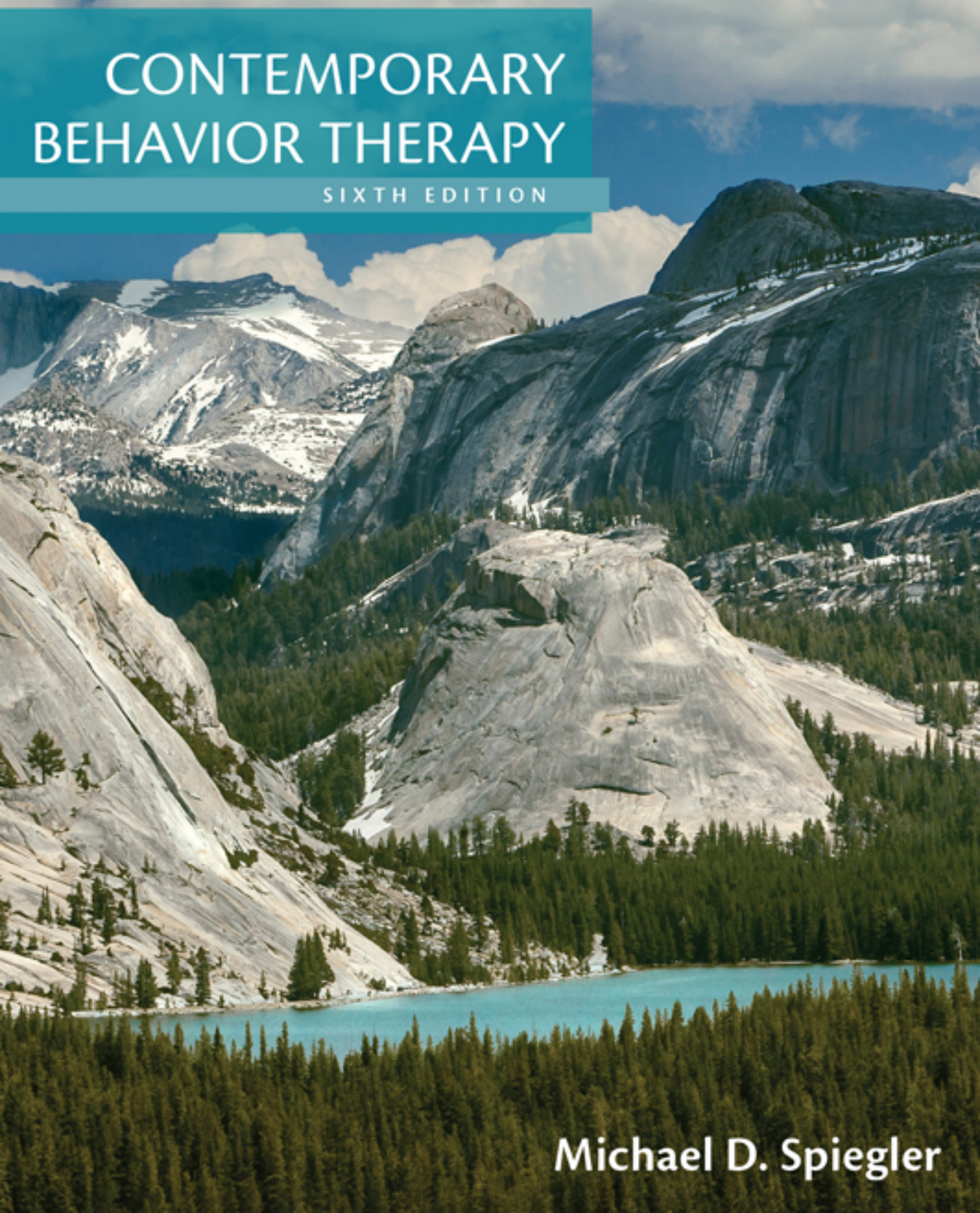
CONTEMPORARY BEHAVIOR THERAPY

SIXTH EDITION



Michael D. Spiegler

CONTEMPORARY BEHAVIOR THERAPY

Sixth Edition

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CONTEMPORARY BEHAVIOR THERAPY

Sixth Edition

Michael D. Spiegler

Providence College

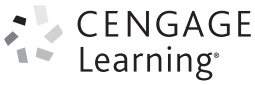
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To my brother and sister

Rick McEwan

my best friend who continues to cover me in many ways, both on and off belay

Myrna Lamb

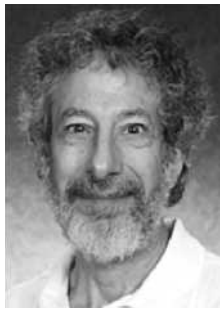
my dear friend who knew me on levels I could not fathom who has gone void, of course and so cannot read this— but knowing Myrna, I bet she is appreciating yet another tribute to the extraordinary human being she was

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About the Author



Michael D. Spiegler (Ph.D., clinical psychology, Vanderbilt University) is professor of psychology at Providence College and was formerly director of the Community Training Center at the Palo Alto VA Hospital and assistant professor of psychology at the University of Texas at Austin. His contributions to behavior therapy include the development of the first skills training program for the treatment of schizophrenia and his pioneering work in film modeling therapy for phobias. His other areas of research include observational learning, anxiety, the treatment of obesity, and active learning. Professor Spiegler is coauthor of *Personality: Strategies and Issues* and *The Community Training Center,* and he is coeditor of *Contemporary Psychotherapies for a Diverse World*. He regularly presents workshops and courses on college textbook writing and is on the governing board of the Text and Academic Authors Association. His nonprofessional passions include his wife and family, flying his Skycatcher, listening to early music, and being in the mountains (especially in those on this book's cover).

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Preface

Thank you for reading this preface. Few people read prefaces, so I want to immediately reinforce your extraordinary behavior by answering one of the questions you may be curious about: How is this book different from other behavior therapy textbooks? *Contemporary Behavior Therapy* is simultaneously an introduction for beginning students and a comprehensive, scholarly review and resource for advanced students and professionals. To make this a "teaching book"—one from which students can easily learn—I have written in a casual, inviting style and have employed many pedagogical features, including:

- *Unifying principles and themes* that are initially presented in brief introductory chapters and then illustrated throughout the book
- *A consistent behavioral perspective*, including the use of behavioral principles—such as prompting, shaping, reinforcement, modeling, and behavior rehearsal—to teach behavioral principles and procedures, and the use of behavioral (rather than trait) descriptions of clients' problems
- *Unique conceptual schemes* that organize the currently diverse field of behavior therapy
- *Numerous cases* that are integrated into the text and provide rich detail about the application of behavior therapy to a wide array of disorders
- *Participation Exercises* that provide students with hands-on experience with behavior therapy principles and procedures to promote active learning and that include two new features: greater integration with the text and immediate feedback for those exercises that have answers
- *Broad Strokes* is a new feature that covers concepts related to a number of behavior therapies, such as the use of treatment manuals and the proliferation of the application of acceptance and mindfulness in a number of behavior therapies
- *Many illustrations*—including photographs and cartoons that are functional rather than decorative—present content that is most readily grasped visually
- *Integration of clinical, research, professional, and ethical facets* of behavior therapy to illustrate how they are interwoven in practice

Contemporary Behavior Therapy has been written for readers in a variety of disciplines, and applications and examples are drawn from diverse fields. Readers need no previous background because all of the basic concepts are presented in Chapters 3 and 4. Theoretical, methodological, and professional issues in behavior therapy are set off as In Theory features so that they can be omitted in courses in which their content is not germane.

What makes this book a scholarly review of behavior therapy is its comprehensiveness and critical evaluation. All of the major behavior therapy procedures are discussed, and the latest research findings are presented, synthesized, and

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critically evaluated. I have conducted an extensive literature review of more than 3,000 articles, books, and chapters published from 2010 to the spring of 2014, and, of the roughly 2,700 references cited in the book, almost 600 are new.

Since the publication of the previous edition of *Contemporary Behavior Therapy* in 2010, the field of behavior therapy has burgeoned, and the sixth edition of this text has been expanded accordingly. Here is a sampling of what's new to the sixth edition.

- A separate chapter (Chapter 5) is now devoted to behavior therapy research. This chapter includes new discussions of treatment manuals and standards for evidence-based treatment as well as expanded discussion of clinical versus statistical significance and outcome variables.
- Coverage occurs throughout the book of transdiagnostic (unified protocol) behavior therapies, the use of behavioral intervention technology to implement and facilitate many different behavior therapies, and the application of behavior therapy to diverse populations.
- Expanded coverage is given to behavioral activation, functional analytic psychotherapy, and group reinforcement contingencies (Chapter 7); differential reinforcement (Chapter 8); behavioral parent training (Chapter 9); recent developments in virtual reality exposure therapy (Chapter 10); cognitive processing therapy and cognitive therapy for hallucinations and delusions (Chapter 13); and relapse prevention for diverse problems, problem-solving therapy, cognitive-behavioral couple therapy, and prevention of couple relationship problems (Chapter 14).
- Expanded discussion is now provided of relational frame theory and the critical evaluation of acceptance/mindfulness-based behavior therapies (Chapter 15).
- New sections have been added on the crucial issues of dissemination and implementation of evidence-based behavior therapies and the future of behavior therapy (Chapter 18).

As in previous editions, *Contemporary Behavior Therapy* is divided into three parts. Part One presents the fundamental principles of behavior therapy, which are repeatedly illustrated and drawn on in subsequent chapters. Part Two covers all the major behavior therapy procedures used today. Part Three illustrates broader applications of behavior therapy principles and procedures to behavioral medicine and psychological disorders with primary physical characteristics and then presents a final evaluation of and commentary on the present status and future of behavior therapy.

I have written the sixth edition of *Contemporary Behavior Therapy* as a teacher, researcher, and clinician. As a teacher, I have incorporated many pedagogical practices to facilitate learning, including stressing general principles, actively engaging students in learning about behavior therapy, and providing numerous examples and everyday illustrations to which students can relate. As a researcher, I appreciate the importance of empirically validating treatment procedures. Thus, not only have I presented the evidence for the efficacy and effectiveness of behavior therapy procedures by describing numerous studies, but I have also critically evaluated them and discussed their limitations. As a clinician, I find the practice of behavior therapy to be challenging, stimulating, and reinforcing; I have striven to impart that in my writing in the hope of inspiring future behavior therapists.

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I wish to express my appreciation to the many people who facilitated the writing of this book and whose contributions enhanced the final product.

I am grateful to Jon-David Hague, my editor, for believing in the book and his behind-the-scenes shepherding of it from start to finish, and to his editorial assistant, Nicole Richards, who always was available to help make things happen.

Over the course of my writing books, I have worked with a dozen and a half copyeditors, including some excellent ones, but Sarah Wales-McGrath tops them all. She clarified my writing (which I thought was clear to begin with!), found errors and inconsistencies, made valuable suggestions, and made the copyediting phase a delight. Thank you Sarah.

I would have had to become a client in behavior therapy to weather the many problems that arose in the production of this book had it not been for the able assistance and caring of Ruth Sakata Corley, my Senior Content Project Manager. Thank you Ruth for being there for me.

Vernon Boes, the Cengage Art Director, is responsible for the excellent design of the book. Vernon is my longtime colleague at Cengage (we first worked together 25 years ago at Brooks-Cole—if you are old enough to remember that imprint). Besides his expertise in the details and esthetics of books design, Vernon is very attentive to the impact the design has on textbook pedagogy, which is important to me. And he patiently went through multiple iterations of the design until we were both pleased with it. Thanks Vernon.

Once again, Rick McEwan provided one of his many stunning photographs for the cover. And this one, an inspiring view of Tenya Lake and the high country of Yosemite from Olmsted Point, has special meaning for me, one that Rick and I share. Thank you Rick.

Victoria Sanborn, my research assistant, performed many tasks that facilitated my writing, including doing most of the work for the large name index. Thank you for all that, Victoria, as well as for your dedication.

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In the spirit of genuine professional collegiality, Dave Barlow, Jonathan Kanter, Alan Kazdin, and Mike Twohig, who are experts in various areas of the field, willingly engaged in email exchanges with me to clarify issues. And many behavior therapists, too numerous to name, promptly responded to my requests for copies of their research. Thanks to all of you.

Yanwei Hu, who, in the course of translating the fifth edition of *Contemporary Behavior Therapy* into Chinese, raised perceptive questions about the accuracy and clarity of some of what I had previously written, which I have made use of in writing this edition. Thank you Yanwei.

I am grateful to Annmarie Mullen, the consummate secretary, who provided assistance in so many ways, as she always does; Diane Wilkes-Smith my Word wizard, who found time-saving shortcuts and solutions to my problems as I wrote; and Brian Marinelli and Will Toner for answering my questions on writing.

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For graciously accepting the priority of "the book" for a protracted period, I am most appreciative of and for my family. The joy and nachas I constantly receive from my granddaughter, Amelia Fink, were a source of balance during frenetic periods. Writing this book, and all I do, is partially maintained by the modeling and reinforcement provided by the two people who picked me up from the hospital steps (or at least that's how they explained it to me): my loving and devoted parents, Lillian and Julie Spiegler. And most important, I am grateful, always and forever, for my wife Arlene's total support, understanding, and love as well as "stending" me during the writing of this book.

Michael D. Spiegler

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A Note to Readers

As you journey through this book, you should be aware of several topographical features that will help you learn about behavior therapy and make your reading easier.

- Each chapter begins with an outline of its contents, and I suggest you look it over before starting to read so that you'll have an idea of where you are going.
- References are designated by superscript numbers that correspond to reference notes at the end of each chapter. I've done this to spare you having to jump over APA-style parenthetical references in the text.
- All major behavior therapy terms are printed in **boldface** at the point where they are first formally defined. These terms also are succinctly defined in a comprehensive Glossary of Behavior Therapy Terms at the back of the book.
- Should you be unfamiliar with some of the psychological disorders and problems discussed, there also is a Glossary of Psychological Disorders and Problems at the back of the book.

Four special features are set off from—but integrated with—the main text.

- *Cases* present detailed accounts of behavior therapy in action. The Cases are a continuous part of the text discussion, so you should read them as you come to them and then continue with the main text that follows the Case.
- *Participation Exercises* will give you hands-on experience with behavior therapy principles and procedures. I've written instructions in the text for when to read and complete each Participation Exercise. For those Participation Exercises that have answers, you'll find them at the end of the chapter following the summary. Some of the Participation Exercises require work sheets, which you will find in the Student Resource Manual as well as additional resources to help you learn and study. You can access the Student Resource Manual through Cengagebrain.com. Search for "Spiegler" and then click the following, in order: "Contemporary Behavior Therapy, 6th edition" (be sure it is the sixth edition), "Free Materials" (at bottom), "Access Now" (bottom right), "Student Resource Materials," and finally the "Media" icon. (Note: Specific locations of links on the page may change.)
- *In Theory* features describe theoretical, methodological, and professional issues related to behavior therapy.
- *Broad Strokes* features discuss overarching concepts that relate to a number of behavior therapies.

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Finally, tables and figures supplement and complement the text by providing important information and ideas that are most usefully presented in these formats (rather than prose). So look at them carefully when they are referred to in the text. Similarly, spending a moment with photos and cartoons will help you learn and remember the material—that's why I put them there.

In writing the sixth edition of *Contemporary Behavior Therapy*, I have incorporated suggestions from students who have read previous editions. I'd welcome your comments and suggestions. Please write me at spiegler@providence.edu; I promise to respond.

I hope you enjoy reading and learning about behavior therapy—I sure did in the course of writing your textbook.

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PART ONE



BASIC PRINCIPLES

1 Behavior Therapy: Introduction
2 Antecedents of Contemporary Behavior Therapy
3 The Behavioral Model
4 The Process of Behavior Therapy
5 Behavior Therapy Research
6 Behavioral Assessment

Imagine that you are about to enjoy a delicious three-course dinner. Consider each of the three parts of this book as one of the courses. Part One presents the appetizers: the ideas that will prepare your palate for the rest of the dinner. You'll begin with an overview of the field of behavior therapy in Chapter 1, followed in Chapter 2 by a look at the historic events that shaped contemporary behavior therapy. Chapter 3 introduces the behavioral model, the principles that underlie behavior therapy. Chapter 4 explains how the behavioral model is applied to behavior therapy and describes the basic processes involved in implementing behavior therapy. Chapter 5 discusses behavior therapy research. Finally, Chapter 6 describes behavioral assessment, the basic methods behavior therapists use to gather information about clients' problems and measure their progress in therapy.

The first course is about to be served. Bon appétit.

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CHAPTER 1



Behavior Therapy:
Introduction

PARTICIPATION EXERCISE 1-1 What Do You Know About Behavior Therapy?

Terminology and Scope

What Is Behavior Therapy?

Defining Themes of Behavior Therapy
Common Characteristics of Behavior Therapy

The Therapist–Client Relationship in Behavior Therapy

Many Variations of Behavior Therapy

Ethical Issues in Behavior Therapy

Purpose of This Book

SUMMARY
REFERENCE NOTES

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Opening a textbook for the first time is like walking into a psychotherapist's office for the initial visit. Both students and clients arrive with general expectations about what is going to happen. Students assume the author will teach them, just as new clients in psychotherapy expect the therapist will help them with their problems.

Being taught and being helped are all too often passive processes. As a teacher and behavior therapist, I believe that for education and psychotherapy to be most effective, students and clients must actively participate in the process. In behavior therapy, clients are involved in choosing and implementing therapy procedures. In education, students learn best when they are actively engaged. Accordingly, I have written this book in ways that promote active learning.

One way you will actively learn about behavior therapy is through Participation Exercises that provide hands-on experience with the ideas, concepts, and procedures used in behavior therapy. Some Participation Exercises take a very brief time to complete, and you should do them when you come to them in a chapter because they elucidate what you are reading about. Others require a bit more time; it is best to do them before continuing your reading, but you can do them later. Finally, some exercises are more extensive and must be done after you read the chapter; I'll tell you when it would be optimal to complete each Participation Exercise. The first Participation Exercise is one you should complete before you continue reading. It will take just a couple of minutes.

PARTICIPATION EXERCISE 1-1

What Do You Know About Behavior Therapy?

You have no doubt heard about behavior therapy. How accurate is your picture of behavior therapy? This exercise can help answer that question. Read each of the following statements and write down whether you think it is primarily true or primarily false.

1. Behavior therapy is the application of well-established laws of learning.
2. Behavior therapy directly changes symptoms of a disorder.
3. A trusting relationship between client and therapist is not necessary for behavior therapy to be effective.
4. Behavior therapy does not deal with problems of feelings, such as depression and anger.
5. Generally, little verbal interchange takes place between the therapist and client in behavior therapy.
6. The client's cooperation is not necessary for behavior therapy to be successful.
7. Most clients in behavior therapy are treated in fewer than five sessions.
8. Behavior therapy is not applicable to changing mental processes such as thoughts and beliefs.
9. Positive reinforcement works better with children than with adults.
10. Many behavior therapy procedures use painful or aversive treatments.
11. Behavior therapy primarily deals with relatively simple problems, such as phobias (for example, fear of snakes) or undesirable habits (for instance, fingernail biting).

(*continued*)

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PARTICIPATION EXERCISE 1-1 (*continued*)

12. Goals for therapy are established by the therapist.
13. The therapist primarily is responsible for the success of therapy.
14. Because behavior therapy treats the symptoms of a disorder and not its underlying cause, once the symptoms are removed, others will develop because the cause of the symptoms has not been treated.

You may have recognized that many of the statements are false. In fact, all of them are predominantly false. They are all myths or misconceptions about behavior therapy, and you will learn why as you read.

TERMINOLOGY AND SCOPE

Behavior therapy also is called *behavior modification* and *cognitive-behavioral therapy* (or *cognitive-behavior therapy*). Behavior therapists occasionally distinguish among the terms, but the distinctions are not standard.[1] *Behavior modification* originally referred to procedures that change the consequences of behaviors (such as reinforcement) and the stimulus conditions that elicit behaviors (such as environmental cues). However, *behavior modification* sometimes has been used as a generic term to refer to *any* procedure that modifies behaviors, including some rather radical procedures ranging from lobotomies to wilderness survival courses,[2] which are unrelated to behavior therapy. The term **cognitive-behavioral** (or **cognitive-behavior**) **therapy** originally referred to treatments that change cognitions (such as thoughts and beliefs) that are influencing psychological problems. Today, *cognitive-behavioral therapy* more broadly refers to therapies that involve both cognitive and overt behavioral interventions or what might be called *traditional behavior therapy.*[3] *Behavior therapy* is the broadest and "purest" term,[4] and I will use it to refer to the entire field of therapy you will be learning about.

The major goal of behavior therapy is to help clients with psychological problems, a goal it shares with other forms of psychotherapy. Examples of psychological problems include anxiety, depression, interpersonal difficulties, sexual dysfunction, stress-related problems, and odd behaviors (such as hearing voices). Psychological problems are personally maladaptive, are generally distressing to clients, may violate social norms, and may be disturbing to other people (for example, parents may be troubled by their child's aggressive acts). Such problems are often referred to as *mental illness, emotional disturbance, psychopathology,* and *abnormal behavior*, each of which has a particular connotation. In this book, I use more neutral terms: *psychological problem, psychological/psychiatric disorder, problem behavior,* and *problem.*

In addition to treating psychological disorders, the principles and procedures of behavior therapy have been harnessed for a variety of purposes, including to improve everyday functioning, such as work productivity and child rearing;[5] to deal with societal problems, such as safety hazards and recycling;[6] to enhance athletic performance;[7] to reduce perfectionism in graduate students;[8] and to prevent and treat the physical and psychological effects of medical disorders.[9]

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WHAT IS BEHAVIOR THERAPY?

If the statements in Participation Exercise 1-1 reveal something of what behavior therapy is *not,* then just what is behavior therapy? Unfortunately, no single, agreed-upon definition exists.[10] Behavior therapy is both diverse and evolving, so it is difficult to define concisely.

DEFINING THEMES OF BEHAVIOR THERAPY

Instead of a general definition, I propose four defining themes that are at the core of behavior therapy: scientific, active, present focus, and learning focus.[11] These themes are interrelated and overlap in their influence on the practice of behavior therapy.

Scientific

The essence of behavior therapy is a commitment to a scientific approach that involves *precision* and *empirical evaluation*.[12] All aspects of behavior therapy are defined precisely, including the behaviors targeted for change, treatment goals, and assessment and therapy procedures. Treatment protocols that spell out the details of particular therapy procedures have been developed for a number of behavior therapies.[13] Using such protocols enables therapists to employ the same procedures that have already proven efficacious. As another example of precision, clients' progress is monitored before, during, and after therapy using *quantitative* measurements of the behaviors to be changed.

Conclusions about the effectiveness of behavior therapies are based on the results of empirical research[14] rather than the subjective judgments of therapists or testimonials from satisfied clients.[15] This standard, which behavior therapists have always used, has been highlighted in recent years with the advent of managed care. Managed-care companies are willing to pay only for psychotherapy that has a track record of success with the client's identified psychiatric disorder, and many behavior therapies are on their list of preferred treatments because they are empirically supported.

Active

In behavior therapy, clients engage in specific actions to alleviate their problems. In other words, clients *do* something about their difficulties, rather than just talk about them. Behavior therapy is an *action therapy,* in contrast to a *verbal therapy* (such as psychoanalysis or client-centered therapy). In verbal psychotherapies, the dialogue and relationship between the client and therapist is the major mode through which therapy techniques are implemented. In action therapies, conversations between the client and therapist are predominantly for exchanging information. The therapy itself primarily consists of tasks the client engages in. In therapy sessions, examples would be role-playing problem situations, rehearsing coping skills, and imaging anxiety-evoking situations while actively countering the anxiety with muscle relaxation. Examples of what clients do outside of therapy sessions include monitoring their problem behaviors during the course of their daily activities and practicing applying coping skills.

Specific therapeutic tasks clients perform in their everyday environments, called **homework assignments**, are an integral part of behavior therapy,[16] and compliance with homework often is associated with better outcomes.[17] The logic

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for implementing treatment in the client's natural environments is simple: The client's problem is treated where it is occurring, which is in the client's everyday life. "Taking therapy home" makes it more likely that the changes that occur during therapy will transfer to the client's life and continue after therapy has ended.[18] For instance, in the treatment of antisocial behaviors, children and adolescents are taught problem-solving skills in therapy sessions; but the crucial part of the treatment occurs when the clients practice these skills at home.[19] For instance, school interventions that are coordinated with treatment in therapy sessions have proved beneficial for such diverse problems as attention disorders,[20] adolescent depression,[21] disruptive behaviors,[22] bullying,[23] and obesity.[24]

Homework contributes to the efficiency of behavior therapies because it reduces the number of therapy sessions and therapist's time, and it shortens the overall length of treatment. On the down side, clients may consider homework to be onerous, both because of the time required, which can be considerable, and negative associations with homework in school, which may be a reason for calling out-of-session assignments something else, such as "real-life practice." A study titled "No Pain, No Gain: Depressed Clients' Experiences of Cognitive Behavioural Therapy" revealed that clients identified homework as a big challenge.[25]

The term **in vivo** (Latin for "in life") is used to designate therapy procedures that are implemented in the client's natural environment. In vivo therapy can be implemented in one of three ways. First, the therapist may work directly with the client in the client's natural environment. This approach is costly in terms of therapists' time and is therefore used only occasionally. Second, the therapist can train people in the client's life (such as parents, spouses, and teachers) to assist in the treatment, as by administering reinforcers.[26] Third, clients can serve as their own change agents by carrying out therapy procedures on their own with therapist instructions and monitoring.[27] Thus, those responsible for implementing treatment include not only behavior therapists but also other people who serve as *change agents*, including relatives, friends, teachers, and—most important—clients themselves.

Clients' serving as their own change agents illustrates the **self-control approach** commonly used in behavior therapy.[28] Examples of specific behavior therapies that involve self-control are self-monitoring (Chapter 17), self-reinforcement (Chapter 7), and self-instructional training (Chapter 14). Self-control skills are necessary for independent daily functioning, which is why they are target behaviors for people with developmental disabilities.[29]

Self-control approaches have three important advantages. First, being responsible for changes in one's life is personally empowering.[30] Second, clients who are instrumental in changing their own behaviors are more likely to maintain the change. Third, clients who become skilled in dealing with their problems may be able to cope with future problems on their own,[31] which makes a self-control approach cost effective in the long run.

Present Focus

The focus of behavior therapy is in the present. Behavior therapists assume that clients' problems, which occur in the present, are influenced by current conditions. Accordingly, behavioral assessment focuses on the client's current, rather than past, circumstances to find the factors responsible for the client's problems. Then

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behavior therapy procedures are employed to change the current factors that are affecting the client's behaviors. This emphasis contrasts with other types of psychotherapy, such as psychoanalytic therapy, which assume that the major influences on clients' problems reside in the past.

Learning Focus

An emphasis on learning is a final theme that defines behavior therapy and distinguishes it from other types of psychotherapy. Learning is important in three different respects. First, the behavioral model holds that many problem behaviors develop, are maintained, and change primarily through learning. Behavior therapists do not believe that *all* behaviors are primarily a function of learning because some behaviors are strongly influenced by heredity and biology. Nonetheless, virtually all behaviors are affected by learning, even if they have biological components.

Second, behavior therapy provides clients with learning experiences in which new (adaptive) behaviors replace old (maladaptive) behaviors. Thus, there is a strong *educational* component in behavior therapy, and behavior therapists often serve as teachers.

Third, the development of some behavior therapies was influenced by basic learning principles, and theories of learning (such as classical and operant conditioning) often are used to explain why behavior therapy procedures work.

COMMON CHARACTERISTICS OF BEHAVIOR THERAPY

In addition to the defining themes in behavior therapy just described, four common characteristics of behavior therapy help distinguish it from other forms of psychotherapy: individualized therapy, stepwise progression, treatment packages, and brevity.

Individualized Therapy

In behavior therapy, standard therapy and assessment procedures are tailored to each client's unique problem, the specific circumstances in which the problem occurs, and the client's personal characteristics.[32] For instance, reinforcement is used to get clients of all ages to engage in adaptive behaviors. However, the specific reinforcer is likely to vary with the client's age as well as a host of other demographic factors, including cultural identification. For example, cream cheese might be a reinforcer for a Jewish-American 3-year-old girl while kimchi—a spicy Korean cabbage dish—might be a reinforcer for a Korean-American girl of the same age.

Stepwise Progression

Behavior therapy often proceeds in a stepwise progression, moving from simple to complex, from easier to harder, or from less threatening to more threatening. For example, a girl who was socially withdrawn was taught—through modeling and reinforcement—to interact with peers in steps: initially playing by herself in the presence of peers, then playing with peers, and finally initiating play with peers. Similarly, a man who was afraid of heights was gradually exposed to higher elevations during treatment, beginning a few feet off the ground and eventually ending on top of a 10-story building.

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Treatment Packages

Two or more behavior therapy procedures often are combined in a **treatment package** to increase the effectiveness of the therapy. This practice is analogous to the treatment of many medical problems, such as combining medication, diet, and exercise for cardiovascular disease.

There are two caveats about treatment packages. First, reasoning that more is better, one would expect that the combination of two or more effective treatments would be more beneficial than just one of the treatments. However, that is not always the case.[33] For example, exposure therapy for obsessive-compulsive disorder and social phobia is as effective as combining exposure therapy with cognitive-behavioral therapies, whereas cognitive-behavioral treatment packages are more effective than single treatments for other anxiety disorders.[34] Second, although treatment packages can be more effective than single treatments, combining therapies may lengthen treatment.[35]

Treatment packages are the norm in behavior therapy today. This is important to keep in mind as you begin to read about specific behavior therapies in Chapter 7. To facilitate your learning about behavior therapies, they will be introduced individually. Then, as you become familiar with specific therapies, increasingly you will read about treatment packages made up of the specific therapies.

Brevity

The duration of behavior therapy is relatively brief, generally involving fewer therapy sessions and often less overall time than many other types of therapy. This results, in part, from the use of homework assignments in particular and the self-control approach in general, but it is largely attributable to the potency of the treatments that target the critical factors that are causing the client's problems.

The length of therapy varies considerably with the problem being treated. Usually, the more complex and severe the problem, the longer is the treatment duration. For example, one survey revealed that the average number of hours required to treat specific phobias with behavior therapy was 13.4, compared with 46.4 for obsessive-compulsive disorder (a considerably more complex problem).[36] Treatment duration also varies with the particular behavior therapy used. In general, the majority of behavior therapies require between 8 and 20 therapy sessions,[37] which in relation to many other types of psychotherapies is quite brief.

THE THERAPIST–CLIENT RELATIONSHIP IN BEHAVIOR THERAPY

The relationship between the therapist and the client is important in all forms of psychotherapy,[38] and with some psychotherapies it is paramount. In behavior therapy, the relationship is considered *a necessary but not a sufficient condition* for successful treatment,[39] and the specific behavior therapy techniques are the primary source of treatment effectiveness.[40] Interestingly, clients in behavior therapy may attribute their improvement more to the therapist–client relationship than to the therapy procedures.[41] Nonetheless, from the behavior therapist's perspective, the therapist–client relationship is analogous to the role of anesthesia in surgery.

> Somebody goes . . . for surgery because there are certain procedures that need to be implemented. In order for these procedures to take place, the person must be under anesthesia; the anesthesia facilitates what is really

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> important [that is, the surgical procedures]. However, if anything goes wrong with the anesthesia during the surgery, then that becomes the priority. Similarly . . . a good . . . [therapist–client relationship] is necessary and often crucial. Without it you just can't proceed.[42]

Thus, there is no question that the rapport between behavior therapists and their clients impacts the outcome of therapy.[43] In fact, in one study of the effects of the therapeutic relationship on treatment of chronic depression, cognitive-behavioral therapy and brief supportive psychotherapy were compared.[44] The supportive therapy was similar to client-centered therapy in which the therapist–client relationship is considered the primary factor that accounts for its effectiveness. Surprisingly, the therapeutic relationship was more strongly related to outcome with the cognitive-behavioral therapy.

In behavior therapy, the therapist–client relationship facilitates the implementation of specific therapy procedures in a variety of ways, including increasing the client's positive expectations and hope for success; encouraging the client to complete homework assignments that involve risk taking; overcoming obstacles that arise in therapy, including clients' not complying with the treatment; and increasing the potency of the therapist's praise and approval.[45]

Collaboration between the therapist and client is a hallmark of behavior therapy.[46] Behavior therapists share their expertise so that clients become knowledgeable partners in their therapy. Decisions about therapy goals and treatment procedures are made jointly. For instance, behavior therapists provide information about treatment options, describing what each of the appropriate therapies entails and the effectiveness of each (based on research findings). Clients then can decide on the type of treatment that is best suited to their needs and personal preferences.

MANY VARIATIONS OF BEHAVIOR THERAPY

Behavior therapy is not a single technique. There are many different forms of behavior therapy—in other words, many behavior therapies. These therapies are unified by the defining themes and common characteristics you read about earlier. The following examples illustrate the variety of behavior therapy procedures that exist; the chapters in which they are introduced appear in parentheses.

- *Positive reinforcement* (Chapter 7): A fifth-grade girl strongly disliked doing homework and was spending much less time on it than was required because she avoided doing it until shortly before her bedtime. The therapist suggested that her parents have her earn preferred evening activities by spending appropriate time on homework. The girl was allowed to play a favorite computer game, watch a video, have an evening snack, and chat with her grandma only after she had completed her homework.
- *Self-instructional training* (Chapter 14): In a predominantly Latino-American junior high school, students were required to speak English in class. However, many of the first-generation immigrant students often reverted to Spanish because they could express themselves better in their native tongue. They were taught to subvocally say, "Speak only English" to remind themselves each time they raised their hand to speak in class.

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- *Modeling* and *behavior rehearsal* (Chapter 12): A woman was intimidated by her boss and consequently was unable to speak to him about problems at work. She learned to express her desires to her boss appropriately by observing her therapist demonstrate effective ways to tell superiors politely yet forcefully about dissatisfactions and personal preferences (modeling). The woman then practiced these behaviors—initially with her therapist and later with other people who were less threatening than her boss—before she attempted to speak with her boss (behavior reversal).
- *Response cost* (Chapter 8): A 7-year-old boy, who was big for his age, frequently bullied smaller children. To decrease the boy's bullying, his teacher instituted a rule specifying that he would miss recess or gym, his favorite school activities, each time he was caught fighting.
- *Stress inoculation training* (Chapter 14): A business executive drank excessively when he arrived home each evening after a frustrating day at the office. To help the man deal with his frustration, the therapist taught him appropriate coping skills, including self-instructions and problem solving. In therapy, the client role-played being in various frustrating situations and practiced applying the coping skills. Then he used the skills in his everyday life whenever he felt frustrated and had the urge to drink.
- *Extinction* and *differential reinforcement of other behaviors* (Chapter 8): On several occasions, a young mother had beaten her 3-year-old son when he had a temper tantrum. The more the mother tried to get her son to stop crying, the angrier she got; eventually, she hit the child. The mother was taught to ignore her son during a temper tantrum (extinction) and to reinforce him with attention when he began engaging in any other behavior (differential reinforcement of other behaviors). This treatment package was designed not only to reduce the frequency and duration of her son's temper tantrums but also to help the mother cope with her frustration and eliminate abusing her child.
- *Systematic desensitization* (Chapter 10): A college student was doing poorly in school because she panicked during examinations. To overcome her test anxiety, the student first was taught muscle relaxation. While relaxed, she visualized increasingly more anxiety-evoking situations (beginning with hearing the announcement that an exam would be given in 2 weeks and ending with being unable to answer an exam question). The objective was to substitute relaxation for the anxiety associated with test situations.
- *Token economy* and *shaping* (Chapters 9 and 7, respectively): A 36-year-old man who was hospitalized for the treatment of schizophrenia was extremely socially withdrawn. He was placed in a token economy program in which he earned tokens (poker chips) for engaging in increasing levels of social interaction. At first, he earned tokens for minimally interacting with others (for instance, asking a nurse for something he wanted) and later, he earned them for extended social interactions (for example, having a conversation with another patient while they worked on a project together) (shaping). The man could exchange the tokens he earned for a variety of reinforcers (such as having a snack and playing pool).
- *Cognitive-behavioral couple therapy* (Chapter 14): A gay couple who had been together for 11 years sought help because of their difficulty resolving conflicts, which arose frequently, and because they believed that they no longer loved each other. For dealing with conflicts, they were taught problem-solving

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strategies that involved generating many potential solutions to disagreements and then evaluating them to select the optimal solution. For the couple's second complaint, the therapist instructed each partner to perform several behaviors each day that the other partner considered an indication of caring.

- *Cognitive restructuring* (Chapter 13): A college student avoided going to social functions (which he desperately wanted to do) because he was afraid that he was socially awkward. He learned to substitute positive, reassuring thoughts (such as, "I just need to be myself, and I will fit in") for his habitual negative, self-deprecating thoughts (such as, "I'm going to make a fool of myself"), which lowered his social anxiety and allowed him to attend social functions.
- *Acceptance and Commitment Therapy* (Chapter 15): A college student avoided going to social functions (which he desperately wanted to do) because he was afraid that he was socially awkward. He learned to accept and defuse (separate from) his habitual negative, self-deprecating thoughts (for example, "I'm going to make a fool of myself") by recognizing that they were just thoughts (in other words, "I am having the thought that I will make a fool of myself"), which allowed him to attend social functions while still having his critical thoughts and feeling anxious.

Even from the small sample of behavior therapy procedures just presented, it is clear that many diverse behavior therapies are used to treat a wide array of problems. Also, the same problem can be treated with very different behavioral strategies, as was illustrated in the last two examples in which the college student suffering from social anxiety could be treated by either cognitive restructuring or Acceptance and Commitment Therapy.

Why are there so many different behavior therapies? One advantage of having multiple treatments for the same general problem is that therapies vary in their suitability for specific problems, clients, and circumstances. Clients' preferences make a difference in the success of therapy because clients are more willing to engage in and persevere at a treatment that they believe will work.[47] Also, different therapies may target different aspects of the same problem. In treating anger in children, for example, one study showed that problem-solving therapy and social skills training were both successful in reducing aggression, conduct problems, and the frequency of anger expression.[48] However, problem-solving therapy was more effective in reducing hostile intentions in anger-provoking situations and developing adaptive ways of thinking about conflict situations; in contrast, social skills training was more effective in developing anger control skills. Thus, depending on the nature of a client's specific problem, one therapy might be more suitable than another.

ETHICAL ISSUES IN BEHAVIOR THERAPY

The two major potential ethical issues in behavior therapy are *depriving clients of their rights* and *harming clients*. Throughout the book, I will raise ethical questions in relevant contexts. As you read, be alert for instances where ethical issues could arise. In addition, consider the ways in which behavior therapy protects clients from ethical violations. For example, you have already read about the active role clients play in deciding on their treatment goals and the specific therapy procedures used to achieve them. This practice not only increases the chances

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that the treatment will be successful because clients are actively involved in their therapy,[49] it also gives clients freedom of choice, which protects clients' rights.

Ethical violations occasionally occur in behavior therapy, and there are a small number of well-documented incidents. Most involved clients who had little or no power, especially institutionalized individuals such as prison inmates.[50] To help prevent such incidents, behavior therapists developed guidelines for the ethical practice of behavior therapy.[51] Table 1-1 presents examples of the questions that should be answered for each therapy case.

TABLE 1-1
Examples of Ethical Questions That Should Be Answered for Each Therapy Case

A. Have the goals of treatment been adequately considered?
   1. To ensure that the goals are explicit, are they written?
   2. Has the client's understanding of the goals been ensured by having the client restate them orally or in writing?
   3. Have the therapist and client agreed on the goals of therapy?
   4. Will serving the client's immediate interests be contrary to the client's long-term interest?

B. Has the choice of treatment methods been adequately considered?
   1. Does the published literature show the procedure to be the best one available for that problem?
   2. Has the client been told of alternative procedures that might be preferred by the client on the basis of significant differences in discomfort, treatment time, cost, or degree of demonstrated effectiveness?

C. Is the client's participation voluntary?
   1. Have possible sources of coercion on the client's participation been considered?
   2. If treatment is legally mandated, has the available range of treatments and therapists been offered?
   3. Can the client withdraw from treatment without a penalty or financial loss that exceeds actual clinical costs?

D. Has the adequacy of treatment been evaluated?
   1. Have quantitative measures of the problem and its progress been obtained?
   2. Have the measures of the problem and its progress been made available to the client during treatment?

E. Has the confidentiality of the treatment relationship been protected?
   1. Has the client been told who has access to the records?
   2. Are records available only to authorized persons?

F. Is the therapist qualified to provide treatment?
   1. Has the therapist had training or experience in treating problems like the client's?
   2. If deficits exist in the therapist's qualifications, has the client been informed?
   3. If the therapist is not adequately qualified, is the client referred to other therapists or has supervision by a qualified therapist been provided? Is the client informed of the supervisory relation?

Source: Adapted from *Ethical issues for human services*, 1977, pp. v-vi.

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Finally, in considering ethical issues related to behavior therapy, bear in mind that the ethical issues that can potentially arise in behavior therapy are relevant to all types of psychotherapies.

PURPOSE OF THIS BOOK

The purpose of this book is to introduce you to contemporary behavior therapy. I'll first present its general principles and then illustrate how they are applied using different behavior therapies to treat clients' problems. Although this book is not intended to teach you to be a behavior therapist, you may be able to apply many of the principles and some of the procedures to deal with minor problems in your everyday life. However, if you develop a psychological problem that seriously affects your life and does not resolve itself quickly, you should seek the help of a professional therapist. You can find guidelines for choosing a behavior therapist in the Appendix.

SUMMARY

1. The basic aim of behavior therapy is to help clients deal with psychological problems. Behavior therapy principles and procedures also are used to modify everyday problems.
2. There is no single, agreed-upon definition of behavior therapy. Behavior therapy can be characterized by four defining themes: scientific, active, present focus, and learning focus.
3. The scientific approach entails precisely defining treatment goals, assessment procedures, and therapy procedures; continuously monitoring clients' progress using quantitative measurements; and evaluating the effectiveness of procedures through controlled research.
4. Behavior therapy is active in that clients do more than just talk about their problems. Clients engage in specific therapeutic tasks in therapy sessions and in the everyday environments where their problems are occurring.
5. Behavior therapy focuses on the present. Current conditions are assumed to influence the clients' present problems, and behavior therapy procedures change these current conditions.
6. In behavior therapy, problem behaviors are assumed to be acquired and/or changeable through learning; therapy therefore focuses on learning. Also, theories of learning often are used to explain why behavior therapies work.
7. Four common characteristics further define behavior therapy. Behavior therapy is individualized for each client, proceeds in a stepwise progression, often involves the combination of two or more therapies in a treatment package, and tends to be relatively brief.
8. In behavior therapy, the therapist–client relationship is considered necessary but not sufficient for successful treatment because it is the specific change techniques used that are most influential in treatment success. Collaboration between the therapist and client, such as in setting goals and choosing therapy procedures, is a hallmark of behavior therapy.

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9. Behavior therapy consists of a wide variety of different treatment procedures.
10. As with all psychotherapies, ethical issues can arise in behavior therapy. The two major potential issues are depriving clients of their rights and harming clients. Behavior therapy practices provide for some internal protections against ethical violations.

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CHAPTER 2



Antecedents of Contemporary Behavior Therapy

Historical Precursors

Early Experimental Work

Growing Discontent With Psychoanalysis

Formal Beginnings of Contemporary Behavior Therapy

Developments in North America
Developments in South Africa
Developments in Great Britain

Early Ethical Concerns About Behavior Therapy

Acceptance and Growth of Behavior Therapy

Emergence of Behavior Therapy

SUMMARY

REFERENCE NOTES

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Behavior therapy has "a long past but a short history."[1] In rudimentary forms, behavior therapy is very old. Humans have been using behavioral principles to modify people's behaviors for thousands of years (such as parents' rewarding children for good behaviors). Although these everyday applications are generally haphazard, they can be effective. However, to treat serious problems, a systematic approach is necessary. The formal, systematic application of behavioral principles to treat psychological problems—that is, behavior therapy—is only about 60 years old.

HISTORICAL PRECURSORS

A number of historical treatments for psychological disorders closely resemble contemporary behavior therapies. For example, Pliny the Elder, a 1st-century C.E. Roman scholar and naturalist, treated drinking problems using the fundamental principle of aversion therapy. He created an aversion to alcohol by putting putrid spiders at the bottom of the problem drinker's glass.[2] Pliny wrote about *Lupus salictarius*—better known as hops, the flavoring and stability ingredient in beer. To pay homage to him, the Russian River Brewing Company named a double India pale ale with a high alcohol content "Pliny the Elder."

An early account of a behavioral activation and cognitive therapy strategy for treating depression is portrayed in a 10th-century Icelandic story.[3] In Egil's saga, a daughter helps her grieving father overcome his severe depression by getting him to engage in sequentially more active behaviors, which results in his feeling better.

At the close of the 18th century, Jean-Marc-Gaspard Itard attempted to socialize the "Wild Boy of Aveyron," a child who grew up without human contact.[4] To teach the boy language and other social behaviors, Itard employed procedures similar to contemporary behavior therapies used to treat children with autism spectrum disorder, including modeling, prompting, shaping, and time-out from positive reinforcement.[5]

In the early 19th century, Alexander Maconochie, a captain in the Royal Navy, was put in charge of a British penal colony located on Norfolk Island, Australia.[6] To rehabilitate the prisoners, Maconochie established a point system that allowed each prisoner to redeem himself by performing appropriate behaviors. In Maconochie's words, "When a man keeps the key of his own prison, he is soon persuaded to fit it into the lock." Despite the apparent success of this early token economy, Maconochie's superiors disapproved of his innovative methods and denigrated their effectiveness.[7] This scenario would be replayed a century and a half later, as you shall see shortly.

An 1845 paper presented to the Royal Academy of Medicine in Paris reported on the treatment of a 30-year-old wine merchant for his obsessional thoughts. François Leuret, a physician, had the man recite song lyrics, behaviors that competed with his disturbing, repetitive thoughts.[8] With a similar problem, Diocletian (Dio) Lewis, a 19th-century physician, described in his book *Chastity or Our Secret Sins* the treatment of a man preoccupied with sexual thoughts by telling the man that sensual ideas are dangerous and that they would startle him when they came to mind. When this occurred, Lewis instructed the man to immediately engage in a competing response, such as thinking about something else or engaging in physical exercise (Lewis was a pioneer in physical education and also invented the beanbag).[9] Lewis and Lauret's procedures are similar to some present-day cognitive-behavioral interventions.

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These early harbingers of behavior therapy procedures have only historical significance because they have had no real influence on the development of contemporary behavior therapy.[10]

EARLY EXPERIMENTAL WORK

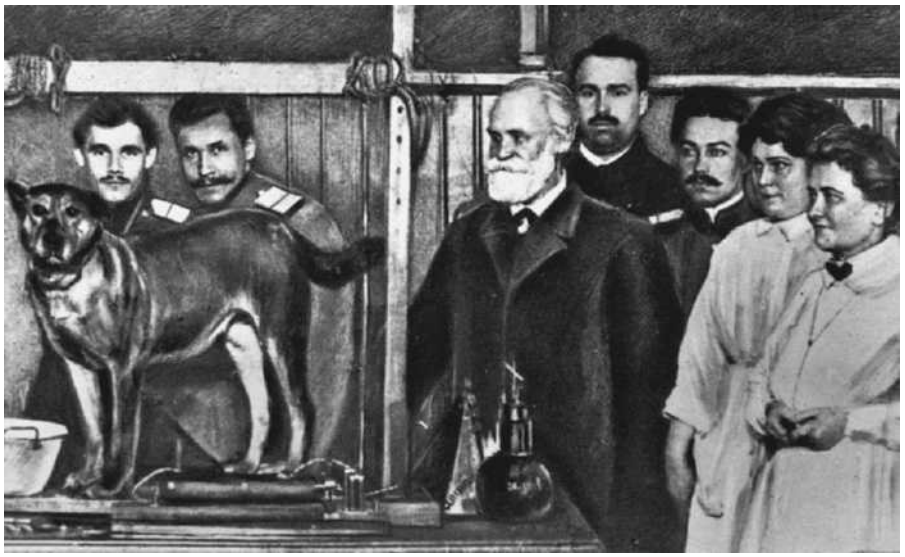
The inspiration for contemporary behavior therapy came from experimental work on learning carried out at the beginning of the 20th century. Russian physiologist Ivan Pavlov is credited with the first systematic account of what has come to be called *classical* (or *Pavlovian*) *conditioning*.[11] In this form of learning, a neutral stimulus (one that elicits no particular response) is repeatedly paired with a stimulus that naturally elicits a particular response. The result is that eventually, the neutral stimulus alone comes to elicit the response. In Pavlov's well-known experiments with dogs, a neutral stimulus, such as a light or a tone, was paired with food, a stimulus that reflexively produces salivation. After repeated pairings of these two stimuli, the light or tone alone resulted in the dogs' salivation. This classical conditioning process is shown in Figure 2-1 (see page 18).



Archives of the History of American Psychology/The University of Akron

John B. Watson

In addition to his important laboratory experiments with animals, Pavlov wrote about the application of learning procedures to treat psychological disorders.[12] Pavlov's critical contribution to behavior therapy, however, was the influence his work had on John B. Watson, an experimental psychologist at Johns Hopkins University. Watson is the founder of *behaviorism*, the school of psychology on which behavior therapy is largely based. Watson's behaviorism emphasized the importance of objectively studying behaviors by dealing only with directly observable stimuli and responses and rejected mentalistic concepts, such as consciousness, thought, and imagery.[13]



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Pavlov (center) in his lab

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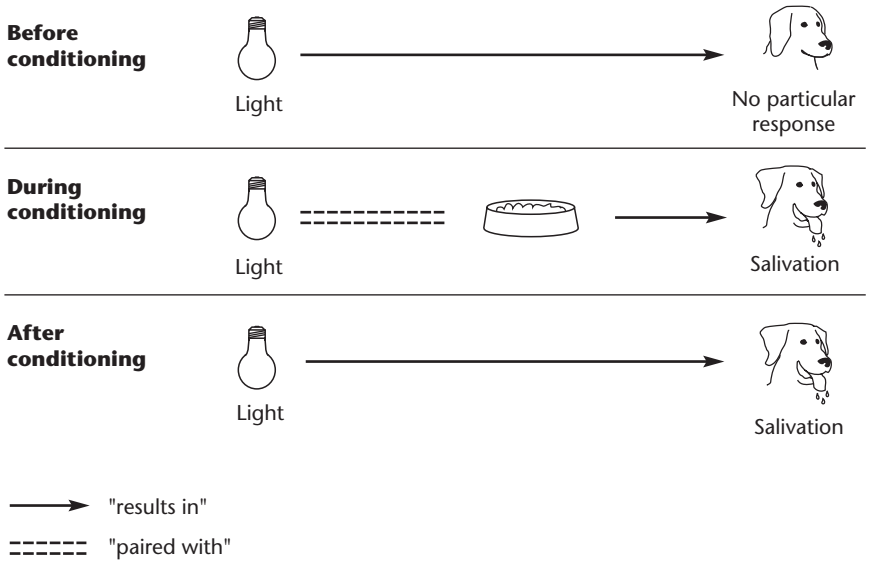


FIGURE 2-1
The learning process Pavlov recognized, which came to be called *classical conditioning*


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Mary Cover Jones

In 1924, Mary Cover Jones, one of Watson's students, successfully treated a 3-year-old boy named Peter, who had an intense fear of rabbits.[14] The therapy consisted of two basic procedures. First, Peter watched other children happily playing with a rabbit. Then Jones gradually exposed Peter to the rabbit. She placed a caged rabbit in the room while Peter was eating a favorite food. The cage was at a sufficient distance so that its presence did not interfere with Peter's eating and did not upset him. Over a number of days, Jones brought the rabbit closer to Peter, always keeping it at a distance that was comfortable for Peter. Jones eventually took the rabbit out of the cage and gradually brought it closer to Peter. Following this treatment, Peter was able to comfortably hold and play with the rabbit. Years later, Jones' two treatment procedures—modeling therapy and in vivo desensitization—were refined and now are widely used behavior therapies for the treatment of fears.

Hobart and Willie Mowrer also were influenced by Pavlov's classical conditioning principles. In 1935, they began a treatment program for nocturnal enuresis (bedwetting) at the New Haven Children's Center.[15] The treatment taught children to awaken when they felt tension in their bladder so that they could go to the toilet to urinate rather than wet the bed. To accomplish this, a special pad under the bed sheet activated a bell when a small amount of urine contacted it.[16] Thus, as soon as a child began to urinate, he or she was awakened by the bell. After bladder tension and awakening were paired a number of times, a full bladder alone woke the child. The bell-and-pad technique proved highly successful and is still used today.


Archives of the History of American Psychology/The University of Akron
Edward Thorndike

At the same time that Pavlov was studying classical conditioning, psychologist Edward Thorndike at Columbia University was investigating the strengthening and weakening of behaviors by systematically changing their consequences (reinforcement and punishment, respectively).[17] This type of learning came to be called *operant* (or *instrumental*) *conditioning*.

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Photographer: Special Collections & University Archives, University of Illinois at Chicago Library

Willie & Hobart Mowrer

In a different arena, Edmund Jacobson, a physiologist at the University of Chicago in the 1930s, was experimenting with skeletal muscle relaxation as a treatment for tension associated with a wide array of psychological and physical disorders, including generalized anxiety, phobias, depression, hypertension, colitis, tics, and stuttering.[18] Jacobson's *progressive relaxation* is the basis for the extensive use of muscle relaxation in behavior therapy.

GROWING DISCONTENT WITH PSYCHOANALYSIS

Despite the effectiveness of some early behavior therapy efforts,[19] contemporary behavior therapy did not begin in earnest until the 1950s.[20] The genesis of behavior therapy was influenced to a significant degree by the nature and status of psychoanalysis, the prevailing model of psychotherapy in the 1950s.

Psychoanalysis, originally developed by Sigmund Freud, focuses on exploring clients' early childhood experiences and attempting to uncover unconscious conflicts and desires, which are hypothesized to be the causal factors of psychological disorders. The objective is for clients to gain insight about the origin of their problems. Insight is believed to be the key to change; for this reason, psychoanalysis and similar therapies are called *insight therapies*.

Psychoanalysis was the only major approach to psychotherapy during the first half of the 20th century. However, after World War II, doubts about the usefulness of psychoanalysis as a general treatment method began to mount.

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TABLE 2-1
Differences Between Psychoanalysis and Behavior Therapy

	Psychoanalysis	Behavior Therapy
Locus of time	Past	Present
Mode of treatment	Verbal	Action-oriented
Treatment strategy	Indirectly explore client's past and unconscious as related to client's problem	Identify and directly change present maintaining conditions of client's problem
How techniques are applied	Same for all clients	Customized for each client
Length of treatment	Lengthy	Brief
Evidence for effectiveness	Uncontrolled, qualitative case studies	Controlled, quantitative experiments



Courtesy of the University of London British Postgraduate Medical Federation

Hans Eysenck

Because psychoanalysis is such a lengthy process—often requiring years—it could not meet the needs of the large number of veterans who required psychological treatment as a result of the war.

This growing discontent with traditional psychoanalytic psychotherapy received a major impetus from a 1952 retrospective study by British psychologist Hans Eysenck (pronounced EYE-zink).[21] Eysenck investigated the effectiveness of insight therapies by examining records from hospitals and insurance companies. He concluded that people treated by traditional insight psychotherapy were no more likely to improve than those who received no treatment at all. Subsequent reanalysis of Eysenck's data showed that his conclusion was exaggerated.[22] Nonetheless, Eysenck's original conclusion did serve as an impetus for psychotherapists to seriously question the benefits of traditional insight therapies and to seek more effective alternatives. Behavior therapy was a major alternative. The differences between psychoanalysis and behavior therapy are highlighted in Table 2-1.

FORMAL BEGINNINGS OF CONTEMPORARY BEHAVIOR THERAPY

Contemporary behavior therapy formally began in the 1950s simultaneously in the United States and Canada, South Africa, and Great Britain.



Harvard University Archives, call # HUP Skinner, B.F. (9)

B. F. Skinner

DEVELOPMENTS IN NORTH AMERICA

Beginning in the 1930s, psychologist B. F. Skinner at Harvard University began his extensive investigation of operant conditioning with pigeons and rats. Like Pavlov, Skinner speculated about the therapeutic uses of learning principles,[23] but he himself did not carry his ideas to fruition. It remained for his students and followers to apply operant principles to therapy.

In the early 1950s, Ogden Lindsley, then a graduate student working with Skinner, directed a series of studies to determine the feasibility of applying operant conditioning procedures to adults with severe psychiatric disorders.[24] His initial research demonstrated that patients in psychiatric hospitals whose behaviors seemed

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Courtesy of University Archives, Spencer Research Library, University of Kansas Libraries

Ogden Lindsley

aimless would consistently perform simple tasks when given meaningful reinforcers. Lindsley's initial investigations could not legitimately be considered therapy. However, they did lead to the development of sophisticated procedures, derived from operant conditioning principles, to treat complex human problems. Incidentally, Lindsley may have been the first to formally use the term *behavior therapy* to describe the systematic use of learning procedures to treat psychological disorders.[25]

In the late 1950s, Teodoro Ayllon (pronounced eye-YONE), at the Saskatchewan Hospital in Canada, performed now-classic demonstrations of the effectiveness of operant principles in modifying severely disturbed behaviors of psychiatric patients.[26] According to psychoanalysis, the dominant approach at the time, the symptoms of psychological disorders are the result of deep-seated, unconscious conflicts that were originally created by complex psychological processes (that often arose from anxiety-inducing or traumatic events in the person's life).[27] Besides having implications for how abnormal behaviors develop, this theory implied that successful treatment had to delve into those conflicts.

To challenge this psychoanalytic notion and to present an alternative and far simpler behavioral account, Ayllon and his colleague Eric Haughton performed a simple demonstration. The demonstration showed that a behavior that might be considered a symptom of a psychiatric disorder could be created simply by reinforcing it and then could be eliminated (treated) simply by withdrawing the reinforcement.[28]

The behavior they chose was *standing while holding a broom in an upright position* (see Figure 2-2). Their subject was a 54-year-old female patient with schizophrenia who had been hospitalized for 23 years and who spent most of her time lying in bed or sitting on a couch.



FIGURE 2-2
Sketch of the patient's stance that Haughton and Ayllon reinforced in their demonstration study

Source: Haughton & Ayllon, 1965, p. 96.

After Ayllon and Haughton had successfully conditioned the woman to engage in the broom-holding behavior, a psychiatrist who was unaware of what they had done made the following comments.

> Her constant and compulsive pacing holding a broom . . . could be seen as a ritualistic procedure, a magical action. When regression conquers the associative process, primitive and archaic forms of thinking control the behavior. Symbolism is a predominant mode of expression of deep-seated unfulfilled desires and instinctual impulses . . . .
>
> Her broom could then be:
>
> 1. a child that gives her love and she gives him in return her devotion;
> 2. a phallic symbol;
> 3. the sceptre of an omnipotent queen.[29]

This explanation is consistent with psychoanalytic theory that postulates complex and deep-rooted causes of behavior. However, the actual cause of the broom-holding behavior was that it had been reinforced. The validity of this simpler and more straightforward explanation was enhanced by demonstrating that the behavior could be eliminated by withholding the reinforcement. As with Lindsley's demonstrations, Ayllon and Haughton's broom-holding demonstration played a role in overcoming the widespread resistance to the behavioral model in the psychiatric community.

In 1961, Ayllon collaborated with Nathan Azrin, another of Skinner's former students, to design the first comprehensive token economy at Anna State Hospital in Illinois.[30] A token economy provides clients with token reinforcers (such

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as poker chips or points) to motivate them to perform desired behaviors; clients exchange their tokens for actual reinforcers (for instance, playing ping pong or having an ice cream cone). The Anna State Hospital token economy paved the way for the widespread application of token economies.

Early Resistance to Behavior Therapy

In setting up their token economy, Ayllon and Azrin, like most other early behavior therapists, encountered considerable resistance from the hospital staff. Most of the staff did not believe that the new behavioral treatment methods could be effective and were reluctant to support Ayllon and Azrin's program. As was typical of behavior therapy efforts at the time, the Anna State Hospital token economy was an experimental program funded by a research grant, which separated it from the mainstream hospital treatment programs. Resisting the new treatment model, the staffs of other hospital programs were reluctant to refer patients to the token economy program, especially patients with whom they were having some success. Therefore, the patients who were referred to Ayllon and Azrin's experimental program were those who had not responded to traditional treatments and were considered incurable. Naturally, this "stacked the deck" against the new behavior therapy program. Ironically, these unfavorable conditions turned out to be a blessing in disguise. The token economy resulted in remarkable changes in the so-called incurable patients, which only strengthened the case for the effectiveness of behavior therapy procedures. This cycle of facing *skepticism* from traditional professionals, having to work under *adverse conditions*, and nonetheless *demonstrating effectiveness* was a common experience for early behavior therapists through at least the mid-1970s.



Courtesy of Dr. Arnold A. Lazarus

Arnold Lazarus



Courtesy of Stanley Rachman

Stanley Rachman

DEVELOPMENTS IN SOUTH AFRICA

Meanwhile, in South Africa, psychiatrist Joseph Wolpe had become disenchanted with the psychoanalytic therapy in which he had been trained. In the 1950s, he developed several keystone behavior therapies, most notably systematic desensitization used to treat fear and anxiety. Systematic desensitization involves exposing clients to mental images of anxiety-evoking situations while engaging in a behavior that competes with anxiety, such as skeletal muscle relaxation (based on Jacobson's progressive relaxation). Wolpe explained his procedures in terms of classical conditioning and neurophysiological concepts.[31] His work was seminal, and he is sometimes referred to as the founder of behavior therapy.[32]

Prominent among the professionals whom Wolpe trained in South Africa were Arnold Lazarus and Stanley Rachman. Lazarus, who immigrated to the United States in 1966, initially made important contributions by adapting systematic desensitization to groups of clients and to children.[33] Throughout his career, Lazarus strongly advocated extending the boundaries of behavior therapy. He developed innovative therapy techniques on the basis of their effectiveness rather than their being derived from existing theories[34]—in contrast to Wolpe, whose work always was tightly bound to learning theory. Rachman, who had collaborated with Lazarus in South Africa, immigrated to Great Britain in 1959 to work closely with Eysenck. Rachman introduced systematic desensitization to British behavior therapists, and he became one of behavior therapy's foremost advocates and researchers in Great Britain.[35]

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DEVELOPMENTS IN GREAT BRITAIN

Great Britain was the third major breeding ground for contemporary behavior therapy. The development of behavior therapy in Great Britain was spearheaded by Eysenck at the Institute of Psychiatry at the University of London. This work was facilitated by M. B. Shapiro,[36] who, as director of the Clinical-Teaching Section, advocated validating behavior therapies by systematically comparing individual clients' behaviors during periods of therapy and periods without therapy (essentially *reversal studies;* see Chapter 5), as did Skinnerians.[37] Relying on empirical validation is just one commonality among early behavior therapists in North America, South Africa, and Great Britain. As often happens in the history of science, similar approaches developed simultaneously and independently. Nonetheless, behavior therapy in North America, South Africa, and Great Britain in the 1950s presented a strong and fairly unified alternative to traditional psychoanalytic therapy.

EARLY ETHICAL CONCERNS ABOUT BEHAVIOR THERAPY

In its formative years, there were some ethical concerns about behavior therapy that were, in large measure, artifacts of the time. One ethical concern was the possible danger that behavior therapy techniques would be used to control people. In part, this notion may have arisen from misunderstandings about some of the terminology that behavior therapists used, such as references to "*controlling* variables," "experimental *control*," and the "*manipulation* of contingencies." Coincidentally, behavior therapy emerged in a period of heightened vigilance about external control (such as by governments), about the invasion of personal privacy (as through electronic eavesdropping and computer storage of personal information), and about the abuse of civil liberties (for instance, of institutionalized patients and prisoners). "Reacting to the seemingly unchecked growth of these influences, many citizens . . . [came] to adopt positions that are highly critical of any and all behavior influence efforts."[38]

A number of early ethical criticisms of behavior therapy arose out of confusion as to what behavior therapy was and what it was not. These criticisms occurred most frequently when the term *behavior modification* was used (rather than *behavior therapy*). *Behavior modification* was mistakenly confused with *any* procedure that modifies behavior, including psychosurgery (such as lobotomies), electroconvulsive therapy (ECT), drugs, brainwashing, sensory deprivation, and even torture.[39] A survey of articles indexed under *behavior modification* in the *New York Times* over a 5-year period revealed that the term was incorrectly used approximately half the time.[40] In some cases, the treatment procedures referred to as *behavior modification* had absolutely no relationship to behavior therapy, such as the use of a drug that causes a brief period of paralysis of the muscles (including those of the respiratory system) as punishment for prisoners.[41]

The extent to which the name of a therapy procedure can influence people's perceptions of it is illustrated by a study titled "A Rose by Any Other Name . . . : Labeling Bias and Attitudes toward Behavior Modification."[42] In this experiment, undergraduate and graduate students evaluated a video of a teacher using reinforcement procedures in a special education class. All the students saw the

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same video, but half were told that it illustrated "behavior modification" and half were told that it illustrated "humanistic education." Compared with students who viewed the "humanistic education" video, those who viewed the "behavior modification" video gave the teacher significantly less favorable ratings and considered the teaching method significantly less likely to promote academic learning and emotional growth. Apparently, a rose by any other name may not smell as sweet.

ACCEPTANCE AND GROWTH OF BEHAVIOR THERAPY

In the 1960s, there were few behavior therapists in private practice, and those working in psychiatric hospitals and outpatient facilities were still encountering resistance from traditional psychotherapists. Even in academic settings, which typically are accepting and nurturing atmospheres for new ideas, behavior therapists often were isolated because their colleagues viewed behavior therapy as a radical departure from mainstream psychology.

To overcome these barriers to acceptance and growth, behavior therapists in the late 1950s and early 1960s spent considerable time gathering evidence that behavior therapy was a viable alternative to traditional psychotherapy. This effort included the publication of demonstration projects, such as Ayllon and Haughton's, that showed that a wide array of clinical problems could be treated successfully in a relatively brief period with behavior therapy techniques.[43]



Linda A. Cicero/Stanford News Service

Albert Bandura

In the 1960s, while already-established behavior therapy procedures (such as token economies and systematic desensitization) were being refined, another major approach to behavior therapy was born. Psychologist Albert Bandura at Stanford University developed a social learning theory that included not only principles of classical and operant conditioning but also *observational learning*[44]—the process of changing one's own behaviors by viewing the behaviors of another person (a model). In addition, Bandura's *social learning theory*[45] emphasized the critical role that cognitions (such as thoughts, images, and expectations) play in psychological functioning, including their role in the development and treatment of psychological disorders. Bandura now calls his theoretical approach *social cognitive theory*.[46]

Making cognitions a legitimate focus of behavior therapy was antithetical to Watson's behaviorism because cognitions are not directly observable. Watson's behaviorism may have been a useful position for early behavior therapists to adopt because it countered the deeply entrenched psychoanalytic perspective emphasizing unconscious forces that, of course, cannot be observed directly. Today, most behavior therapists believe that dealing only with directly observable behaviors is too restrictive.[47] After all, humans *do* think, expect, plan, and imagine, and these cognitive processes clearly influence how people act.

During the 1960s, several prominent behavior therapists created *cognitive-behavioral therapy*, which changes clients' maladaptive cognitions that contribute to psychological disorders. Independently, Aaron Beck at the University of Pennsylvania developed *cognitive therapy*,[48] and Albert Ellis, in private practice in New York City, designed *rational emotive therapy*[49] (which he renamed *rational*

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emotive behavior therapy in 1993[50]). Both therapies seek to modify the negative and illogical thoughts associated with many psychological disorders, such as depression and anxiety. Donald Meichenbaum (pronounced MIKE-en-baum), at the University of Waterloo in Ontario, developed cognitive-behavioral treatment packages such as *self-instructional training* and *stress inoculation training* that are used to treat a wide range of psychological problems, including impulsive behaviors, anxiety, anger, and pain.[51] Meichenbaum was among the first to apply cognitive-behavioral interventions to children. Initially, cognitive-behavioral therapies served as supplements to existing behavior therapy procedures, but they rapidly evolved as a major approach in the field. Indeed, today, a majority of behavior therapists use cognitive-behavioral therapies.

In 1966, the Association for Advancement of Behavior Therapy was established in the United States. Cyril Franks, who previously had worked with Eysenck and Rachman at the Institute of Psychiatry in London, was its first president. It has become the major professional organization that advocates for behavior therapy and facilitates the field's further development. Additionally, by 1970, four major professional journals were devoted exclusively to behavior therapy.

Still, some critics voiced the opinion that behavior therapy would soon fade into oblivion, along with a host of other "faddish" therapies that arose in the 1960s, such as encounter groups and primal scream therapy. However, developments in the 1970s clearly showed that behavior therapy was much more than a passing fancy. Behavior therapy was beginning to be acknowledged as an acceptable form of treatment and even a *treatment of choice* (that is, an optimal treatment) for certain psychological problems.



Courtesy of Cyril Franks

Cyril Franks

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EMERGENCE OF BEHAVIOR THERAPY

In the 1970s, behavior therapy emerged as a major force in clinical psychology and made a significant impact on psychiatry, social work, and education. The principles and techniques of behavior therapy also were adapted to enhance the everyday functioning of people in areas as diverse as business and industry,[52] child rearing,[53] ecology,[54] and the arts.[55] Applications included improving athletic performance,[56] increasing people's willingness to take prescribed medications,[57] enhancing the quality of life of nursing home residents and geriatric patients,[58] and more efficiently teaching young children to play musical instruments.[59] Examples of larger-scale behavioral interventions included promoting energy conservation,[60] preventing crimes,[61] providing individual instruction for large college classes,[62] and influencing entire communities to engage in behaviors that lower the risk of cardiovascular disease.[63]

During the 1980s, two important developments in the field of behavior therapy increased its applicability and acceptance. First, cognitive-behavioral therapy emerged as a major force. Second, behavior therapy began to make contributions to the field of *behavioral medicine*, which involves the treatment and prevention of medical problems.[64]

By 1990, the Association for Advancement of Behavior Therapy was a quarter of a century old and had grown in membership from 18 (in 1966) to approximately 4,000. Today, the organization is known as the Association for Behavioral and Cognitive Therapies and has 4,700 members. The new name simultaneously acknowledges the inclusion of both traditional behavioral and cognitive-behavioral approaches and that the field consists of many different therapeutic techniques.

Also by 1990, behavior therapy societies had been founded in other countries, including Argentina, France, Germany, Great Britain, Israel, Japan, Mexico, the Netherlands, and Sweden.[65] More than 20 major journals devoted solely to behavior therapy were being published, and empirical research on behavior therapy filled the leading clinical psychology journals as well as many prestigious publications in psychiatry, social work, and education. Although behavior therapy had its origins in South Africa, Great Britain, and North America, today it is practiced around the world in such diverse countries as Russia,[66] Poland,[67] Argentina,[68] Puerto Rico,[69] Italy,[70] Japan,[71] Singapore,[72] New Zealand,[73] and Cuba,[74] to name a few.

The field of behavior therapy continues to grow and evolve in the present. As we have moved from the end of the 20th century and into the beginning of the 21st, two major trends have developed. One is an increased emphasis on establishing the empirical validity of behavior therapies. The other is the development of therapies that alleviate clients' suffering through very different approaches that use mindfulness and acceptance strategies.

One indication of the increasing maturity of the field of behavior therapy is that beginning in the 1980s, convincing skeptical outsiders was no longer a priority.[75] Instead, behavior therapists began to scrutinize their own therapy methods and the impact they were having on clients and on the broad field of psychotherapy.[76]

Behavior therapy is about change, and it should be clear to you after reading this chapter that change also aptly describes the field of behavior therapy in its relatively short history.

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SUMMARY

1. Behavioral principles have been used for thousands of years to change people's problematic behaviors. However, only in the past 60 years have they been applied systematically.
2. There are a number of historical accounts of treatment procedures that resemble those of contemporary behavior therapy. However, the origins of behavior therapy lie in experimental research on learning conducted in the early part of the 20th century. This included the work of Pavlov, who conceptualized classical conditioning; Watson, who founded behaviorism, an approach that dealt only with observable behaviors; Jones, who designed an early learning-based treatment of fear; and the Mowrers, who designed the bell-and-pad treatment for bedwetting, based on classical conditioning.
3. Contemporary behavior therapy began in the 1950s, in part because of a growing discontent with psychoanalysis. It started simultaneously in North America, South Africa, and Great Britain. In the United States, Lindsley used the operant conditioning principles developed by Thorndike and Skinner to influence the behaviors of patients with psychiatric disorders, and Ayllon and Azrin developed the first token economy. In South Africa, Wolpe developed systematic desensitization, and Lazarus broadened its application. Rachman brought behavior therapy from South Africa to England and collaborated with Eysenck, an advocate for behavior therapy and critic of psychoanalytic therapy.
4. Early behavior therapy efforts were met with strong criticism and resistance from traditional psychotherapists. Initially, behavior therapists had to focus on demonstrating that behavior therapy could be effective.
5. Early ethical criticisms of behavior therapy, which proved to be unfounded, arose because of a heightened concern about the possible dangers of external control and because of confusion about what constitutes behavior therapy.
6. In the 1960s, Bandura developed a social learning theory that combined observational learning with classical and operant conditioning. The theory emphasized the critical role that cognition (thinking) plays in psychological functioning—a drastic departure from Watson's behaviorism.
7. Also in the 1960s, Ellis, Beck, and Meichenbaum developed the first cognitive-behavioral therapies that change clients' cognitions that maintain psychological disorders. Cognitive-behavioral therapy began as a supplement to existing behavior therapy procedures but rapidly evolved into a major behavior therapy approach.
8. In the 1970s, behavior therapy emerged as a major force among psychotherapy approaches.
9. The Association for Advancement of Behavior Therapy (today known as the Association for Behavioral and Cognitive Therapies) was established in 1966 in the United States to advocate for behavior therapy and has served as its major professional organization.
10. Although behavior therapy had its origins in South Africa, Great Britain, and North America, today it is practiced in many diverse countries.

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CHAPTER 3



The Behavioral Model

We Are What We Do: Preeminence of Behavior

Overt and Covert Behaviors

Covert Behaviors: Special Considerations

PARTICIPATION EXERCISE 3-1 Distinguishing Between Overt and Covert Behaviors

Behavioral Versus Trait Descriptions

PARTICIPATION EXERCISE 3-2 Distinguishing Between Traits and Behaviors

PARTICIPATION EXERCISE 3-3 Translating Traits Into Behaviors

Why Do We Behave the Way We Do?

The ABC Model

IN THEORY 3-1 It's Where You Are (Not Who You Are) That Counts: Behavior Is Situation Specific

IN THEORY 3-2 The Myth of Symptom Substitution

PARTICIPATION EXERCISE 3-4 Identifying Antecedents and Consequences

Present Maintaining Conditions Versus Past Originating Conditions: A Critical Distinction

Environment and Learning Versus Biology and Heredity

IN THEORY 3-3 Don't Look Back: The Role of Past Events on Current Behaviors

IN THEORY 3-4 Freedom in Reciprocal Determinism

SUMMARY

PARTICIPATION EXERCISE ANSWERS

REFERENCE NOTES

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To appreciate the nature of behavior therapy, you must understand the model on which it is based. This chapter describes the general model of human behavior that forms the basis of behavior therapy. Then Chapter 4 outlines the principles and process of behavior therapy derived from the model. Together, Chapters 3 and 4 present the core of behavior therapy.

WE ARE WHAT WE DO: PREEMINENCE OF BEHAVIOR

How do we define who a person is? What makes a person unique? According to the behavioral model, each of us is defined by our **behaviors**—in other words, by what we *do. We are what we do.*

OVERT AND COVERT BEHAVIORS

There are two broad categories of behaviors: overt and covert. **Overt behaviors** are *actions* that other people can directly observe (most often through sight or hearing); in a sense, they are public behaviors. Examples include eating, walking, talking, kissing, cooking, laughing, driving a car, and texting (hopefully not while driving).

Covert behaviors are private behaviors, things we do that others cannot directly observe; however, we usually are aware of them when we ourselves engage in them. There are three categories of covert behaviors: *cognitions* (such as thinking, expecting, attributing, believing, and imagining); *emotions* (feelings); and *physiological responses* (such as muscle tension, heart rate, blood pressure, and respiratory rate).

Overt behaviors, cognitions, emotions, and physiological responses constitute the four **modes of behavior** that are assessed and treated in behavior therapy. Before you continue reading, do Participation Exercise 3-1, as it will indicate if you can distinguish between overt and covert behaviors, which is not always as simple as it might seem.

COVERT BEHAVIORS: SPECIAL CONSIDERATIONS

Covert behaviors are no less important than overt behaviors. Indeed, many behaviors that supposedly set us apart from our relatives in the animal kingdom are covert, including complex thinking and reasoning. Although behavior therapists deal with both overt and covert behaviors, this was not always the case. Early behavior therapists followed the tradition of Watson's behaviorism and dealt only with overt behaviors (see Chapter 2).

Assessing overt behaviors is relatively straightforward because they are directly observable. In contrast, assessing covert behaviors is more complicated. Each of us has direct knowledge of our own covert behaviors, but we have only indirect knowledge of other people's covert behaviors.

The covert behaviors of others are inferred from their overt behaviors. (An exception is physiological responses that can be measured by instruments, such as a stethoscope and a polygraph.) Most often, we learn of others' covert behaviors when they tell us about their thoughts and feelings. *Talking* about one's private experiences is an *overt* behavior.

The other way we learn about someone's covert behaviors is by observing what the person does and *inferring* from his or her overt actions what is "going

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PARTICIPATION EXERCISE 3-1

Distinguishing Between Overt and Covert Behaviors

Distinguishing between overt (public) and covert (private) behaviors is easy if you remember the following two rules. If you can directly observe (usually see or hear) other people's engaging in the behavior, it is overt. If you cannot directly observe the behavior, it is covert.

Number from 1 to 20 on a sheet of paper, and for each of the behaviors listed, write *O* for overt behaviors and *C* for covert behaviors. Then check the answers in the Participation Exercise Answers at the end of the chapter.

1. Singing
2. Thinking
3. Smiling
4. Learning
5. Eating
6. Remembering
7. Liking
8. Staring
9. Enjoying
10. Writing
11. Listening
12. Observing
13. Speaking
14. Dreaming
15. Drinking
16. Smoking
17. Hoping
18. Touching
19. Concentrating
20. Sighing

on inside the person." For instance, if you see someone smiling and laughing, you are likely to conclude that the individual is feeling happy. You could say that you have "anchored" a covert behavior with an overt behavior.[1] Look at Table 3-1 (see page 32) for examples of overt behaviors that could serve as anchors for common covert behaviors. Notice that some of the overt behavioral anchors could easily be indicative of other covert behaviors (for example, besides forgetting, what other overt behaviors might "missing an appointment" be indicative of?).

BEHAVIORAL VERSUS TRAIT DESCRIPTIONS

Before reading further, take 2 minutes to do a simple demonstration. Think of someone you know well. Write a brief description of that person so that someone who doesn't know the person could get a feel for what he or she is like. When you have finished, continue reading.

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TABLE 3-1
Examples of Overt Behaviors That Serve as Anchors for Covert Behaviors

Overt Behaviors	Covert Behaviors
Telling others what's "on your mind"	Thinking
Missing an appointment	Forgetting
Staring, wrinkling one's brow, remaining motionless	Concentrating
Trembling, pacing, biting one's nails	Feeling frightened
Hugging, kissing, saying "I love you"	Feeling love for someone
Applauding, thanking	Appreciating

When describing someone, as you just did, most people refer to the individual's traits rather than to their behaviors. *Traits* are personality characteristics that we *attribute* to others and ourselves, such as friendly, smart, interesting, and honest. Traits are theoretical constructs that do not actually exist, but they are convenient ways of describing people's characteristics. Traits are inferred from behaviors. For example, when we observe someone holding the door open for people or stopping to let other motorists enter the flow of traffic (behaviors), we infer that the person is *courteous* (trait). It is important to remember that *traits are abstract concepts, not covert behaviors.*

Trait descriptions *appear* to provide a great deal of information about a person, but they actually provide generalizations rather than specific information. Consider the following example. When her friends are upset, Juanita tries to comfort them, whereas Juan respects his friends' privacy and leaves them alone. Both Juanita and Juan can be considered *caring.* However, referring to either of them as *caring* does not tell us how each will behave.

To understand what is meant by a trait for a particular person, you have to refer to the person's behaviors that led to the inference of the trait in the first place—which is circular reasoning. First, you observe a person's behavior; then you infer a trait from the behavior you've observed; finally, to explain what is meant by the trait (for the particular person), you return to the behavior you observed. If one begins and ends at the observed behavior, the use of traits is superfluous.

In contrast, the behavioral model simply describes people in terms of their behaviors. Behavioral descriptions are specific and much more detailed than trait descriptions. On the downside, they are lengthier. Compare a trait description "Lillian is caring" with the observation "Lillian calls sick friends to check on them, always remembers people's birthdays and sends them cards, does errands for others, and recycles." However, the precision—and therefore the usefulness of the behavioral description—outweighs its disadvantage of being lengthier.

There are several interrelated advantages of describing clients' problems in terms of behaviors rather than traits. Behavioral descriptions are more precise, and they preserve the client's individuality. In contrast, trait descriptions classify clients' problems into broad categories (such as depression and schizophrenia). Further, behavioral descriptions provide the specific, detailed information needed to design a treatment plan tailored to each client's unique problem.

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Being able to distinguish behaviors from traits is important for understanding the behavioral model. Descriptions that concern what people *do* refer to behaviors; descriptions that concern what people *are* or characteristics that they *possess* refer to traits. Participation Exercise 3-2 provides a check of your understanding of this distinction, and you should complete it before continuing reading.

PARTICIPATION EXERCISE 3-2

Distinguishing Between Traits and Behaviors

See if you can differentiate between traits and behavioral descriptions in the following paragraph. On a sheet of paper, number from 1 to 20. Then write the letter *T* for trait or *B* for behavior (overt or covert) for each of the numbered statements.

> (1) Ramon is extremely perceptive. (2) He notices even small changes in others' emotions and (3) accurately tells them how they are feeling. (4) He reads a great deal and (5) is very knowledgeable about many topics. (6) He is very intelligent, and (7) he can recall facts he learned years ago. (8) Ramon is a warm, sincere, good-natured person. (9) He is a good friend, (10) goes out of his way to help other people, and (11) is generous. (12) He always dresses neatly. (13) Ramon works hard, and (14) he is a dedicated worker. (15) He is a good athlete. (16) He swims during the summer and ice skates during the winter. (17) He is an active person (18) who is very energetic. (19) Although he is gregarious, (20) Ramon frequently spends time alone.

You can check your answers with those in the Participation Exercise Answers at the end of the chapter. Look at the descriptions you mislabeled and apply the following rule: What a person *does* is a behavior; what a person *is* or *possesses* is a trait.

Behavior therapists deal with clients' behaviors, not their traits. However, clients often describe themselves and their problems by using traits (for example, "I'm shy and withdrawn"). Thus, behavior therapists must "translate" traits into behaviors. This involves identifying the unique behaviors that are associated with clients' trait descriptions. The key question the therapist asks is, "*What specific things do you do that lead you to describe yourself as [the trait]?*" As you can see in Table 3-2, a trait description may be associated with a variety of specific behaviors.

TABLE 3-2
Examples of Trait Descriptions and Possible Associated Overt Behaviors

Trait	Overt Behaviors
Happy	Smiling, laughing, talking about feelings of joy
Depressed	Crying, sitting alone, moving slowly, saying that one is depressed ("down" or unhappy)
Friendly	Greeting people, smiling at others, engaging strangers in conversation
Trustworthy	Arriving on time to appointments, carrying out assigned tasks, keeping secrets
Generous	Volunteering to help others, frequently paying for the check when dining with others, donating money to charities

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PARTICIPATION EXERCISE 3-3

Translating Traits Into Behaviors

Translating trait descriptions into behavioral descriptions involves finding behaviors that could be indicative of particular traits. For each of the eight traits, list several behaviors that people who use that trait to describe themselves would be likely to engage in. The behaviors you list should be actions individuals *do* that most people would agree are associated with the particular trait.

1. Sociable
2. Hostile
3. Helpful
4. Thrifty
5. Dependable
6. Smart
7. Patient
8. Healthy

You will find sample behaviors for each trait in the Participation Exercise Answers at the end of the chapter.

Before continuing your reading, complete Participation Exercise 3-3, which will give you experience in translating traits into behaviors, as behavior therapists often have to do.

WHY DO WE BEHAVE THE WAY WE DO?

How often have you asked, "Why did I do that?" or "Why did so-and-so act that way?" People are fascinated by "why questions" about human behavior, and psychologists have developed theories or models to explain human behavior. According to the behavioral model, *a person's behaviors are caused by present events that occur before and after the behaviors have been performed.* **Antecedents** are events that occur or are present *before* the person performs the behavior. **Consequences** are events that occur *after* and *as a result of* the behavior. For example, feeling tired is an antecedent for sleeping, and feeling rested the next day is a consequence of sleeping.

THE ABC MODEL

The **ABC model** describes the temporal sequence of antecedents, behavior, and consequences (see Figure 3-1). The specific antecedents and consequences that cause an individual to perform a behavior are its **maintaining conditions**. Not all antecedents and consequences of a behavior are maintaining conditions of the behavior. Only a relatively small number of antecedents and consequences *maintain* (influence or cause) a behavior, and we refer to these as **maintaining antecedents** and **maintaining consequences**. The process of assessing the maintaining conditions of a behavior is known as a *functional analysis.*

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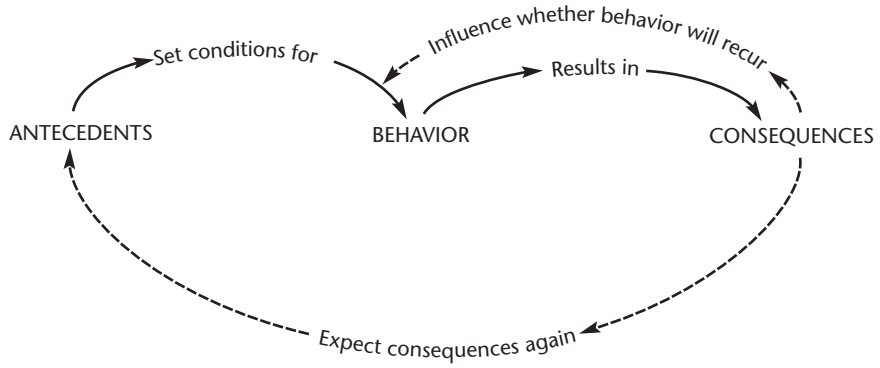


FIGURE 3-1
The ABC model

Maintaining Antecedents

There are two categories of maintaining antecedents—*prerequisites* and *stimulus control*—and both can occur naturally or can be introduced intentionally to change a behavior.

To engage in a behavior, you must first have the requisite motivation, knowledge, skills, and resources. For example, *going to the movies* requires a desire to go to the movies (motivation), knowing where the theater is located and what time the movie starts (knowledge), being able to drive to the theater (skills), and having enough money to pay for a ticket (resources). If these prerequisites seem trivial, consider whether you could go to a movie without them.

Stimulus control involves cues or conditions that "set the stage" for behaviors to occur. There are two types of stimulus control: *prompts* and *setting events.* **Prompts** are *cues* to perform a specific behavior, such as when a parent says to a child before dinner, "Go wash your hands." **Setting events** are environmental *conditions* that elicit a behavior; they are broader and more complex than prompts. Whereas a prompt generally is for a specific behavior, setting events may elicit multiple behaviors (for example, a hot, sunny day might elicit going for a run, reading outside, or staying in an air conditioned house). Setting events may include who is present and what they are doing, the time of day, and the physical arrangement of the environment. For example, you are more likely to study for a test if you are in a quiet room with others who are studying than if you were in a room where people are socializing.

Think about how your behavior differs when you are in class, at a party, hanging out with close friends, and in a waiting room with strangers. Each of these setting events elicits different behaviors. People frequently alter setting events in their daily lives to influence their own behaviors. For instance, a woman wishing to lose weight and improve her health might remove all high-fat foods from her house and keep healthful foods prominently displayed. Behavior therapists use both prompts and setting events in therapy to change clients' problem behaviors. In Theory 3-1 discusses the broad implications of setting events.

Figure 3-2 (page 37) presents the composition of maintaining antecedents schematically, which may help you conceptualize the various categories. The four types of prompts listed will be described in Chapter 7.

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IN THEORY 3-1

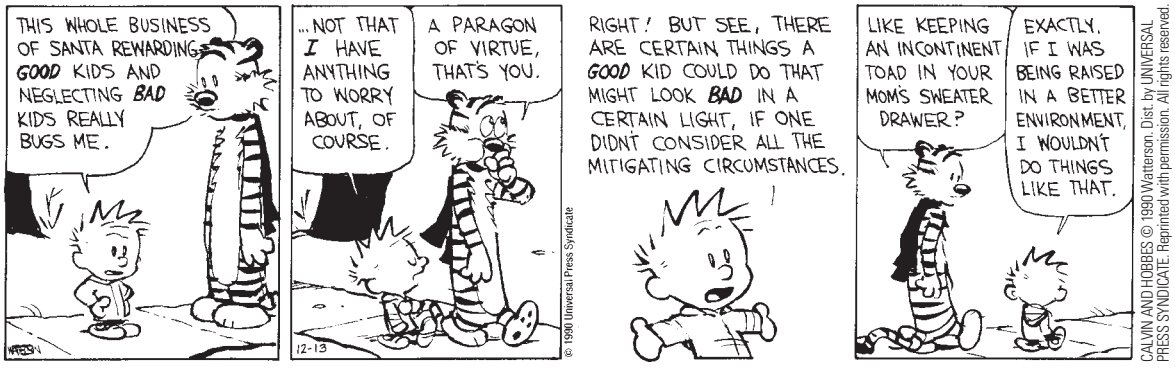
It's Where You Are (Not Who You Are) That Counts: Behavior Is Situation Specific

Our predictions about how people in our lives will act often are correct because people generally behave *consistently.* Many theories have been developed to explain the source of this consistency. According to the behavioral model, the consistency is determined, in large part, by the *situation* in which the behavior is performed. *Situation* refers to the context, including where we are, whom we are with, and what is happening. Setting events indicate which behaviors are typically expected or appropriate in the particular circumstances and therefore are likely to result in positive consequences. Setting events also may tell us which behaviors are inappropriate and likely to result in negative consequences.

Because the cues in each situation influence our behavior, how we act is likely to be consistent in the same or similar situations. Thus, we say that behavior is **situation specific**.[2]

A simple example will illustrate what is meant by situation specificity. Wilberto is a college student who typically sits quietly in each of his lecture classes, usually talks at a moderate volume whenever he eats with friends at the cafeteria, and yells at basketball games until he becomes hoarse. In each instance, the social expectations and restrictions associated with the specific context influence how loudly Wilberto speaks. Wilberto's speech volume is consistent in similar situations, but it varies in different situations. Further, although Wilberto sits quietly in all his lecture classes, he often speaks up in seminars and discussion sections, where the demands of the situation are different from those in lecture classes.

By way of contrast, the major alternative to the situation-specificity explanation of the consistency of behavior is to attribute behavioral consistency to a person's traits. We might call Wilberto quiet or loud. However, both these descriptions are inaccurate because *quiet* does not predict Wilberto's behavior at basketball games, and *loud* does not predict his behavior in lecture classes. Thus, describing Wilberto's behavior in different situations is more accurate than referring to traits he might have.



Maintaining Consequences

Whereas maintaining antecedents are responsible for a behavior's being performed in the first place, *maintaining consequences determine whether the behavior will occur again.* In general, when the consequences of performing a behavior are favorable, the individual is more likely to repeat the behavior. Unfavorable consequences make it less likely that the person will engage in the behavior in

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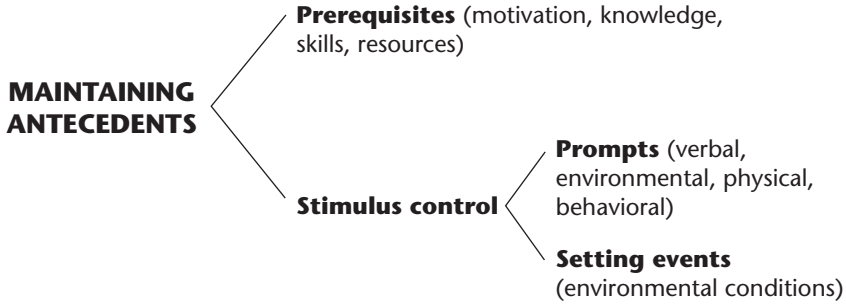


FIGURE 3-2
The categories of maintaining antecedents

the future. Consequences include what happens directly to the person, to other people, and to the physical environment as a result of the behavior. Consequences can be immediate or delayed, and they can be short term or long term.

You may be wondering how events that occur *after* a behavior has been performed can influence that behavior. In fact, the actual consequences of a behavior can influence only the future occurrence of the behavior. However, a person's *expectations* about the probable consequences influence whether a person will perform a behavior in the present (see Figure 3-1, page 35). These expectations are *antecedents.* In other words, a person's prediction about what is likely to happen as a result of performing a particular behavior is one factor that determines whether the person will perform the behavior.

Our expectations about the maintaining consequences of our actions are largely a product of the consequences we have experienced for similar behaviors in the past. *Maintaining consequences for today's actions are the maintaining* antecedents *of tomorrow's actions.* For example, if Julius' dinner guests praised his Caesar salad last week, he will be tempted to make one this week. His guests' praise was a consequence of making the salad last week, but it becomes an antecedent of the same behavior this week. Clearly, remembering the consequences of a behavior is necessary if the consequences are to affect the future occurrence of the behavior.[3]

Identifying Maintaining Antecedents and Consequences

Contrary to the popular misconception, behavior therapy does not *directly* change symptoms or problem behaviors (see In Theory 3-2). *Behavior therapy treats problem behaviors by directly changing their maintaining conditions.* And before the maintaining conditions can be changed, they first must be identified. This process begins by identifying all antecedents and consequences of the behavior, some of which are its maintaining conditions. Participation Exercise 3-4 will give you some practice doing this and also check on whether you understand the difference between antecedents and consequences. You can do this exercise now or at a later time.

Remember, not all the antecedents and consequences of a behavior are its maintaining conditions. In behavior therapy, the therapist and client identify those antecedents and consequences that are likely to be influencing (causing)

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IN THEORY 3-2

The Myth of Symptom Substitution

In the early days of behavior therapy—the 1950s and early 1960s—psychoanalysts used the concept of symptom substitution to argue that behavior therapy was an incomplete treatment.[4] *Symptom substitution* refers to the notion that treating behaviors—rather than their so-called underlying causes—will result in another maladaptive behavior (symptom) replacing (substituting for) the treated behavior. A hypothetical example would be a client who develops a fear of undressing in locker rooms after successfully being treated for fear of public speaking. A psychoanalyst might argue that this occurred because the underlying cause of the public speaking anxiety, such as an unconscious conflict about exposing oneself in public places, was not treated. Although the client no longer is afraid of speaking in public, the unconscious conflict still exists, and it manifests itself in another symptom, fear of undressing in locker rooms.

The symptom substitution criticism of behavior therapy is fallacious for two reasons. First, it is based on the *mistaken* premise that behavior therapy treats symptoms (problem behaviors).[5] As you have just learned, behavior therapy *directly* treats the maintaining conditions—which *are the causes*—of problem behaviors (symptoms). Second, and most important, there is no empirical evidence that symptom substitution occurs in behavior therapy.[6] In studies that specifically looked for evidence of symptom substitution, none was found; clients do not develop maladaptive substitute behaviors.[7] Nonetheless, the myth of symptom substitution apparently still exists among some mental health professionals who are unfamiliar with behavior therapy.[8]

PARTICIPATION EXERCISE 3-4

Identifying Antecedents and Consequences

This exercise contains a list of six specific behaviors and the details surrounding each. From the details, list the antecedents and consequences of each designated behavior. Include all the antecedents and consequences actually mentioned in the scenario, but do not assume any that are not mentioned. When you have finished, check your answers with those in the Participation Exercise Answers at the end of the chapter.

Behavior 1: *Calling the police.* One hot summer evening, Mrs. Kriegel was sitting in her second-floor apartment. As she looked out the window, she saw two young men attack an elderly woman and then run off with the woman's purse. She immediately called the police. The police thanked her and then rushed to the scene of the crime. Mrs. Kriegel realized she had done the right thing.

Behavior 2: *Going to a play.* Quanisha read about a new play in town that had received especially good reviews. She knew she could get a student pass to see it and that she could earn extra credit for her English class if she saw the play. As it turned out, she was disappointed in the play and felt it was a waste of time. The extra credit, however, did boost her grade.

Behavior 3: *Getting up late.* Al did not go to bed until after 3 a.m., and he was so drunk he forgot to set his alarm clock. He awoke 2 hours late the next morning and missed the last bus to the office. When he finally arrived at his office, he discovered that he had missed two important appointments with clients.

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Behavior 4: *Cooking a fancy meal.* Brendan's parents were coming for a visit, and he wanted to make a good impression. It was the perfect opportunity for him to try out a new recipe, and besides, he enjoyed preparing a fancy meal. Although his efforts turned the kitchen into a complete disaster area, the meal itself was a success and his parents enjoyed the dinner. Brendan also enjoyed the dinner and was satisfied with the evening as a whole.

Behavior 5: *Shopping for new clothes.* Jane needed new clothes, and she had saved enough money during the summer to go shopping. She got directions to the new shopping mall and borrowed the family car. Jane came home with a comfortable and stylish new wardrobe. She felt good about her new clothes, and her mother and friends commented on how good she looked in them.

the problem behavior. It is these ***probable*** **maintaining conditions** of a behavior that are changed to modify the problem behavior.

An example may help clarify the concept of maintaining antecedents and maintaining consequences and their roles in determining behaviors. Consider the behavior you are engaging in right now—reading a chapter in your textbook. What motivation, prerequisites, prompts, and setting events have led to your reading the chapter? What are the likely consequences of reading the chapter? Take a moment to write down these antecedents and consequences, and then look at the examples in Figure 3-3.

PRESENT MAINTAINING CONDITIONS VERSUS PAST ORIGINATING CONDITIONS: A CRITICAL DISTINCTION

According to the behavioral model, *present* conditions maintain our current behaviors. What role do our past experiences play in determining our current behaviors? The answer is that past events only indirectly influence present behaviors. The factors that directly result in present behaviors are occurring now, in the present.

Let's look at a personal example. When was the last time you dressed yourself? Unless you are lounging at home in your pajamas, the answer probably is "sometime earlier today." In fact, you dress yourself one or more times a day, every day. What are the maintaining conditions of *dressing yourself*?

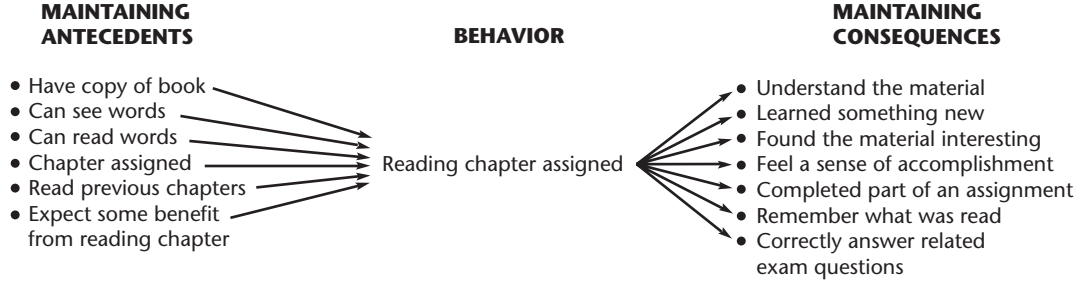


FIGURE 3-3
Some of the possible maintaining antecedents and maintaining consequences of performing a specific behavior: reading an assigned chapter

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The maintaining antecedents may include knowing how to dress yourself, having clothes, waking up in the morning, and anticipating going somewhere outside your home. The maintaining consequences may include feeling properly dressed, being complimented on your attire, and not getting arrested for indecent exposure.

Do you recall your first attempts to dress yourself as a child? You may have resisted dressing yourself initially. After all, you had been used to having others dress you, and knowing where to put your arms and legs and how to button a shirt and lace your shoes was difficult and frustrating. Nonetheless, you learned to dress yourself. What conditions influenced your learning to dress yourself? The major maintaining antecedent probably was your parents' verbally prompting you to get dressed. The maintaining consequences probably included praise from your parents and permission to engage in some desirable activity (such as going outside to play) that required being dressed.

This example illustrates that the same behavior—dressing yourself—is maintained today by conditions that are very different from the conditions in which it originated. This is the essence of the crucial distinction between present maintaining conditions and *past originating conditions*.

Past events can have an *indirect* influence on current behaviors, as when the memory of previous events affects how you act now.[9] For instance, *recalling* how pleasant it was to be comforted by your mother when you cried can help maintain your crying years after you received your mother's sympathy. However, note that the comfort your mother provided is not influencing your current behavior. Rather, the *memory* of being comforted is serving as a maintaining condition—and memories are *present* events.

To summarize, behavior therapists assume that present conditions directly influence behaviors occurring in the present. In other words, *present behaviors are maintained by present maintaining conditions.* Thus, the way to change a present behavior is to change its present maintaining conditions. In Theory 3-3 continues the discussion of the role of past events on current behaviors.

ENVIRONMENT AND LEARNING VERSUS BIOLOGY AND HEREDITY

All our behaviors—including the abnormal behaviors treated by behavior therapy—develop and are maintained by both biological/hereditary factors and environmental/learning factors. *Learning* is the process by which environmental factors influence behaviors. The **environment** comprises all external influences on behaviors, including the physical setting and conditions as well as the people who are present. The proportion of influence of biological versus environmental factors varies with different behaviors, but even those behaviors that have a significant biological component are also influenced by environmental factors.[10] Here are just a few examples.

Intellectual behaviors (such as comprehension, reasoning, and problem solving) have a strong genetic component.[11] Within the broad limits established by one's genetic endowment, however, environmental factors can substantially enhance (as with a stimulating environment) or inhibit (as with minimal stimulation) intellectual behaviors.[12]

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IN THEORY 3-3

Don't Look Back: The Role of Past Events on Current Behaviors

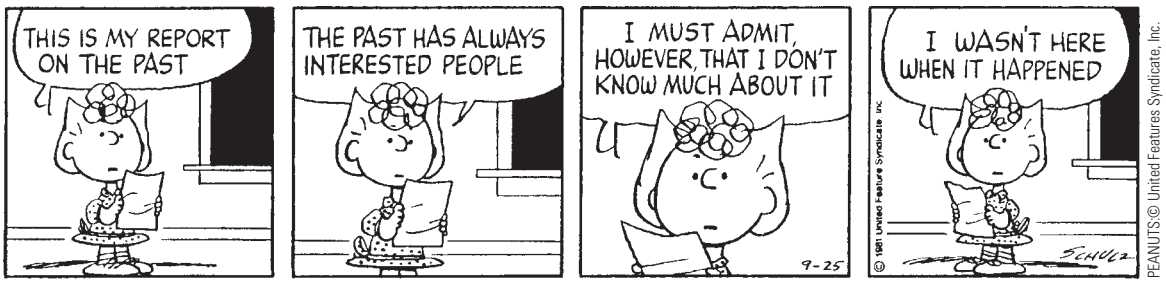
The idea that past events have only a weak and indirect influence on our present behaviors may seem contrary to the widely held view that our past, especially early childhood, has a profound effect on our current lives. The notion that "the child is parent to the adult" is rooted in psychoanalysis, and like other psychoanalytic concepts, it has become part of our everyday belief system.

The behavioral and psychoanalytic views are not totally at odds. Both hold that adults are products of their previous experiences. The two perspectives differ, however, in how they view the nature of that influence. Psychoanalysis postulates that early experiences have a direct and permanent effect on later behaviors, implying that current circumstances have little influence on adult (or later childhood) behaviors. The behavioral model holds that the behaviors that result from early experiences can, with appropriate learning, change so that the early experiences exert little or no influence on later behaviors.

Looking to the past for the determinants of present behaviors can be problematic. Examining past events is difficult and involves gathering information that is *retrospective,* which often is inaccurate. Not only do we forget the specifics of past events, we also inevitably reconstruct history, as when we fill in missing details or modify apparent inconsistencies in our recollections. Moreover, even if it were possible to collect reliable accounts of past events, there is no way to know whether particular events that occurred in the past caused a behavior because we cannot go back in time and test such hypotheses.

In contrast, the *current* factors that are influencing the way we behave are considerably easier to assess. First, because they are occurring in the present, obtaining accurate information is possible. Second, unlike past conditions, those in the present can be systematically modified, and the effect of these changes on the behaviors can be evaluated. Thus, it is possible to test the validity of hypotheses about the influence of current (but not past) factors on behaviors.

All that being said, in practice, for the purpose of elucidating the nature of its current maintaining conditions, behavior therapists may inquire about the circumstances in which a client's problem may have started. But the focus of treatment will be on those current conditions.



Viewing the past from the present has its limitations.

The self-injurious behaviors of individuals with Cornelia de Lange syndrome (a rare congenital condition involving delay of physical and psychological growth) are associated with specific setting events, such as whether the individuals are alone or with others.[13]

Learning can change psychological disorders that seem to have substantial heritable or biological origins, such as autistic spectrum disorder, depression, and schizophrenia.[14]

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Although genetic and neurobiological factors play a dominant role in the development of Tourette's disorder,[15] behavior therapy techniques that operate on the behavioral level are successful in significantly reducing tics[16] (as you will read about in Chapter 17).

Does the strong environmental influence on our behaviors curtail our personal freedom? In Theory 3-4 addresses this question.

Finally, it is noteworthy that successful behavior therapy can result in measurable central nervous system changes. For example, normalization of brain circuits has been shown to occur in clients successfully treated for spider phobia,[17] and other central nervous system changes that occur with medication for obsessive-compulsive disorder also occur with successful behavior therapy.[18]

IN THEORY 3-4

Freedom in Reciprocal Determinism

According to the behavioral model, environmental factors play a major role in determining how people behave. However, this does *not* mean that we are "controlled by the environment." There are reciprocal or give-and-take relationships among our environment, overt behaviors, and covert behaviors. Each of these factors influences and is influenced by the other two—in other words, they are *reciprocally determined* (as Figure 3-4 depicts).[19] Table 3-3 has examples of how the environment, covert behavior, and overt behavior might reciprocally influence one another in the case of writing a paper.

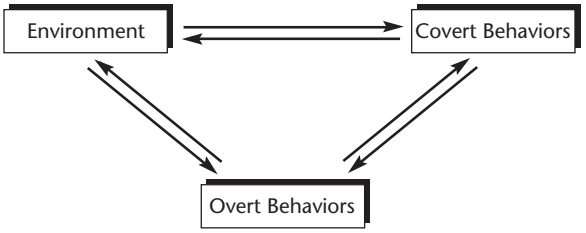


FIGURE 3-4
According to the principle of reciprocal determinism, the environment, overt behaviors, and covert behaviors each influence and are influenced by the two other factors

TABLE 3-3
Examples of How the Environment, Covert Behavior, and Overt Behavior Might Reciprocally Determine One Another in the Case of Writing a Paper

ENVIRONMENT influences OVERT BEHAVIOR
When Chung writes in a quiet place, he gets more writing done.
OVERT BEHAVIOR influences ENVIRONMENT
When Megan starts to write in her dorm room, her understanding roommates lower the volume on the stereo.
COVERT BEHAVIOR influences OVERT BEHAVIOR
When Victoria thinks that a particular topic is interesting, she spends more time writing about it.
OVERT BEHAVIOR influences COVERT BEHAVIOR
When Carlos successfully completes a difficult paper, he feels competent as a student.
ENVIRONMENT influences COVERT BEHAVIOR
When Manny's teacher assigns a paper due the next day, he feels anxious.
COVERT BEHAVIOR influences ENVIRONMENT
When Indiana is concentrating on writing a paper, her roommate stops talking to her.

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The concept of reciprocal determinism has important implications for personal freedom. How we behave is not rigidly determined by external forces. We can alter or create the factors that influence our behaviors. For instance, a woman who rarely exercises can join a health club, which will increase the chances that she will exercise regularly. Likewise, a man who thinks poorly of himself because he is unsuccessful in his work can select a job at which he can succeed, which, in turn, will influence his thoughts about himself. A key to personal freedom lies in understanding the factors that influence our behaviors and accepting responsibility for controlling them.

SUMMARY

1. The behavioral model defines people in terms of their behaviors.
2. Behavior is anything a person does. Overt behaviors are actions that other people can directly observe. Covert behaviors are private behaviors that others cannot directly observe and consist of cognitions, emotions, and physiological responses. Covert behaviors are inferred from overt behaviors, with the exception of physiological responses, which can be measured by instruments.
3. The most common way of describing people is in terms of traits. The problem with trait descriptions is that they are general rather than specific. Behavioral descriptions are more precise than trait descriptions and preserve individuality.
4. The ABC model describes the temporal sequence of antecedents, behavior, and consequences. The specific antecedents and consequences that cause an individual to perform a behavior are its maintaining conditions. Maintaining antecedents establish the conditions for the behavior to occur and consist of prerequisites and two types of stimulus control: prompts (cues to perform the behavior) and setting events (environmental conditions that elicit the behavior). Maintaining consequences determine whether the behavior will occur again.
5. Behavior therapy treats problem behaviors by directly changing their maintaining conditions, not symptoms or problem behaviors themselves. Confusion regarding this distinction leads to the mistaken notion of symptom substitution, the idea that treating behaviors rather than their underlying causes will result in a replacement maladaptive symptom.
6. The past originating conditions of a behavior—those conditions that accounted for its initial development—have only an indirect influence on our present behaviors.
7. Our behaviors are situation specific. They are consistent in the same or similar situations and vary in different situations.
8. Although behavior therapy modifies learning/environmental factors to change problem behaviors, behavior therapy may be applicable to changing problem behaviors that are predominantly caused by biological/hereditary factors.
9. One's environment, covert behaviors, and overt behaviors are reciprocally determined; each factor influences and is influenced by the two other factors.

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PARTICIPATION EXERCISE ANSWERS

PARTICIPATION EXERCISE 3-1

Distinguishing Between Overt and Covert Behaviors

1. O	5. O	9. C	13. O	17. C
2. C	6. C	10. O	14. C	18. O
3. O	7. C	11. C	15. O	19. C
4. C	8. O	12. C	16. O	20. O

PARTICIPATION EXERCISE 3-2

Distinguishing Between Traits and Behaviors

1. T	5. T	9. T	13. B	17. T
2. B	6. T	10. B	14. T	18. T
3. B	7. B	11. T	15. T	19. T
4. B	8. T	12. B	16. B	20. B

PARTICIPATION EXERCISE 3-3

Translating Traits Into Behaviors

1. *Sociable*
   Attending social events
   Meeting new people
   Inviting people to your house
   Talking with strangers
   Going places where people often gather
   Being with other people rather than being alone
2. *Hostile*
   Criticizing someone slanderously
   Striking a person
   Spreading rumors about someone
   Fighting
   Defacing someone's property
3. *Helpful*
   Giving a hitchhiker a lift
   Tutoring a student
   Lending money to a friend
   Doing volunteer work
   Changing a flat tire for a stranger
   Giving someone good advice
4. *Thrifty*
   Budgeting your money
   Using a car pool
   Making your own clothes
   Sharing an apartment
   Shopping at sales

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5. *Dependable*
   Being on time
   Keeping a promise
   Adhering to a schedule
   Paying back borrowed money
6. *Smart*
   Getting good grades in school
   Scoring high on an IQ test
   Reading difficult books
   Writing a book
   Speaking several languages fluently
   Solving complex problems
7. *Patient*
   Sticking to a long, frustrating task until it is completed
   Answering a rude customer politely
   Cheerfully waiting for a late person
   Tutoring a student who is having trouble learning a subject
   Calmly teaching a beginning driver
   Sitting attentively through a boring lecture
8. *Healthy*
   Exercising regularly
   Eating nutritious foods
   Sleeping an appropriate number of hours each night
   Passing a physical exam
   Attending a health spa
   Taking blood pressure medication

PARTICIPATION EXERCISE 3-4

Identifying Antecedents and Consequences

Antecedents	Behavior	Consequences
Hot evening Sitting in her apartment Looking out window Saw attack	1. *Calling the police*	Reported the crime Was thanked by police Police rushed the scene Felt she did the right thing
Play was in town Read about play Play received good reviews Got a pass for the play Expected to earn extra credit	2. *Going to a play*	Earned extra credit Was disappointed Felt she wasted her time Grade was boosted
Got to bed very late Was intoxicated Forgot to set alarm	3. *Getting up late*	Missed the bus to work Missed two important clients

(*continued*)

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PARTICIPATION EXERCISE 3-4 (*continued*)

Antecedents	Behavior	Consequences
Parents coming for visit Brendan wanted to make a good impression Perfect situation for trying new recipe Brendan enjoyed preparing fancy meals	4. *Cooking a fancy meal*	Kitchen was messed up Meal was a success Parents enjoyed his meal Brendan enjoyed the meal Brendan felt satisfied
Needed new clothes Saved enough money to go shopping Took family car Obtained directions to shopping mall	5. *Shopping for new clothes*	Now had a new wardrobe Felt good Received compliments on new clothes

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CHAPTER 4



The Process of Behavior Therapy

CASE 4-1 The Behavioral Analysis of a Phobia in a 9-Year-Old Boy

Defining Themes and Common Characteristics of Behavior Therapy in Case 4-1

The Process of Behavior Therapy: An Overview

Step 1: Clarifying the Problem

Step 2: Formulating Initial Treatment Goals

Step 3: Designing a Target Behavior

Characteristics of Good Target Behaviors
Two Types of Target Behaviors: Acceleration and Deceleration

PARTICIPATION EXERCISE 4-1 Competition Can Be a Good Thing: Finding Competing Acceleration Target Behaviors for Deceleration Target Behaviors

PARTICIPATION EXERCISE 4-2 Resurrecting the Dead: Identifying and Correcting Dead Person Behaviors

Measuring the Target Behavior

Step 4: Identifying Maintaining Conditions

Steps 5 and 6: Designing and Implementing a Treatment Plan

Steps 7 and 8: Evaluating the Success of Therapy and Follow-Up Assessment

SUMMARY

PARTICIPATION EXERCISE ANSWERS

REFERENCE NOTES

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The behavioral model you have just read about in Chapter 3 is the basis for behavior therapy. This chapter provides an overview of how that model is applied in behavior therapy. We begin with a classic case published in 1965. The senior therapist was Arnold Lazarus, a prominent early behavior therapist. The case illustrates many of the principles of the behavioral model. It also provides examples of some of the defining themes and common characteristics of behavior therapy described in Chapter 1. As you read the case, see if you can identify examples of the four themes (scientific, active, present focus, learning focus) and examples of three of the four characteristics (individualized therapy, stepwise progression, treatment packages, brevity). The title of this case is a play on Freud's (1909/1955) classic case, "The Analysis of a Phobia in a Five-Year-Old Boy."[1] The similarity between the two cases ends with the titles.

CASE 4-1

The Behavioral Analysis of a Phobia in a 9-Year-Old Boy[2]

At the beginning of the fourth grade, Paul (age 9) was intensely afraid of school. Initially, he hid in the coatroom and subsequently began spending less time at school each day. When he was referred to therapy, Paul had been absent from school for 3 weeks. Paul had also avoided school at the beginning of kindergarten and second grade.

During the 4 years preceding Paul's beginning fourth grade, he had been victim to a series of traumatic events: he underwent surgery with serious complications, he nearly drowned, and he witnessed a drowning that upset him considerably. Upon entering fourth grade, a close family friend died suddenly, and Paul's father was experiencing considerable stress at work. Finally, Paul was intimidated by a warning from his eldest sister that fourth grade was especially difficult.

From the initial interview, it was determined that Paul's school phobia was the most pressing problem of a "generally bewildered and intimidated child" who had a history of familial tensions, situational crises, and multiple traumatic events.

Paul lived two and a half blocks from his school. He typically walked to school, leaving home at 8:30 a.m., and walked home when school ended at 3:30 p.m. When therapy began, Paul "was extremely surly and dejected in the mornings, refused breakfast, rarely dressed himself, and became noticeably more fearful toward 8:30." His parents' attempts to comfort him and coax him to go to school only led to Paul's sobbing and withdrawing.

The therapy was administered by two therapists and involved a series of increasingly more difficult behaviors related to his school phobia. Treatment began on a Sunday afternoon. The therapists accompanied Paul as he walked to school and allayed his anxiety through distraction and humor. At 8:30 a.m. on the following 2 days, Paul walked from his house into the schoolyard with one of the therapists. The therapist helped reduce Paul's anxiety by encouraging him, instructing him to relax and think of pleasant images, and playing with him in the schoolyard. After 15 minutes in the schoolyard, they returned home.

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Next, after school hours, the therapist persuaded Paul to enter his classroom and sit at his desk, at which point part of the normal school routine was playfully enacted. For the next three mornings, the therapist accompanied Paul into the classroom with the other children, and after chatting with the teacher, Paul and the therapist left.

A week later, Paul spent the entire morning in his class with the therapist in the classroom. The therapist smiled approvingly at Paul whenever he interacted with his classmates or the teacher. Two days later, Paul lined up with his classmates outside the classroom while the therapist waited for him inside the classroom.

While still walking to school with the therapist each morning, Paul began staying in his classroom without the therapist, who spent the day in the school library adjacent to Paul's classroom. Paul then agreed that the therapist would leave 1 hour before school ended. Gradually, the therapist was able to leave Paul alone at school for increasingly longer periods. Paul's school attendance without the therapist's presence was achieved by providing specific reinforcers, including comic books and tokens that could eventually be exchanged for a baseball mitt. Paul's mother was recruited to emphasize the importance of school attendance to Paul, a role that the therapists had been playing. When Paul had earned sufficient tokens to get his baseball mitt, he decided, in consultation with his parents, that the specific reinforcers were no longer necessary.

Paul's therapy was carried out over 4½ months, during which time there were a number of setbacks. However, at the end of treatment, Paul was not only attending school regularly but, according to his mother's reports, his behavior had improved outside of school. For example, Paul had become less moody, more willing to participate in household chores, more congenial in interacting with his peers, and more self-sufficient. Ten months after the termination of therapy, Paul's mother reported that Paul had not only maintained the positive changes but also had progressed further.

DEFINING THEMES AND COMMON CHARACTERISTICS OF BEHAVIOR THERAPY IN CASE 4-1

Many features of the treatment for Paul's school-phobic behaviors are typical of behavior therapy. The *scientific* approach taken in Paul's case is evident in the precision of the assessment and treatment. For example, highly specific details regarding the circumstances surrounding the problem behaviors, such as exact times, were collected. Treatment focused on a specific and clearly defined overt behavior: school attendance.

The therapist encouraged Paul to engage in *active* procedures that helped reduce his fear and increase his school attendance and positive feelings about being in school. Further, Paul's therapy took place in vivo; the therapists worked directly with Paul in the school setting, where the problem was occurring. Because a therapist had to be at school with Paul for many hours, multiple therapists were employed. Using multiple therapists is not typical, although with children it is common to enlist the aid of parents and teachers to implement specific

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aspects of the treatment, as was done with Paul. And, consistent with the *collaborative nature* of behavior therapy, the therapists consulted Paul about a variety of treatment decisions even though he was only 9 years old.

The focus of therapy was in the *present*. Paul had a difficult, even traumatic childhood before he developed the problem that resulted in his parents seeking therapy for him at the beginning of the fourth grade, and these events no doubt affected Paul. However, treatment for his school avoidance (a present problem) focused on his intense current fear of school because it was the probable maintaining condition of his problem.

Although standard therapy procedures were employed, they were *individualized* to fit Paul's unique case (for example, reinforcers were matched to Paul's interests). Paul's treatment involved a *stepwise progression* in which Paul was gradually exposed to increasingly more anxiety-evoking situations. Finally, a variety of behavior therapy procedures were combined in a *treatment package*.

THE PROCESS OF BEHAVIOR THERAPY: AN OVERVIEW

Behavior therapy proceeds via a series of interrelated steps, shown schematically in Figure 4-1. The steps are:

1. Clarifying the client's problem
2. Formulating initial goals for therapy
3. Designing a target behavior (the specific behavior that will be changed)
4. Identifying the maintaining conditions of the target behavior
5. Designing a treatment plan (specific therapy procedures) to change the maintaining conditions
6. Implementing the treatment plan
7. Evaluating the success of the treatment plan
8. Conducting follow-up assessments

Additionally, measurement of the target behavior begins immediately after the target behavior has been designed (step 3) and continues through the evaluation of therapy (step 7).

If the therapy successfully changes the target behavior, then either the therapy is terminated or the process is begun again with another target behavior. If the therapy procedures are not successful, the therapist and client return to the step where the process broke down. For instance, the target behavior may not have been defined precisely enough, or the therapy procedures may not have been implemented correctly.

STEP 1: CLARIFYING THE PROBLEM

Clients usually describe their problems in broad, vague terms (for instance, "I'm unhappy much of the time" or "I can't seem to cope with my job"). The first step in behavior therapy is to clarify the client's *presenting problem* (the problem for which therapy is sought). For example, with a client whose presenting problem is "I'm stressed out a lot," specifying what the client means by "stressed out" and "a lot" is crucial.

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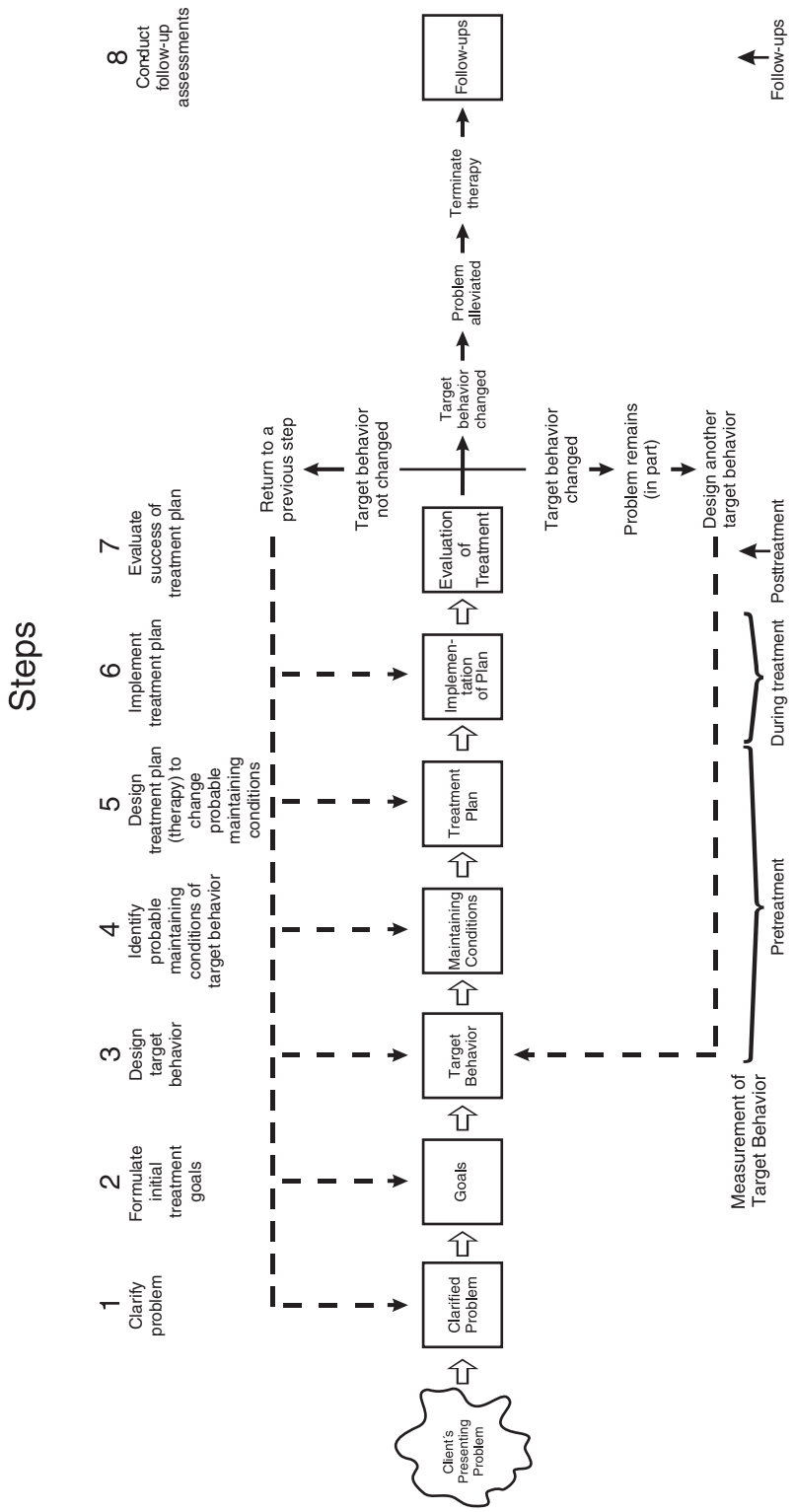


FIGURE 4-1
The process of behavior therapy
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Clients often come to therapy with multiple problems. Behavior therapy begins by narrowing the client's complaints to one or two problems to be worked on initially. Treating one problem at a time has three advantages. First, clients can focus their attention more easily on one task than on multiple tasks. Second, treating just a single problem is likely to result in relatively quick change, which may motivate the client to continue working on other problems. Third, problems may be related to one another, so alleviating one problem may reduce or even eliminate others.[3] Thus, treating one problem at a time is efficient in the long run.

As an example, a 38-year-old man who had suffered from schizophrenia for 8 years had been minimally responsive to a variety of antipsychotic medications.[4] In addition to persecutory delusions and hallucinations that were directly related to his schizophrenia, he had a fear of dogs and avoided going out in public places. Although the focus of treatment was on these two fears, which were successfully treated through in vivo desensitization (Chapter 10), there was a marked improvement in his schizophrenic symptoms, especially regarding his persecutory delusions.

STEP 2: FORMULATING INITIAL TREATMENT GOALS

Once the client's problem has been clarified, the client and the therapist formulate initial goals that will direct subsequent steps in the treatment process. Clients always enter therapy with some goals, but often they are general and vague (for instance, "getting help with my problem" or "feeling better"). Beginning therapy by clarifying the client's problem allows more specific goals to be formulated.

The client is given the major responsibility for deciding on the specific goals he or she wants to achieve, and the therapist helps the client clarify expectations about the outcome of treatment. The therapist takes a more active role in goal setting in two circumstances: (1) when the client's goals are clearly unrealistic (for example, *never* getting angry at my children) or (2) when the goals are likely to have negative consequences for the client or others (for instance, a high school senior who wants to lose 30 pounds in the 2 weeks before his prom). Once goals have been established, the therapist helps the client state them so that they are *specific, unambiguous,* and *measurable.*

Clients' goals are reevaluated and may be changed during the course of therapy. For example, clients may raise or lower their expectations about the degree to which their target behavior might change, based on its ongoing assessment.

STEP 3: DESIGNING A TARGET BEHAVIOR

After treatment goals have been formulated, the next step is to design a **target behavior**—that is, a narrow, discrete aspect of the problem that can be clearly defined and easily measured. Rather than attempting to treat the client's

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problem in its entirety, one component of the problem (a target behavior) is focused on at a time. As you will see later, the target behavior can be something the client is presently doing that needs to be eliminated (such as overeating) or something the client is not doing that the client needs to begin doing (such as regular exercise).

In Case 4-1, a series of target behaviors were designed for Paul, and each was dealt with in sequence, starting with the easiest and least anxiety-evoking behavior. For example, the first target behavior was "Walking from his house to the school with the therapist on a nonschool day," and a later target behavior was "Spending the morning in his classroom with the therapist present." Notice the specificity of these target behaviors and how their clarity makes it unambiguous as to whether the target behaviors were performed. Although Paul had a series of target behaviors, each one was worked on separately and sequentially. The same advantages related to focusing on one or two problems also hold for treating one or two target behaviors at a time.

CHARACTERISTICS OF GOOD TARGET BEHAVIORS

Target behaviors should meet four requirements:

1. *Narrow in scope*. The target behavior usually addresses one aspect of the problem rather than the entire problem. For example, "going out with close friends" might be a target behavior for a client whose problem is pervasive social anxiety. Further, the definition of the target behavior may include a specific time when and place where engaging in it is appropriate (for example, "making one's bed before leaving the house").
2. *Unambiguously defined*. A target behavior that is defined precisely can be assessed reliably. In the case of an overt behavior, knowing the definition of the target behavior should allow anyone observing the client to determine whether the client is engaging in it.
3. *Measurable*. Whenever possible, the target behavior should be quantified. Discrete numbers are more precise than qualitative categories (such as "improved" versus "unimproved"). The measurements can be of (1) *frequency,* (2) *duration,* (3) *intensity* (strength), or (4) *by-product* of the target behavior. Table 4-1 (see page 54) describes these measures and provides examples. The type of measure employed depends on such factors as the nature of the target behavior, the treatment goals, and practical considerations (such as ease of measurement).
4. *Appropriate and adaptive*. The target behavior must fit the client's unique problem and be adaptive for the client. This requirement includes not causing other problems (for instance, in the treatment of obesity, smoking as a substitute for snacking is detrimental to one's health). The target behavior also must suit the particular client's circumstances and abilities. Running 5 miles a day would not be an appropriate target behavior for a person who is 100 pounds overweight.

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TABLE 4-1
Types of Measures Used to Assess Target Behaviors

Type of Measure	Description	Examples: 1. School Attendance and 2. Smoking
Frequency	Number of times the behavior occurs	1. Number of days child attends school 2. Number of cigarettes smoked
Duration	a. Length of time spent engaging in target behavior	1. Hours child spends at school 2. Minutes spent smoking a cigarette
	b. Latency (length of time to begin a target behavior)	1. Minutes to enter school after being dropped off by parents 2. Minutes to light up after sitting down at desk
	c. Interval between responses (length of time between the occurrence of instances of the target behavior)	1. Number of days between an absence and next attendance 2. Minutes between cigarettes smoked
Intensity	Strength of the target behavior	1. How anxious (on self-report scale of 1–10) child feels while in school 2. Strength of inhalation
By-Product	Amount or number of by-product(s) of engaging in the target behavior	1. Number of check marks in teacher's attendance record 2. Number of cigarette butts left in ashtray

TWO TYPES OF TARGET BEHAVIORS: ACCELERATION AND DECELERATION

There are two types of target behaviors: acceleration and deceleration. **Acceleration target behaviors** are increased and are used to treat **behavioral deficits**, which are adaptive behaviors that clients are not performing often enough, long enough, or strongly enough (for instance, paying attention in class and standing up for one's rights). **Deceleration target behaviors** are decreased and are used to treat **behavioral excesses**, which are maladaptive behaviors that clients are performing too often, for too long a time, or too strongly (for example, self-injurious behaviors and social withdrawal).

The terms *acceleration* and *deceleration* are easy to remember because they refer to a desired increase or decrease, respectively. Behavior therapists also use the verb form of those terms—*accelerating* and *decelerating*—to mean increasing and decreasing, respectively.

Dealing with acceleration target behaviors is simple and straightforward. Behavior therapy procedures are used to increase the acceleration target behavior directly. For example, if social interaction were the acceleration target behavior for a hospitalized man who was depressed, the nurses might praise the man each time they saw him interacting with someone. Dealing with deceleration target behaviors is more complicated.

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Lauren Ward/Contour Style/Getty Images

Dennis MacDonald/PhotoEdit

(a) (b)

PHOTOS 4-1a and 4-1b
The effects of (a) a behavioral deficit and (b) a behavioral excess in eating

Special Considerations for Deceleration Target Behaviors

Two basic strategies are used to treat deceleration target behaviors. One is to decrease the deceleration target behavior directly, as parents often try to do by punishing a child's misbehavior. This simple strategy often results in an incomplete solution. When a problem behavior is eliminated or substantially decreased, a void is created in the person's life. No matter how disruptive or personally distressing the problem behavior was, it served some function for the person and filled time. As a man who was struggling to give up drinking alcohol put it, "There's just this kind of hole in my life where drinking used to be."[5]

The preferred strategy for treating deceleration target behaviors is to *replace a deceleration target behavior with an acceleration target behavior*. This strategy fills the functional and temporal void with an appropriate adaptive behavior. For instance, if the deceleration target behavior is "criticizing friends," then "complimenting friends" would be a suitable acceleration target behavior. Often, the therapist implements both decelerating strategies simultaneously—that is, the deceleration target behavior is decreased at the same time that an appropriate substitute acceleration target behavior is increased.

An acceleration target behavior used as a substitute for a deceleration target behavior must meet three requirements. First, it must serve the same general function (compliments and criticisms, for example, are both ways of communicating feedback). Second, it should be adaptive; nothing is gained by substituting one maladaptive behavior for another. Third, the acceleration target behavior should be a **competing response**, meaning that it should be difficult to perform both at the same time (as is true of complimenting and criticizing).

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TABLE 4-2
Examples of Acceleration Target Behaviors That Compete with Deceleration Target Behaviors

Deceleration Target Behavior	Competing Acceleration Target Behavior
Studying in front of the TV	Studying in the library
Biting fingernails	Keeping hands in pockets or at sides
Driving home from parties drunk	Taking a taxi home
Staying up until 3 a.m.	Getting into bed and turning out the lights before 1 a.m.
Talking to "voices" (hallucinating)	Talking to other people
Procrastinating on completing assignments	Doing assignments when they are announced

Substituting an acceleration target behavior for a deceleration target behavior works because the more the client performs the acceleration target behavior, the fewer opportunities the client has to engage in the deceleration target behavior. It is standard practice in behavior therapy to include an acceleration target behavior in treatment plans that involve a deceleration target behavior. Table 4-2 gives examples of deceleration target behaviors and suitable competing acceleration target behaviors. After looking at the table, complete Participation Exercise 4-1 before you continue reading.

PARTICIPATION EXERCISE 4-1

Competition Can Be a Good Thing: Finding Competing Acceleration Target Behaviors for Deceleration Target Behaviors

For each undesirable behavior listed below, write one or more acceleration target behaviors that compete with it—in other words, behaviors that, when performed, make it unlikely that the undesirable behavior will occur. Be sure each of your acceleration target behaviors meets the requirements for a good target behavior (described earlier in the chapter). When you have finished, see how your competing acceleration target behaviors compare with examples in the Participation Exercise Answers section at the end of the chapter.

1. Eating junk food between meals
2. Cramming for exams
3. "Blowing" an entire paycheck
4. Using foul language
5. Leaving lights on when they are not in use
6. Wasting time
7. Being late for classes
8. Procrastinating in paying bills
9. Littering

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Dead Person Rule

Whereas acceleration target behaviors indicate what a client should do, deceleration target behaviors indicate only what the client should *not* do, which poses a problem. Consider a typical scene in an elementary school classroom. Heather is disrupting the class by talking to Nigel when the teacher wants the class to read silently. If the teacher tells Heather, "Don't talk to Nigel" (a deceleration target behavior), all Heather knows is that she is *not* allowed to talk to Nigel. She could obey her teacher by talking to Katie or Kendra or by dancing in the aisle. It would be more useful if the teacher told Heather, "Work on your assignment," which is the acceleration target behavior the teacher wants Heather to engage in.

When dealing with behavioral excesses, it often is easier, but less beneficial, to specify what a client should *not* do than what the client should do. To avoid making this mistake, behavior therapists follow the **dead person rule**: *Never ask a client to do something a dead person can do*. Only dead people are capable of *not* behaving! "Don't talk" violates the dead person rule because dead people can "not talk" (they have a lot of practice). Applying the dead person rule results in having the client do something *actively*. "Work on your assignment" follows the dead person rule because dead people can't work on assignments.

The wording of the dead person rule creates a problem. Before continuing reading, see if you can identify the problem with how the rule is stated.

Ironically, the dead person rule violates itself. "Never ask a client to do something a dead person can do" is something a dead person *could* do. The general principle could be rephrased as a *live person rule*: Always ask a client to do something that only a live person can do. However, the purpose of the dead person rule is to remind therapists to formulate target behaviors that clients can actively perform, and this function is better served by the catchy dead person rule. Participation Exercise 4-2 gives you a chance to apply the dead person rule to common violations of the rule. I'd suggest that you do Part I of the Participation Exercise before you continue reading, but you will need to complete Part II later.



Courtesy of Michael D. Spiegler

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PARTICIPATION EXERCISE 4-2

Resurrecting the Dead: Identifying and Correcting Dead Person Behaviors

The dead person rule often is violated in everyday life. This exercise will make you aware of common violations of the rule and give you practice in rephrasing dead person behaviors as live person behaviors. Following the dead person rule results in more precise communication of requests and increases the odds that the requests will be complied with (both in and out of behavior therapy).

Part I: Changing Dead Person Behaviors to Live Person Behaviors

A number of frequently heard or seen instructions are listed in Table 4-3. Each instruction is a request to perform a dead person behavior. For each instruction, write a *live person behavior* that is appropriate for the situation. When you have finished Part I, compare your live person behaviors with those in the Participation Exercise Answers at the end of the chapter.

Part II: Identifying Common Dead Person Behaviors

Over the next few days, look for violations of the dead person rule you hear or see in verbal and written instructions to others. Briefly note the situation or context (following the models in Table 4-3), write the instruction that calls for a dead person behavior, and finally rephrase the instruction so that it refers to a live person behavior. You may be surprised at the number of dead person behaviors that are commonly requested.

TABLE 4-3
Everyday Violations of the Dead Person Rule

Situation/Context	Instruction
Parent to child	"Don't be impolite."
Sign in park	DO NOT LITTER
Teacher to student	"No running in the hallway."
Sign on one of two side-by-side doors	DO NOT ENTER
Parent to young boy having trouble tying his shoe	"Don't cry; big boys don't cry."
Parent to child at dinner table	"Don't eat with your fingers."
Sign at petting zoo	DO NOT FEED THE ANIMALS
Parent to child being put to bed	"I don't want to hear another word out of you."
Traffic sign at fork in road	NO LEFT TURN
Teacher to student	"Don't look at other students' answers."
Instructions on a written form	DO NOT WRITE BELOW THE RED LINE
Lifeguard to swimmer	"No diving off the side."
Parent to child	"Don't hit your sister when she takes your toy."

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MEASURING THE TARGET BEHAVIOR

Measurement of the target behavior begins as soon as it has been designed and before therapy begins. This initial measurement provides a **baseline**, which consists of the repeated measurement of a target behavior as it occurs naturally—that is, before treatment. A baseline provides a standard for evaluating how much a target behavior changes after treatment has begun.[6] Measurement of the target behavior continues throughout the remainder of the therapy process as an ongoing check of the client's progress.

STEP 4: IDENTIFYING MAINTAINING CONDITIONS

Identifying the maintaining conditions of the target behavior is a crucial step because it is these conditions that will be changed in order to change the target behavior.[7] A variety of behavioral assessment procedures (covered in depth in Chapter 6) are employed to pinpoint probable maintaining antecedents and consequences.

The assessment typically begins with an interview in which the therapist questions the client in detail about the antecedents and consequences of the target behavior.[8] Examples of the questions are "In what situations do you engage in the target behavior most frequently and least frequently?" "What are you thinking and how are you feeling right before you perform the target behavior?" "What happens right after you perform the target behavior?" "What are the long-term effects of engaging in the target behavior?"

The retrospective information gathered in interviews may be checked out with other assessment procedures.[9] The therapist may ask the client to keep a record of when the target behavior occurs and note the antecedents and consequences in each case. Parents may be instructed to observe the circumstances in which their child engages in the target behavior. Sometimes the therapist sets up a simulated situation in which possible maintaining conditions are systematically introduced and removed, and the effects on the target behavior are noted.[10] For example, a child who has trouble concentrating on schoolwork might be asked to work on an assignment with and without an adult present.

STEPS 5 AND 6: DESIGNING AND IMPLEMENTING A TREATMENT PLAN

Target behaviors are changed indirectly by directly changing their maintaining conditions. A **treatment plan** specifies the therapy procedures that will be used to change the maintaining conditions of the target behavior, including the details of how they will be individualized for the particular client. In Case 4-1, for example, Paul's acceleration target behavior—school attendance—occurred infrequently because its consequences (anxiety) were negative. Accordingly, the treatment plan for Paul involved increasing his attending school by gradually exposing him to being in school (in vivo desensitization) while making the consequences of school attendance positive (reinforcement) with the support and friendship of the therapists and tangible reinforcers.

Most behaviors are maintained by multiple antecedents and consequences. For example, among the common maintaining consequences of self-injurious

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behaviors (such as head banging) associated with severe developmental disabilities are social attention, direct sensory stimulation, and removal of clients from frustrating tasks.[11] Generally, it is not feasible or necessary to change all the maintaining conditions to change the behavior because the maintaining conditions of a behavior tend to be interrelated. Behavior therapists select for change those maintaining conditions (1) that appear to exert the greatest control over the target behavior and (2) that therapy procedures are most likely to modify efficiently.

Although behavior therapists are the experts in the methods used to change target behaviors, it is clients who will undergo the treatment. Accordingly, clients in behavior therapy play a role in selecting the particular therapy procedures to be used. In most cases, several different behavior therapies are likely to be effective for the client's problem. The therapist describes each viable alternative therapy procedure to the client, including (1) the underlying rationale, (2) what the therapy entails, (3) what the client is expected to do, (4) an estimate of how long the therapy will take, and (5) the general success rate of the therapy for the client's problem. Finally, the therapist describes the advantages and disadvantages of each therapy.

Once the client and therapist decide on the therapy procedures, the treatment plan is implemented. The target behavior continues to be measured to assess progress during treatment. When problems or setbacks arise, which is common, the treatment plan is revised.

STEPS 7 AND 8: EVALUATING THE SUCCESS OF THERAPY AND FOLLOW-UP ASSESSMENT

Evaluating the success of therapy first involves determining whether the target behavior has changed significantly from the baseline. If the target behavior has not changed or not changed enough to make a difference, then it is necessary to return to one of the previous steps and correct any mistakes made (for example, not having correctly identified the maintaining conditions of the target behavior). If the target behavior has changed, the next question is: Have the treatment goals been met, and has the problem been alleviated? The answer is not always yes because a target behavior deals with part of the problem. It may be necessary to change one or more additional target behaviors before the problem is fully alleviated (as in Case 4-1 in which a series of target behaviors were treated one at a time).

When the treatment goals have been met, therapy is terminated. However, the therapist and client may set up periodic checks (for example, in 3 months, 6 months, and 12 months) to ascertain whether the client's treatment gains have been maintained over time. This is called **follow-up assessment** (or **follow-up**, for short). If the follow-up reveals the client's treatment gains have not been maintained, additional treatment is provided.

SUMMARY

1. The process of behavior therapy involves eight basic steps: clarifying the client's problem, formulating treatment goals, designing a target behavior, identifying the maintaining conditions of the target behavior, designing a treatment plan to change the maintaining conditions, implementing the treatment plan, evaluating its effectiveness, and conducting follow-up assessments.

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Assessment begins after the target behavior has been designed and continues through the course of therapy and after therapy is terminated.

2. In behavior therapy, only one or two problems are treated simultaneously. Each problem is defined as a target behavior, an aspect of the problem that is relatively small, discrete, and measurable. A good target behavior is narrow in scope, unambiguously defined, measurable, and appropriate and adaptive for the client and the problem.
3. Acceleration target behaviors are increased and are used for behavioral deficits, which are adaptive behaviors clients are not performing enough. An acceleration target behavior is treated by increasing it directly. Deceleration target behaviors are decreased and are used for behavioral excesses, which are maladaptive behaviors clients are performing excessively. A deceleration target behavior can be decreased directly. However, the preferred strategy is to decrease it indirectly by increasing an adaptive acceleration target behavior that competes with the deceleration target behavior.
4. The dead person rule, "Never ask a client to do something a dead person can do," reminds therapists to specify target behaviors that clients can actively perform.
5. Once a target behavior has been selected, its probable maintaining conditions are identified. A treatment plan is then developed to change the maintaining conditions, which will change the target behavior.
6. The effectiveness of the treatment plan is evaluated in terms of the specific treatment goals. If the plan was successful, therapy is terminated and periodic follow-up assessments are conducted. If the treatment plan has not alleviated the problem or not sufficiently, then additional target behaviors are designed and treated.

PARTICIPATION EXERCISE ANSWERS

PARTICIPATION EXERCISE 4-1

Competition Can Be A Good Thing: Finding Competing Acceleration Target Behaviors for Deceleration Target Behaviors

Deceleration	Acceleration
1. Eating junk food between meals	Eating only fruits between meals Only drinking between meals Eating only at mealtime Buying only healthy food
2. Cramming for exams	Studying 2 hours per day a week before exam Putting all books away at 11 p.m. the night before exam Scheduling nonstudy activities the night before exam
3. Blowing an entire paycheck	Immediately depositing part of check into bank account Sticking to a budget Having paycheck automatically deposited Having someone else hold your money for you Immediately paying off all bills

(*continued*)

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PARTICIPATION EXERCISE 4-1 (*continued*)

Deceleration	Acceleration
4. Using foul language	Using only decent language Using a nonsense word when angry Counting to 10 when frustrated Stamping feet instead of swearing
5. Leaving on lights when they are not in use	Shutting lights off immediately after use Turning lights on only when needed Working with daylight only Shutting lights off when leaving room
6. Wasting time	Having more planned than you can complete Following a schedule Having activity prepared for free times Carrying a portable hobby (such as reading, knitting)
7. Being late for classes	Arriving 5 minutes early to class
8. Procrastinating in paying bills	Paying all bills within 3 days of receipt Having someone pay all bills for you
9. Littering	Using garbage cans Carrying litter bag with you Using nondisposable items (such as glasses instead of paper cups)

PARTICIPATION EXERCISE 4-2

Resurrecting the Dead: Identifying and Correcting Dead Person Behaviors

Dead Person Instruction	Live Person Instruction
"Don't be impolite."	"Be polite." "Chew with your mouth closed." "Please excuse yourself." "Say 'please'!"
DO NOT LITTER	PLACE TRASH IN CANS TAKE GARBAGE WITH YOU CLEAN UP BEFORE LEAVING KEEP AREA CLEAN
"No running in the hallway."	"Walk slowly down the hallway." "Walk slowly."
DO NOT ENTER	USE OTHER DOOR TRY ANOTHER ENTRANCE USE ELEVATOR ONLY
"Don't cry; big boys don't cry."	"Be proud that you're doing so much better." "Put a smile on your face for effort." "Keep on trying; you'll get it." Go sit down on the chair for a few minutes if you're going to keep crying!"

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Dead Person Instruction	Live Person Instruction
"Don't eat with your fingers."	"Use your fork to eat that." "Try using a spoon." "Keep your fork and knife in your hands while you eat."
DO NOT FEED THE ANIMALS	IF YOU ARE THINKING OF GIVING OUR ANIMALS FOOD, PLEASE WALK AWAY IMMEDIATELY KEEP ALL FOOD OUT OF REACH OF ANIMALS GIVE FOOD TO OTHER PEOPLE ONLY PLACE FOOD ON TABLE WHILE VIEWING THE ANIMALS
"I don't want to hear another word out of you."	"Walk silently back to your room." "Place both hands over your mouth and go back to your bed."
NO LEFT TURN	MAKE A RIGHT TURN YOU MUST GO STRAIGHT TURN RIGHT OR GO STRAIGHT
"Don't look at other students' tests."	"Keep your eyes on your own tests." "Look straight ahead only."
DO NOT WRITE BELOW THE RED LINE	WRITE ABOVE THE RED LINE PUT YOUR PENCIL DOWN WHEN YOU COME TO THE RED LINE
"No diving off the side."	"You may jump off the side only." "Stay in the water at all times."
"Don't hit your sister when she takes your toy."	"Tell someone when your sister takes your toy." "Ask your sister to give your toy back to you." "Find another toy to play with when your sister takes your toy."

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CHAPTER 5



Behavior Therapy Research

Research Methods

Case Studies
Reversal Studies
Multiple Baseline Studies
Experiments

IN THEORY 5-1 Behavior Therapy as an Experiment

What Constitutes Effective Behavior Therapy?

Meaningfulness of Change

IN THEORY 5-2 Clinical Versus Statistical Significance: A Significant Distinction

Transfer of Change
Generalization of Change
Durability of Change
Acceptability of the Therapy
Outcome Measures in Perspective

Meta-Analytic Studies

IN THEORY 5-3 Evaluating the Efficacy and Effectiveness of Behavior Therapies

BROAD STROKES 5-1 Treatment Manuals: A Cookbook Approach to Therapy

SUMMARY

REFERENCE NOTES

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Consistent with its scientific ethic, research is an important part of the practice of behavior therapy. Behavior therapists engage in two types of research: outcome and process. The purpose of o*utcome research* is either (1) to evaluate the success of a specific treatment for a particular client or (2) to evaluate the general effectiveness of a specific treatment—that is, for many different clients. Outcome research answers the basic question: Does the therapy work?

Process research answers the question: Why is a therapy successful? More precisely, process research identifies the underlying *mechanisms of change*—that is, how does the treatment produce change?[1] Although it might seem that whether a therapy works is more important to know than why it works, both questions are important. An understanding of the mechanisms of change that underlie the success of a therapy can contribute to refining the therapy procedures and increasing their effectiveness. Regrettably, compared to the number of outcome studies on behavior therapy, only a small number of process studies are conducted.[2]

RESEARCH METHODS

Four methods of research are used to study the outcome and process of behavior therapies: *case studies, reversal studies*, *multiple baseline studies,* and *experiments.* The first three are used to assess the success of an individual client's treatment and, occasionally, to provide evidence for the general effectiveness of a therapy and its mechanisms of change. Experiments, which involve groups of clients, are employed to validate the general effectiveness of a therapy and to study its mechanisms of change.

CASE STUDIES

A **case study**, such as Case 4-1 describing the treatment of Paul's school phobia, is a detailed description of what transpires during the treatment of a specific client.[3] Besides documenting the treatment and outcome for an individual client, case studies are useful for describing new therapy procedures and novel applications of existing therapies.[4] Case studies also can demonstrate the feasibility of the delivery of a therapy technique—for a particular population or problem or in a particular setting—which lays the groundwork for further empirical testing using the research methods described in the next sections.[5] Finally, case studies are used for teaching purposes to provide a behind-the-scenes look at the practice of behavior therapy, as in this book.

The major limitation of case studies is that generalizations to other clients cannot be made because a single case cannot be considered representative of clients in general. However, sometimes a series of case studies that evaluate the effectiveness of a therapy procedure with a number of clients is used to document its effectiveness.[6] Additionally, case studies cannot rule out the possibility that factors other than the treatment may have contributed to the changes obtained. For example, variations in a client's life circumstances that occur concurrently with therapy—such as beginning a new job—may be responsible for changing the client's problem.

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REVERSAL STUDIES

Reversal studies systematically introduce and withdraw a therapy and examine what happens to the client's target behavior in periods with and without therapy. Reversal studies always involve a minimum of three phases: baseline, treatment, and reversal. In the first phase, a *baseline* (pretreatment) level of the target behavior is obtained to provide a basis for comparison.

In the second phase, the *treatment* is introduced, and the target behavior continues to be assessed. If the therapy is effective, the client's target behavior will change from the baseline level. An acceleration target behavior will increase, and a deceleration target behavior will decrease. Figure 5-1 shows the typical change for an acceleration target behavior between baseline (A) and treatment (B).

Change in the target behavior from the baseline to the treatment phase is not necessarily caused by the therapy. Some unaccounted-for factors in the client's life may have caused the change. To determine whether the therapy was influencing the change in the target behavior, a third phase of the study is introduced. The therapy is terminated, but the target behavior continues to be assessed. This is called a **reversal phase** because the conditions are reversed to the baseline conditions where the target behavior was only assessed. If the therapy was responsible for the change in the target behavior, then the target behavior will return to near baseline levels when the therapy is withdrawn (as depicted in Figure 5-1).

These three phases—baseline, treatment, and reversal—make up an **ABA study**. *A* stands for no therapy (assessment only)—in the baseline and reversal phases—and *B* stands for treatment. An ABA study provides evidence that the therapy was responsible for changes in the target behavior. However, ending with the reversal phase means that the client is not benefiting from the treatment. Thus, a fourth phase, *reinstatement of treatment*, is added so that the client can continue to benefit from the therapy. The study thus becomes an **ABAB study**,

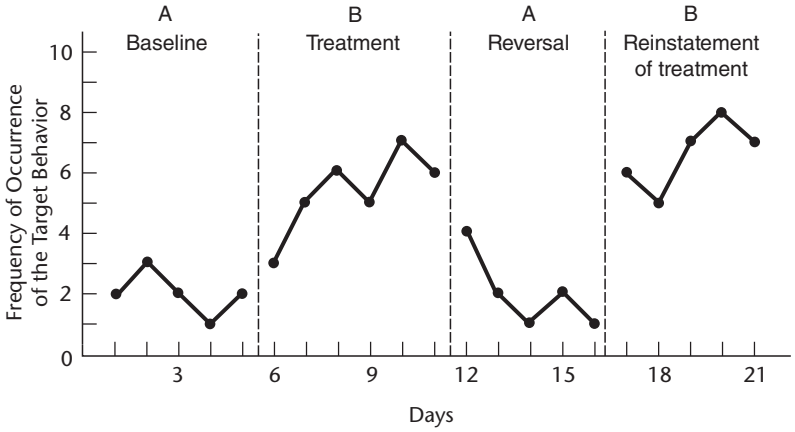


FIGURE 5-1
Hypothetical data in a reversal study indicating typical changes that would be expected in an acceleration target behavior if the treatment were effective

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TABLE 5-1
Phases of an ABAB Reversal Study

	PHASES			
	A Baseline	**B Treatment**	**A Reversal**	**B Reinstatement of Treatment**
Procedure	Measure target behavior	Introduce treatment; measure target behavior	Withdraw treatment; measure target behavior	Reinstate treatment; measure target behavior
Purpose	Assess normal level of target behavior	Change target behavior	Check whether treatment is responsible for change in target behavior	Reinstate change in target behavior
Expectation	None	Target behavior will change in desired direction	Target behavior will return to near baseline level	Target behavior will change in desired direction

with the second *B* standing for the reinstatement of treatment. If the therapy is effective, the target behavior will again change in the desired direction (see Figure 5-1). Thus, the second B phase provides additional evidence that the therapy is responsible for the change in the target behavior. Compared with an ABA study, an ABAB study, by virtue of its additional confirming evidence, provides greater confidence that change is the result of the therapy. Table 5-1 summarizes the phases of an ABAB reversal study.

Reversal studies have three major limitations. First, it is not legitimate to generalize from the success of a single client's therapy to clients in general. As with case studies, this limitation can be overcome to some degree by conducting a *series* of reversal studies on a particular therapy procedure for the same problem with multiple clients.[7]

Second, reversal studies cannot be used to evaluate the success of therapy with all types of target behaviors. Reversal studies are appropriate when target behaviors are maintained by external factors, such as privileges given to a teenage girl for studying and getting good grades. Reversal studies are inappropriate when intervention would be likely to bring about enduring changes in the target behavior, as when the therapy teaches a client a behavior that, once learned, will be retained (for example, study skills).

Third, withdrawing therapy in reversal studies may be unethical. For instance, if a treatment reduces a client's self-destructive behavior, such as driving while intoxicated, then it would be unethical to remove the treatment in a reversal phase (even though it is important to assess the effectiveness of the treatment). Multiple baseline studies circumvent the second and third limitations of reversal studies, and, to some degree, the first limitation.

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MULTIPLE BASELINE STUDIES

A **multiple baseline study** evaluates the effects of a therapy on a particular class of variables—different target behaviors, different clients, or different settings—depending on the purpose of the study. One purpose can be to ascertain whether the therapy is effective for different target behaviors; a second purpose can be to determine whether the therapy is effective with different clients; and a third purpose can be to assess whether the therapy is effective in different settings (such as at home and at work). After baseline measurement of all the permutations of the variable being studied, the therapy is sequentially introduced for each permutation of the variable. If the therapy is responsible for the changes in the target behavior that occur, then the change should occur *only after the therapy is introduced* and not before. The variables that change and remain constant in the three basic types of multiple baseline studies are shown in Table 5-2.

To illustrate the rationale and basic procedures of multiple baseline studies, let's examine a hypothetical example of a multiple baseline study that examined the effectiveness of a particular therapy on three different acceleration target behaviors, for the same client and in the same setting. (The same basic procedures would be used for evaluating the effect of a treatment for multiple clients or multiple settings.)

The study begins with baseline measurements of all three target behaviors. As you can see in Figure 5-2, following 5 days of baseline, the therapy was introduced for behavior 1 but not for behaviors 2 and 3, for which baseline assessment just continued. Notice that only the target behavior being treated (behavior 1) increased, which is what would be expected if the therapy was responsible for the change (because the therapy was not applied to the other behaviors).

When the therapy was introduced for behavior 2 on day 10, behavior 2 changed, and behavior 1 maintained its changes because both behaviors were being treated. However, behavior 3 remained unchanged, which would be expected because it was not being treated.

Finally, the therapy was applied to behavior 3 on day 14. As with the other two target behaviors, behavior 3 increased when the therapy was introduced. Because each target behavior changed *only* after the therapy was applied to it, and because the client and setting were held constant, it is reasonable to conclude that the changes were attributable to the therapy.

TABLE 5-2
Variables That Change and Remain Constant in Three Types of Multiple Baseline Studies

	VARIABLE		
Type of Study	**Target Behaviors**	**Clients**	**Settings**
Across target behaviors	Different	Same	Same
Across clients	Same	Different	Same
Across settings	Same	Same	Different

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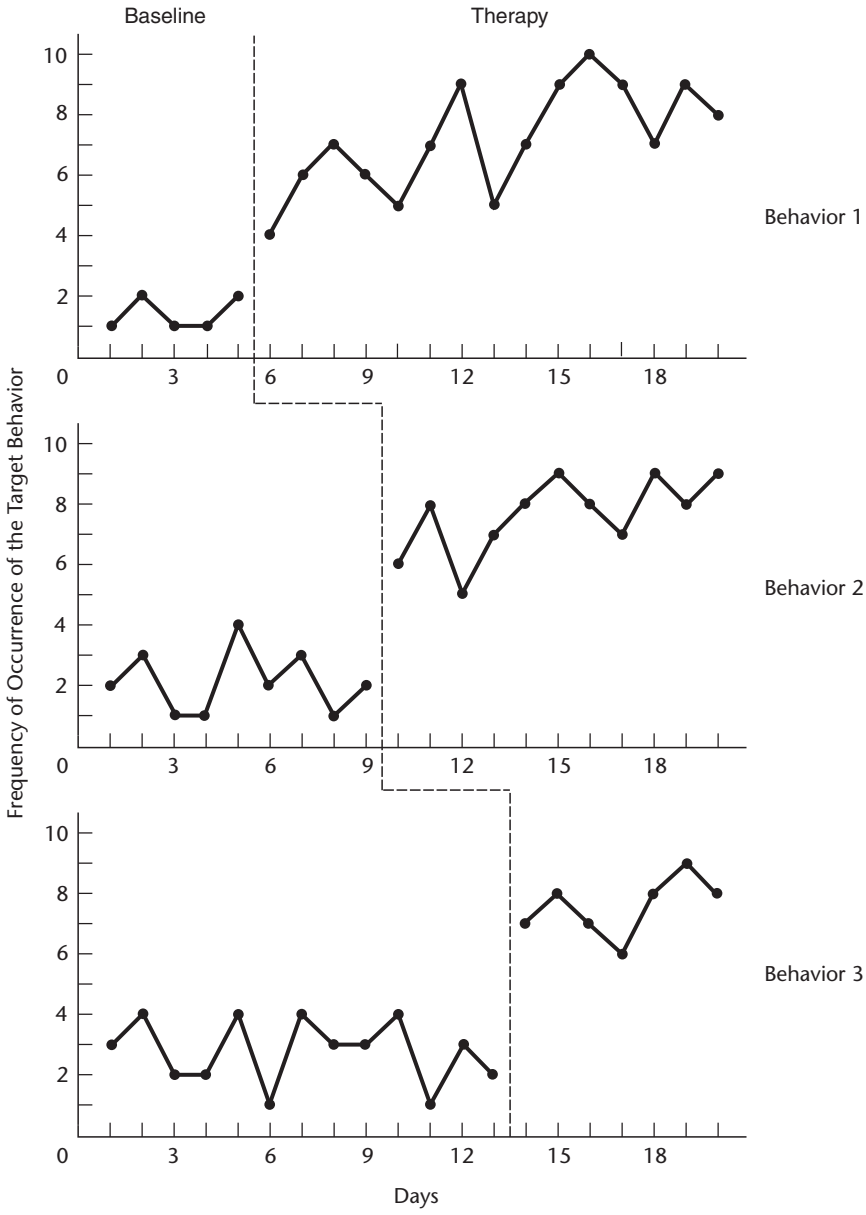


FIGURE 5-2
Hypothetical data in a multiple baseline study indicating typical changes that would be expected in three different acceleration target behaviors if the therapy were effective

Because of the systematic comparisons they make between treatment and no treatment, both reversal studies and multiple baseline studies provide more information than case studies do about the causal effects of the therapy. Further, multiple baseline studies hold some possible confounding variables constant

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(the two variables that are the same; see Table 5-2), which provides additional evidence for the causal role of the therapy. However, determining the general effectiveness of a particular therapy typically requires evidence from experiments with large groups of clients and more control over variables other than the therapy that could result in changes.

EXPERIMENTS

Experiments study groups of clients, all of whom are dealt with in the same way except that some clients receive the therapy being evaluated and others do not. Experiments are the primary research method used to evaluate the general effectiveness of a treatment, as opposed to its specific effectiveness for a particular client. Experiments can examine both outcome and process issues, but the vast majority involve outcome issues, which will be emphasized here.

Outcome experiments address the question: Is the therapy responsible for the changes in clients' target behaviors? This question can be answered with some surety because experiments *control*, or account for, the influence of *confounding variables*—that is, variables other than the therapy that are likely to affect clients' problems (such as motivation to change and beneficial changes in one's life).

In the simplest experiment, clients are randomly assigned to one of two groups. *Random assignment* means that each client has an equal chance of being assigned to each group. The **treatment group** receives the therapy, whereas the other group does not, and so it serves as a comparison or **control group** (see Table 5-3 for examples of different kinds of control groups). The two groups are made equivalent with respect to confounding variables in two ways. First, random assignment usually ensures that, on average, clients in one group do not differ from clients in the other group in terms of preexisting characteristics (such as age, education level, marital status, severity of the disorder being studied); in a sense, randomization evenly distributes these characteristics across the groups. To be sure of this, data are collected on the client characteristics, and the two groups are compared for each relevant characteristic. Second, the two groups are dealt with in the same way (for instance, they are given the same assessment measures), except for the presence or absence of therapy. Thus, if clients in the treatment group improve significantly more than clients in the control group, then we can confidently conclude that the improvement was a result of the therapy and not of confounding variables.

Once the effectiveness of a therapy has been demonstrated in relation to suitable control groups, researchers may carry out additional experiments to assess its relative effectiveness compared with other therapies. In such experiments, the comparison groups consist of clients treated by other therapies, and a control group itself may not be necessary.

The findings of experiments are more generalizable than the findings of case studies, reversal studies, and multiple baseline studies because the results of experiments represent averages for a sizeable number of clients. However, the accuracy of generalizations to other clients depends on how similar the clients and their problems in the experiments are to the clients to whom the generalizations are made.

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TABLE 5-3
Types of Control Groups Commonly Used in Behavior Therapy Outcome Experiments

Control Group	Description	Purpose	Example
No Treatment	Clients receive no therapy. Target behaviors are assessed at the same time that clients in the therapy group receive pretherapy and posttherapy assessments.	To control for improvements in clients' problems that are due to factors other than the specific therapy procedures.	Children who were referred for therapy because of aggressive behaviors were assessed for aggressive behaviors at the same times as the clients in the treatment group were.
Wait-List	Clients initially receive no therapy. Target behaviors are assessed at the same time that clients in the therapy group receive pretherapy and posttherapy assessments. After the therapy group's final assessment, control clients receive the therapy (if it was found to be effective).	To control for the influence of clients' expectations that they will receive therapy.	Couples seeking help for their marital conflicts had their marital relationship assessed and then reassessed 2 months later. They then participated in 2 months of marital therapy, after which their marital relationship was assessed again.
No Contact	Clients receive no therapy. Target behaviors are assessed without the clients' being aware that they are part of a therapy study and without direct contact with the therapist or researcher.	To control for improvements in clients' problems that are due to being participants in a therapy study rather than to the specific therapy procedures.	All people between the ages of 21 and 35 in a community were mailed a questionnaire about their anxiety 3 days after an earthquake struck and then again 5 months later.
Attention	Clients meet with a therapist for the same amount of time as clients in the therapy condition but do not receive the therapy.	To control for improvements in clients' problems that are due to the therapists' attention rather than to the specific therapy procedures.	College students with severe test anxiety met with a therapist once a week for 12 sessions and discussed theories of the development and course of test anxiety.
Placebo	Clients receive a therapy-like procedure that they are led to believe is highly effective but, in fact, has no proven effectiveness.	To control for improvements in clients' problems that are due to clients' expectations that the therapy they are receiving will be effective rather than to the specific therapy procedures.	Clients who were depressed were told that listening to a specially prepared audiotape of rhythmic clicking sounds before they went to sleep for 6 weeks would result in improvements in their mood.
Treatment as Usual	Clients receive the treatment or care that is typically used for them (generally the treatment they are already receiving).	To control for improvements that would occur without the therapy that is being tested but with whatever treatment they are currently receiving.	Clients in a day treatment center received twice-weekly group therapy sessions, medication, and biweekly medication checks.

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IN THEORY 5-1

Behavior Therapy as an Experiment

Treating a client with behavior therapy is analogous to carrying out an experiment. An experiment begins with a hypothesis that a particular *independent variable* (a condition that is directly varied) will influence a particular *dependent variable* (the behavior being studied). To test the hypothesis, a researcher introduces the independent variable and measures the dependent variable to see if it changes—while controlling confounding variables that might change the dependent variable. If the dependent variable changes (in the expected direction) when the independent variable is introduced, then the hypothesis is supported. In other words, the experiment has produced evidence that the independent variable has a causative effect on the dependent variable.

You can see the parallels between an experiment and the process of behavior therapy by substituting the terms *maintaining conditions* for independent variable and *target behavior* for dependent variable. The behavior therapist hypothesizes that certain conditions are maintaining the client's target behavior. The therapist tests the hypothesis by changing the maintaining conditions in therapy and by observing whether the target behavior changes. If the target behavior changes (in the desired direction), then the hypothesis is supported and the therapy is successful. If the target behavior does not change, then the hypothesis is not supported and the treatment is unsuccessful. Table 5-4 details the parallels between behavior therapy and an experiment.

TABLE 5-4
Parallels Between Behavior Therapy and an Experiment

Step	Behavior Therapy	Experiment
1. *Define what is to be changed*	Target behavior	Dependent variable
2. *Assess baseline level*	Pretherapy measurement of target behavior	Preexperiment measurement of dependent variable
3. *Search for influential factors*	Identify maintaining antecedents and maintaining consequences of target behavior	Decide on independent variable
4. *Formulate hypothesis*	"If the correct maintaining conditions have been identified, then modifying them will change the target behavior."	"If the independent variable does have an influence on the dependent variable, then varying the independent variable will result in the dependent variable changing."
5. *Test hypothesis*	Implement therapy (that is, modify maintaining conditions)	Carry out experiment (that is, vary independent variable)
6. *Examine outcome*	Posttherapy measurement of target behavior	Postexperiment measurement of dependent variable
7. *Draw conclusions when*		
a. *Change is in expected direction*	Therapy successful	Hypothesis confirmed
b. *No change or change is in unexpected direction*	Reassess maintaining conditions (that is, return to step 3)	Find other independent variable (that is, return to step 3)

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There is one major difference between treating a client with behavior therapy and performing an experiment. In an experiment, control procedures prevent factors other than the independent variable from influencing the dependent variable. Accordingly, experiments can establish cause-and-effect relationships with a high degree of certainty. This is less true for behavior therapy. If the hypothesized maintaining conditions are changed and the target behavior changes, then therapy is successful. However, because in therapy confounding variables are not controlled, there is no way to know whether modifying the hypothesized maintaining conditions caused the change. For example, changes in a client's life that occur during therapy may have a beneficial effect on the problem (for instance recovering from an illness is likely to decrease depression). Not knowing definitively what accounts for the success of therapy usually is acceptable in clinical practice because the goal is to alleviate a client's problem.

WHAT CONSTITUTES EFFECTIVE BEHAVIOR THERAPY?

Five *outcome measures*, or criteria, are used to evaluate the effectiveness of behavior therapy: meaningfulness of change, transfer of change to the client's natural environment, generalization of change to nontreated behaviors and situations, durability of change over time, and acceptability of the therapy. These outcome measures are applicable both to research that evaluates a therapy for clients in general and for a particular client in clinical practice.

MEANINGFULNESS OF CHANGE

Effective therapy should result in a change that is meaningful and clearly makes a difference for the client. This is known as **clinical significance**.[8] The difference between clinical significance and *statistical* significance is explained in In Theory 5-2. Clinical significance is usually assessed using two criteria: relevant norms[9] and social validity.

Consider the hypothetical case of Belinda, a 4-year-old girl who interacts with her peers only 5% of the time that she is with other children at her preschool. Suppose that after therapy, Belinda is spending 35% of her time at preschool interacting with other children. Although 35% clearly is a substantial change, if the norm for social interaction for 6-year-old girls were 55%, then the therapy outcome would not be considered clinically significant with respect to relevant norms.

Social validity,[10] the second criterion for clinical significance, refers to generally accepted standards for adaptive and acceptable functioning. Social validity is assessed by having appropriately qualified people judge whether the client's behaviors following therapy are personally adaptive and socially acceptable.[11] For example, Belinda's teacher might be asked to observe her peer interactions and rate them in terms of how appropriate they are (for her age and sex).

Another aspect of meaningfulness of change is the degree to which the clinical changes have increased clients' quality of life. Therapeutic success is usually measured by symptom reduction; given that clinical symptoms are maladaptive and distressing, it would be expected that their diminution would make clients' lives better. But whether this is the case must be assessed.[12]

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IN THEORY 5-2

Clinical Versus Statistical Significance: A Significant Distinction

Clinical significance is not the same as *statistical significance*, which refers only to the *reliability* of an outcome and is calculated mathematically. A statistically significant outcome means that there is a high probability that the outcome would occur again if the therapy were applied in other cases, but it implies nothing about how meaningful the outcome is. Suppose a treatment for smoking cessation results in an average reduction of cigarettes smoked from 36 to 33 per day. Given a sufficient number of clients in the treatment group, this outcome could be statistically significant, which would indicate that there is a high probability that the treatment would reduce the number of cigarettes smoked (but not necessarily the same number) in other studies. However, because three fewer cigarettes per day would be unlikely to improve one's health, the results of the study are not clinically significant because they have no pragmatic import.

In treatment outcome experiments, it is important to assess both statistical and clinical significance because we need to know if the treatment is likely to work again (reliability) and whether the outcome makes a difference in clients' lives. When measuring the impact of treatment for an individual client, the concept of statistical significance is not relevant, but clinical significance—meaningfulness of change—certainly is.

TRANSFER OF CHANGE

The purpose of therapy is to bring about changes in the client's everyday life. Obviously, then, effective treatment requires that changes that are achieved in therapy *transfer* to the client's life. **Transfer** occurs when what is learned and practiced in therapy carries over to other settings. Take the example of a man who has trouble controlling his anger when frustrations arise in his family life. In therapy, he is taught to use self-instructions to cope with frustrations and avoid becoming angry, and he is able to do so while role-playing with his therapist. For the therapy to be effective, however, the man must successfully use the self-instructions at home.

GENERALIZATION OF CHANGE

In many cases, the benefits a client gains in therapy can be applied to behaviors and aspects of the client's life other than those that were specifically addressed in treatment, a process called **generalization**.[13, a] This is most likely to be the case when clients develop coping skills to deal with their problem. For instance, the man in the previous example might also use self-instructions to deal with his excessive drinking as a response to stressors at work.[14]

[a] Both transfer and generalization are forms of generalization—stimulus generalization and response generalization, respectively. I have chosen to use the term *transfer* for stimulus generalization and *generalization* for response generalization to avoid confusion. Additionally, durability or long-term maintenance of treatment gains (which will be discussed later) can also be considered a form of generalization—that is, generalization *over time* (Foxx, 2013).

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On a broader level, when a therapy has been demonstrated to be effective for a particular disorder (for example, generalized anxiety disorder), it cannot be assumed that it will also be effective in treating other disorders (for example, phobic disorder). How well it works with other problems must be empirically validated. For instance, cognitive therapy was originally developed for depression and was shown to be highly effective in treating that disorder (see Chapter 13). Subsequently, cognitive therapy was applied to anxiety disorders after outcome studies demonstrated that it was effective for anxiety disorders.

Because transfer and generalization of change are not always a natural outcome of successful treatment, it often is necessary to include specific procedures that promote transfer and generalization in the treatment plan. For instance, with children who are socially withdrawn, social skills training can be carried out with multiple peers (to enhance generalization) and in a variety of settings (to enhance transfer).[15]

DURABILITY OF CHANGE

Changes that result from therapy must endure long after the treatment has ended. Endurance of therapeutic effects is referred to as **long-term maintenance** (or **maintenance**, for short).

Maintenance of treatment effects is determined by assessing the client's functioning at various time intervals after therapy—optimally, extending for several years.[16] Such *follow-up assessments* have become standard in behavior therapy outcome research.[17] Typically, the results of follow-up assessments are reported in the research literature using phraseology such as "the treatment gains were maintained up to 2 years." Such wording can be misleading. What is meant is that at a 2-year follow-up, the treatment gains were maintained—not that the treatment effects lasted only 2 years or less. The major practical obstacle to obtaining follow-up assessments is keeping track of clients' whereabouts and inducing clients to undergo additional assessment procedures.[18]

Maintenance of treatment gains, like transfer and generalization, is not guaranteed by a successful therapy outcome immediately following therapy. Specific procedures may need to be included during and after therapy to ensure durability over time. For example, in a residential program for treating antisocial behaviors, teenage clients' socially appropriate behaviors are reinforced with spending money. As clients are nearing the end of the program, the reinforcers are switched to verbal praise because outside the program, appropriate behaviors are more likely to be reinforced by praise than money. Additionally, significant people in the clients' lives, such as family members and teachers, are trained to continue the social reinforcement of appropriate behaviors. These procedures help ensure that clients will continue to perform the behaviors after they have left the program.

Long-term maintenance is, in part, dependent on transfer and generalization. To begin with, maintenance requires that the therapeutic changes transfer to the client's everyday life. Further, the more situations to which therapeutic changes transfer and the more behaviors to which the changes generalize, the greater is the likelihood that the therapeutic effects will be maintained.

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ACCEPTABILITY OF THE THERAPY

A final outcome measure concerns the acceptability of the treatment procedures to the client and sometimes to significant others, as in the case of children.[19] **Acceptability** refers to how palatable the therapy procedures are. It does not refer to whether the client believes the therapy is effective.[20] Acceptability is typically assessed using standardized measures, such as the Satisfaction with Therapy Questionnaire,[21] and in recent years, acceptability has increasingly been assessed in behavior therapy outcome studies.

Some forms of behavior therapy are more likely to be acceptable than others. As with many treatments for medical problems, behavior therapies vary in terms of how pleasant they are, how much they intrude into clients' lifestyles, and how much time and effort they require. These variables influence how acceptable or tolerable different behavior therapies are to clients. Additionally, clients have individual preferences for different therapies.[22]

All other things being equal, therapy procedures that are acceptable to clients are more useful because clients are more likely to seek acceptable procedures and remain in treatment.[23] Conversely, clients tend to drop out of treatments that have low acceptability.[24] Not surprisingly, there also is evidence that acceptability of treatment is associated with treatment effectiveness.[25]

In addition to the general acceptability of a treatment procedure, acceptability may depend on demographic variables, including age, educational level, and culture.[26] For the treatment of posttraumatic stress disorder, for example, veterans consider virtual reality exposure therapy (Chapter 10) more desirable than do civilians (most likely because it is less stigmatizing, which is a concern for veterans).[27] Standard procedures may have to be modified to make them more acceptable for certain groups of clients, such as using examples and metaphors that are culturally relevant.[28]

Acceptability of treatments also applies to therapists because if therapists consider a treatment less acceptable, they are likely to use it less often. This might occur for many reasons independent of the demonstrated usefulness of a particular therapy, including therapists' misunderstandings about a therapy,[29] therapists' concerns about potential negative side effects (despite the rarity of adverse side effects in their practice),[30] and therapists' finding a therapy difficult or boring to administer. Moreover, negative beliefs about a therapy are associated with suboptimal administration of the therapy and consequentially less effective treatment.[31] Similarly, nonprofessional change agents, such as parents and teachers,[32] are more likely to continue administering therapy procedures that they find acceptable and discontinue or inconsistently employ procedures that they find unacceptable.[33] The bottom line is that even the most effective therapies can be helpful only if they are used, which partly depends on their being acceptable first to clinicians who recommend and administer the treatments and then to the clients who must undergo them.

OUTCOME MEASURES IN PERSPECTIVE

Of the five outcome measures, meaningfulness of change and transfer are paramount. If the change clients experience does not make a difference in their lives,

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then clearly the treatment was not successful. And for the results of the therapy to make a difference in clients' lives, the therapeutic gains must transfer to their daily lives.

Ideally, the treatment benefits should continue indefinitely, but even if they last for a reasonable time after therapy has terminated, the treatment may be considered worthwhile. Generalizing what is gained from therapy to aspects of clients' lives that were not treated in therapy is a bonus but not necessary for the treatment to be considered successful. Moreover, generalization is possible only with therapies that provide clients with skills or strategies that are generalizable. Many behavior therapies do this directly (problem-solving therapy and self-instructional training are just two examples) and indirectly (as when a client who is treated with exposure therapy for a particular fear extrapolates the strategy of reducing fear by exposure to other things the client may fear). However, there are some behavior therapies that do not leave clients with generalizable treatment strategies, such as reinforcement therapy in which a target behavior (such as paying attention to a task) is accelerated through reinforcement. Finally, a therapy must be minimally acceptable—otherwise, clients will not agree to undergo it—and the more acceptable a therapy is, the more likely clients will be to stick with it.

META-ANALYTIC STUDIES

To make general statements about the effectiveness of a given behavior therapy, it is necessary to examine relevant studies and draw conclusions from them. This can be a daunting task, given the large number of studies and the different methodologies they employ. Fortunately, there is a statistical procedure known as **meta-analysis** that integrates and compares empirical findings from multiple studies regarding a specific research question, such as "Is therapy X an effective treatment for disorder Y?"[34] Instead of asking this question in a single study, a meta-analytic study asks it about a group of studies. Hundreds of meta-analytic studies of behavior therapies have been performed.[35]

The first step in a meta-analysis is establishing a set of criteria for the studies that will be included, such as the quality of the methodology, the assessment measures used, and the length of follow-up assessments. Then an extensive search for published studies that ask the research question of interest and meet the inclusion criteria is made.

To compare the findings from the studies included, a common numerical index is calculated for each study. This index, called an *effect size*, indicates the degree of change that clients experience as a result of the treatment.[36] The meta-analysis takes the effect sizes from all the studies and statistically averages them. The averages are usually weighted for number of clients and sometimes for quality of the study; studies with more clients and higher quality are given more weight.[37] The end result is an *average effect size* that is a measure of the degree of change clients experienced across all the studies.

Meta-analysis provides a more comprehensive answer to the question of whether a given therapy is effective in treating a particular problem than a single study because it is based on multiple, and usually high-quality, studies.

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Additionally, a meta-analysis may identify important common variables across the individual studies that refine the research question.[38] For example, the meta-analysis might reveal that although therapy X is generally effective in treating disorder Y, it is more effective with twice-weekly therapy sessions than weekly sessions or that it works better for children than for adolescents.

The generally accepted values indicating different levels of meaningfulness of change have been arbitrarily determined. For a commonly used statistic for effect size, Cohen's *d*, .2 indicates a small change, .5 a moderate change (generally the threshold for clinical significance), and .8 or more a large change.[39] (An effect size of zero indicates no change, and a negative effect size indicates worsening of clients' problems.)

The clinical significance of a treatment depends on the effect size that is interpreted in the context of the therapy and its application. For example, small effect sizes can be clinically significant when there are small changes in a disorder that is extremely difficult to change (as might be the case with autism spectrum disorder). Also, small effect sizes for therapies that are very efficient and cost effective may be meaningful because some change has occurred with little expenditure of time or effort.[40]

Increasingly, meta-analyses are being conducted to evaluate the effectiveness of behavior therapies. The strength of meta-analysis is that it combines research from a number of studies and thus includes many clients—strength in numbers, if you will. However, one downside of amalgamating many studies is that because the studies often use diverse methodologies, the legitimacy of comparing them may be questionable (just as comparing apples and oranges is said to be suspect). Additionally, although the result of a meta-analysis is quantitative and objective, interpretation of the overall effect size is subjective. A final caveat about meta-analyses is that they select only published studies—which almost always demonstrate effectiveness because, as a matter of course, research that yields negative results does not get published. This means that meta-analyses generally yield somewhat overestimated effect sizes.[41]

IN THEORY 5-3

Evaluating the Efficacy and Effectiveness of Behavior Therapies

Using both the terms *efficacy* and *effectiveness* in the title of this In Theory may seem redundant because in everyday language, the words are synonymous. However, in scientific research, they have different meanings. **Efficacy** refers to the success of therapy when it is assessed under ideal conditions, which means in research settings using standardized procedures and rigorous controls. **Effectiveness** refers to the success of therapy in "real-world" clinical settings (such as community-based clinics and private practices) where rigorous controls and standardization generally are not be possible. It is important for therapies to be both efficacious and effective. (Bear in mind, this discussion concerns providing empirical support for a particular therapy procedure in general and not for its success in treating an individual client.)

Efficacy studies are usually conducted in a research, rather than a clinical, context. The participants all have the same reliably diagnosed disorder, and they either receive the treatment free or are paid for their participation. The specific

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therapy being evaluated is extensively defined in a **treatment protocol** that provides detailed, session-by-session procedures for the therapist to follow,[42] and usually the number of sessions is prescribed. Thus, all the participants receive the same treatment.[43] Confounding variables other than the therapy itself that could result in change are controlled for (such as the therapist–client relationship). Most efficacy studies are experiments, and participants who receive the therapy are compared to equivalent participants who are in a control group (see Table 5-3, page 71). All the participants in the study are randomly assigned to groups, so each participant has an equal chance of being put in the treatment or the control group. Because of the highly controlled conditions in efficacy studies, if participants who receive the therapy being tested improve more compared to participants in the control group, it should be possible to definitively attribute the improvement to the therapy itself (rather than to other factors).

The type of experiment just described is known as a **randomized controlled trial (RCT)**,[44] so called because participants are randomly assigned to groups, and rigorous controls for confounding variables are included. RCTs are considered the benchmark for a treatment to be called **evidence based.**[45] Generally, for therapy to be considered evidence based, it must (1) consist of a discrete set of specific psychological techniques, (2) be administered in a prescribed manner using a standardized treatment protocol, (3) have been shown to be superior to an appropriate control group for a specific disorder in at least two randomized controlled trials,[b] and (4) have been replicated by at least two independent researchers.[46]

The major limitation of efficacy studies is that they are artificial in that the conditions do not replicate those in the "real" world of clients' seeking and being treated in therapy.[47] For example, in efficacy studies, clients who have the same disorder are recruited, are randomly assigned to treatments, and do not pay for treatment. Additionally, the treatment is administered according to a standardized treatment protocol. By contrast, *effectiveness studies* take place in actual clinical rather than research facilities, and clients often have multiple disorders, choose the type of therapy they receive, and pay for the treatment. The therapists are likely to be flexible in how they administer standardized treatment procedures rather than strictly following the procedures in a **treatment manual** that is derived from the treatment protocol used in the efficacy research on the treatment (see Broad Strokes 5-1).

Because of these differences, whether an efficacious treatment will prove effective in everyday clinical practice is not known until effectiveness studies are carried out.[48] Effectiveness studies—which can be experiments, reversal studies, multiple baseline studies, or case studies—usually do not have the same rigorous standards and controls as efficacy studies. For example, it is unlikely that an effectiveness study would be a randomized controlled trial because in actual clinical practice, clients typically are not randomly assigned to treatment.[49] However, effectiveness research can be methodologically sound within the limits of practical and ethical considerations, and it has the advantage of testing the therapy under the actual practice conditions where it will be used.

Although the logical progression is to test a therapy first in efficacy studies and then in effectiveness studies, this practice often does not occur. In fact, only a minority of studies evaluating behavior therapies are efficacy studies, and the preponderance of empirical support for behavior therapies comes from effectiveness studies. One reason is that efficacy studies are extremely expensive, time-wise and monetarily; efficacy studies often are multisite and multiyear investigations with follow-ups, and the cost can be several million dollars. Also, testing behavior therapies in efficacy studies is a relatively new practice, and so many established behavior therapies developed before the advent of efficacy studies have only been validated in effectiveness studies.

[b] An alternative, less frequently used research method for establishing evidence-based status is at least 10 high-quality single case design studies that indicate superiority to appropriate controls.

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Broad Strokes 5-1 *Treatment Manuals: A Cookbook Approach to Therapy*

Treatment manuals contain detailed session-by-session procedures for the treatment of a specific disorder. Treatment manuals used in clinical practice have evolved from research protocols employed in efficacy studies[50] and are adapted to community-based settings. As an example, a program for training school counselors to treat inner-city students' anxiety disorders employed a modified cognitive-behavioral treatment that had been shown to be efficacious in randomized controlled trials.[51] Having a research protocol in efficacy research is important because, if followed, the therapy being tested will be administered in the same way by each therapist and across studies. Such *fidelity* is necessary to draw definitive conclusions about the success of the therapy.

Treatment manuals have been written for many behavior therapies, especially those that have been developed in recent years. Using a treatment manual to administer a therapy in clinical practice ensures that the treatment is the same as that which has been shown to be efficacious. Another advantage of well-written treatment manuals is that therapists who have not otherwise been trained in a therapy can implement it using the manual.[52] Although treatment manuals make evidence-based treatments available to clinicians, their existence does not necessarily mean that clinicians will use them. For instance, a survey of therapists treating eating disorders revealed that only 6% indicated that they used treatment manuals.[53]

The major criticism of using treatment manuals is that adhering to their standard procedures does not allow the treatment to be tailored to clients' unique problems.[54] However, manual-based treatment does not preclude therapists' applying their clinical judgment to adapt procedures so that they fit for individual clients.[55] The challenge for therapists is to be able to modify the standard procedures while still maintaining the elements that are essential to a treatment's effectiveness,[56] which has been termed *flexibility within fidelity*.[57] This would be analogous to a cook's tweaking a recipe for banana bread to meet the dietary needs or tastes of dinner guests (such as substituting gluten-free flour for all-purpose flour) but not leaving out any essential ingredients (such as bananas). Using manual-based treatment flexibly with fidelity is an example of melding the science and art of therapy.

SUMMARY

1. Outcome research evaluates whether therapy is effective, both for individual clients and for a therapy procedure in general. Process research investigates why a therapy is successful or how a therapy produces change.
2. Case studies are detailed, descriptive accounts of what transpired in the treatment of individual clients. Case studies are limited in terms of the

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generalizability of their findings to other clients and in terms of determining whether the therapy itself caused the changes in the target behavior.

3. Reversal studies systematically introduce and withdraw a therapy to assess its effects on the client's target behavior. In multiple baseline studies, a particular therapy procedure is introduced sequentially for different target behaviors, clients, or settings.
4. Experiments study groups of clients and control for the effects of confounding variables. In a simple experiment, clients are randomly assigned to one of two groups. One group receives therapy and the other does not, the latter serving as a control or comparison group. Experiments can indicate whether the therapy has caused the changes in clients' target behaviors, and their results can be generalized.
5. Behavior therapy can be viewed as a scientific experiment in which hypotheses about the causes of the client's target behaviors are tested.
6. Five outcome measures are used to evaluate the effectiveness of behavior therapy: meaningfulness of change, transfer of change, generalization of change, durability of change, and acceptability of the therapy.
7. Meta-analytic studies integrate and compare empirical findings from multiple studies regarding a specific research question. The effect sizes of the individual studies are averaged and weighted, resulting in an average effect size that indicates the degree of change across all studies.
8. Efficacy refers to the success of therapy assessed under ideal controlled conditions (with the limitation of artificiality). Evidence-Based treatments are those that have been evaluated in randomized controlled trials (experiments), so called because participants are randomly assigned to groups, and rigorous controls for confounding variables are included.
9. Effectiveness refers to the success of therapy in "real" clinical settings (where rigorous controls and standardization may be lacking). It is important for therapies to be both efficacious and effective.
10. Treatment manuals contain detailed session-by-session procedures for the treatment of a specific disorder. They have evolved from research protocols employed in efficacy studies.

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CHAPTER 6



Behavioral Assessment

Multimethod and Multimodal Assessment

Characteristics of Behavioral Assessment

Individualized

IN THEORY 6-1 Is There a Place for Diagnosis in Behavior Therapy?

Present Focus

Directly Samples Relevant Behaviors

Narrow Focus

Integrated with Therapy

Behavioral Interviews

PARTICIPATION EXERCISE 6-1 What, When, Where, How, and How Often? Behavioral Questioning

Direct Self-Report Inventories

PARTICIPATION EXERCISE 6-2 Are You in the Habit of Good Study Habits? Find Out With a Direct Self-Report Inventory

Self-Recording

PARTICIPATION EXERCISE 6-3 What Ya Doin'? Self-Recording

PARTICIPATION EXERCISE 6-4 Daily SUDsing

IN THEORY 6-2 Someone Is Looking Over My Shoulder: Reactivity

IN THEORY 6-3 The Boons and Banes of Self-Reports

Behavioral Checklists and Rating Scales

PARTICIPATION EXERCISE 6-5 Checking Out a Professor

Systematic Naturalistic Observation

Simulated Observation

Role-Playing

Physiological Measurements

PARTICIPATION EXERCISE 6-6 Getting to the Heart of the Matter: Measuring Your Pulse

CASE 6-1 Behavioral Assessment in a Case of Domestic Violence

All Things Considered: Behavioral Assessment

SUMMARY

PARTICIPATION EXERCISE ANSWERS

REFERENCE NOTES

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Behavioral assessment is to behavior therapy what a banana is to a banana split—indispensable. Behavioral assessment procedures are used to gather information relevant to clarifying clients' problems, setting goals, selecting and designing target behaviors, identifying the maintaining conditions of the target behaviors, designing a treatment plan, and monitoring clients' progress.

The eight most frequently used behavioral assessment methods will be discussed: interview, direct self-report inventory, self-recording, checklist/rating scale, systematic naturalistic observation, simulated observation, role-playing, and physiological measurement.[1] The first three methods—interviews, self-report inventories, and self-recordings—provide information from clients' reports about themselves and are called *self-report measures*. The next four methods—checklists and rating scales, naturalistic observations, simulated observations, and role-playing—employ other people to assess clients' behaviors. Finally, physiological measurements rely primarily on instrumentation to provide information. In subsequent chapters, you will see each of the basic methods of behavioral assessment used in behavior therapy.

Occasionally, the effects or by-products of a target behavior called *permanent products* are measured to assess changes in the target behavior rather than assessing the target behavior itself.[2] In the case of a woman with a severe case of skin picking, digital photographs of the client's wounds before and after treatment were used as a measure of change (along with self-report measures and rating by others).[3] This was necessary because even if the treatment resulted in diminished skin picking (the deceleration target behavior), the ultimate measure of the success of the treatment was whether the ill effects of the target behavior—the wounds caused by the woman's skin picking—were diminished. Other examples of permanent products are the number of cigarettes remaining in a pack or butts found in an ashtray to assess cigarette smoking, the number of clothes found out of place (for example, on the floor rather than in a drawer or closet) to assess putting clothes away, and minutes of cell phone usage for a client wanting to increase contact with others or decease cell phone usage.

As you will see, all of the major methods of behavioral assessment have elements of subjectivity. Objective measures are difficult to obtain, but this is becoming less so with the use of contemporary technology, such as measuring "minutes of cell phone usage." In a study examining the effect of decreasing TV watching on weight loss, an objective measure was used to assess time watching TV.[4] Participants in the study had the plug of their home TV locked into a device that needed to be accessed with a code to watch TV. Participants had their own codes, and the device recorded number of minutes watched.

MULTIMETHOD AND MULTIMODAL ASSESSMENT

In practice, more than one *method* of assessment generally is used to gather information about a client.[5] **Multimethod assessment** leads to a more comprehensive assessment than does employing a single method. It provides corroborative evidence from different assessment procedures, which increases the reliability and validity of the assessment. Also, each method has its particular strengths and limitations, so using multiple methods yields a balanced assessment.

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In behavioral assessment, information about more than one *mode* of behavior usually is obtained.[6] **Multimodal assessment** is important because psychological disorders generally involve more than one mode.[7] Depression, for example, may consist of reduced activity (overt behavior), thoughts of hopelessness (cognition), sadness (emotion), and fatigue (physiological response). Similarly, social phobia not only involves fear of criticism, being watched, being the center of attention, and embarrassment, but also impaired social behaviors.[8]

The particular modes of behavior assessed and the methods used depend on the nature of the problem and on practical considerations. Table 6-1 provides examples of how anger and aggressive behaviors might be assessed using each of the eight most common behavioral assessment methods for each of the four modes of behavior. As the table indicates, certain methods of assessment are optimal for each mode of behavior, and not all methods are appropriate for each of the modes.[9] In assessing a client's thoughts, for example, interviews, self-report inventories, and self-recordings are the optimal methods, and role-playing could possibly be used; however, the remaining four assessment methods are not applicable. In practice, the most efficient and least costly methods of assessment typically are chosen, which is one reason that behavioral interviews and self-report inventories are used most frequently.

TABLE 6-1
Examples of Behavioral Assessment Methods Used to Assess *Anger* and *Aggressive Behaviors* (examples of the most commonly used methods are printed in **boldface**)

	Modes of Behavior			
Method	**Overt Behaviors**	**Cognitions**	**Emotions**	**Physiological Responses**
Interview	**"Describe what you do when you get angry at your wife."**	**"What are you saying to yourself when you get angry at your wife?"**	**"How are you feeling when you hit your wife?"**	**"What specific bodily reactions do you have when you get angry at your wife?"**
Direct self-report inventory	**True or false: "I often use physical violence to get my way."**	**True or false: "When I get angry, I think about attacking someone."**	**True or false: "When I am angry, I feel like I am going to explode."**	**True or false: "When I get angry, I start to sweat."**
Checklist and rating scale	**Parents check off the specific aggressive acts a teenager engaged in over the last week.**	Not used.	Teacher rates the severity of a student's overt indications of anger (such as shaking fist or making threatening remarks) using a 5-point scale.	Mother checks off possible physiological responses (such as face and neck flushing) that she observes in her son which may indicate anger.

(*continued*)

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TABLE 6-1 (*continued*)

	Modes of Behavior			
Method	**Overt Behaviors**	**Cognitions**	**Emotions**	**Physiological Responses**
Self-recording	**Client keeps diary of incidents of aggressive acts.**	**Client keeps diary of thoughts before, during, and after feeling angry and behaving aggressively.**	**Client records occurrences of angry feelings during the day.**	**Client records pulse when provoked to anger.**
Systematic naturalistic observation	**Therapist observes parent–child interactions at home, coding examples of parents' verbally and physically aggressive behaviors.**	Not used.	Therapist observes overt behaviors (such as shaking fist or making threatening remarks) that may indicate client feels angry.	In client's home, therapist observes overt signs of physiological reactions (for example, face flushing and rapid breathing).
Simulated observation	**Therapist deliberately provokes client and notes client's overt aggressive and nonaggressive responses.**	Not used.	Therapist deliberately provokes client and notes client's overt behaviors (such as shaking fist or making threatening remarks) that may indicate client feels angry.	Therapist deliberately provokes client and notes overt signs of physiological reactions (for example, face flushed and rapid breathing).
Role-playing	**Scenario is presented of client's boss' criticizing client for being late. Therapist role-plays boss, and client responds to boss' criticism. Therapist records what client says.**	Scenario is presented of client's boss' criticizing client for being late. Therapist role-plays boss and client responds to boss' criticism. Client describes thoughts while responding to criticism.	Scenario is presented of client's boss' criticizing client for being late. Therapist role-plays boss, and client responds to boss' criticism. Therapist observes client's overt responses (such as grimaces) that may indicate anger.	Scenario is presented of client's boss' criticizing client for being late. Therapist role-plays boss, and client responds to boss' criticism. Therapist observes client's overt signs of physiological reactions (such as face flushing).
Physiological measurement	Not used.	Not used.	Heart rate and blood pressure, signs of arousal that may indicate anger, are measured while client thinks about frustrating situations.	**A father's heart rate, blood pressure, and galvanic skin response are measured before, during, and after he watches a video of his child's misbehaving.**

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In addition to using multiple methods and assessing multiple modes of behavior, multiple assessors may be employed. A typical example would be assessment of a child that consisted of parents' interview responses, a teacher's rating scales, and a therapist's naturalistic observations. If different assessors agree, the reliability and probably the validity of the assessment increase. Discrepancies can sometimes be sources of error or assessor bias,[10] but at other times, discrepancies can provide important information about the situation specificity of the client's behavior in different contexts (for example, a child may behave differently at school than at home).[11]

CHARACTERISTICS OF BEHAVIORAL ASSESSMENT

In a sense, behavioral assessment is defined independently of the methods used. Whether assessment is behavioral in nature depends on *how* it is implemented and used. For instance, the interview is hardly unique to behavioral assessment. However, the emphases in a behavioral interview (such as focusing on current circumstances) distinguish it from interviews in other types of assessment. Some of the general differences between behavioral and nonbehavioral (traditional) approaches to assessment are summarized in Table 6-2.

Behavioral assessment procedures share five characteristics. Behavioral assessment (1) is individualized, (2) focuses on the present, (3) directly samples relevant behaviors, (4) has a narrow focus, and (5) is integrated with therapy. These emphases are consistent with the behavioral model and overlap with the defining themes and common characteristics of behavior therapy described in Chapter 1.

TABLE 6-2
Comparison of Behavioral and Traditional Assessment

	Behavioral	Traditional
Aims	To identify target behaviors	To describe personality functioning
	To identify maintaining conditions	To identify etiology (origin)
	To select appropriate treatment	To diagnose or classify
	To evaluate and revise treatment	
Assumptions		
1. Role of behavior	Sample of client's typical behaviors in specific situations	Sign of client's personality (for example, traits and intrapsychic dynamics)
2. Role of past	Minimal importance (present behavior caused by present events)	Crucial (present behavior caused by past events)
3. Consistency of behavior	Consistent in the same situation	Consistent in different situations
Interpretation		
1. Direct or indirect	Direct (sample)	Indirect (sign)
2. Degree of inference	Low (behavior to behavior)	High (behavior to personality)

Source: Adapted from Barrios, 1988.

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INDIVIDUALIZED

Behavioral assessment is used to gather unique, detailed information about a client's problem and its maintaining conditions.[12] Thus, the assessment methods are chosen with the particular client and the client's specific problem in mind, and standard tests and procedures are customized as needed. These practices are consistent with behavior therapy's individualized approach. Individualized behavioral assessment directly contrasts with the practice of diagnosing psychological problems, as In Theory 6-1 discusses.

IN THEORY 6-1

Is There a Place for Diagnosis in Behavior Therapy?

Diagnosis involves classifying clients' problems into discrete categories of disorders. For more than 60 years, the American Psychiatric Association has developed the standard diagnostic categories that are used and that are published in its *Diagnostic and Statistical Manual of Mental Disorders* (abbreviated DSM). The fifth edition of DSM (DSM-5) was published in 2013.[13]

Philosophically, diagnosis is antithetical to fundamental premises of behavior therapy and behavioral assessment.[14] In contrast to the individualized approach, diagnosis groups clients' problems into categories.[15] For example, rather than dealing with a client's particular problem behaviors, DSM-5 views the client as having a specific disorder. The consequence is that the client's individual problem behaviors become indistinguishable from the problems of all people whose behaviors have the same diagnosis. This often results in two false assumptions: (1) that all individuals with the same disorder display the same behaviors and (2) that an individual whose problem has been given a particular diagnosis displays all, or at least most of, the symptoms that are supposedly characteristic of the diagnosis.[16] Thus, based on a diagnosis, one may attribute characteristics to a client that the client does not possess.

Diagnosis is a trait concept, which is another basic way in which diagnosis runs counter to the behavioral approach. Strictly speaking, diagnoses refer to people's behaviors rather than to the people themselves. Unfortunately, this fact is often forgotten. The client becomes the diagnosis, which leads to viewing the client as a *schizophrenic* rather than as an *individual with schizophrenia*, for example. This error results in stigmatizing and discriminating against people. Further, in the case of some disorders, it is assumed that once diagnosed, the person always has the disorder, although the symptoms may not always be present.[17] This unsupported assumption accounts for the common expression "Once an alcoholic, always an alcoholic," which, incidentally, epitomizes the regrettable common practice of equating the person with her or his diagnosis. From the behavioral perspective, clients are viewed as *having* disorders, rather than *being* the disorder (or being disordered).

Accurate diagnosis may steer a behavior therapist toward general strategies for treatment. However, diagnosis does not specify (1) the specific behaviors that are problematic for an individual client; (2) the conditions under which the behaviors are problematic; (3) their frequency, intensity, and duration; and, most important for developing a specific treatment plan, (4) the maintaining conditions of the problem behaviors.

Does this mean behavior therapists do not use diagnostic labels in referring to their clients' problems? No, it does not. In fact, most behavior therapists do assign DSM diagnoses. In clinical practice, the major reason for doing so is that official diagnoses are required by clinics, hospitals, schools,

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and social service agencies before treatment and services can be offered and by health insurance companies before treatment will be paid for. In its favor, diagnoses provide a common language for clinicians to communicate about disorders, and this allows different researchers to assume that they are studying the same *basic* clinical phenomena.

The behavioral alternative to diagnosis is a detailed description of a client's unique problem and the antecedents and consequences that are maintaining it. On one hand, the end product of a thorough behavioral assessment is much lengthier and makes comparisons between clients (such as for communication and research) more difficult than diagnostic categorization. On the other hand, behavioral assessment provides the necessary information for designing individualized treatment, which diagnosis does not.

Assigning discrete diagnoses also assumes that clients' problems will fall into a particular category. Often, however, clients' problems involve characteristics or symptoms of more than one category.

Recently, there has been a trend to develop **transdiagnostic behavior therapies** that are designed to treat the common factors that affect the maintenance of abnormal behaviors that are related to a number of existing diagnostic categories,[18] such as eating disorders (anorexia nervosa and bulimia nervosa) and emotional disorders (anxiety and mood disorders).[19] A transdiagnostic approach largely negates the need for diagnosis. Instead, clients are treated with respect to their presenting symptoms, which often are related to multiple diagnoses. The approach also deals with the common occurrence of *comorbidity*—that is, clients' having more than one disorder. For example, clients with a mood disorder often experience one or more anxiety disorders,[20] and clients suffering from posttraumatic stress disorder often have substance-related problems.[21]

PRESENT FOCUS

The focus of behavioral assessment, like behavior therapy, is on relevant information about the client's current functioning and life conditions. Isolating the causes of problem behaviors involves assessing the current maintaining conditions. Details about the client's past, especially early childhood, are considered relatively unimportant.

DIRECTLY SAMPLES RELEVANT BEHAVIORS

Behavioral assessment procedures examine *samples* of a client's behaviors to provide information about how the client typically behaves in particular situations. Suppose Josephine's parents are concerned that their daughter is not socializing with her peers. They could observe her in various social situations and record the time she spends interacting with her peers and alone. If she interacts with her peers only 10% of the time, this would probably indicate that Josephine has a deficit in social behaviors. Their assessment takes a direct approach: a sample of the person's behavior is used to generalize about that behavior. In contrast, nonbehavioral, traditional assessment is *indirect*. Behaviors are used as *signs* (of traits or psychological states), rather than samples, of something other than behavior. In our example of Josephine's spending a minimal amount of time interacting with her peers, this observation, from a traditional assessment perspective, might indicate that Josephine is an introvert (a trait that is indirectly inferred from the observations of her behavior).

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NARROW FOCUS

Behavioral assessment deals with discrete behaviors and specific circumstances rather than a client's total personality or lifestyle, as traditional assessment does. This strategy is consistent with the focus in behavior therapy on target behaviors, which are discrete aspects of the client's problem. It also makes behavioral assessment more efficient.

INTEGRATED WITH THERAPY

Behavioral assessment is an integral and continuous part of therapy. Assessment of the client's problem and its maintaining conditions are initial steps in behavior therapy, and assessment continues throughout therapy to evaluate changes in the client's target behavior. In fact, often it is difficult to distinguish between behavior therapy and assessment.[22] In the treatment of obesity, for example, clients self-record all the food they eat. Besides providing an assessment of the clients' eating, keeping food records makes clients aware of the food they consume and of their eating habits. Such awareness is a key component in the treatment of obesity, and it, by itself, can result in eating less. Thus, clients' self-recording can be both assessment and treatment.

BEHAVIORAL INTERVIEWS

Generally, the first session of behavior therapy begins with an interview. In addition to assessment, initial interviews serve two functions. The first is for the therapist to begin building rapport with the client, which involves developing a relationship of mutual trust. Listening attentively and nonjudgmentally and letting clients know that they are understood are among the ways in which therapists' build rapport with clients. The second function of the initial interview is to provide clients with information about behavior therapy. The therapist describes the behavioral model and its view of psychological problems as well as the general nature of behavior therapy (essentially a synopsis of what you read in Chapters 3 and 4). The therapist also explains the ethical and legal rules of confidentiality that are followed in psychotherapy.

As an assessment tool, the interview enables the therapist to gather information about the client's problem and its maintaining conditions.[23] Clients often describe their problems in vague trait terms. They may say that they are "shy" or "hot-headed." The therapist questions the client to elicit the specific details of the client's unique problem. It is not enough to know that the client "has trouble in relationships with men," for example. Does "trouble" mean that she cannot approach men or that she feels uneasy in their company? Is the client referring to casual or intimate relationships?

Once the specifics of the problem have been delineated, the client and therapist can design a target behavior. The next step is to identify the probable maintaining conditions of the target behavior. The therapist asks about the antecedents and consequences of the target behavior. Specifically, *when* and *where* (under what circumstances) does the client get anxious with men? What happens to the client and to her interactions with men when she experiences

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TABLE 6-3
Examples of Questions Behavior Therapists Typically Ask in Initial Behavioral Interviews

1. What brings you here today?
2. When did the problem begin?
3. How often does the problem occur?
4. When (or in what situations) does the problem occur?
5. What tends to occur before the problem [antecedents]?
6. What tends to occur after the problem, and how does the problem affect your life [consequences]? Immediately? Later?
7. What do you think about when the problem is occurring?
8. What do you feel when the problem is occurring?
9. What steps have you already taken to alleviate the problem, and what were the results?

anxiety? Does she attempt to escape from the situation or remain in it? Do the men attempt to escape from the situation?

The standard questions in a behavioral interview (as well as those implicitly asked by other behavioral assessment methods) are: *what, when, where, how*, and *how often?* These types of questions provide information concerning the specific nature of the problem and its maintaining conditions. In contrast, traditional assessment emphasizes *why* questions to gather information about the causes of the client's problem. One difficulty with *why* questions is that clients often are not aware of what causes their behaviors (which is one reason they have come to therapy). Further, according to the behavioral model, the causes of a behavior are its maintaining conditions, which are assessed by the standard behavioral interview questions (*what, when, where, how,* and *how often?*).

The focus in the behavioral interview is on the present rather than the past. Table 6-3 has examples of questions a behavior therapist typically asks in an initial interview. The therapist may also interview significant people in the client's life (such as a parent or spouse) to provide additional or corroborating information. Sometimes only other people are interviewed, as in the case where relatives and institutional staff can provide the most valid information (for instance, for very young children or people with severe intellectual disability).[24]

Before you continue reading or at a later time, complete Participation Exercise 6-1 (page 92), in which you will experience using behavioral interview questions to clarify clients' descriptions of their presenting problems and to discover their probable maintain conditions.

Gathering information through interviews is an efficient assessment method that can provide both quantitative data (such as frequency and duration of problems) and rich qualitative descriptions of behaviors and maintaining conditions. No wonder the interview is the most frequently used assessment method in clinical practice. The therapist has access not only to the client's self-reported information but also can observe the client's associated body language that can elucidate the verbal accounts. However, self-reports can be unreliable due to

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PARTICIPATION EXERCISE 6-1

What, When, Where, How, and How Often? Behavioral Questioning

Clients typically describe their problems in vague, general terms. This exercise presents examples of descriptions that a client or a client's advocate might give. For each description, write five or more questions that you think would be helpful for a behavior therapist to ask to clarify the problem, select target behaviors, and identify probable maintaining conditions. Be sure the format of your questions is appropriate for a *behavioral* interview—that is, *what, when, where, how*, and *how often* questions. When you have finished, compare your questions with the examples in the Participation Exercise Answers at the end of the chapter to see if you thought of the same type of questions and to see what other questions you might have asked.

1. The father of a 9-year-old girl reports, "My daughter's self-concept is so poor and she has so little confidence that she fails at most things she tries."
2. A 37-year-old business executive says, "There has been so much pressure on me lately. Between work and family responsibilities, I feel like I'm just going to explode."
3. The mother of a 5-year-old boy reports, "My son can be an absolute monster. He has no respect for authority and always has to have things his own way or else he acts up."
4. Two college juniors, boyfriend and girlfriend, report, "We are either best friends or at each others' throats. We seem to have a Jekyll and Hyde relationship."
5. A 22-year-old woman says, "I have this habit of avoiding responsibility, and it makes me feel like a coward. I lost two jobs in the past 6 months because of my stupid attitude."

the client's reluctance to reveal personal information or desire to "look good," and characteristics of the interviewer and interview setting can also distort the data collected.

DIRECT SELF-REPORT INVENTORIES

Direct self-report inventories are questionnaires containing brief statements or questions that require a simple response from the client, such as answering "yes" or "no" or rating how true a statement is on a 5-point scale. Behavioral self-report inventories are *direct* because they ask straightforward questions and because the answers are taken at face value. For instance, when a client responds "yes" or "often" to "I avoid going to parties," the answer provides information about a specific situation the client avoids. In contrast, the same answer might be

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used in traditional assessment to *indirectly infer* a trait of shyness.[25] This contrast illustrates how behavioral assessment is defined by the way in which assessment procedures are used rather than by the methods themselves.

One example of a self-report inventory is a **fear survey schedule**, which provides a list of events or stimuli that commonly evoke anxiety in people and asks clients to rate how fearful they are of each. A fear survey schedule for adults appears in Table 6-4.[26] Fear survey schedules for children include events that are likely to evoke fear in youngsters, such as being in the dark and being left alone.[27]

There are hundreds of direct self-report inventories that are used to assess the gamut of problem behaviors clients present, including fear and anxiety;[28] depressive behaviors;[29] social skills, including assertive behaviors;[30] health-related disorders, such as premenstrual syndrome, Type A behavior, and eating

TABLE 6-4

Portion of a Fear Survey Schedule

Instructions: The items in this questionnaire are objects, experiences, or ideas that may cause fear, anxiety, or other unpleasant feelings. Using the scale below, write the appropriate number after each item to describe the degree to which the item causes you to feel fear, anxiety, or other unpleasant feelings.

1 = Not at all
2 = A little
3 = A moderate amount
4 = Much
5 = Very much

1. Open wounds
2. Being alone
3. Public speaking
4. Falling
5. Automobiles
6. Being teased
7. Dentists
8. Thunder
9. Failure
10. High places
11. Receiving injections
12. Strangers
13. Feeling angry
14. Insects
15. Sudden noises
16. Crowds
17. Large open spaces
18. Cats
19. Being watched while working
20. Dirt
21. Dogs
22. Sick people
23. Fire
24. Mice
25. Blood
26. Enclosed places
27. Flying in airplanes
28. Darkness
29. Lightning
30. Doctors
31. Losing control
32. Making mistakes
33. Older people
34. Going blind
35. Drowning
36. Examinations
37. Cancer
38. Fog
39. Being lost
40. Police
41. Talking on the telephone
42. Death of a loved one
43. Pain
44. Suicide
45. War
46. Going insane
47. Violence
48. Psychologists

Source: Developed by Spiegler & Liebert, 1970.

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TABLE 6-5
Examples of Items Used in Direct Self-Report Inventories for Various Problems

Problem	Sample Item
Unassertive behavior	When the food you are served at a restaurant is not done to your satisfaction, you complain about it to your server. (*Agree* or *Disagree*)
Depression	I cry often. (*True* or *False*)
Anxiety/Fear	Enclosed spaces (Rate on scale from 1 to 5, with 1 being *no discomfort* and 5 being *extreme discomfort in the situation*)
Obesity	I have one or more between-meal snacks each day. (*True* or *False*)
Sexual dysfunction	I become aroused by sexual fantasies. (*Agree* or *Disagree*)
Social skills	I often share my toys with other kids. (*Yes* or *No*)
Marital discord	My partner does not understand me. (*Usually, Sometimes,* or *Never*)

disorders;[31] sexual dysfunctions;[32] and marital problems.[33] Direct self-report inventories have been developed for adults[34] and children.[35] Table 6-5 provides examples of items that might appear on direct self-report inventories for different problem behaviors.

Direct self-report inventories are a highly efficient assessment method, which is the major reason they are used very frequently in both clinical practice and research. It typically takes only a few minutes (and sometimes less time) for clients to complete a self-report inventory. The Social Phobia Inventory, for example, has only 17 items, and a brief 3-item version exists.[36] Clients complete self-report inventories on their own, and the inventories can be scored quickly. Because self-report inventories contain standard questions that pertain to people in general, they may not yield specific and detailed information about an individual client. Accordingly, self-report inventories are most useful for initial screening; subsequently, more individualized assessment, such as an interview, can be conducted.

Self-report inventories that focus on a particular problem, such as the Beck Depression Inventory,[37] often are used as general measures of changes over the course of therapy. It is standard practice in cognitive therapy (Chapter 13) for clients to complete the Beck Depression Inventory before each therapy session so that the therapist and client can evaluate changes since the previous session.

You'll get a more complete understanding of what is involved with taking and scoring a self-report inventory by completing Participation Exercise 6-2, which you can do before you read about the next method of behavioral assessment or at a later time.

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PARTICIPATION EXERCISE 6-2

Are You in the Habit of Good Study Habits? Find Out With a Direct Self-Report Inventory[b]

What is it like to complete a direct self-report inventory? To see, write the numbers 1–15 on a sheet of paper, and then rate how often you engage in each of the 15 study habits listed below, using the following scale.

3 = Consistently
2 = Usually
1 = Occasionally
0 = Rarely or never

1. I review my class notes each evening.
2. I study in a setting that is free of distractions.
3. I read assigned material before class but do not study it until shortly before the exam on the material.
4. I look up the meaning of words I don't know while I am reading.
5. I get a good night's sleep before exams.
6. I use background music to relax me while I study.
7. I start studying for exams at least 3 days before an exam.
8. Before reading course material, I skim the reading to get an idea of what it includes.
9. While reading course material, I underline or highlight as many important points as possible rather than taking notes as I read.
10. I take practice tests (such as in a study guide) when they are available.
11. When I get back an exam, I make sure I know the correct answers to the questions that I got wrong.
12. If I do not understand something a teacher says in class, I write it in my notes and try to figure it out later.
13. I read the chapter summary before and after I read a chapter.
14. After completing a reading assignment, I write down the key ideas.
15. I read all my assignments at the same speed.

The major purpose of this exercise was to give you the experience of completing a direct self-report inventory. So, before checking "how you did," think about the experience. To what extent do you think the inventory adequately assessed your study skills? Were you completely honest in your responses? For instance, did you note any tendency to respond as you think you *should* study rather than how you *actually* study? What advantages of self-report inventories became clear as you completed this inventory? What limitations did you become aware of?

If you'd like to score the inventory, first reverse the scoring of the items that describe poor study habits. For items 3, 6, 9, 12, and 15, change *3* to *0*, *2* to *1*, *1* to *2*, and *0* to *3*. Now add the scores for all 15 items. The higher the total (the closer to 45), the better are your study habits. You may find it helpful to consider changing the study habits that you assigned a *0* or a *1* (after reversing scores). Also, if you are unsure why a particular study habit is good or poor, consult with a teacher, your learning assistance center, or a book on study skills.

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SELF-RECORDING

With **self-recording** (or **self-monitoring**), clients observe and record their own behaviors. Self-recording capitalizes on the fact that clients are almost always available to observe and record their own behaviors. Compared with observations made by others, self-recording is time efficient, especially for infrequent behaviors (such as panic attacks) that would necessitate constant observation by another person.[38] Self-recordings can be made of both overt and covert behaviors, which include both emotions[39] and thoughts.[40]

In the simplest form of self-recording, clients record the behavior's frequency (number of times they engage in the behavior). This can be done, for example, by making tally marks on a small card or wristband or by using an inexpensive golf or knitting counter (see Photos 6-1a, 6-1b, and 6-1c).[41] More elaborate recording devices exist,[42] such as a cigarette pack that indicates the number of cigarettes removed[43] and a pill-bottle cap containing a microchip that records bottle openings.[44] Sophisticated monitoring is now becoming possible with smartphones and other mobile devices. For example, applications exist for mood monitoring via mobile phones. Besides rating their mood, clients can write notes about their thoughts, overt behaviors, and settings. Their self-recordings can be sent directly to their therapist for review during treatment sessions or even for the therapist to provide assistance or support before the next session when needed.[45]

What is recorded depends on the problem being treated. Records may include quantitative data, such as frequency and duration, as well as qualitative data, such as context, mood, and thoughts. Clients are instructed to self-record relevant behaviors immediately after they occur.[46] The more retrospective the recordings are—even with a few minutes delay—the less accurate they tend to be.

Participation Exercise 6-3 provides an experience analogous to clients' self-recording overt behaviors. Because this exercise must be done over a number of days, you can't complete it now. However, read it now (and carry it out in the coming week) because some of the procedures involved in self-recording are discussed in the instructions.

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(a) (b) (c)

PHOTOS 6-1a, 6-1b, and 6-1c
Examples of simple, inexpensive self-recording devices: (a) index card, (b) wristband, and (c) golf counter

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PARTICIPATION EXERCISE 6-3

What Ya Doin'? Self-Recording

What is the experience of self-recording behaviors like for a client? Here's a chance to find out.

Before you begin self-recording, there are three preparatory steps.

1. First, choose a simple behavior to self-record. Examples might be reading, jogging, being late, daydreaming, text messaging, swearing, and listening to music. Whatever behavior you choose, be sure that (a) it is relatively easy to observe, (b) it can be quickly recorded without disrupting the behavior, and (c) it occurs at a moderate rate. If you perform the behavior very often (for example, blinking), it will be difficult to record; if you rarely engage in the behavior (for example, buying a car), you will have nothing to record.
2. Decide on an appropriate unit for measuring the behavior (such as pages read, miles jogged, or minutes on the phone) and a unit of time (for example, per hour or per day) for the behavior.
3. Finally, devise a recording device. The simplest procedure is to divide a 3" × 5" index card into intervals and make a check mark each time you perform the behavior, as shown in Figure 6-1. Or your smartphone or other mobile device may have an app that is convenient for recording (and there is no chance you'll ever be without it!). At the end of your designated time period, total the number of check marks. Also include on your record brief notes about what is happening in your life while you are recording; they may help you understand variations in your rates of performing the behavior.

		Total Per Day
Mon.	𝍸 𝍸 𝍸 𝍸 𝍸 I	26
Tues.	𝍸 𝍸 𝍸 𝍸 𝍸 III	28
Wed.	𝍸 𝍸 𝍸 𝍸 𝍸 III	28
Thurs.	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 I	56
Fri.	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 II	57
Sat.	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸	30
Sun.		0
Sat. night big date		
Sun. slept till 1:30 PM		

FIGURE 6-1
Example of an index card record of pages read in a week

(*continued*)

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PARTICIPATION EXERCISE 6-3 (*continued*)

You are now ready to observe and record your behavior. Be sure you carry your index card (or other recording device) with you whenever you might engage in the behavior. Make your observations over the course of a week so that you can observe the behavior under various conditions.

When you have finished your observations, plot them on a graph on which the horizontal axis represents units of time and the vertical axis represents units of the behavior (see Figure 6-2). The graph, along with your notes of what was happening during the recording, will provide a snapshot of the results of your self-recordings. For example, the graph in Figure 6-2 shows that the person read approximately the same number of pages (between 26 and 28) for the first 3 days. On Thursday, the number of pages nearly doubled, and it remained the same on Friday. On Saturday, the number of pages dropped to approximately the same rate as for Monday through Wednesday, perhaps because of a Saturday evening party. And on the seventh day, no pages were read (even God takes the seventh day off).

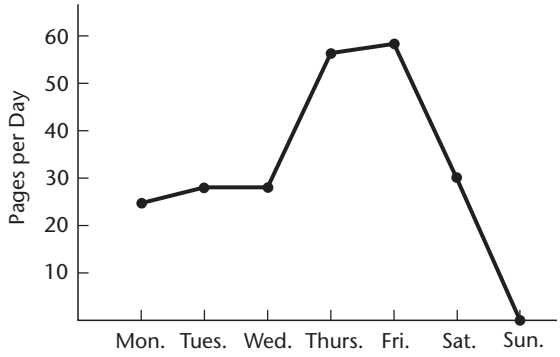
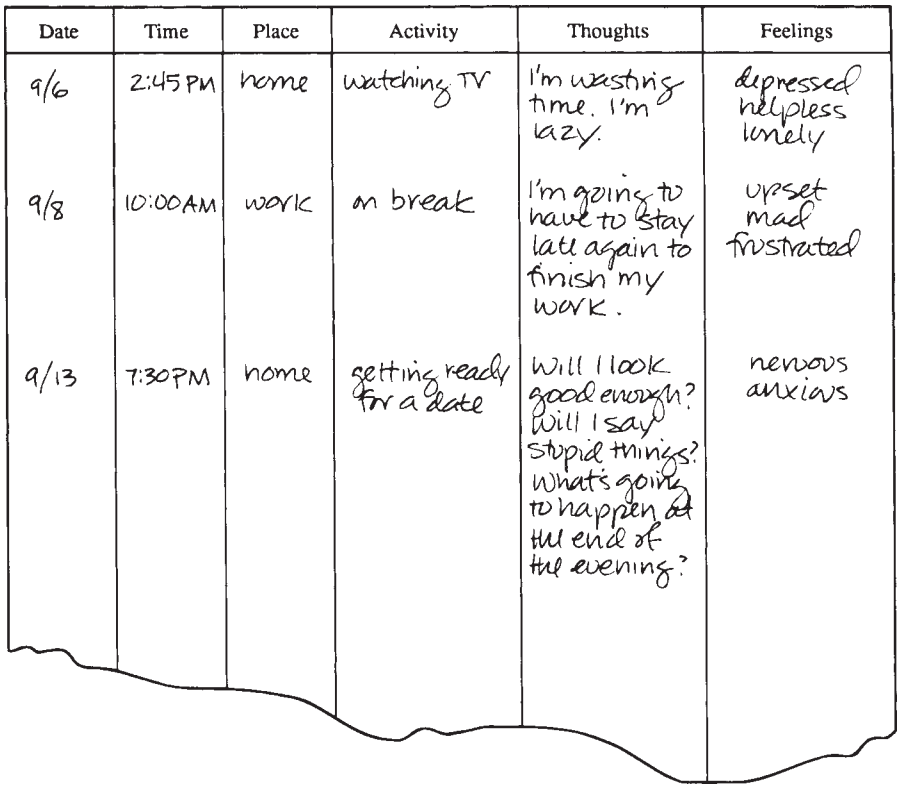


FIGURE 6-2
Graph of a week's reading

Your experiences in doing this exercise may have been similar to those of clients who are asked to self-record overt behaviors. For example, you may have found it inconvenient to record the behavior. Accordingly, you may have put off recording until later, which may have led to inaccurate recording or your forgetting to record altogether. You may have found that your behavior changed as a result of self-recording, which is an example of reactivity (see In Theory 6-2, page 101). Additionally, you may have learned something about your behavior, such as how often it actually occurs and the circumstances in which you engage in it more frequently and less frequently.

Self-recordings of covert behaviors, such as thoughts or feelings, are often brief qualitative descriptions of the behaviors and the circumstances in which they occur written in diaries or on simple forms,[47] such as the example in Figure 6-3. Covert behaviors also can be quantified, as in terms of frequency, duration, and intensity. Intensity can be measured on a predetermined scale, such as the **Subjective Units of Discomfort scale** used to assess anxiety.

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Date	Time	Place	Activity	Thoughts	Feelings
9/6	2:45 PM	home	watching TV	I'm wasting time. I'm lazy.	depressed helpless lonely
9/8	10:00 AM	work	on break	I'm going to have to stay late again to finish my work.	upset mad frustrated
9/13	7:30 PM	home	getting ready for a date	Will I look good enough? Will I say stupid things? What's going to happen at the end of the evening?	nervous anxious

FIGURE 6-3
Sample form used to record incidents of binge eating, including relevant environmental circumstances, thoughts, and feelings

The units of this scale, called **SUDs**, range from 0 to 100 (sometimes 0 to 10). Zero represents no anxiety; 100 represents the highest level of anxiety that the client can imagine.[48] As the word *subjective* implies, SUDs are relevant only for the individual client. Two people who report experiencing the same SUDs level are not necessarily experiencing equivalent degrees of discomfort; this means that comparisons between the two people cannot be made. However, the same person's SUDs levels can be compared at various times and in different circumstances. For instance, if a client reported experiencing 60 SUDs last week and 40 SUDs today in the same situation, then it is safe to conclude that the client is less anxious today. To see the usefulness of SUDs, complete Participation Exercise 6-4 (page 100) over the next few days.

Self-recording has three potential limitations. First, its usefulness depends on the client's ability and willingness to make careful and candid recordings. The accuracy of self-recording can be increased by (1) simplifying recording procedures, (2) recording as soon as possible after the observation is made, and (3) having independent observers make occasional reliability checks.

Second, self-recording interrupts ongoing activities. Clients usually must stop whatever they are doing, at least briefly, to record. If the target behavior

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PARTICIPATION EXERCISE 6-4

Daily SUDsing

Choose a regularly occurring (at least daily) situation or experience in your life in which you generally feel uncomfortable. Whenever the situation occurs, rate your SUDs level (1–100) and record it on Work Sheet 6-1 (which you'll find in your on-line Student Resource Manual; see page xxxi) along with a brief description of (1) your feelings and thoughts and (2) what is happening at the time. You can either have the work sheet with you all the time or a piece of paper to record the information on and transfer it to the work sheet later. Record a minimum of 10 instances of the situation you have chosen. Figure 6-4 shows a portion of a work sheet for a student who monitored her SUDs levels when she spoke up in her history class.

After collecting your series of SUDs ratings, graph the ratings to provide an overall picture of how your level of discomfort varied. To account for the variations, consult your work sheet for particular circumstances that may have affected your level of discomfort.

Situation: Speaking up in history class

Date	SUDs	Feelings and thoughts	What is happening
9/4	80	Scared to death; I'm going to sound dumb	Professor asks our reasons for taking course
9/6	—		Didn't do anything
9/9	75	This is hard; butterflies	Answering questions from reading
9/11	70	Nervous; here I go again—better say something worthwhile	Joining discussion

FIGURE 6-4
A portion of a work sheet of SUDs levels, feelings and thoughts, and descriptions of what was happening each time a woman spoke up in her history class

occurs frequently, numerous interruptions will occur. Not surprisingly, clients may find self-recording annoying, which can result in their failing to record.

The third potential problem with self-recording is *reactivity,* where the act of self-recording a behavior influences how the behavior is performed; In Theory 6-2 discusses this intriguing phenomenon.

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IN THEORY 6-2

Someone Is Looking Over My Shoulder: Reactivity

When people are aware that their behaviors are being assessed, by others or themselves, they may behave atypically. You no doubt have experienced this yourself, as when you perform differently (worse or better) than you usually do when someone is "watching over your shoulder." This phenomenon is known as **reactivity**. When reactivity occurs during behavioral assessment, the result is an inaccurate or distorted assessment of the client's typical (unobserved) behaviors.[49] For example, when children in a classroom monitor their "remaining at an assigned task" (an acceleration target behavior), their on-task behavior increases substantially.[50] Likewise, when clients monitor their self-destructive hair-pulling (a deceleration target behavior), their habitual hair-pulling decreases dramatically.[51] Reactivity can occur whenever clients are aware that they are being assessed, which means it is a potential problem with naturalistic observation, simulated observation, and role-playing as well as self-recording, which will be used for examples.

The consequences of self-recording may influence reactivity.[52] Clients may find self-recording annoying and bothersome, which results in their recording less and less accurately when they do record. Conversely, when self-recording provides positive feedback for changing the target behavior in the desired direction, self-recording (and the target behavior) will increase.

Self-recording does not always result in reactivity, and some measures tend to be more reactive than others. For instance, self-recording caloric intake may result in weight loss for some clients, but self-recording eating habits is not likely to be associated with weight loss.[53] Thus, one way to reduce reactivity is to employ measures that tend to be less reactive.

Reactivity is a problem for assessment because accurate information about the current status of a client's target behavior is required, such as to establish a baseline level. However, clients' self-recording can change the target behavior in the desired direction, as when children who are overweight eat less when they are monitoring their food intake.[54] Why, then, not harness reactivity in the service of therapy? In fact, self-recording occasionally is used as a therapy procedure.[55] For example, in the treatment of panic disorder, self-monitoring of panic attacks focuses on the specifics of the experience, such as the subjective units of discomfort the client reports. This specific self-monitoring creates *objective self-awareness* in contrast to global, exaggerated assessments (for example, "This is unbearable; I'm totally out of control") and thus lowers anxiety.[56] Self-monitoring also serves an essential therapeutic function in instances where clients are unaware of the extent of their problems, as with eating disorders[57] and nervous habits (such as tics).[58] In general, however, the changes produced through self-recording tend to be relatively small and short lived.[59] Accordingly, self-recording *as a therapy* procedure typically is employed as one component of a treatment package rather than as the sole treatment, such as in habit reversal (see Chapter 17).[60]

All of the behavioral assessment methods we've looked at so far—interviews, self-report inventories, and self-recording—are self-report measures. Behavior therapists frequently use self-report measures because they have some distinct advantages over other methods of assessment. They also have distinct limitations. Both the pros and cons of self-report methods of behavioral assessment are the subject of In Theory 6-3.

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IN THEORY 6-3

The Boons and Banes of Self-Reports

By far the simplest and most efficient way for a behavior therapist to gather treatment-relevant information about clients is to ask them directly. The information comes in the form of answers to interview questions, responses to a self-report inventory, or data collected through self-recording. If the information is valid, it can be extremely useful in therapy; however, its validity depends on clients' ability and willingness to provide honest and accurate answers. This may not occur for various reasons, including the inclination to present oneself in a favorable light (for example, to please the therapist), the tendency to overestimate or underestimate one's own behaviors, and the frequent discrepancy between what people say they do and what they actually do.

Still, self-report measures are the major means of assessing clients' covert behaviors—how they are feeling and what they are thinking. Further, for some problem behaviors, subjective self-report is the standard measure of the success of therapy. This is the case with marital problems, where relationship satisfaction is paramount,[61] and sexual dysfunctions, where couple satisfaction with improvements is the best measure of success.[62]

Self-report measures are frequently used in behavior therapy because of their efficiency and the useful information they can provide. Whenever feasible, however, independent measures that do not rely on clients' self-reports are used to corroborate the findings from self-report measures. For instance, a man who indicates on a self-report inventory that he has difficulty asserting his desires could role-play situations with the therapist requiring such assertive behaviors, or a close friend could be asked to observe his reactions when such assertive responses are appropriate. If the information gathered from other methods of assessment is consistent with the client's self-reports, then the therapist can rely on the self-reports and use them to guide the client's therapy.

BEHAVIORAL CHECKLISTS AND RATING SCALES

Checklists and rating scales are similar in format to self-report inventories, but they are completed by someone other than the client, such as a parent, teacher, or spouse. Checklists and rating scales list potential problem behaviors. With a **checklist**, the assessor checks off those behaviors that are problematic for the client. With a **rating scale**, the assessor evaluates each behavior by indicating how frequently it occurs or how severe it is. Thus, rating scales provide more information than checklists.[63] Checklists and rating scales are both completed *retrospectively;* that is, they are based on the informant's recollections of the client's behaviors. For example, after school hours, a teacher might complete a checklist of a student's behaviors that day.

Although checklists and rating scales typically are used to assess target behaviors, they also can be used to identify maintaining conditions. For instance, using the Children's Headache Assessment Scale, parents rate environmental antecedents associated with their child's headaches.[64]

Many checklists and rating scales have been developed for both adults and children.[65] Some are broad, measuring problem behaviors in general; others are narrow, assessing specific problem areas. The Child Behavior Checklist includes

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CAP Rating Scale

Child's Name:	FOR OFFICE USE ONLY
Today's Date:	
Filled Out By:	

Below is a list of items that describes pupils. For each item that describes the pupil *now* or *within the past week*, check whether the item is Not True, Somewhat or Sometimes True, or Very or Often True. Please check all items as well as you can, even if some do not seem to apply to this pupil.

	Not True	Somewhat or Sometimes True	Very or Often True
1. Fails to finish things he/she starts	☐	☐	☐
2. Can't concentrate, can't pay attention for long	☐	☐	☐
3. Can't sit still, restless, or hyperactive	☐	☐	☐
4. Fidgets	☐	☐	☐
5. Daydreams or gets lost in his/her thoughts	☐	☐	☐
6. Impulsive or acts without thinking	☐	☐	☐
7. Difficulty following directions	☐	☐	☐
8. Talks out of turn	☐	☐	☐
9. Messy work	☐	☐	☐
10. Inattentive, easily distracted	☐	☐	☐
11. Talks too much	☐	☐	☐
12. Fails to carry out assigned tasks	☐	☐	☐

Please feel free to write any comments about the pupil's work or behavior in the last week.

FIGURE 6-5
The Children's Attention Profile
Source: Adapted from © 1986 Craig Edelbrock.

113 common problem areas associated with childhood.[66] In contrast, the Children's Attention Profile is a rating scale designed specifically to assess inattention and hyperactivity in children within a classroom setting (see Figure 6-5).[67]

Checklists and rating scales are efficient ways to assess behaviors; most can be completed in less than 15 minutes and some take just a few minutes. Because they are completed retrospectively, reactivity is not a concern because the person being assessed is not present when the assessor completes the checklist or rating scale. Generally, checklists and rating scales are used for initial screening purposes and as global measures of change, and sometimes they are used to select target behaviors.[68]

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The utility of checklists and rating scales depends on informants' accurately observing the client's behaviors and later making reliable ratings.[69] *Reliability*, in general, refers to the consistency or dependability of observations. The specific type of reliability germane to checklists and rating scales is **interrater reliability**, which is the degree to which two or more raters agree. It is measured by comparing the responses of the raters and calculating the percentage of agreement.

The same concept and procedure is used to check on the reliability of observations—that is, **interobserver reliability**. An example involved teaching a 14-year-old boy with Asperger's syndrome to discriminate between his appropriate and inappropriate social interactions.[70] The boy self-recorded his interactions, indicating whether he thought they were appropriate or inappropriate. His judgments were compared to a therapist's to obtain interobserver reliability. The boy was reinforced with points for agreements, and he later exchanged the points for time on a computer.

Having just learned about behavioral checklists, you might like to experience what filling one out is like, which Participation Exercise 6-5 will allow you to do—and you'll probably have fun in the process. It will take just a few minutes to respond to the checklist, so I'd suggest you do it now since you've just learned about the assessment method. A small part of it will have to be done later with a classmate.

PARTICIPATION EXERCISE 6-5

Checking Out a Professor

The checklist in this exercise, like most behavioral checklists, will take only a few minutes to complete. Table 6-6 contains a list of 40 behaviors in which professors might engage. Choose one of your current or past professors whose course you have been in for at least a month. Using Work Sheet 6-2 (which you'll find in your on-line Student Resource Manual; see page xxxi), place a check mark next to each of the behaviors that the professor has performed on at least one occasion. Complete the checklist anytime you are not in the professor's class, which is analogous to how checklists are used in behavioral assessment.

To determine how reliable your responses to the checklist are, you will need the help of another student who also has been in the professor's course, ideally in the same class/section as you were. Ask this student to fill out the checklist using Work Sheet Duplicate Form 6-2 (also in your on-line Student Resource Manual). Then compare your two checklists to obtain your interrater reliability. First, count the number of times you both responded the same way (either both of you checked a behavior or both of you left it blank). Then divide the number of instances that you had the same response by 40 (the total possible agreements you could have) and multiply by 100. This calculation yields the percentage of agreement, which indicates your interrater reliability.

Doing this Participation Exercise should give you some insight into the checklist method. Obviously, it can be done quickly, although you considered 40 different behaviors. Did you have any problems completing the checklist? Were you clear about what each behavior referred to so that you could easily say whether you've noticed the professor engaging in each behavior? How reliable were your

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TABLE 6-6
Behaviors in Which a Professor Might Engage

Paces	Coughs	Drinks coffee in class
Fumbles with notes	Makes eye contact	Ridicules students
Arrives late	Speaks softly	Listens attentively to students
Speaks in monotone	Keeps class late	Gives hard exams
Talks with hands	Picks nose	Tells personal stories
Smiles	Rubs eyes	Falls asleep
Taps pen on desk	Strokes beard	Cracks knuckles
Pauses for long time	Tells jokes	Writes on whiteboard
Plays with hair	Stutters	Talks to students before class
Talks rapidly	Loses train of thought	Talks to students after class
Hums	Argues with students	Cancels class
Dismisses class early	Reads notes	Takes attendance
Checks watch	Fiddles with clothing	
Sits on desk	Repeats self	

observations? Any ambiguity in what was meant by the behaviors on the checklist would lower interrater reliability because your classmate might have interpreted the meaning of the behavior differently. What other factors might account for your having less than perfect (100%) agreement?

SYSTEMATIC NATURALISTIC OBSERVATION

Systematic naturalistic observation consists of observing and recording a client's specific, predetermined overt target behaviors as the client naturally engages in them.[71] Precise definitions of the behaviors, including criteria for differentiating each target behavior from similar behaviors, are essential. Table 6-7 (page 106) contains sample definitions of three different target behaviors along with examples of behaviors that are consistent and inconsistent with the definition. Note that these are not definitive definitions of the behaviors because the behaviors could have been defined differently. Rather, they are *operational definitions* that are to be used by the observers. What matters is that the observers all use the operational definitions and not their personal definitions.

The type of measure used—such as frequency, time, or strength—depends on the nature of the target behavior and the purpose of the assessment.[72] When observations are made *continuously* over a relatively brief time, such as an hour or two, considerable observer time is required. A more efficient procedure is

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TABLE 6-7
Sample Definitions of Target Behaviors and Examples That Fit or Do Not Fit the Definitions

Physically Aggressive Behaviors

Definition: The client physically strikes another person with any part of his or her body or with an object, with potential for inflicting pain on the other person.

Examples: Hitting, slapping, punching, tripping, tackling, pushing, biting, kicking, throwing an object at another person, hitting another person with a stick.

Nonexamples: Spitting, making faces, calling another person names, making verbal threats or threatening gestures at another person.

Verbally Expressing Admiration

Definition: The client verbally praises, compliments, expresses a liking or admiration for another person, or expresses a sense of awe about another person's behavior or accomplishment.

Examples: "You did a nice job," "I really like you," "You look very handsome," "How did you get that done so quickly?" "I enjoy talking with you very much," "Your fast ball is incredible."

Nonexamples: "Would you like to have dinner with me?" "How about a kiss?" "What do you know, he finally got a good grade" (a backhanded compliment), hugging, kissing, embracing, or any other physical show of affection without concomitant verbal affection.

Initiating Social Contact

Definition: The client (1) initiates social contact by verbally greeting or *starting* an interaction with another person, (2) uses a neutral or pleasant tone of voice when talking to the person, (3) directly looks at the person when initiating contact, and (4) is within 15 feet of the other person at the time the social contact is begun.

Examples: Introducing oneself to another person, asking another person a question (for example, "Can you please tell me where the exit is?"), calling another person by name, or starting a conversation with another person through a comment (for instance, "The team played well today").

Nonexamples: Yelling at or otherwise using an unpleasant tone of voice, talking to another person *only* after that person initiated the contact, talking to someone without looking at the person, or initiating social contact from a distance of greater than 15 feet.

time sampling, in which observations are restricted to specific time intervals, such as the first 5 minutes of each hour.[73] Devices used to make recordings range from simple to complex and include paper and pencil; clocks and counters; electromechanical devices, such as event recorders and keyboards; and video recordings.

Training observers—who are often nonprofessionals, such as parents, teachers, and psychiatric technicians—is essential.[74] Observers first study the definitions of the behaviors and familiarize themselves with the recording system. Then they practice making observations until their observations are highly accurate and are consistent with one another (consistency is determined by

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interobserver reliability). The minimum level of acceptable agreement among observers typically is between 80% and 90%.[75]

Systematic naturalistic observation has three potential problems: reactivity, observer error or bias, and impracticality.

Reactivity, discussed in In Theory 6-2 (page 101), is a common occurrence when clients are observed by others. The optimal way to combat reactivity during naturalistic observation is to eliminate clients' awareness that they are being observed. This involves making *unobtrusive observations*, such as when the observer is out of sight or a hidden camera records the behavior.

When unobtrusive observations are not possible, reactivity may be minimized by an **adaptation period** in which clients become accustomed to the observer and the observation procedures before the actual observations begin.[76] This often results in clients' ignoring or forgetting about the fact that their behavior is being observed during the actual observations. For example, if a child were being observed in a classroom, the observer might be present and simulate recording observations (as by taking notes) in the room for short periods over the course of a few days before starting the actual observations. It is likely that the child (as well as other children in the classroom) will adapt to the observer's presence, much as we tend to stop noticing a new piece of furniture after it has been in a room for a while.

Sometimes only a very brief adaptation period is required for people to act naturally. One example occurred when Photo 6-2 was taken to illustrate



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PHOTO 6-2
Systematic naturalistic observation of a 4-year-old child interacting with her peers in a preschool playground. Following an adaptation period, the children have become accustomed to the observer's presence.

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systematic naturalistic observation for this book. I have a confession to make. The picture was simulated by having me positioned as an observer might be in a nursery school playground. The young lady standing in the background is my daughter Heather, who was playing "school" and, as the teacher, was talking to her "class" consisting of three boys who are sitting in front of her. Although the picture was taken less than 5 minutes after I sat down in the playground, all of the children—including Heather and the girl playing in the sandbox right at my feet—seemed oblivious to my presence.

Most observational errors occur because the behaviors being observed are not clearly and unambiguously defined. Even when the behaviors are clearly defined, observers' personal biases may make the observations invalid. For example, observers' expectations about how the target behaviors are likely to change as a result of therapy are a major source of bias.[77] Failure to take into account the cultural context of behaviors is another source of bias. Consider the following interaction observed in an African-American family.[78]

Adolescent: I thought you were my friend.

Parent: I am no pal to you.

European-American observers recorded this interaction as "harsh discipline." However, African-American observers, who were familiar with the cultural context, recorded it as "constructive discipline." Cultural issues must be considered when using standard observational codes because codes developed for one population may not apply to other populations.[79]

Systematic naturalistic observations often are impractical.[80] Considerable observer time is required, such as for training, for travel to the client's natural environment, and for the actual observations. If the client performs the target behavior infrequently, an observer may spend an inordinate amount of time waiting for it to occur. Further, naturalistic observation may not be possible because it invades a client's privacy. When these practical or ethical limitations make systematic naturalistic observation impractical, simulated observation is an alternative.

SIMULATED OBSERVATION

In **simulated observation**, conditions are set up to resemble the natural environment in which the client's problem is occurring.[81] The observation may take place in a room that allows observers to see and hear the client through a one-way mirror and intercom (see Photo 6-3), or a video camera can be placed unobtrusively in the room and observers can view the client's behavior in real time or later. Having the observers out of sight generally minimizes reactivity. Clearly, simulated observation is more efficient than systematic naturalistic observation in terms of the observers' time.[82]

Using simulated observations, behavior therapists can test hypotheses concerning external maintaining conditions by systematically varying probable maintaining conditions and observing changes in the client's target behavior.[83] For example, suppose the therapist suspects that a couple communicates least effectively when they talk about financial matters. To test this hypothesis, the

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AP Images/The Sheridan Press, Alan Carroll

PHOTO 6-3
Observing a child's behaviors from behind a one-way mirror

therapist can observe the couple interacting while they attempt to solve problems concerning money and a variety of other issues.[84]

A **behavioral approach** (or **avoidance**) **test** is a simulated observation procedure used to assess fear.[85] The therapist asks a client to engage in a series of steps that involve progressively more fear-inducing behaviors. The number of steps the client can complete is used as a measure of fear. For example, to assess how fearful a client is of snakes, the therapist might ask the client to (1) approach a snake that is in a glass cage 20 feet away (and the number of feet the client walks toward the cage is recorded); (2) put on gloves and touch the snake; (3) hold the snake for a moment; (4) take off the gloves and touch the snake; (5) hold the snake for a moment; and finally (6) pick up the snake, walk to a chair, and sit down with the snake in his or her lap.

Therapists sometimes use simulated observation procedures that have been previously developed and validated for a particular problem. An example is the Restricted Academic Situations Test, which assesses children's ability to pay attention while working independently on written assignments in the classroom.[86] The child is seated at a desk in an observation room and told to complete a written assignment while remaining seated. From behind a one-way mirror, the therapist records the child's behaviors in 30-second intervals for 20 minutes. The specific behaviors recorded are leaving the seat, playing with objects around the desk, fidgeting in the seat, talking out loud, and looking away from the written work. The observer simply places a check mark in the appropriate behavior category if the client engages in the behavior during the

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30-second interval. The proportion of time the child engages in each behavior provides data that can be used to pinpoint target behaviors and assess progress during and after therapy.

The primary potential limitation of simulated observation is the ability to generalize the findings to the client's natural environment because of the artificiality of the simulated observations. The closer the simulated conditions are to the client's natural conditions, the more valid generalization is.[87]

ROLE-PLAYING

In **role-playing**, clients enact problem situations to provide the therapist with samples of how they typically behave in those situations. Role-playing is especially useful in assessing social skills, such as assertive behaviors.[88]

Role-playing is an efficient form of simulated observation. No special physical arrangements are needed because the relevant environmental conditions are imagined—clients act *as if* they were in the problem situation. With interpersonal problems, the therapist plays the roles of other people. For example, a client who reported difficulty in giving her secretary work was asked to make work-related requests of the therapist, who played the role of her secretary.

The more clients are able to behave *as if* they were in the actual situations, the more likely it is that the behaviors observed will be valid indications of how they typically act. Many clients initially feel uneasy or awkward engaging in role-playing. With practice, however, most clients are able to effectively role-play. The therapist must be able to play roles realistically, which requires *specific* knowledge of the other people involved and the nature of the client's interactions with them. The therapist uses that specific information and avoids stereotypic concepts of role relationships, such as how fathers "typically" deal with sons. Reactivity is a potential problem in role-playing, as when clients act more appropriately during role-playing than they typically do in actual situations. Reactivity tends to dissipate with practice in role-playing.

PHYSIOLOGICAL MEASUREMENTS

When physiological components of a target behavior are relevant to treatment, physiological responses are measured. The most frequent measures are heart rate, blood pressure, respiration rate, muscle tension, and skin electrical conductivity (a common measure of anxiety).[89] These responses are used to assess complex behaviors, such as feeling anxious[90] and being sexually aroused.[91] Physiological responses can be the primary target behavior, as when lowering a client's blood pressure is the aim of relaxation training for hypertension.

Physiological measurements have most often been taken in specially equipped research laboratories, and the high cost of the instrumentation

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required to obtain accurate physiological measures has precluded general application in most clinics or private practice offices. Ideally, physiological recordings should be made in clients' natural environments as problem behaviors are occurring. Portable measurement devices can be used for this purpose,[92] but they generally have been less accurate than stationary laboratory apparatus, and they also have been expensive. This state of affairs may soon be changing with the emergence of relatively low-cost, sophisticated, and accurate technological devices.[93] Applications for smartphones are being developed to monitor a variety of physiological functions, such as galvanic skin response and heart rate (used as measures of anxiety). Physiological measurements should not be considered more valid than any other assessment method, although people sometimes give them more credence either because they seem to be "pure" measures or because hi-tech equipment is used. Each method of behavioral assessment is legitimate and valuable for measuring particular aspects of clients' behaviors. For example, people suffering from insomnia typically self-report a longer time to fall asleep than is indicated on an electroencephalogram (EEG).[94] It is tempting to say that the more valid measure is from the EEG because it is objective. However, clients' perceptions of their problem are equally and perhaps more important. Fortunately, cognitive-behavioral interventions for insomnia appear to decrease the discrepancy between the two assessment methods.[95]

One physiological measure that requires no equipment and that clients can easily assess themselves in their natural environments is heart rate (as indicated by one's pulse), which can be used to measure anxiety. If you'd like to monitor your heart rate and see how it changes in various situations, complete Participation Exercise 6-6 over the course of the next few days.

PARTICIPATION EXERCISE 6-6

Getting to the Heart of the Matter: Measuring Your Pulse

In this exercise, you will compare your heart rate at rest and in anxiety-evoking situations in your daily life. Because people's normal or resting heart rates can differ widely, *changes* in heart rate from one's resting base rate are typically used, rather than the absolute rate.

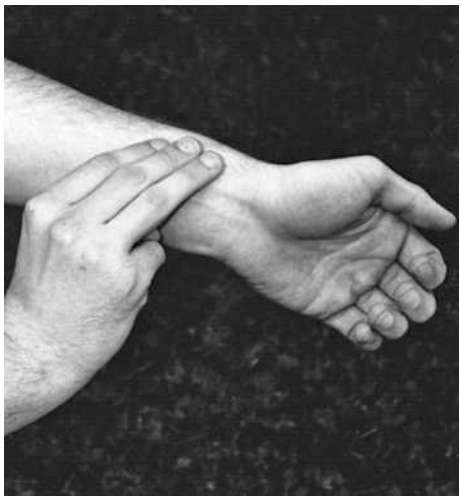
Part I: Taking Your Pulse

You can easily take your pulse from either your radial artery or carotid artery. To locate the radial artery, remove anything you are wearing on your wrist and turn your palm upward. Place the three middle fingers of your other hand over the thumb side of your wrist, as shown in Photo 6-4 (page 112). To locate the carotid artery, gently place the three middle fingers of one hand along the opposite side of your neck, as shown in Photo 6-5 (page 112). Take your pulse from both your radial and carotid arteries, and use the one that is stronger.

(*continued*)

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PARTICIPATION EXERCISE 6-6 (*continued*)



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PHOTO 6-4
Placement of fingers for taking the radial pulse



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PHOTO 6-5
Placement of fingers for taking the carotid pulse

Part II: Assessing Your Resting Heart Rate

To measure your resting heart rate, lie or sit comfortably and get relaxed. When you feel very relaxed, count your pulse for 15 seconds; then continue to relax for another minute. Again, count your pulse for 15 seconds. Add these two counts and multiply by 2 to get your resting heart rate. Record your resting pulse in the upper left corner of Work Sheet 6-3 (which you'll find in your on-line Student Resource Manual; see page xxxi).

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Part III: Assessing Your Heart Rate In Vivo

Over the next few days, carry the work sheet with you. When you find yourself in a situation in which you feel some anxiety (for example, as you are cramming for an exam), take your pulse for 15 seconds and multiply by 4; write your pulse rate in the "Rate per minute" column of the work sheet. Then rate your anxiety on a scale of 1 to 5, where 1 is calm and 5 is very anxious; write the number in the "Anxiety rating" column. Next, in the "Circumstances" column, write a brief description of the situation you are in at the time. Finally, subtract your resting pulse from your rate per minute and write the difference in the "Change" column; use a minus sign if your rate per minute is less than your resting pulse. Check your pulse in at least five different situations in which you experience anxiety.

Part IV: Evaluation

Most likely, you will find that your heart rates for the anxiety-producing situations are higher (positive changes) than your resting pulse rate; however, some people's heart rates decrease when they are anxious, which is another reason that *change* rather than absolute rate is used. In either case, by comparing the numbers in the last two columns, you may see a correlation between your heart rate changes and your anxiety ratings.

Now that we have examined the primary methods of behavioral assessment separately, we'll conclude with a case that illustrates how, in practice, they are combined in multimethod/multimodal assessment.

CASE 6-1

Behavioral Assessment in a Case of Domestic Violence

Tina T. was a 36-year-old college graduate who worked as a computer sales representative. She had a 5-year history of violence toward her husband and 10-year-old daughter. Tina contacted a behavior therapist when her husband threatened to move to another city with their daughter if she did not seek help.

In the initial session, Tina admitted that she had a serious problem, which she described as "uncontrollable fits of anger." The therapist asked Tina a series of questions to elucidate the nature of her problem and its maintaining conditions. The questions included:

1. When you have an "uncontrollable fit of anger," what do you do? How do you feel? What are you thinking? What bodily reactions do you experience?
2. What seems to precipitate your "anger fits"? Are they associated with something your husband or daughter says or does? Are there any situations that make you more prone to have a "fit"? Where do your "fits" usually occur? Who is there at the time? At what time of day and on which days of the week do they occur? What feelings and thoughts do you have right before an "anger fit"?

(*continued*)

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CASE 6-1 (*continued*)

3. What happens after your "anger fits"? How do your husband and daughter react to your "fits"? What do they do and say? How long do their reactions last? What do you do after your "fits"? How do you feel and what thoughts run through your mind afterward?
4. What strategies have you used to deal with your problem, and how successful have they been?

The behavioral interview in the first therapy session revealed that Tina's "anger fits" initially involved yelling and cursing, then throwing objects at her daughter and husband, and finally beating them with her fists and household objects. She became angry whenever she was frustrated about a situation she believed she could not handle (such as unreasonable demands from others). Her "fits" most often occurred shortly after returning home from work. A "fit," which rarely lasted more than 5 minutes, would gradually subside and become less violent as she "vented her anger." At that point, she would start to cry and beg for her family's forgiveness, which usually was forthcoming.

Other assessment procedures were instituted to confirm the accuracy of the information Tina gave in the interview and to provide additional data.

1. Tina filled out the Novaco Anger Inventory, which assesses anger reactions in a wide array of situations.[96] The inventory contains descriptions of 80 situations, and clients rate the degree of anger they would expect to feel if the situation actually occurred.
2. Tina started an *anger diary* in which she (a) described each instance when she became angry, (b) rated the intensity of her anger (using a scale ranging from "no anger" to "rage"), (c) noted how she reacted to her own anger (including overt and covert behaviors), and (d) described the consequences of her reactions.[97] The anger diary provided the therapist with information about the situations that elicited Tina's anger, the ways in which she typically responded, and the consequences of her anger. It also helped Tina become more aware of her anger and her reactions to it. Tina continued to use the anger diary during therapy as an ongoing measure of her progress.
3. To directly observe her behaviors, the therapist visited Tina's house on three consecutive Tuesdays shortly after she had arrived home from work. Besides assessing Tina's aggressive acts toward her daughter and husband (for example, yelling and hitting), the therapist recorded positive behaviors (such as praising and physical affection). Using a modified Patterson Coding System[98] that listed 18 different aggressive and positive behaviors, the therapist recorded each of these behaviors that he observed Tina perform over the course of 30 minutes.
4. In the third therapy session, Tina and her therapist role-played several troublesome situations that the therapist learned about from her anger diary and the anger inventory. The therapist played the role of either her husband or daughter and observed Tina's reactions to provocations. Tina's heart rate and blood pressure were monitored during the role-playing and compared with baseline recordings taken when Tina was calm.

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On the basis of the information gathered from these assessment procedures, the therapist and Tina designed a treatment plan for two related target behaviors: positive interactions with family members and adaptive reactions to frustration. The systematic naturalistic observations in Tina's home had revealed that Tina rarely had positive interactions with her husband and daughter. Thus, one component of Tina's therapy involved teaching her specific ways to engage positively with her family. In both the home observations and role-playing, the therapist observed that Tina reacted to provocation impulsively. Accordingly, through self-instructional training (reminding herself to pause and think), Tina was taught strategies to help her pause and think before reacting. From the interview, anger diary, and home observations, it became clear that a key maintaining consequence of her anger and aggression was the sympathetic responses from her family that Tina received when she expressed remorse after an "anger fit." Consequently, Tina's husband and daughter were asked to withhold sympathy and forgiveness when Tina indicated that she was sorry about an "anger fit."

Tina's anger diary provided a continuous measure of her progress over the course of the 5½ months of her therapy, and it showed a steady improvement. Two home observations in the last weeks of therapy indicated that Tina now handled frustration and other potential provocations with restraint and often with prosocial responses. At the end of therapy, Tina again filled out the anger inventory; both the number of different situations that evoked anger and the intensity of the anger she experienced had decreased significantly. Additionally, role-playing with concurrent physiological recording during the last therapy session showed that Tina became less aroused to potentially provocative situations and that she responded in more socially appropriate ways than she had at the beginning of therapy. Two follow-up telephone interviews with Tina, 6 and 12 months after treatment, indicated that her anger and violence were no longer problematic for her or for her family.

Case 6-1 highlights the essentials of behavioral assessment. Assessment procedures supplied information to clarify the problem, design target behaviors, identify maintaining conditions, and then design a treatment plan and monitor the client's progress. The assessment proceeded in a stepwise fashion by cumulatively gathering and substantiating data. Employing a multimethod/multimodal approach provided a comprehensive assessment. Finally, treatment and assessment were closely linked.

ALL THINGS CONSIDERED: BEHAVIORAL ASSESSMENT

If we liken behavior therapy to a pilot, behavioral assessment is the navigator. Behavioral assessment determines the direction in which therapy will proceed, provides the necessary course corrections along the way, and indicates when the destination has been reached.

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Each behavioral assessment method has its strengths and limitations. Multimethod assessment helps overcome the limitations of single methods and provides more complete information about clients' problems. Multimodal assessment, because it examines different facets of the problem behavior, can result in more effective treatment. For example, anxiety may involve a client's thoughts, feelings, and actions. To assess only one of these modes might result in incomplete treatment. Different modes of a problem behavior may be optimally assessed by different methods because assessment methods vary in their ability to tap each mode of behavior[99] (as you saw in Table 6-1, page 85). In addition, information gathered by one assessment method may be verified by other methods.

Behavioral assessment has evolved over the past 60 years, and its basic nature continues to change. For example, in the early days of behavior therapy, behavioral assessment (and therapy) focused on overt behaviors. Thus, behavior therapists considered systematic naturalistic observation the optimal method of assessment and viewed self-report measures as less valid.

Today, systematic naturalistic observation is no longer considered the sine qua non of behavioral assessment.[100] However, systematic naturalistic observation can be important for many target behaviors,[101] and it may be used in research.[102] Self-report methods, such as direct self-report inventories and self-recording, have become more popular because of both their efficiency and their ability to directly tap cognitive and emotional modes of behavior, which is not possible with systematic naturalistic observation.[103] Another trend in behavioral assessment is the increased recognition of the need to design assessment techniques that are appropriate for clients from diverse cultural backgrounds.[104]

SUMMARY

1. Behavioral assessment is an indispensable part of behavior therapy. Behavioral assessment gathers information to clarify the problem, set initial goals, design target behaviors, identify maintaining conditions, and then design a treatment plan and monitor the client's progress.
2. Behavioral assessment is multimethod (using more than one method of assessment) and multimodal (assessing more than one mode of behavior).
3. Behavioral assessment procedures are individualized, focus on the present, directly sample relevant behaviors, are narrowly focused, and are integrated with therapy.
4. Generally, diagnosis of disorders is antithetical to the fundamental premises of behavioral assessment and behavior therapy. The behavioral alternative involves detailed descriptions of client's unique problems and their specific maintaining conditions.
5. Behavioral assessment procedures examine samples of a client's behaviors to provide information about how the client typically behaves in particular situations. This approach contrasts with traditional assessment in which the behaviors assessed are used as signs of traits or psychological states.

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6. An interview is usually the first assessment method used. Besides its role in assessment, the initial behavioral interview is used to establish rapport with the client and to educate the client about the behavioral approach.
7. To gather information about a client's problem and its maintaining conditions, behavioral interviews focus on the present and ask questions concerning what, when, where, and how often rather than why.
8. Direct self-report inventories are questionnaires containing brief statements or questions that require a simple response or rating. They are highly efficient and are often used for initial screening. Their validity depends on clients' responding honestly and accurately.
9. Self-recording involves clients' observing and keeping records of their own behaviors. It is time efficient and can be used to assess both covert and overt behaviors. Clients must be motivated to self-record and must make accurate recordings.
10. Reactivity—a change in clients' behaviors because they know they are being observed—is a potential problem with most observational assessment procedures.
11. Behavioral checklists and rating scales contain lists of potential problem behaviors about which someone who knows the client well responds. With checklists, the informant indicates all the behaviors the client performs. With rating scales, the informant uses a scale of frequency, duration, or severity to evaluate the client on each behavior. Checklists and rating scales are efficient assessment methods.
12. Systematic naturalistic observations are made in the situations in which target behaviors normally occur. These observations are most accurate when the target behaviors are clearly defined and observers are well trained. The reliability of the observations is assessed by comparing the observations of two or more independent observers. Potential problems with systematic naturalistic observations are reactivity, observer error and bias, and impracticality.
13. Simulated observations are made under conditions set up to resemble the client's natural environment. A potential limitation is the ability to generalize from what is observed in the simulation to the client's natural environment.
14. In role-playing, a form of simulated observation, clients enact problem situations to provide the therapist with a sample of how they typically behave. Generalization to the natural environment can be limited because when clients role-play, they may behave differently from the way they typically do.
15. Physiological measurements assess physiological responses associated with the target behavior.
16. Each behavioral assessment method has its strengths and limitations. Multimethod/multimodal assessment helps overcome the limitations of single methods and provides more complete information about clients' problems.
17. Initially, behavioral assessment focused on overt behaviors and systematic naturalistic observations. Today, direct self-report inventories and self-recording that can tap cognitive and emotional modes of behavior frequently are employed.

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PARTICIPATION EXERCISE ANSWERS

PARTICIPATION EXERCISE 6-1

What, When, Where, How, and How Often? Behavioral Questioning

1. What does your daughter say or do that leads you to say her self-concept is so poor?
   What happens after she says or does these things?
   When does she seem to lack self-confidence?
   Are there situations in which she appears to have more self-confidence?
   How often does she fail at things that she tries?
   What exactly do you mean when you say "she fails"?
2. What are you thinking about when you feel like you're going to explode?
   How often do you feel this way?
   When did this pressure seem to begin?
   When do you usually feel the most pressure?
   Where do you feel that you are going to explode? In your head? In your stomach?
   What happens immediately after you get these feelings?
3. What does your son do when he is behaving like a monster?
   Where does this typically occur?
   How often does your son act this way?
   What happens immediately before he begins acting like a monster?
   What happens after he acts this way?
4. What do you actually do when you are "at each others' throats"?
   How long do these conflicts typically last?
   Where do they take place?
   What are you generally thinking about when these conflicts begin?
   What are you typically doing when the conflicts begin?
   How do the conflicts generally end?
5. What do you say to yourself when you feel that you have avoided a responsibility?
   How does avoiding responsibilities make you feel?
   How often do you have these thoughts and feelings?
   What specifically do you think is "stupid" about your attitude?
   When do you usually feel this way?

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PART TWO



BEHAVIOR THERAPIES

7 Acceleration Behavior Therapy: Stimulus Control and Reinforcement
8 Deceleration Behavior Therapy: Differential Reinforcement, Punishment, and Aversion Therapy
9 Combining Reinforcement and Punishment: Token Economy, Contingency Contract, and Behavioral Parent Training
10 Exposure Therapy: Brief/Graduated
11 Exposure Therapy: Prolonged/Intense
12 Modeling Therapy: Vicarious Extinction and Skills Training
13 Cognitive-Behavioral Therapy: Cognitive Restructuring
14 Cognitive-Behavioral Therapy: Coping Skills
15 Acceptance/Mindfulness-Based Behavior Therapy

Now that I've whetted your appetite, you are ready for the elaborate main course: behavior therapy with all the trimmings. I'll begin by presenting relatively simple therapy procedures and proceed to more complex ones. The presentation of therapies is cumulative, so you'll have to have learned about previously discussed therapies to fully appreciate and understand the discussion of each new group of therapies.

Chapter 7 deals with stimulus control and reinforcement procedures that increase clients' adaptive behaviors. Chapter 8 covers punishment and aversion

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therapies that decrease clients' maladaptive behaviors. Token economy, contingency contract, and behavioral parent training—the topics of Chapter 9—are treatment packages based on the procedures and principles presented in Chapters 7 and 8. Exposure therapies, covered in Chapters 10 and 11, treat anxiety disorders and other emotional problems by safely exposing clients to threatening stimuli. Chapter 12 covers vicarious extinction and skills training that are modeling-based treatments that foster adaptive behaviors and alleviate maladaptive behaviors. Chapters 13 and 14 discuss cognitive-behavioral therapies, which change clients' cognitions that maintain their psychological disorders. Finally, Chapter 15 covers so-called third-generation behavior therapies—new behavior therapies that introduce acceptance and mindfulness strategies.

Now that you've seen the entrée choices (I hope you'll choose them all), you are invited to really bite into behavior therapy.

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CHAPTER 7



Acceleration Behavior Therapy:
Stimulus Control and Reinforcement

Stimulus Control: Antecedents That Elicit Behaviors

Prompting
Setting Events
Stimulus Control in Perspective

Reinforcement: Consequences That Accelerate Behaviors

What is Reinforcement?
Positive and Negative Reinforcement
Types of Positive Reinforcers

CASE 7-1 Treatment of Conversion Disorder by Social Reinforcement

Premack Principle

CASE 7-2 Increasing Social Interaction with the Premack Principle

PARTICIPATION EXERCISE 7-1 Doing What Comes Unnaturally: Applying the Premack Principle

Behavioral Activation
Identifying Reinforcers

IN THEORY 7-1 Activating Technology for Behavioral Activation Therapy and Beyond

PARTICIPATION EXERCISE 7-2 Identifying Your Own Potential Reinforcers

Alternatives to Identifying Reinforcers
Administering Reinforcers
Shaping

CASE 7-3 Shaping and Prompting Used to Institute Speech in a Patient with Long-Standing Selective Mutism

PARTICIPATION EXERCISE 7-3 Shaping Your Shaping Skills

Reinforcement Therapy in Perspective
SUMMARY
REFERENCE NOTES

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To treat clients' problems, behavior therapies modify maintaining antecedents, maintaining consequences, or both. This chapter first explores therapy procedures that modify antecedents to elicit or initiate target behaviors and then turns to therapy procedures that change the reinforcing consequences of target behaviors.

STIMULUS CONTROL: ANTECEDENTS THAT ELICIT BEHAVIORS

Antecedents, the *A* in the ABC model (discussed in Chapter 3), "set the stage" for behaviors to occur. In some cases, a client may not be performing a desirable behavior because there are no antecedents that elicit it; for such acceleration target behaviors, stimulus control procedures introduce antecedents to initiate the desirable behavior. In other cases, existing antecedents elicit an undesirable behavior; for such deceleration target behaviors, stimulus control procedures change the antecedents. These interventions involve either *prompts* or *setting events*, the two broad categories of stimulus control.

PROMPTING

Driving down the road, you see a sign for the street you're looking for and you slow down. Your friend, sitting next to you, tells you to turn left onto the street. You change lanes and turn left because you have been prompted to do so by the street sign and your friend's instructions. **Prompting** provides people with cues (prompts) that remind or instruct them to perform a behavior or indicate that it is appropriate to perform a behavior. Every day we rely on prompts to guide our behaviors, such as when we stop at a red light or check our appointment book. There are four categories of prompts—verbal, environmental, physical, and behavioral—each of which can be used alone or in combination with other types of prompts.[1]

Verbal prompts involve telling clients what they are expected to do. For example, adolescents with moderate to severe intellectual disability (IQs of 20–55) who were students in a community-based vocational training program were given a series of verbal prompts through an MP3 player to remain on task. This intervention worked as effectively as or better than reinforcement for on-task behaviors.[2] In an unusual application of prompting, children were taught to



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prompt their teacher to praise their appropriate behaviors.[3] For example, children would approach the teacher with a completed assignment and say, "I finished all my math problems" to remind the teacher to praise them.

Environmental prompts are cues in the environment, such as signs, that remind clients to perform behaviors (see Photo 7-1 for an example). Some examples are alarms to remind older adults to take their medications,[4] written cue cards to prompt adults with mild developmental disabilities to perform home maintenance tasks,[5] pictorial signs to remind children with autistic spectrum disorder to perform daily living skills (such as getting dressed),[6] and written notes for people with diabetes to remind them to self-monitor their blood glucose levels.[7]

Physical prompts (also called *physical guidance*) involve using physical touch to direct a client to perform a behavior, such as teaching a child to write by holding the child's hand and helping the child make the required movements. Physical prompts are used extensively to teach self-care skills to individuals with disabilities, such as training children who are both deaf and blind in self-feeding skills.[8]

With *behavioral prompts*, one behavior cues another. For example, a husband learned in marital therapy to use his wife's crying as a signal to respond with sympathy rather than annoyance. An individual's own behavior can serve as a prompt to engage in another behavior, as when parents use their feeling angry at their child as a cue to leave the room to "cool off."

Prompting is most effective when the following guidelines are followed: (1) administer the prompt just before it is appropriate to perform the target behavior, (2) make the prompt salient so that the client is aware of it, (3) make



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PHOTO 7-1
How many different types of environmental prompts can you identify in this picture?

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the prompt specific and unambiguous, (4) have the prompt remind clients about the consequences of engaging in the desired behavior (such as a sign reading, "Taking Your Medication Will Make You Feel Better"), and (5) follow up prompts with reinforcement for engaging in the prompted behavior.[9]

Prompting usually is a temporary measure. As the client performs the behavior more frequently (because it is reinforced), prompts become less necessary and are gradually withdrawn—a process called **fading**. For example, as children with autism spectrum disorder performed basic skills correctly, prompting was gradually faded, whereas errors were followed with increasingly more intrusive prompts.[10] Prompting is a standard procedure for eliciting behaviors that a client rarely performs. Teaching language and social interaction skills to children with autistic spectrum disorder is a prime example.[11] To teach the names of objects, for instance, the therapist points to the object and says, "What is this? *Pencil.*" (The therapist's saying the word *pencil* is a verbal prompt.) As the child begins to imitate the prompt, the therapist fades the prompt by saying it at successively lower volumes. Eventually, the therapist whispers the prompt, then merely mouths it, and finally asks the child, "What is this?" without any prompt.

Although prompting can be a stand-alone treatment,[12] it is most often employed as a component of a treatment package that minimally includes reinforcement and often modeling.[13] Prompting is particularly useful in teaching daily living skills to clients for whom learning is difficult, such as those with autism spectrum disorders,[14] intellectual disabilities,[15] and cognitive impairment.[16] Similarly, prompting is valuable in teaching academic skills to clients with hyperactivity attention deficit disorder[17] and autism spectrum disorders.[18] Consistent with the recent trend to employ technology in behavior therapy, prompting is increasingly being administered through technology. For example, Television Assisted Prompting has been used to increase adherence to home exercises for people who have had strokes,[19] and a variety of assistive technologies have been used to help people with prospective memory deficits (not remembering to do something in the future) due to acute brain injury, such as audiovisual reminders on a person's home television,[20] short prompts at prespecified times with an alphanumeric pager,[21] and text prompts delivered on a smartphone.[22]

SETTING EVENTS

Setting events are environmental conditions that influence the likelihood that certain behaviors will be performed. When a setting event is identified as a maintaining antecedent of a target behavior, it is modified to create the desired change in the behavior. Consider the case of a boy with autistic spectrum disorder who behaved aggressively toward his baby sibling.[23] A detailed behavioral assessment showed that one of the setting events for the boy's aggressive behaviors was the noise the sibling made when eating from a metal plate. The sibling's metal plate was replaced with a plastic one that made little noise. This simple, yet potent, intervention reduced the client's aggressive behaviors.

Changing setting events, like prompting, is usually a component in a treatment package aimed at modifying more than one maintaining condition of a

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target behavior.[24] However, when a target behavior is maintained primarily by a setting event, simply changing the setting event may be sufficient, as in the previous example. In another case, modifying setting events was the sole treatment for two boys with attention deficit hyperactivity disorder who interacted inappropriately during play.[25] The boys' inappropriate social interactions (such as calling each other names and refusing to share toys) occurred in a playroom containing 12 different toys and where there were no rules or adult supervision. Behavioral observations revealed that the boys' inappropriate play seemed to be maintained by there being too many toys in the room, no rules about how to behave, and no adult supervision. A dramatic decline in antisocial behaviors and an increase in positive social interactions occurred when the therapist rearranged the playroom so that there were only two toys, specified specific play-time rules, and an adult supervisor was present as the boys played.

Teachers often change setting events to increase on-task behaviors and to reduce or prevent problem behaviors in the classroom.[26] Examples include rearranging seating (for example, placing a student who is disrupting the class close to the teacher), removing distractions (such as lowering window shades so that children cannot look outside),[27] and modifying work (for instance, reducing the number of problems assigned to make the assignment more manageable).

Changing setting events is also used to treat adult problem behaviors, such as to facilitate weight loss,[28] reduce pathological gambling,[29] promote cholesterol-lowering diets,[30] and treat trichotillomania (compulsively pulling one's own hair out).[31] One of the simplest and most powerful treatments for adult insomnia involves changing setting events,[32] as you'll read about in Chapter 17.

STIMULUS CONTROL IN PERSPECTIVE

Stimulus control procedures typically are part of a treatment package, although they can serve as the sole intervention. In the former case, the role stimulus control plays often is not assessed because the effectiveness of the treatment package is assessed without looking at the specific contributions of the treatment components. Accordingly, there is less direct empirical support for stimulus control procedures than for many other behavior therapies. When stimulus control is the primary intervention, the effectiveness of the techniques has been empirically validated.

Compared with other behavior therapy interventions that accelerate adaptive behaviors, stimulus control procedures can be very efficient because they can be easily implemented with little time and effort. Instructing a client to do something and posting a sign that reminds the client to perform a particular behavior are examples of efficient prompts. Making simple changes in setting events also can be effective, as when alcohol is removed from the home of a person who has a drinking problem. Another advantage of stimulus control interventions is that they can prevent maladaptive behaviors, as the previous example illustrates.

Similarly, using **planned activity scheduling**, behavior change agents arrange for clients to engage in *active* desirable behaviors in situations likely to elicit problem behaviors; this reduces opportunities for misbehavior.[33]

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For instance, in anticipation of sibling conflicts on a long-distance car trip, parents can provide a variety of activities for their children, such as having them play favorite games. Planned activity scheduling generally is employed with children, but it has been effectively used in treating adults with head injuries and adults with schizophrenia.[34]

When serious deceleration target behaviors are maintained by both antecedents and consequences, it sometimes is possible to intervene primarily through stimulus control. For instance, if a teenage boy often gets into fights after playing violent video games, his access to video games could be limited to those that have no violence. The advantage of treating the deceleration target behavior by modifying antecedents rather than consequences is that effective consequential interventions may require the use of aversive consequences. In general, behavior therapists avoid using aversive procedures whenever possible because of humanitarian and practical problems (that you will read about in Chapter 8).

The purpose of stimulus control procedures is to get clients to perform a target behavior. Ultimately, however, for the behavior to continue, it must be reinforced.

REINFORCEMENT: CONSEQUENCES THAT ACCELERATE BEHAVIORS

Teachers motivate students to learn by awarding high grades for good test performance. Parents get children to do chores by letting them watch TV if they complete their chores. Employers ensure continued work output by paying employees decent salaries. These are common examples of the use of reinforcement in everyday life. People have always reinforced other people's behaviors (and their own) to get others (and themselves) to act in particular ways. Behavior therapists did not invent the concept of reinforcement. What behavior therapists have done, however, is to systematically apply the principles of reinforcement to reliably change behaviors.

WHAT IS REINFORCEMENT?

To reinforce is to strengthen. The term *reinforcement* refers to strengthening a behavior so that the person will continue to perform it. Formally, **reinforcement** occurs when the consequences of a behavior increase the likelihood that the person will repeat the behavior. This is an *empirical definition* because it is based on the *observation* that the behavior recurs.

The reinforcing consequence is called a **reinforcer**. An individual receives the reinforcer only if he or she engages in the behavior—in other words, the reinforcer is *contingent on* the behavior being performed. Accordingly, using reinforcement to accelerate behaviors is sometimes referred to as **contingency management**, as are punishment techniques (see Chapter 8) that are used to decelerate behaviors.

Whether a consequence is a reinforcer depends on its effects on the behavior, not on the person's subjective evaluation of the pleasantness or desirability of the consequence. Reinforcers are defined by their accelerating effects on the

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behaviors they follow. However, in most cases, reinforcers are pleasant or desirable consequences for the person, and we will assume that is the case.

Reinforcers differ from rewards. *Rewards* are pleasant or desirable consequences of a behavior that do *not necessarily* make it more likely that the person will perform the behavior again.[35] Receiving your driver's license is an example. You are rewarded for passing the driving test, but the reward does not result in your taking additional driving tests.

Behavior therapists do not assume that a consequence will serve as a reinforcer. A *potential reinforcer* is identified and then made contingent on the client's engaging in the target behavior. If the behavior continues to be performed, then the therapist assumes that the consequence was a reinforcer.

Besides increasing the likelihood that the behavior will recur, reinforcers have a second function: providing *positive feedback*, which informs people that they are engaging in appropriate behaviors and are performing them properly.[36] When you receive an *A* for a poem in a writing class, the grade tells you that you have written a good poem.

POSITIVE AND NEGATIVE REINFORCEMENT

Reinforcement always *increases* the frequency of a behavior. This accelerating effect can come about in two ways. When a pleasant or desirable stimulus is *presented* (added) as a consequence of a person's performing a behavior, it is known as **positive reinforcement**, and the consequence is a **positive reinforcer**. For instance, you hold the door open for your friend who is behind you, and your friend says, "Thank you." If hearing "thank you" makes you more likely to hold the door for your friend (or other people) in the future, then "thank you" is a positive reinforcer, and positive reinforcement has occurred.

The other way that a behavior is accelerated through reinforcement occurs when an event (which is usually unpleasant or undesirable) is *removed*, *avoided*, or *escaped from* (subtracted) as a consequence of a person's performing a behavior. This is **negative reinforcement**, and the consequence is a **negative reinforcer**. Many everyday behaviors are maintained by negative reinforcement. For example, taking aspirin is reinforced by relief from pain, napping is reinforced by decreasing fatigue, turning in an assignment on time is reinforced by avoiding a loss of points, and driving at the speed limit is reinforced by avoiding a ticket. In each instance, we avoid or escape from something undesirable. Such was the case with a 19-year-old man with autistic spectrum disorder who had been stealing and ingesting pills whenever he could find them.[37] In searching for the maintaining conditions of this dangerous behavior, his therapist learned that when the man ingested pills, he immediately was taken away from his job that he disliked. Apparently, leaving work was negatively reinforcing his potentially life-threatening behavior.

Although negative reinforcement plays an important role in maintaining people's behaviors, behavior therapists only occasionally use it as an intervention.[38] Accordingly, positive reinforcement will be highlighted in this chapter.

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Negative Reinforcement Versus Punishment

Equating negative reinforcement with punishment is a common mistake.[39] **Punishment** occurs when the consequences of a behavior *decrease* the likelihood that the person will repeat the behavior, and the consequence is called a **punisher**. Thus, punishment has the opposite effect of negative reinforcement because punishment *weakens* rather than strengthens a behavior. **Positive punishment** involves *presenting* (adding) an unpleasant or undesirable consequence. **Negative punishment** involves *removing* (subtracting) a pleasant or desirable consequence. Punishment always decelerates the behavior, whether positive or negative. As with reinforcers, punishers are defined by their ability to decelerate behaviors, rather than their unpleasantness or being undesirable. However, we will assume that punishers are subjectively unpleasant or undesirable, as they *usually* are for the client. Punishment will be discussed in the next chapter, but I've introduced the concept here to make the important distinction between negative reinforcement and punishment.

To distinguish the difference between reinforcement and punishment and what is meant by positive and negative, you just have to remember two things: (1) reinforcement involves *strengthening (accelerating)* and punishment involves *weakening (decelerating)* the behavior; (2) for positive, think "+" *(add)*; for negative, think "–" *(subtract)*. These concepts are depicted in Figure 7-1 with examples of how a particular problem behavior (substance abuse) can be treated by positive and negative reinforcement and by positive and negative punishment.

Before reading any further, take just 2 minutes to make a list of consequences that you think would serve as reinforcers for you—in other words, consequences you might receive for performing various behaviors that would

EFFECT	PROCESS: *Add (+)*	PROCESS: *Subtract (–)*
Strengthen	POSITIVE REINFORCEMENT **Consequence:** Store coupons given *Contingent upon* **ATB:** Remaining abstinent	NEGATIVE REINFORCEMENT **Consequence:** Job suspension removed *Contingent upon* **ATB:** Successfully completing therapy
Weaken	POSITIVE PUNISHMENT **Consequence:** Verbal reprimand given *Contingent upon* **DTB:** Missing therapy appointment	NEGATIVE PUNISHMENT **Consequence:** Home visits forfeited *Contingent upon* **DTB:** Resuming drug use

FIGURE 7-1

Examples of how substance abuse can be treated by changing the consequences of an acceleration target behavior (ATB) with reinforcement and a deceleration target behavior (DTB) with punishment

Source: Based on Higgins & Silverman, 2008.

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increase the future likelihood of your performing those behaviors. Save this list to use later in Participation Exercise 7-2. As you read about the different types of reinforcers, notice which type of reinforcer each of the reinforcers you identified for yourself is.

TYPES OF POSITIVE REINFORCERS

Positive reinforcers can be grouped into four major categories: tangible reinforcers, social reinforcers, token reinforcers, and reinforcing activities. Some reinforcers fit into more than one category.

Tangible Reinforcers

Tangible reinforcers are material objects. Food, clothes, electronic gadgets, jewelry, CDs, books, and sports equipment are examples of tangible items that are reinforcers for many adults.[40] It is common to associate reinforcers exclusively with tangible reinforcers, and many of your own potential reinforcers that you listed a moment ago were probably tangible reinforcers. However, they are only one type of reinforcer.

Social Reinforcers

Social reinforcers consist of attention, praise, approval, and acknowledgment from other people.[41] They are administered verbally (for example, "Great job!"), in writing (for instance, a thank-you note), physically (as with a pat on the back), and through gestures (such as smiling).[42] Social attention can result in rapid and dramatic changes in clients' behaviors, as you can see in Figure 7-2; the graph shows the number of items of clothing a 6-year-old girl left lying on her bedroom floor before and after her mother began giving her attention for putting her clothes away.[43]

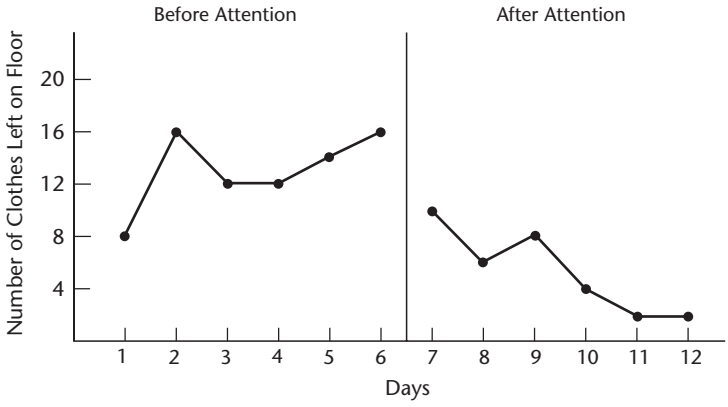


FIGURE 7-2
Number of items of clothes a 6-year-old girl left on her bedroom floor before and after her mother began giving her attention for putting her clothes away
Source: Hall & Hall, 1998b.

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Social reinforcers have four advantages. First, they are easy to administer. All that is needed is another person. Second, social reinforcers don't cost anything, and people have a limitless supply of social reinforcers to give to others. Third, social reinforcers generally can be administered immediately after the person has performed the target behavior, which increases the effectiveness of a reinforcer. Fourth, social reinforcers are **natural reinforcers**—consequences that people receive as a regular part of their daily lives. Using social reinforcers during therapy increases the chances that the target behavior will transfer to the client's life and will be maintained after therapy has ended because the reinforcers will continue to be available.[44]

Social reinforcers are among the most powerful consequences for initiating and maintaining behaviors. People of all ages, including very young children, actively seek attention, affection, and praise from others for engaging in desirable behaviors.[45] Think about how your own daily behaviors (such as the way you dress) are influenced by other people's approval and attention. Social reinforcement was the major component used in Case 7-1 to treat a patient whose legs were paralyzed due to psychological rather than physical causes, which is known as *conversion disorder*.

CASE 7-1

Treatment of Conversion Disorder by Social Reinforcement[46]

On admission to a psychiatric hospital, a 42-year-old married man was bent forward at the waist, unable to straighten his body or move his legs. For 15 years, he had complained of lower back pain, despite two orthopedic surgeries. Every 4 to 6 weeks, he had episodes (lasting for 10 to 14 days) of being totally unable to walk, which he referred to as "drawing over." The patient had been hospitalized numerous times and treated with heat and muscle relaxants.

Orthopedic and neurological evaluations revealed no abnormalities. Behavioral assessment, however, indicated that the patient received considerable attention from family members for his physical complaints.

Treatment began in the hospital, where it was administered by an attractive young female assistant. The assistant asked the patient to leave his wheelchair and to stand and walk as far as possible, and she praised his efforts (for example, "You're standing very well today" and "I'm proud of you").

In Phase 1, only standing was socially reinforced. As Figure 7-3 shows, this resulted in minimal walking. When both standing and walking were reinforced in Phase 2, walking increased. To check whether social reinforcement specifically for walking was responsible for the increase, a 5-day reversal period, in which only standing was reinforced, was instituted in Phase 3. During this reversal period, the patient did not increase his walking distance, except on day 11. When reinforcement for both standing and walking was reinstated in Phase 4A, walking further increased. The social reinforcement for both standing and walking led to additional increases when a walker was

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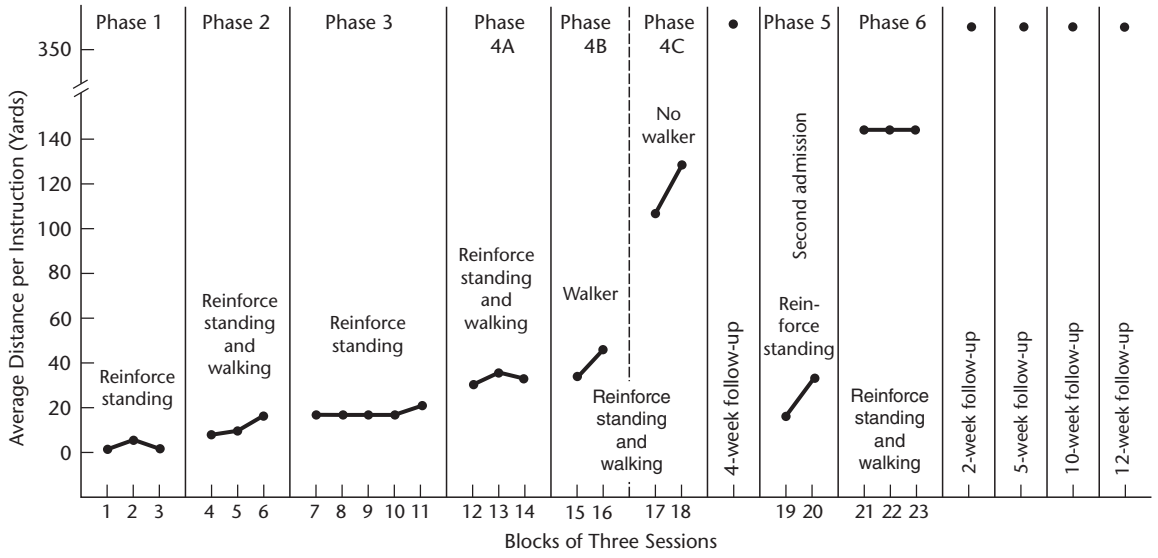


FIGURE 7-3

Average distance that the patient walked during all phases of treatment and follow-up

Source: Kallman, W. M., Hersen, M., & O'Toole, D. H. (1975). The use of social reinforcement in a case of conversion reaction. *Behavior Therapy, 6*, 411–413.

substituted for the wheelchair (Phase 4B) and then when the walker was taken away (Phase 4C). By day 18, the patient was walking normally and was discharged from the hospital. Four weeks later, the patient had increased his walking to an average of 350 yards a day.

Immediately after the follow-up assessment (see Figure 7-3), the patient had a severe "drawing over" episode and was readmitted to the hospital, unable to walk. The therapist learned that the patient's family had reinforced his "sick-role" behaviors with social attention.

The patient began walking again when social reinforcers were reintroduced for standing in Phase 5 (see Figure 7-3). His walking dramatically increased when the social reinforcers were administered for both standing and walking in Phase 6 (see Figure 7-3). During this last phase of therapy, the patient's family members were videotaped while interacting with the patient. Analysis of the tape revealed that they generally ignored the patient when he was standing and walking. Accordingly, the family was instructed to socially reinforce the patient's attempts to stand and walk and to ignore his physical complaints. The social reinforcement procedures previously used by the assistant in the hospital were modeled for family members. After his second hospital discharge, the patient again increased his daily walking to an average of 350 yards. Follow-up assessments over the next 12 weeks indicated that he continued to walk normally.

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Case 7-1 illustrates the potency of social reinforcement. Initially, the patient's physical complaints seemed to be exacerbated by the attention he received from family members. Later, the attention and praise of a hospital assistant accelerated the patient's walking. The case also points out that changes achieved in therapy do not automatically transfer to the person's natural environment. Usually, specific procedures must be implemented to ensure the transfer of treatment effects. This was accomplished in Case 7-1 by making certain that the reinforcement contingencies used in therapy continued in the patient's home environment.

Token Reinforcers

Token reinforcers, a third type of positive reinforcer, are symbolic items that have value because of what they can be exchanged for or what they stand for. Token reinforcers become *conditioned reinforcers*—that is, they acquire reinforcing properties because of their association with already-established reinforcers. Money, the most ubiquitous token reinforcer, has become a conditioned reinforcer due to its association with the valued goods and services it can be exchanged for.[47] Good grades and airline mileage points are also everyday examples of token reinforcers.

Reinforcement is most effective when the reinforcer immediately follows the behavior.[48] However, often it is impractical to provide the reinforcer immediately. For instance, Kavitha's parents want to use bike riding after school as a reinforcer for her making her bed in the morning. When Kavitha makes her bed in the morning, her parents immediately place a sticker of a bicycle on the calendar for the current day, which indicates that she may ride her bike that afternoon. The sticker is a token reinforcer that serves the important function of bridging the time between the behavior and the substantive reinforcer.

Token reinforcement has been used in the treatment of substance abuse disorders,[49] as when drug abstinence is reinforced with food and gas coupons and with points and vouchers used to purchase retail items.[50] In a controlled study of 70 outpatients who were dependent on cocaine, reinforcing cocaine-free urinalyses with vouchers exchangeable for retail goods resulted in abstinence during treatment and at a 1-year follow-up.[51] Similarly, for clients who were dependent on marijuana, receiving vouchers for retail items contingent on abstinence enhanced the effects of learning coping skills to deal with urges and avoid high-risk situations.[52]

Other examples of token reinforcers are stickers to increase school attendance of children with severe anxiety[53] and paying attention in children with autism spectrum disorder,[54] and coupons for fast food to promote cooperation of disruptive adolescents in an inner-city school.[55] In the business world, electronic codes have been given to employees for meeting periodic performance objectives.[56] The codes were used to play on-line games in which the workers could win bonuses of up to $50 or benefits such as time off from work. One large company reported that the intervention resulted in increased revenues and enhanced retention of workers. The most extensive use of token reinforcers in behavior therapy is in token economies, which you will read about in Chapter 9.

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Reinforcing Activities

Engaging in activities is the fourth type of positive reinforcer. Examples of activities that serve as reinforcers for many people include shopping, watching TV, listening to music, surfing the Internet, playing computer games, getting a massage, socializing with friends, talking on the phone and texting, sleeping late, and going out to eat.[57]

Reinforcing activities usually are pleasurable. However, activities in which a person frequently engages—whether they are enjoyable or not—can serve as reinforcers, which is the basis of the Premack principle.

PREMACK PRINCIPLE

Kay, like many of us, turns on the radio every time she starts her car, but she generally does not fasten her seat belt. What do you think would happen if Kay could turn on her car radio *only after* she had put on her seat belt? Most likely, Kay would start using her seat belt on a regular basis—probably every time she drove.

Fifty years ago, David Premack discovered that higher probability (more frequent) behaviors—whether they are considered enjoyable or not—can serve as reinforcers for lower probability (less frequent) behaviors, which came to be called the **Premack principle**.[58] In behavior therapy, the *relative frequency of occurrence* of a behavior is typically used as a measure of probability because frequency is easy to measure and approximates probability.

Acceleration target behaviors are low-probability behaviors; they occur infrequently, which is why they need to be accelerated. Thus, high-probability behaviors can be used as reinforcers for many acceleration target behaviors.[59] Although the high-probability behaviors need not be pleasurable to serve as reinforcers, high-probability behaviors that are *aversive* to the individual generally do not function as reinforcers.[60] Additionally, the high-probability behaviors must not be occurring so often that they lose their effectiveness in motivating clients to engage in the low-probability target behavior. As the familiar adage tells us, too much of a good thing can be bad.[61] Within these parameters, any high-probability behavior can serve as a reinforcer for a low-probability behavior. As one example, providing children who have attention deficit hyperactivity disorder with the opportunity to engage in vigorous activity (a high-probability behavior for children with ADHD) has significantly increased their being calm and paying attention (a low-probability behavior for children with ADHD).[62]

Employing high-probability behaviors as reinforcers is especially useful with clients for whom other potential reinforcers are difficult to identify, such as hospitalized patients with chronic psychiatric disorders for whom tangible and social reinforcers may be ineffective.[63] If we observe these patients' daily activities, we note such typical behaviors as standing, staring out the window, pacing, and sleeping in a chair. These simple, mundane activities (that might erroneously be labeled "doing nothing") are high-probability behaviors. Thus, they can serve as reinforcers using the Premack principle, as Case 7-2 illustrates.

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CASE 7-2

Increasing Social Interaction With the Premack Principle[64]

B. H. was a 44-year-old female patient in a psychiatric hospital who rarely interacted with other patients or staff members. She responded to questions by nodding or giving one-word answers. The staff reported that they had "never observed B. H. enjoying anything." She spent almost all her waking hours sitting in a specific chair in the day room. The ward staff decided to use this high-probability behavior to reinforce social interactions, which clearly were low-probability behaviors for B. H.

The ward psychologist informed B. H. that she would be permitted to sit in her favorite chair only after she had interacted with another patient or staff member. Initially, 2 minutes of social interaction was required for 30 minutes of sitting. B. H. nodded that she understood, at which point the psychologist immediately reinforced their interchange by permitting her to sit in her chair for 30 minutes. The psychologist made the contingency explicit by specifically telling B. H. that she had just earned sitting time by listening and communicating that she understood what the psychologist had said.

At the end of the first 30-minute period, a staff member approached B. H. and suggested that they have a cup of coffee together, reminding B. H. that she had to spend 2 minutes interacting with others in order to sit in her chair. B. H. reluctantly accepted the invitation. For the rest of the day, one of the ward staff approached B. H. after each 30-minute period of sitting and suggested some minimal social activity that would allow her to continue sitting.

On each successive day, the number of minutes of social interaction required for 30 minutes of sitting was gradually increased. As B. H. progressed, the staff gave her fewer and fewer suggestions about how she might socialize (fading verbal prompts) and made B. H. responsible for deciding how she wanted to spend time with others, drawing on the examples the staff had initially provided. By the 12th day, B. H. was getting up from her chair after 30 minutes without having to be prompted by a staff member.

Within 3 weeks, B. H. was spending more than the criterion time socializing and less than 30 minutes sitting in her chair. For example, she often played dominoes with a particular patient. Initially, as soon as she had accumulated the required socializing time, she would get up in the middle of the game and go sit in her chair. After a while, she would finish a game first, which took more than 30 minutes. Eventually, B. H. was spending the majority of each day in some social activity.

In using the Premack principle to accelerate B. H.'s social behaviors, the ward staff did not assume that she enjoyed sitting in her chair. All they knew was that sitting in the chair had a higher probability of occurring than social interaction. From the increases observed in B. H.'s social behaviors, it appeared

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that sitting in the chair was a reinforcer. The Premack principle will work for you as well, as you'll find out when you complete Participation Exercise 7-1. It needs to be carried out over the course of a couple of weeks, but you should read it now because it further describes the application of the Premack principle.

PARTICIPATION EXERCISE 7-1

Doing What Comes Unnaturally: Applying the Premack Principle

You can easily see how well the Premack principle works by using it to accelerate one of your own low-probability behaviors. Choose a behavior that you *"should" be doing at least once a day but that you rarely do*. For many people, examples might be washing dishes right after meals, flossing their teeth, making their bed, cleaning their room, and exercising (although these may not be examples for you).

On a sheet of paper, list the dates for the next two weeks. During the first week, at the end of each day, record the number of times you performed the low-probability behavior you chose. This will provide a baseline.

Next, make a list of your routine high-probability behaviors, those you perform at least once a day without fail. These might include such routine behaviors as taking a shower, shaving, putting on makeup, combing your hair, eating breakfast, and checking your email (or whatever your regular behaviors are). You do not have to consider the routine behaviors enjoyable.

Select one of these high-probability behaviors as a reinforcer. It must generally occur *after* you would engage in the low-probability behavior. For example, if your low-probability behavior were making your bed before leaving the house in the morning, then you could reinforce it with any high-probability behavior that you typically do after leaving the house, such as listening to the car radio or stopping for coffee.

After a week of recording a baseline, implement the Premack principle by following the rule: *Engage in the high-probability behavior only after you have performed the low-probability behavior*. Each day for one week, continue to record the number of times you perform the low-probability behavior. At the end of the second week, compare the frequency of your low-probability behavior during baseline with the frequency when you followed the Premack principle. The probability is very high that your low-probability behavior increased in probability (frequency).

BEHAVIORAL ACTIVATION

Low levels of reinforcing activities are the nexus of a behavioral theory of depression posited by Charles Ferster[65] and Peter Lewinsohn in the 1970s.[66] In brief, the theory holds that people who are depressed avoid unpleasant

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environmental events. This alleviates their distress in the short term but also decreases the likelihood of their coming into contact with pleasurable events in the long term. This theory led to the development of a treatment for depression known as *behavioral activation.*

Behavioral activation first identifies a client's avoidance behaviors and potential reinforcing activities. Then it sets up activation strategies that get clients to actively engage in reinforcing activities and thus decrease their avoidance behaviors.[67] The specific activation strategies are designed to fit with the client's life goals. For instance, a recently divorced man avoided contact with his children because contact with them was a painful reminder of the family breakup. His avoidance behaviors resulted in his alienating himself from his family. The man also avoided attending social events with friends (which were usually attended by couples). Because the man's life goals included improving his relationship with his children and maintaining former friendships, the therapist suggested activation strategies that included planned encounters with his children and attending social events with friends. Alternative potentially reinforcing activities related to his life goals, such as beginning to date again or finding rewarding hobbies, were also explored.

Another example of idiosyncratic activation strategies consistent with clients' life goals is employing religious activities for clients for whom religion is central to their lives.[68] Activities might include attending a religious service, reading the Bible, private prayer and meditation, and talking to a clergyperson.

Meta-analytic studies indicate that behavioral activation is effective for treating depression.[69] It may be especially useful for some severe cases of depression that do not respond to cognitive therapy, the most effective cognitive-behavioral treatment for depression (see Chapter 13).[70] Some studies have indicated no difference in the effectiveness of behavioral activation and cognitive therapy.[71] Thus, behavioral activation might be the preferred treatment option because it is easier to administer, it can be implemented by therapists with less training,[72] and it would be more cost effective.[73] Behavioral activation also is being applied to problems other than depression, including pathological (prolonged and complicated) grief,[74] anxiety,[75] worry,[76] suicidal behaviors associated with borderline personality disorder,[77] posttraumatic stress disorder,[78] alcohol abuse,[79] and distress experienced by primary caregivers for family members with dementia.[80]

Behavioral activation has a number of advantages. Not only is it a relatively brief treatment (typically 12 sessions or less)[81] but in some instances, it has been administered in a single therapy session.[82] Its brevity allows it to be used in combination with other behavior therapies without significantly adding to the length of treatment.[83] Additionally, because behavioral activation is based on reinforcement, it is not surprising that clients find it highly acceptable,[84] which enhances adherence[85] and, indirectly, effectiveness. Finally, further enhancing the efficacy and effectiveness of behavioral activation through innovative technology is being explored, as In Theory 7-1 describes.

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IN THEORY 7-1

Activating Technology for Behavioral Activation Therapy and Beyond

Behavioral activation is an efficient treatment because it is brief, and emerging technology holds the promise of making it even more efficient and perhaps more effective. David Mohr and his colleagues at Northwestern University's Center for Behavioral Intervention Technology are developing technological interventions for administering behavioral activation to treat depression.[86] One intervention comes through a Website that teaches behavioral activation principles and skills, such as monitoring the effects of daily activities on mood, scheduling reinforcing behaviors, and recognizing and altering avoidance behaviors.

Mobilyze!, the other intervention, has clients carry a special mobile phone with context-aware technology that provides data about clients and their environments, which is transmitted wirelessly to a secure server. With the caveat that the Mobilyze! technology is in a nascent stage,[87] here are a few examples of its exciting potential. Because GPS can pinpoint a client's location, Mobilyze! can indicate if clients are at their home, work, or health club, for example. This information is useful for determining the client's current behaviors. Accelerometers and GPS can provide information about a client's activity level (for instance, remaining stationary, walking, or in a motor vehicle). Audio recording might be used to detect stress level.

Periodically, Mobilyze! prompts clients to answer a series of questions (multiple choices on dropdown menus) that provide data on their momentary internal states (overall mood, specific emotions, level of pleasure and accomplishment, and perceived control of the current situation) and current context (where they are and what they are doing). Computer algorithms combine the context data generated by the cell phone with a client's momentary state data to generate a client-specific model to predict the client's current state. When the program indicates a client might be in a problematic state (for example, alone at home and sedentary, which may be precursors of depression), the client is prompted through the cell phone with idiosyncratic, specific interventions aimed at increasing pleasurable behaviors. The suggested interventions offered are dependent on the client's characteristics and current situation. If it is raining heavily at the client's GPS location, taking a walk to relieve stress or heighten mood would not be optimal, just as calling a friend to talk would not be suggested if it is 2 a.m.

Finding the right time to prompt clients is another consideration that context-aware technology can assist with. If the client has just ended a phone call, the cell phone would be available to receive a prompt; if, however, the algorithm indicates that the client is driving, then sending a message at that time is contraindicated.

The use of both the Website and Mobilize! is supplemented with brief telephone and email contacts with a therapist to enhance adherence to the program.

In a pilot study with eight adults with major depressive disorder, the Website and Mobilyze! resulted in significant improvement on self-report and interview measures of depressive symptoms, and the participants were less likely to meet the diagnostic criteria for major depressive disorder.[88]

Looking beyond this initial attempt to use sophisticated technology to implement behavioral activation, consider the broader implications for behavior therapy. It certainly could be advantageous for clients to have their "therapist in their pocket" whenever they encounter difficult situations in their daily lives. While it might be ideal for therapists to work with clients in their naturalistic environments where their problems occur, such in vivo therapy is rarely possible for practical reasons. But programs such as Mobilyze! could provide a feasible surrogate therapist. If the technology continues to be honed and clients find such intervention acceptable (as they did in the pilot study), we may have here a glimpse into one aspect of behavior therapy in the future.[89]

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IDENTIFYING REINFORCERS

Reinforcers are most effective when they are individualized for each client. *Potential* reinforcers are first identified and then tested to see if they actually accelerate the target behavior. Behavior therapists use a variety of methods to identify potential reinforcers, including directly questioning the client, selecting from generalized reinforcers, and observing the client's routine behaviors.

Questioning Clients

Asking clients about potential reinforcers is the easiest and most frequently used procedure. The therapist might start with a general question (such as "What things do you find enjoyable or rewarding?"). Then the questions would get more specific, asking about narrow categories of reinforcers (for example, "What do you like to do in the evenings?" or "If you had some extra money, what would you buy with it?").

Directly questioning clients to identify potential reinforcers has its limitations. For instance, it does not work for clients with severely limited intellectual and verbal abilities, and clients who are suffering from depression often cannot think of reinforcers because nothing seems pleasant or worthwhile to them. In such cases, the therapist can question people who know the client.

Exposing Clients to Generalized Reinforcers

Consequences that are reinforcing for many people are called **generalized reinforcers**.[90] Common examples include food, money, and social attention. Generalized reinforcers vary with clients' demographic characteristics, such as age, gender, and cultural background.[91] For example, food is a generalized reinforcer for most people, but the specific foods that are generalized reinforcers are likely to be different for young children and adults as well as for Hispanic and Japanese individuals. Similarly, generalized reinforcers may vary with specialized clinical populations. For instance, the privilege of taking methadone at home rather than at a clinic is a generalized reinforcer for clients who are being treated for heroin dependence.[92]

One method of identifying potential reinforcers is to expose clients to an array of generalized reinforcers and ask them to select those that they think would serve as reinforcers for them. Children can be taken to a toy store or shown pictures of toys and asked to pick out toys they would like to have. Adults might make selections from an on-line merchandise catalogue or the entertainment section of the Sunday newspaper. Special procedures have been developed for clients who have intellectual and verbal challenges.[93] For instance, clients with severe mental impairments spent time in a room containing 16 potential reinforcers, including a fan, juice, and a swing.[94] Reinforcer preference was determined by the frequency with which clients approached each of the objects.

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Whether the preferred items would serve as reinforcers was tested empirically by seeing if they accelerated target behaviors.

Behavior therapists have developed standardized lists of generalized reinforcers. For adults, the Reinforcement Survey Schedule is a direct self-report inventory that lists common generalized reinforcers (such as watching TV, shopping, and solving problems).[95] Clients rate the degree to which they enjoy each on a 5-point scale ranging from "not at all" to "very much." With the Pleasant Events Schedule, clients rate an extensive list of behaviors on two dimensions: (1) how often they engage in each behavior (frequency of occurrence) and (2) the amount of pleasure they experience from engaging in it.[96]

For children who cannot read, reinforcement menus, such as the one shown in Figure 7-4, allow them to point to pictures of generalized reinforcers they prefer.[97] With the Children's Reinforcement Survey Schedule,[98] an adult checks off preferred generalized reinforcers for the child (for example, playing games, eating sweets, going on family outings, and playing with friends).

By completing Participation Exercise 7-2, you'll experience using two of the methods for identifying reinforcers you've just been reading about: direct questioning and identifying pleasant activities. It will take a little time, so you may want to come back to it after you've finished reading the chapter.

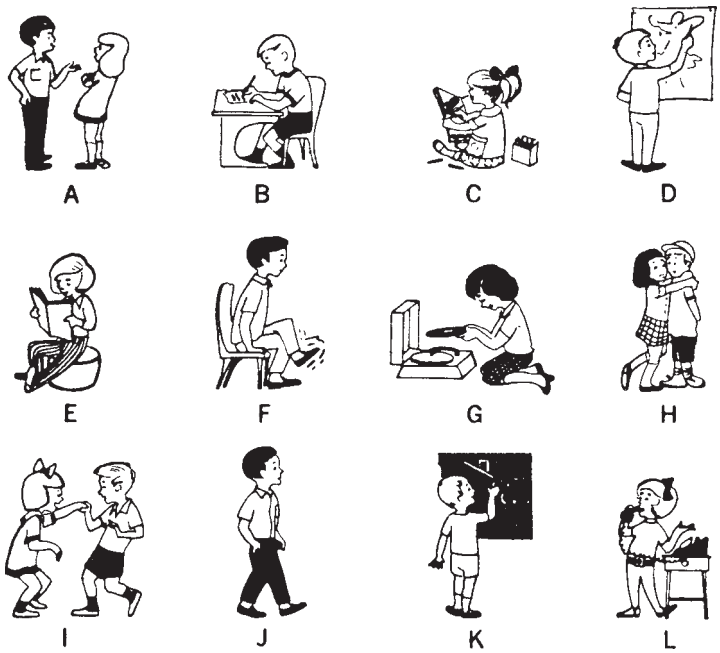


FIGURE 7-4
Part of a reinforcement menu
Source: Adapted from Daley, 1969, p. 44.

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PARTICIPATION EXERCISE 7-2

Identifying Your Own Potential Reinforcers

Earlier, you made a list of your potential reinforcers. Now, you can compile a more complete list, using the two methods you have just read about for identifying potential reinforcers: questioning and exposure to generalized reinforcers.

Part I: Direct Questioning

As you answer the following questions, keep a running list of potential reinforcers that are elicited by the questions, eliminating duplicates. Some of the questions directly identify reinforcers, whereas others are designed to cue areas in your life in which you may find potential reinforcers.

1. What things do you like to use? Buy? Consume (for example, what kind of food)?
2. What would you like as a gift?
3. What items do you see in stores or on the Internet that pique your interest?
4. What are your favorite activities?
5. What do you like to do in your spare time?
6. What do you like to do most in your work?
7. What do you consider a fun night out? Night at home? Weekend? Vacation?
8. What accomplishments make you feel good about yourself?
9. What are you doing when you feel happy? Alive? Useful? Important?
10. What types of social events do you like? What types do you go to?
11. What do you like other people to do for you? Say to you?
12. What do you like to happen when you finish doing something well?

Part II: Identifying Pleasant Activities

Table 7-1 contains 50 activities that are potential reinforcers. Rate each item twice. First, answer the question, "How often have I engaged in the activity during the past 30 days?" For each item, use the following scale.

1 = *Not at all* in the past 30 days
2 = *A few times* (1–6) in the past 30 days
3 = *Often* (7 or more) in the past 30 days

Write the number in the Frequency column of Work Sheet 7-1 (which you will find in your on-line Student Resource Manual; see page xxxi).

After rating the frequency of the 50 activities, read each item again and using the following scale, answer the question, "How pleasant, enjoyable, or rewarding was the activity during the past month?"

1 = This activity was *not* pleasant. (It was either unpleasant or neutral.)
2 = This activity was *somewhat* pleasant. (It was mildly pleasant.)
3 = This activity was *very* pleasant. (It was strongly pleasant.)

Write the number in the Pleasantness column of the work sheet. If you've engaged in an activity more than once in the past month, make an average

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TABLE 7-1
Common Activities That Are Potential Reinforcers

Attending a club meeting	Listening to radio talk shows
Attending a concert	Playing video games
Being alone	Playing sports
Being with my parents	Playing a musical instrument
Complimenting or praising someone	Playing with a pet
Cooking	Reading fiction
Dancing	Reading the newspaper
Dating	Riding a bike
Daydreaming	Saying prayers
Doing art work	Sending and receiving emails
Doing volunteer work	Shopping
Driving	Sleeping late
Eating out	Staying up late
Eating snacks	Straightening up (house or car)
Exercising	Surfing the Internet
Getting dressed up	Taking a nap
Getting or giving a massage or back rub	Taking a shower
Getting up early in the morning	Taking a walk
Going on vacation	Talking on the telephone
Going to a mall	Telling stories and jokes
Going to a party	Texting
Going to the movies	Watching a TV program
Helping someone	Watching a video
Listening to music	Watching people
Listening to or watching the news	Watching sports events

Source: Adapted from MacPhillamy and Lewinsohn, 1971.

pleasantness rating. If you have not engaged in an activity during the past month, rate it according to how enjoyable you think it *would have been*.

When you have rated the activities twice, multiply the frequency and pleasantness ratings for each activity and write the product in the Frequency × Pleasantness column of the work sheet. Higher products indicate more frequent and more pleasant activities and are more likely to be reinforcers. Add the activities with the highest products to your list of potential reinforcers that you compiled in Part I, eliminating duplicates.

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Observing Clients' Routine Behaviors

A third method of identifying reinforcers is to observe clients in their natural environments and note the behaviors they engage in most frequently and spend the most time doing. These high-probability behaviors can serve as reinforcing activities following the Premack principle.

ALTERNATIVES TO IDENTIFYING REINFORCERS

Sometimes it is difficult to identify potential reinforcers, especially ones that are practical as well as potent. In such instances, behavior therapists may draw from generalized reinforcers that are appropriate for the particular client's demographic characteristics. The odds are good that some of them will work for the client.

It also is possible to create a reinforcer by making a generalized reinforcer desirable and valuable to a particular client. With **reinforcer sampling**, clients are first given a generalized reinforcer noncontingently—that is, without having to do anything to obtain it.[99] The aim is to "hook" the client on the generalized reinforcer. When the client begins to enjoy the reinforcer and wants more of it, the client is then required to perform the target behavior to obtain the reinforcer. For example, to get him to clean his room, a mother taught her son a new game that they played together each night for a week. The boy came to enjoy the game and to look forward to playing it. At that point, the mother made playing the game contingent on the boy's cleaning his room. Reinforcer sampling had established the game as a reinforcer, as evidenced by the fact that the boy began to clean his room. Businesses use an analogous strategy when they offer customers free samples to induce them to buy a product being promoted. For instance, supermarkets allow shoppers to taste new food products, hoping that they will enjoy the products and purchase them (see Photo 7-2).

Another way to create reinforcers is to expose the client to other people (models) who are partaking of the reinforcer and who clearly are enjoying it. What we find enjoyable or valuable is determined in part by what we observe others enjoying and valuing. Humor is a good example of this phenomenon. The next time you watch a comedy show on TV, check to see if your laughter coincides with the laugh track (an indispensable feature of TV sitcoms).

ADMINISTERING REINFORCERS

After identifying a client's potential reinforcers, the next step is to design procedures for administering them when the client performs the target behavior.

Sources of Reinforcers

Reinforcers can be administered (1) by other people and (2) by clients themselves, and reinforcers also can be (3) a natural consequence of the behavior. In behavior therapy, other people most often dispense reinforcers for a client. These **reinforcing agents** include therapists,[100] parents,[101] teachers,[102] spouses,[103] siblings,[104] and peers.[105]Adults usually reinforce children's behaviors, but sometimes the reverse occurs, such as when a 6-year-old girl's display of joy at seeing

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PHOTO 7-2
Offering free samples of food products in supermarkets to entice shoppers to buy them is analogous to reinforcer sampling.

her parents when they pick her up on time from school increased her parents' coming on time.[106]

Clients can reinforce their own behaviors, which is called **self-reinforcement**.[107] Self-reinforcement has a number of advantages over reinforcement provided by others. The reinforcing agent is always present, and reinforcement usually can occur immediately after the target behavior is performed and when clients are alone.[108] Self-reinforcement is likely to increase transfer, generalization, and long-term maintenance of the target behavior. It also makes clients responsible for changing their own behaviors. The major limitation of self-reinforcement is that clients may be less reliable at administering reinforcers than other people. Clients may forget to reinforce themselves or not reinforce themselves because they believe that if they have performed their target behavior, reinforcement is not necessary. This is a common fallacy because behavior that is not reinforced eventually will be extinguished (although self-satisfaction about engaging in the target behavior can be reinforcing).

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Besides coming from reinforcing agents, reinforcers may occur as a natural result of engaging in the target behavior. For instance, increased endurance and energy are natural reinforcers of regular aerobic exercise.

Continuous Versus Intermittent Reinforcement

A *reinforcement schedule* is a rule that specifies which occurrences of a target behavior will be reinforced, and reinforcers are administered on two basic schedules. On a **continuous reinforcement schedule**, a behavior is reinforced *every time* a person engages in it. On an **intermittent reinforcement schedule**, only *some* of the occurrences of the target behavior are reinforced. When an intermittent schedule of reinforcement is based on a specified interval of *time*, it is called an *interval schedule*—as when a reinforcer is given after every 5-minute interval in which the individual performs a target behavior one or more times. When the schedule is based on the *number* of times the behavior must be performed for it to be reinforced, it is called a *ratio schedule*—as when a reinforcer is given after every fourth time the individual performs the behavior.

Continuous reinforcement is most useful when the client is first learning to perform a target behavior. Once the behavior is established, the client is usually switched to an intermittent schedule. Intermittent reinforcement is more economical than continuous reinforcement. Both the cost of reinforcers (such as for tangible reinforcers) and the time required to reinforce behaviors are less.

The most important advantage of intermittent reinforcement is that it enhances transfer, generalization, and long-term maintenance of the target behavior.[109] Intermittent reinforcement simulates what occurs in clients' natural environments, where behaviors are reinforced only some of the time. To appreciate just how powerful intermittent reinforcement can be in maintaining behaviors over prolonged periods, consider what happens in compulsive gambling. Although gamblers are reinforced (by winning) only occasionally, they will continue to place countless bets after their last payoff.

Individual Versus Group Contingencies

Reinforcers most often are administered through **individual contingencies** in which the consequences a person receives (or fails to receive) depend only on his or her behavior. An example would be: Any student who scores at least 80 on a quiz gets 5 extra minutes of recess. In contrast, with a **group contingency**, all members of a group receive (or fail to receive) the same consequences, depending on the performance of the group.

One type of *interdependent group contingency* requires that each group member meet a specified performance criterion for all the group members to receive the reinforcer. For instance, if all students get 80 or higher on a quiz, then the whole class receives 5 extra minutes of recess. Another type of interdependent group contingency depends on the total or average performance of all the group members to determine whether the entire group receives the reinforcer.[110] For example, if the average of all the students' quizzes is 80, the entire class gets extra recess.

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The popular Good Behavior Game involves an interdependent group contingency.[111] Small groups of students win the game by keeping the number of disruptive, disturbing, destructive, or inattentive behaviors below a set low criterion or by reaching a high criterion of appropriate and adaptive behaviors. Members of the winning teams are reinforced, often by engaging in pleasant activities. The game is effective in increasing "good" and decreasing "bad" behaviors.

With a *dependent group contingency,* the entire group is reinforced depending on the performance of one or some of the group members. A dependent group contingency is used when a particular group member is or a few group members are in need of the intervention, although all the group members can benefit from the intervention. This was the case with an 8-year-old student who was referred to a school psychologist for excessive off-task behaviors.[112] An ABAB reversal study showed that the group contingency decreased off-task behaviors and increased academic engagement not only for the target student but also for all the students in the class.

Group contingencies are employed most often in elementary school[113] (including kindergarten[114]), middle school,[115] and high school,[116] where their effectiveness has been well documented.[117] Common target behaviors are academic performance (for example, reading), homework completion and accuracy, socially appropriate communication, on-task behaviors, off-task behaviors, and disruptive behaviors (such as fighting). You'll note that the final two examples are deceleration target behaviors, which can be dealt with by reinforcing alternative adaptive behaviors, such as reinforcing on-task behaviors to decrease off-task behaviors or reinforcing cooperating to decrease fighting.

Besides the most common application to improving school behaviors, group contingencies have occasionally been used with other target behaviors, such as showing up for work [118] and smoking cessation.[119] Additionally, it is noteworthy that group contingencies work in diverse cultures, including Spain[120] and Belgium,[121] and not surprisingly in the Japanese collectivist culture.[122] The decision to use an individual or group contingency when a group of clients is being treated varies with the particular application.[123] Potential advantages of group contingencies include the fact that group members are more likely to reinforce one another's appropriate behaviors and the development of implicit or explicit group pressure to perform the target behavior. Potential disadvantages of group contingencies include group members' using excessive pressure or coercion to influence others—the downside of group pressure; one or more members of the group intentionally sabotaging the program; and the unfairness of withholding reinforcers from individuals whose behavior was appropriate.[124]

Because this chapter deals with reinforcement, the examples of group contingencies have involved reinforcement. However, group contingencies involving punishment (Chapter 8) are used, although far less frequently than group reinforcement contingencies.

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Guidelines for Administering Reinforcers and Fostering Long-Term Maintenance

Behavior therapists have developed guidelines for administering reinforcers and fostering the long-term maintenance of target behaviors. The following are seven important guidelines.

1. *Reinforcers should be contingent on the client's performing the target behavior*.[125] The reinforcer is administered only *after* the client has performed the target behavior. Providing a potential reinforcer *before* the client engages in the target behavior will not accelerate it.

2. *The reinforcer should be administered immediately after the client performs the target behavior*. Immediate reinforcement is more effective than delayed reinforcement, especially when the client is initially learning a target behavior.

3. *Reinforcers should be administered consistently*. All of the people reinforcing the client's target behavior should use the same criteria for determining when a reinforcer should be administered, and they should administer the reinforcers each time they are earned.

4. *The client should be made aware that the reinforcer is a consequence of the target behavior*. The simplest way to do this is to tell the client the reason that the reinforcer is being administered (as in Case 7-2, page 136). This makes the contingency between the target behavior and the reinforcer explicit and helps the client remember the consequence, which is important because reinforcement affects the future performance of a behavior.[126]

5. *Continuous reinforcement should be used initially, followed by intermittent reinforcement*. Continuous reinforcement is optimal for initially accelerating a target behavior, and intermittent reinforcement facilitates transfer, generalization, and long-term maintenance.[127]

6. *Natural reinforcers should be used in therapy*. Employing reinforcers that the client is likely to receive outside therapy also enhances transfer, generalization, and long-term maintenance.[128]

7. *Reinforcers should be kept potent*. Reinforcers can lose their effectiveness with repeated use because clients satiate on them (as we become satiated with food after Thanksgiving dinner). Conversely, the more a client is deprived of a specific reinforcer, the greater is that reinforcer's potency (as when we don't eat before Thanksgiving dinner). The internal states of satiation and deprivation that can change the potency of reinforcers are called *establishing operations* because they establish how reinforcers will operate on (influence) clients' target behaviors.[129] Procedures for maintaining the potency of reinforcers include (a) using reinforcers to which clients have not had access recently,[130] (b) dispensing reinforcers in small amounts, (c) using reinforcers that are less likely to lead to satiation (for example, praise rather than food), and (d) switching reinforcers periodically.[131]

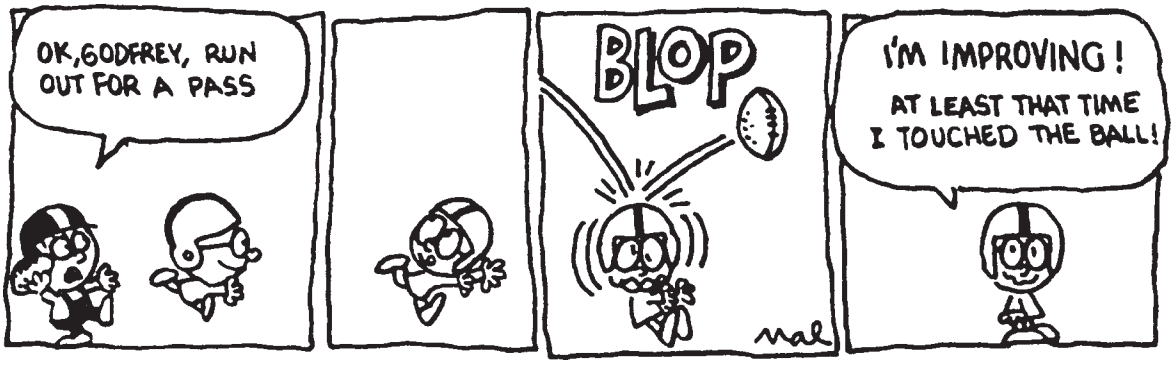
SHAPING

Do you remember playing the game "hot and cold" as a child? One child has to locate a particular object while a playmate directs the child toward the object by saying "hot" when the child gets closer and "cold" when the child starts to move

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farther away from the object. The game is a variation of a reinforcement procedure known as *shaping*.[132]

With **shaping**, the *components* of a target behavior, rather than the complete target behavior, are reinforced. Successively closer approximations of the total behavior are reinforced so that finally the complete behavior is being reinforced.



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Shaping involves reinforcing successive steps required for a complex behavior.

Therapists use shaping to accelerate target behaviors that a client rarely performs, which means that there are very few opportunities to reinforce them. Shaping also is used to accelerate behaviors that are especially difficult or complex for a client, such as in teaching emergency fire-exiting skills to children.[133] The therapist breaks down the total behavior into its logical component parts or steps and then reinforces each component as it occurs. The process is cumulative: each component plus all preceding components are reinforced. Suppose a therapist was teaching a child to say the sentence, "I want milk." The therapist would first reinforce "I," then "I want," and finally "I want milk." Shaping generally is part of a treatment package and often is combined with prompting.

Shaping was used in the treatment of a 3-year-old girl who had to be fed through a gastronomy tube because she refused to eat.[134] Jenny's parents were taught to praise her and briefly engage in a game (such as pat-a-cake) for each bite of food she accepted. An assessment of the foods Jenny would and would not tolerate revealed that the more solid a food was, the less Jenny would tolerate it. Accordingly, the intervention began with baby food that was soft and watery and, as Jenny began to eat, the food was gradually increased in thickness and texture. Jenny showed significant increases in the amount of food she consumed at home, and these results transferred to her preschool. By the end of the intervention, Jenny frequently fed herself a jar of baby food. A similar shaping procedure was used with three girls ages 5–7 who had severe feeding problems due to anatomical disorders of the digestive system that rendered normal eating by taking food through the mouth physically unpleasant.[135] Over the course of 7 months of treatment, the children learned to consume foods of varying taste and texture in a normal amount of time.

Case 7-3 illustrates the details of the use of shaping and prompting to accelerate talking in a man who had not spoken for 19 years.

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CASE 7-3

Shaping and Prompting Used to Institute Speech in a Patient with Long-Standing Selective Mutism[136]

A 40-year-old male patient in a psychiatric hospital had been completely mute and virtually unresponsive during 19 years of hospitalization. For example, in group therapy he remained impassive, staring straight ahead even when he was offered a cigarette, which other patients were accepting. During one group therapy session, the therapist accidentally dropped a package of chewing gum, and the patient momentarily moved his eyes toward it. This response was chosen as a starting point to shape the patient's speaking.

Individual therapy sessions were held three times a week. The therapist began by holding a stick of gum in front of the patient's face and waiting until he looked at it, at which point the patient was given the gum. When the patient consistently looked at the gum, the therapist waited for any lip movement before reinforcing the response with gum, and then looking at the gum, lip movements, and any sound were required for the reinforcer. Next, the therapist used the prompt, "Say *gum, gum*," and made the reinforcer contingent on closer and closer approximations of saying "gum."

At the end of the 18th therapy session, the patient spontaneously said "Gum, please." This breakthrough was accompanied by other verbal responses, such as answering questions about his name and age. Thereafter, the patient responded to other questions the therapist asked, but he did not respond to other staff members. To generalize his responding to other people, a nurse was brought into the therapy sessions. After a month, the patient was responding to the nurse's questions. Finally, the patient's verbal requests were shaped and generalized by having all the staff members with whom the patient had contact do things for the patient only when he specifically asked them to.

Employing shaping to initiate speech in a man who had been mute for essentially all his adult life is an impressive demonstration of shaping. Case 7-3 illustrates that shaping may involve reinforcing tiny, subtle components (such as a brief, momentary eye movement). It also illustrates the use of specific procedures to generalize the patient's speaking to people other than his therapist.

Functional Analytic Psychotherapy

Shaping is the major treatment component of **functional analytic psychotherapy (FAP)**, a behavior therapy that treats interpersonal problems by reinforcing clients' appropriate and adaptive interpersonal behaviors as they occur in the context of the therapist–client relationship.[137] Developed by Robert Kohlenberg and Mavis Tsai, FAP capitalizes on the fact that the therapist–client relationship is a social environment in which clients' interpersonal problems often are reproduced.[138] For example, a man who does not listen to what others are saying in his daily life is likely not to listen to what the therapist says.

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In the therapy sessions, the therapist looks for *clinically relevant behaviors* (*CRB*s). *CRB1*s are instances of the client's habitual maladaptive interpersonal behaviors that become deceleration target behaviors. *CRB2*s are alternative, adaptive behaviors that become acceleration target behaviors.

Consider the case of Ethel, whose presenting problem was an inability to make and sustain friendships. During the initial therapy sessions, the therapist observed that Ethel did not make eye contact with him and did not pay attention to what he said. The therapist identified these two CRB1s as probable maintaining conditions of her difficulties with making and sustaining friendships. The therapist shaped Ethel's making eye contact and paying attention (CRB2s) in the therapy sessions by reinforcing successive approximations of those adaptive behaviors. For instance, when Ethel turned in the direction of the therapist while talking or made momentary eye contact, the therapist leaned toward her or smiled. When Ethel commented on something the therapist had said, the therapist verbally reinforced her paying attention such as by saying, "Yes, you've got the point."

The advantage of having the therapist shape a client's adaptive behaviors in the therapy session is that reinforcement is most effective when it is administered immediately and consistently. Therapists are skilled at doing this, whereas reinforcement is less likely to be administered immediately and consistently in everyday life. Transfer of the client's newly developed CRB2s from the therapy sessions to the client's everyday life and significant others is critical. Transfer is promoted by specific suggestions the therapist makes (for example, "You know, in conversations with others at home, you can listen in the same way you have been learning to listen with me") and followed up with homework assignments (for instance, the client is asked to listen attentively to others in everyday situations and observe what effects it has on her relationships).[139]

Although FAP was introduced 25 years ago and it appears to be used with some frequency both in the United States and some Spanish-speaking countries,[140] its evidentiary base is weak. The FAP literature largely consists of descriptions of the FAP process and theoretical discussions concerning what therapists can do during treatment sessions to shape clients' adaptive interpersonal behaviors (CRB2s).[141] Outcome studies are almost exclusively traditional case studies, which, by themselves, are tenuous.[142] Admittedly, there are challenges to performing experiments with groups of clients.[143] Because each client has a different set of interpersonal problems, identifying a common dependent variable is difficult. Similarly, the FAP process is different for each client, so it is difficult to specify an independent variable. Nonetheless, these problems are not insurmountable, and creative solutions need to be found[144] so that randomized controlled trials that compare FAP to appropriate control groups and other treatments can be conducted before FAP can be considered an evidence-based treatment.

Shaping requires careful observation of the client's actions to make fine discriminations among the components of the target behavior (as you saw in Case 7-3). Participation Exercise 7-3 can help you appreciate the subtle skills required for effective shaping. Although you probably will want to complete the exercise at a later time, you should read it now as you are learning about shaping.

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PARTICIPATION EXERCISE 7-3

Shaping Your Shaping Skills

You will need another person to do this exercise, so first ask a friend to assist you for about 20 minutes.

Choose a behavior that is (1) simple, (2) brief (taking less than 30 seconds), and (3) easily broken down into component parts or steps. Examples of suitable behaviors are opening and closing a book, removing the top of a pen and replacing it, standing up and sitting down, opening and closing a window, and talking about a particular topic (such as schoolwork or a social activity).

List the major components of the behavior in their appropriate order. Table 7-2 lists the major components of two simple behaviors as examples. Refer to your list as you shape your friend's behavior. However, your friend may not perform each component and is likely to perform some steps that fall between the major components you've identified. The key to effective shaping is to be able to notice differences among responses so that you are *always reinforcing closer approximations to the behavior*.

When your friend arrives, say something like the following:

> I am going to try to get you to perform a simple behavior—nothing embarrassing. I'll do this by saying "good" every time you get closer to performing the behavior. I can't give you any hints about what I want you to do. But I will let you know when you are getting closer to performing the behavior by saying "good."

Your friend may appear quizzical or skeptical ("You want me to do something, but you won't tell me what?"). Just be sure your friend understands the instructions. If at any time your friend asks a question such as, "What do you want me to do?" answer, "Just get me to say 'good.' "

At first, your friend may remain motionless and speechless for several minutes (as he or she tries to figure out what to do or say). To get started, reinforce—by

TABLE 7-2
Major Components of Two Simple Behaviors

Opening and closing a book

1. Movement of either hand
2. Movement of either hand in the direction of the book
3. Touching the book with the hand
4. Opening the book partially
5. Opening the book fully
6. Closing the book partially
7. Closing the book fully

Criticizing

1. Any verbal utterance
2. Any statement (as opposed to a question)
3. Any negative statement
4. Any negative statement that is a criticism

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saying "good"—the first physical movement (or utterance if you are shaping a verbal behavior) your friend makes (as the therapist did in Case 7-3). Then reinforce responses that are closer and closer to the complete behavior. It is crucial that you say "good" *immediately* after the component response is made. Otherwise, your friend may associate the reinforcer with some other response that he or she made at about the same time.

When your friend finally performs the behavior, congratulate him or her, describe the shaping procedure you were using, and ask your friend to comment on the process. Your friend may raise questions and issues that will enhance your understanding of shaping.

REINFORCEMENT THERAPY IN PERSPECTIVE

Reinforcement therapy is consistently effective in accelerating many different target behaviors for clients of all ages and intellectual and physical capabilities.[145] The keys to effective application of reinforcement are *consistently* administering *potent* reinforcers *immediately* following the behavior and using reinforcers that have been specifically *identified for the client*. After a client is successfully performing the target behavior, steps must be taken to ensure that the client will perform the behavior in different situations in his or her natural environment (if this is appropriate) and will continue to perform the behavior. Four strategies are employed to promote transfer, generalization, and long-term maintenance: (1) using natural reinforcers, (2) having natural reinforcing agents administer reinforcers, (3) using self-reinforcement, and (4) administering reinforcers intermittently. The first three strategies ensure that the target behavior will continue to be reinforced. The fourth procedure increases the chances that clients will continue to perform the behavior even when it is reinforced only occasionally in their natural environment, which is typically what will happen.

People will continue to perform a behavior only if the behavior is reinforced. Although this principle may appear obvious, many people harbor the illusion that once a person is engaging in a behavior, the behavior should magically continue—that is, without further reinforcement. In other words, reinforcement mistakenly is viewed as a one-time cure, like taking an aspirin to relieve a headache. Behaviors must be reinforced at least occasionally (intermittently) if they are to continue being performed.

Reinforcement therapy is used to accelerate socially adaptive and desirable behaviors. Some critics have argued that clients should perform socially desirable behaviors without their having to be reinforced because the natural consequences of the behaviors are intrinsically worthwhile. However, if this were so, why don't the clients engage in these "intrinsically worthwhile" behaviors on their own? Apparently, the behaviors do *not* have intrinsic worth to the clients, which is why *extrinsic* reinforcers are needed to initiate and maintain many adaptive and socially desirable behaviors that clients are not performing.

Another criticism of reinforcement is that reinforcing enjoyable behaviors (so-called rewards) diminishes motivation to perform them. The argument is

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that the value of an enjoyable activity is diminished because people infer that the behavior is not as enjoyable as they had thought given that it "had" to be reinforced.[146] But this turns out to be a weak and unlikely effect[147] and may hold only for behaviors for which initial interest is very high.[148] Moreover, reinforcement in behavior therapy is used to promote behavioral deficits, behaviors that are not being engaged in sufficiently for adaptive functioning and not behaviors that people are already engaging in at appropriate levels.

A related ethical criticism of reinforcement is that by fostering socially desirable behaviors, reinforcement therapy deprives clients of an aspect of their personal freedom—that is, to act however they wish, which includes engaging in socially undesirable or nonconformist behaviors. In fact, clients who are not performing socially desirable behaviors either do not have these behaviors in their behavioral repertoire or do not have an incentive to engage in them. Reinforcement therapy both teaches clients new behaviors and provides incentives for engaging in them. Thus, clients now are in a position to engage in the socially adaptive behaviors if they choose to, which means that they have more personal freedom.

Another common criticism of reinforcement is that it is a form of bribery. *Bribery* refers to offering something valuable, such as money or a favor, to influence someone to act (usually dishonestly or illegally). Bribes are given *before* the behavior is performed, whereas reinforcers are always given *after* the behavior occurs. Furthermore, reinforcers are not used in behavior therapy to accelerate dishonest or illegal behaviors.

Although reinforcement therapy is not a panacea, it is perhaps the most widely applicable behavior therapy, and its effectiveness has been demonstrated by a large body of empirical research. Accelerating desirable behaviors with reinforcement has no negative side effects, and clients consistently rate it as an acceptable treatment.[149] Reinforcement therapy provides clients with new, adaptive behaviors that are alternatives to their maladaptive problem behaviors. In doing so, reinforcement therapy increases clients' freedom by giving them more options for how to behave and enhances their dignity as human beings.

SUMMARY

1. Stimulus control procedures change antecedents that elicit behaviors. Prompting provides the cues that remind or instruct clients to perform target behaviors. Prompts can be verbal, environmental, physical, or behavioral. After the client is performing the behavior, prompts are faded (gradually withdrawn).
2. Setting events are environmental conditions that elicit behaviors. When a setting event is identified as a maintaining antecedent of a target behavior, it is modified to create the desired change in the behavior.
3. Reinforcement occurs when the consequences of a behavior increase the likelihood that the behavior will be repeated. Reinforcers usually are pleasant or desirable consequences, but whether a consequence is a reinforcer depends on its accelerating effects.
4. Reinforcers provide feedback that a behavior is being performed properly.

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5. Reinforcement can be positive or negative, depending on whether the consequence is added or subtracted, respectively. The term *negative reinforcement* often is used erroneously to refer to punishment.
6. Punishment occurs when the consequences of a behavior decrease the likelihood that a behavior will be repeated. Punishment also can be positive or negative, depending on whether the consequence is added or subtracted, respectively.
7. The four major types of positive reinforcers are tangible reinforcers, social reinforcers, token reinforcers, and reinforcing activities.
8. Social reinforcers are versatile because they are easy to administer, usually can be administered immediately, and are natural reinforcers.
9. The Premack principle uses high-probability behaviors as reinforcers for low-probability behaviors.
10. Behavioral activation is a treatment for depression that identifies clients' avoidance behaviors and potential reinforcing activities and then uses activation strategies to get clients to engage in reinforcing activities and decrease avoidance behaviors.
11. Reinforcers are identified by questioning clients, exposing them to generalized reinforcers, and observing their frequent activities.
12. Reinforcers can be created by reinforcer sampling and exposure to models enjoying potential reinforcers.
13. Reinforcers are administered by other people and by clients themselves, and they can occur as a natural consequence of the behavior.
14. Continuous reinforcement is used to teach behaviors initially; intermittent reinforcement fosters long-term maintenance as well as transfer and generalization.
15. With groups of clients, reinforcers can be administered in a group contingency. Group members receive or fail to receive the reinforcers, depending on the performance of the group.
16. Guidelines for administering reinforcers and fostering long-term maintenance include contingent, immediate, and consistent reinforcement; client awareness of the contingency; shift from continuous to intermittent reinforcement; use of natural reinforcers; and keeping reinforcers potent.
17. Shaping involves reinforcing components of a target behavior in sequence until the full target behavior is performed. Shaping is used to accelerate target behaviors that rarely occur or that are difficult or complex.
18. Functional analytic psychotherapy uses shaping to accelerate clients' appropriate and adaptive interpersonal behaviors as they occur in the context of the therapist–client relationship and promotes transfer of these adaptive behaviors to the client's everyday interpersonal relationships.
19. Reinforcement consistently has been effective in accelerating many different types of target behaviors for clients of all ages and intellectual and physical capabilities.
20. Behavior is maintained only if it is reinforced. Procedures for enhancing long-term maintenance as well as transfer and generalization employ natural reinforcers, self-reinforcement, natural reinforcing agents, and intermittent reinforcement.

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CHAPTER 8



Deceleration Behavior Therapy: Differential Reinforcement, Punishment, and Aversion Therapy

Differential Reinforcement: Indirectly Decelerating Undesirable Behaviors

Differential Reinforcement of Incompatible Behaviors

PARTICIPATION EXERCISE 8-1 Finding Incompatible Acceleration Target Behaviors to Substitute for Undesirable Behaviors

Differential Reinforcement of Competing Behaviors

Differential Reinforcement of Alternative Behaviors

Differential Reinforcement of Other Behaviors

Differential Reinforcement of Low Response Rates

Variants of Differential Reinforcement

Deceleration Behavior Therapy: Directly Decelerating Undesirable Behaviors

Punishment

Extinction

CASE 8-1 Eliminating Bedtime Temper Tantrums by Extinction

Time-out From Positive Reinforcement

Response Cost

PARTICIPATION EXERCISE 8-2 Boxing Your Way to a Neater Room

Overcorrection

CASE 8-2 Reducing Object Throwing by Overcorrection

PARTICIPATION EXERCISE 8-3 Designing Novel Overcorrections

Physically Aversive Consequences

CASE 8-3 Eliminating Dangerous Climbing With Contingent Shock

Guidelines for the Effective Use of Punishment

IN THEORY 8-1 Punishment: What's in a Name?

Aversion Therapy

Basic Procedures

CASE 8-4 Treatment of Cross-Dressing by Aversion Therapy

Covert Sensitization

Deceleration Behavior Therapies for Addictive Behaviors

Ethical Issues in the Use of Aversive Therapies

Principle of Utility

Misuse, Abuse, and Safeguards

All Things Considered: Deceleration Behavior Therapy

SUMMARY

PARTICIPATION EXERCISE ANSWERS

REFERENCE NOTES

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Reinforcement therapy is used to accelerate adaptive and desirable behaviors. To decelerate maladaptive and undesirable behaviors, behavior therapists employ a number of strategies. In this chapter, the three major deceleration strategies are discussed: differential reinforcement, punishment, and aversion therapy.

DIFFERENTIAL REINFORCEMENT: INDIRECTLY DECELERATING UNDESIRABLE BEHAVIORS

The preferred strategy for decelerating an undesirable behavior is to reinforce an acceleration target behavior that is an alternative to the deceleration target behavior, a procedure called **differential reinforcement**. For example, to reduce a client's criticism of people, the client might be reinforced for complimenting others. As this example shows, differential reinforcement changes the deceleration target behavior (criticizing) *indirectly* by directly reinforcing the alternative acceleration target behavior (complimenting).

Differential reinforcement works because the more the client engages in the alternative behavior, the less opportunity the client has to engage in the deceleration target behavior. Consider the case of a young girl with severe intellectual disability who frequently hit herself.[1] To reduce her self-destructive behavior, she was reinforced for using her hands to play with a puzzle. Differential reinforcement was effective because while her hands were engaged in playing with the puzzle, she could not hit herself.

Five types of differential reinforcement, in order of most to least effective, are differential reinforcement of (1) incompatible behaviors, (2) competing behaviors, (3) alternative behaviors, (4) any other behaviors, and (5) low response rates (of the maladaptive behavior).

DIFFERENTIAL REINFORCEMENT OF INCOMPATIBLE BEHAVIORS

The best strategy for decelerating undesirable behaviors is to reinforce acceleration target behaviors that are incompatible with them—that is, **differential reinforcement of incompatible behaviors**. *Incompatible* means that the acceleration and deceleration target behaviors cannot occur simultaneously. Thus, while a person is performing the acceleration target behavior, it is *impossible* for the person to perform the deceleration behavior. Differential reinforcement of incompatible behaviors was used as part of a treatment package to reduce excessive crying associated with infant colic.[2] The parents played music and attended to the infant (such as by making eye contact with and gently touching the infant) whenever the infant was quiet and alert for 30 seconds or more. This procedure reduced the infant's crying by 75%.

Designing acceleration target behaviors that are incompatible with undesirable behaviors involves ingenuity and is even more challenging than devising *competing* acceleration target behaviors, which you did in Participation Exercise 4-1. You will get a feel for this process by taking a few minutes to complete Participation Exercise 8-1 before you read about the next type of differential reinforcement.

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PARTICIPATION EXERCISE 8-1

Finding Incompatible Acceleration Target Behaviors to Substitute for Undesirable Behaviors

For each undesirable behavior that follows, write an *incompatible* acceleration target behavior. Be sure the acceleration target behavior meets the standards for a good target behavior described in Chapter 4 (page 53), including making the target behavior appropriate and realistic. You will know you have selected an incompatible behavior if it is *impossible* to *simultaneously* engage in the undesirable behavior while engaging in the acceleration target behavior. When you have finished, exchange your target behaviors with another student in your class, both to check whether the target behaviors are incompatible and to see other examples.

1. Biting one's nails
2. Interrupting others during conversations
3. Sleeping in class
4. Making self-deprecating statements (such as "I'm just no good")
5. Leaving clothes on the floor

DIFFERENTIAL REINFORCEMENT OF COMPETING BEHAVIORS

Although reinforcing incompatible behaviors is the optimal strategy for reducing undesirable behaviors, finding appropriate incompatible behaviors often is not possible. The next best strategy is **differential reinforcement of competing behaviors**. Engaging in a competing acceleration behavior reduces, but does not eliminate, the opportunity to simultaneously engage in the undesirable behavior.[3] Jogging competes with texting, but it is still possible to text while jogging.

DIFFERENTIAL REINFORCEMENT OF ALTERNATIVE BEHAVIORS

Decelerating a maladaptive target behavior with a specific adaptive behavior—but not necessarily one that is either incompatible or competing—is called **differential reinforcement of alternative behaviors**. As an example, two siblings who typically fight with each other could be reinforced for playing a game or riding their bikes together. Teaching the alternative behavior (if necessary) before instituting differential reinforcement of alternative behaviors may result in lower levels of the problem behavior and greater levels of the alternative behavior.[4] *Functional communication training* (which you will read about shortly) is a type of differential reinforcement of alternative behaviors.

DIFFERENTIAL REINFORCEMENT OF OTHER BEHAVIORS

Reinforcing an incompatible, competing, or alternative behavior has the advantage that an *adaptive* behavior is substituted for a maladaptive behavior. However, this strategy is not possible when an alternative acceleration target behavior cannot be easily identified. If a target behavior is seriously maladaptive, it may be necessary to reinforce *any other* behavior to decrease the

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maladaptive behavior quickly; this is known as **differential reinforcement of other behaviors**.

Differential reinforcement of other behaviors is employed primarily for high-frequency behaviors that are dangerous to other people (such as hitting),[5] self-injurious (such as head banging),[6] or self-restricting (such as tics).[7] In these situations, engaging in virtually any other behavior is preferable to engaging in the deceleration target behavior. For example, a child who frequently hurled objects at other people was reinforced for throwing objects at anything but a person. Although throwing things at inanimate objects is undesirable, it is *less* undesirable than injuring people. Differential reinforcement of other behaviors is occasionally used to reduce less severe maladaptive behaviors, such as preschoolers' noncompliance[8] and geriatric patients' wandering.[9]

DIFFERENTIAL REINFORCEMENT OF LOW RESPONSE RATES

Occasionally, it is unreasonable to expect that a client can completely stop engaging in the maladaptive behavior (go "cold turkey," so to speak), as when the rate of performing the behavior is very high. In such cases, the client can be reinforced for performing the deceleration target behavior less often, which is called **differential reinforcement of low response rates**.[10] This strategy was used with an adolescent boy who frequently talked out inappropriately in a special education class.[11] The teacher told the boy that she would spend extra time with him if he talked out inappropriately three or fewer times during a class period. This contingency lowered the rate of the boy's talking out from an average of more than 30 times a class period to an average of fewer than 3 times a period.

Differential reinforcement of low response rates can eliminate a behavior completely if the criterion for reinforcement is gradually decreased to zero. For example, first the client might be reinforced for 10 or fewer responses, then for 5 or fewer, next for 2 or fewer, and finally for no responses.[12]

VARIANTS OF DIFFERENTIAL REINFORCEMENT

Both differential reinforcement of other behaviors and differential reinforcement of low response rates are often used to treat severely maladaptive behaviors. Noncontingent reinforcement and functional communication training are two variants of differential reinforcement that are also used for such problem behaviors.

Noncontingent Reinforcement

With **noncontingent reinforcement**, the reinforcer identified as maintaining a problem behavior is administered on a frequent fixed-interval reinforcement schedule (for example, every 15 seconds), *regardless of whether the client engages in the deceleration target behavior.*[13] The client is still receiving the reinforcer but *usually* not after performing the target behavior, which means that the reinforcer is essentially not contingent on the client's performing the behavior. Noncontingent reinforcement can be thought of as "partial differential reinforcement of other behaviors" (*partial* because occasionally the reinforcer may follow the deceleration target behavior).

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The reductions in problem behaviors following noncontingent reinforcement are believed to be related to satiation and extinction.[14] Because the reinforcer is administered frequently, the client becomes satiated on it, which decreases its effectiveness. Extinction (which you will read about shortly) involves withholding the reinforcer for the problem behavior, which results in a decrease in the behavior.

Noncontingent reinforcement as a treatment for serious maladaptive behaviors is a relatively new intervention. However, an increasing number of studies have demonstrated that it can successfully reduce aggressive, self-injurious, and disruptive behaviors, particularly when social attention is the maintaining consequence.[15]

Functional Communication Training

People sometimes engage in aggressive and disruptive behaviors to obtain desired reinforcers. For example, when 6-year-old Ari becomes frustrated with a task at school, he bangs loudly on his desk; this behavior results in his being permitted to take a break or do some other task. Ari's disruptive behavior is negatively reinforced by escape from the frustrating task. Such a scenario is likely when people lack appropriate communication skills and therefore communicate their desires (such as escaping a frustrating task) inappropriately.

Functional communication training teaches clients to use acceptable ways of communicating their desire for a reinforcer rather than their typical unacceptable means of communicating the same message.[16] For instance, Ari might be taught to say "break" or make the hand gesture for "cut" (side of the hand across the throat) to communicate that he wants to terminate a frustrating task.

The first step in functional communication training is to identify the reinforcer maintaining the problem behavior. Next, the client is taught to use an appropriate communication behavior that will result in the client's obtaining the reinforcer. Because functional communication training often is used with clients with severe developmental disabilities, a wide range of acceptable communication responses are employed, including simple phrases (for example, "Watch me") as well as manual signs, gestures, and picture cards that indicate what the client wants. Typically, clients are taught to use several different communication responses.[17] In the final phase of the training, the alternative, acceptable ways of communicating are reinforced by the client's obtaining the desired reinforcer for using them, and the reinforcer is withheld (extinction) for unacceptable communication behaviors. Thus, functional communication training is a specialized form of differential reinforcement of competing behaviors because appropriate communication competes with inappropriate communication.

Functional communication training has been used to treat aggressive, self-injurious, and disruptive behaviors of children and adults who have very limited communication skills, such as people with developmental disabilities and autism spectrum disorder.[18] It has even been used with toddlers.[19] Functional communication training reduces problem behaviors relatively quickly, and studies have found that the effects of the training persist for at

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least 2 years.[20] Generalization can occur between different classes of treated (destructive) and untreated (disruptive) behaviors.[21] Although functional communication training typically is part of a treatment package, it can be effective as the sole intervention[22] and can be successfully carried out by parents at home.[23] Parents and teachers can be taught and coached remotely, as by phone[24] and videoconferencing.[25]

In contrast to standard differential reinforcement procedures, the alternative behavior that is reinforced in functional communication training is specifically taught to clients, which means that it does not have to already be in their behavioral repertoires. In addition, clients in functional communication training determine when the alternative behavior will be reinforced by appropriately communicating their need or desire for the reinforcer, which makes it function as self-reinforcement.

DECELERATION BEHAVIOR THERAPY: DIRECTLY DECELERATING UNDESIRABLE BEHAVIORS

Differential reinforcement does not always reduce maladaptive behaviors sufficiently or fast enough. This is most likely to happen in three circumstances.

First, sometimes it is difficult to find a suitable acceleration target behavior. With substance abuse, for example, few alternative behaviors are as immediately satisfying as the physical effects of drugs.

Second, increasing the acceleration target behavior may only partially decrease the deceleration target behavior. For instance, accelerating *complimenting* may not result in an acceptable decrease in *criticizing* because a person can compliment and criticize someone at the same time, as with sarcasm.

Third, differential reinforcement typically decreases the deceleration target behavior *gradually*, which may not be fast enough. This would be the case with behaviors (a) that are potentially dangerous to the client (for instance, self-mutilation) or to other people (such as physically aggressive acts) and (b) that infringe on others' rights (for example, destroying someone's property).

Two forms of deceleration behavior therapy are used to reduce undesirable behaviors *directly*. Punishment *changes the consequences* of the maladaptive target behavior. **Aversion therapy** *associates the maladaptive target behavior with something unpleasant*. Punishment is more broadly applicable and is used much more frequently than aversion therapy. Both forms of deceleration therapy can be used in conjunction with procedures that accelerate alternative desirable behaviors. Indeed, treating an acceleration target behavior along with a deceleration target behavior is standard practice in behavior therapy.

PUNISHMENT

Punishment decelerates undesirable or maladaptive behaviors through one of two processes. *Negative punishment* removes a pleasant or desirable consequence, which makes it unconducive for the client to continue performing the deceleration target behavior. In practice, this is done by *eliminating reinforcement*

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for the target behavior, as with extinction, time-out from positive reinforcement, and response cost. The other process is *positive punishment*, in which an unpleasant or undesirable consequence, a punisher, is introduced, which also makes it unconducive for the client to engage in the deceleration target behavior. Overcorrection and physically aversive consequences are examples of positive punishment. We begin our discussion of punishment with negative punishment, eliminating reinforcement to decelerate undesirable behaviors.

EXTINCTION

All behaviors are maintained by reinforcement. When the reinforcers maintaining a behavior are no longer contingent on the behavior, the person eventually stops performing the behavior. The process of withdrawing or withholding reinforcers is called **extinction**.

For extinction to work, the reinforcer that is maintaining the deceleration target behavior must be identified.[26] Extinction often is used to reduce behaviors that are reinforced by social attention. You have probably tried extinction yourself from time to time, such as when you ignore a friend who is behaving obnoxiously, which withholds social attention that is maintaining the obnoxious behavior. Ignoring as an extinction procedure is appropriate *only* when social attention is maintaining the deceleration target behavior. Consider the example of a 9-year-old boy who regularly stole money from his mother's purse. The boy's mother decided to ignore her son when she saw him take money from her purse. She believed she was using extinction. However, her son's stealing continued. It turns out that her son's stealing was being reinforced by the money rather than by social attention. Thus, she was not using extinction because she was not withholding the reinforcer that was maintaining the behavior. In Case 8-1, social attention was reinforcing the child's bedtime temper tantrums, so extinction appropriately involved ignoring the behavior.

CASE 8-1

Eliminating Bedtime Temper Tantrums by Extinction[27]

The client was a 21-month-old boy who engaged in prolonged temper tantrums at bedtime. When his parents put the boy to bed and left the room, he screamed and cried. The parents responded by remaining in the room until he fell asleep (from ½ hour to 2 hours). Thus, it appeared that the boy's parents' attention was reinforcing his temper tantrums.

The therapist suggested an extinction procedure. The parents put the boy in his bed as usual. However, after remaining in the boy's bedroom for a short time, they left the room and did not return, even when he cried. As you can see from the solid line in Figure 8-1, after the boy cried for 45 minutes the first night of extinction, the length of crying quickly declined to zero. By the 10th night, the boy even smiled when his parents left his bedroom, and he continued to fall asleep without incident for the next week.

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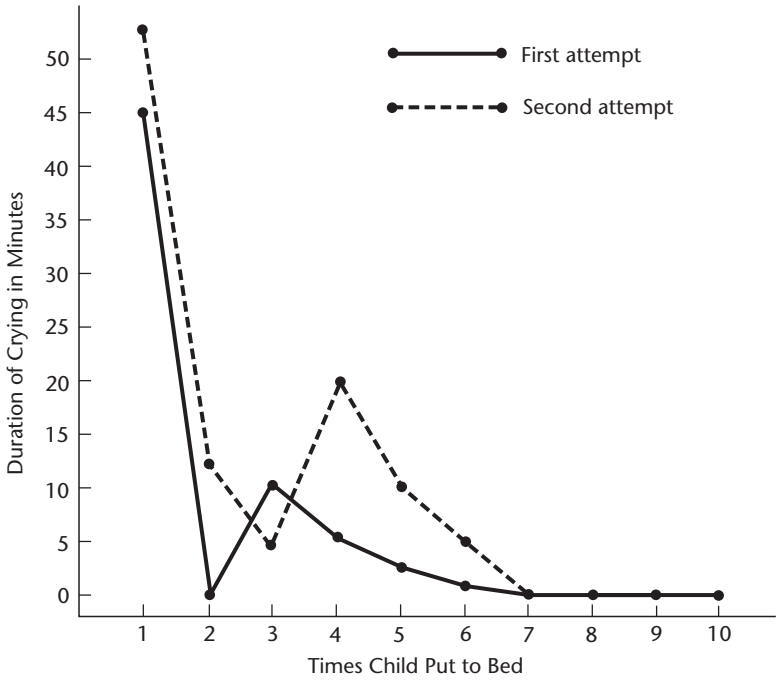


FIGURE 8-1
Results of two attempts to eliminate a 21-month-old boy's bedtime temper tantrums through extinction
Source: Adapted from Williams, 1959, p. 269.

At this point, an unfortunate event occurred. His aunt put the boy to bed, and when he cried as she began to leave the room, she stayed in his bedroom until he fell asleep. This positively reinforced the tantrum behavior that had been eliminated. In fact, this single reinforcer increased the boy's crying to its pretreatment level.

The parents then instituted the extinction procedures again. The broken line in Figure 8-1 shows that the boy's crying reached zero by the seventh night of the second extinction attempt, indicating that the procedures were successful. At a 2-year follow-up, the parents reported that no additional bedtime temper tantrums had occurred.

Extinction can be effective as the sole treatment (as in Case 8-1). Generally, however, it is more effective when it is combined with other therapies, such as differential reinforcement.[28]

Extinction has four potential problems. First, in some (but certainly not all) cases, extinction may work relatively slowly. This is an issue when extinction is used with target behaviors that must be decelerated rapidly, such as self-injurious behaviors.[29]

Second, in one of every four cases, extinction results in an *extinction burst*, an initial intensification of the target behavior before it begins to decrease.[30]

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And for certain target behaviors, such as self-injurious behaviors where extinction bursts are especially undesirable,[31] extinction bursts occur in as many as half the cases treated with extinction.[32] Extinction bursts are reduced when extinction is combined with other deceleration procedures, such as differential reinforcement.[33]

Third, the effects of extinction may not transfer from the specific circumstances in which the extinction was carried out to other circumstances. This may have occurred in Case 8-1. The boy had not cried for a week and a half with his parents, who had administered the extinction procedure. However, when his aunt put him to bed, the circumstances changed and he cried.

The fourth potential problem with extinction is that the target behavior may recur temporarily after it has been eliminated, which is known as *spontaneous recovery*. Spontaneous recovery is not an indication that extinction has been ineffective. In fact, the intensity of the deceleration target behavior generally is weaker during spontaneous recovery than it was before extinction was implemented, and the target behavior soon begins to decline again. When using extinction, the therapist should tell the client and other people involved that the deceleration target behavior may recur temporarily.[34]

Extinction also has three practical limitations. First, the reinforcer maintaining the target behavior must be identified, which is not always possible.

Second, for extinction to be most effective, the reinforcer generally must be *completely* withheld.[35] As you saw in Case 8-1, even a single, isolated exception can reinstate the deceleration target behavior and maintain it for a considerable time thereafter. When the boy's aunt stayed in the room when he cried, his crying was reinforced on an intermittent schedule, which increased the durability of the behavior. Although the parents in Case 8-1 were able to tolerate their son's extended crying when they instituted extinction, many parents find it difficult not to comfort their clearly distressed child.

Thus, a third possible limitation of extinction is reluctance or refusal to implement it. When that occurs, modified extinction procedures can be somewhat effective, and you'll read about their use for childhood insomnia in Chapter 17.

TIME-OUT FROM POSITIVE REINFORCEMENT

Time-out from positive reinforcement (or **time-out**, for short) involves *temporarily* withdrawing a client's access to generalized reinforcers immediately after the client performs the deceleration target behavior. When parents have their child stand in a corner for several minutes following a socially inappropriate behavior, they are using time-out. In part, time-out is time-limited extinction. However, in contrast to extinction, the actual reinforcer for the deceleration target behavior is not identified. In fact, what is temporarily denied is access to a range of generalized reinforcers.[36] To be precise, then, the term *time-out from positive reinforcement* is a misnomer. The procedure should be called *time-out from generalized reinforcers*.

Typically, time-out requires that the client, usually a child, leave the situation in which the undesirable behavior occurs and spend a specified amount of time

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PHOTO 8-1
Having a child spend a few minutes in a corner is a common way that time out from positive reinforcement is implemented.

in a designated time-out area. This may be an isolated corner (as in Photo 8-1) or a special **time-out room** that does not allow access to generalized reinforcers (such as windows to look out of or interesting objects to play with).[37]

Practical considerations often make it impossible to completely eliminate generalized reinforcers during the time-out period. For example, in a school setting, a time-out room may not be available, so children are put in a remote corner of the classroom for time-out. Although some of the previously available generalized reinforcers have been removed (such as interacting with other children), the child still has access to some generalized reinforcers (such as observing other children, albeit from a distance).[38] Such a "partial" time-out tends to be less effective than a "total" time-out, in which all generalized reinforcers are removed.[39]

Time-out from positive reinforcement is most effective when the following six conditions are met.

1. *The client should be aware of the reason for time-out and its duration.* For instance, "For speaking disrespectfully, you have a 3-minute time-out."

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2. *The duration of time-out should be brief*. Usually, 5 minutes or less is sufficient. For children up to age 5, a rule of thumb is 1 minute for each year of the child's age.[40] Relatively short periods are effective, and lengthening the time does not necessarily increase the effectiveness of time-out.[41]
3. *No reinforcers should be present or introduced during the time-out period*. Adults should not give children attention when they are in time-out (as by answering their questions), and the time-out area should not contain generalized reinforcers (which makes most children's bedrooms inappropriate for time-out).
4. *Time-out should be terminated only when the specified time has elapsed*. If the child is removed from time-out beforehand, the time-out may be less effective in the future.
5. *Time-out should be terminated only when the child is behaving appropriately*, which means the child is not engaging in any undesirable behaviors (usually for a specified time, such as 30 seconds).[42] This release contingency ensures that an undesirable behavior, such as screaming, is not inadvertently negatively reinforced by termination of time-out or positively reinforced by once again gaining access to generalized reinforcers.
6. *Time-out should not allow clients to escape or avoid situations they find unpleasant*. If a child dislikes schoolwork, for example, then removing the student from the classroom for time-out allows the child to avoid schoolwork.[43] In such instances, time-out serves as a negative reinforcer for the deceleration target behavior.

Time-out from positive reinforcement is usually used with children, sometimes with adolescents, and occasionally with adults. Target behaviors have included self-injurious behaviors of children with autism spectrum disorder,[44] inappropriate table manners and eating habits of institutionalized children with intellectual disability,[45] verbal and physical aggression of children and adolescents,[46] disruptive social behaviors of adults with psychiatric disorders,[47] and alcohol consumption by clients with a history of other substance abuse.[48]

Outside of therapy, many parents apply time-out when their young children do not comply with instructions or rules,[49] and elementary school teachers use time-out as a standard discipline procedure.[50] The acceptability of time-out has been thoroughly researched,[51] and it is generally considered an acceptable treatment,[52] especially as an alternative to corporal punishment, such as spanking.[53] When applied correctly,[54] time-out is highly effective and efficient.[55] Children easily learn the time-out routine and generally comply with it. Furthermore, merely the threat of time-out can serve as a deterrent for future misbehaviors (for example, "The next time you eat with your fingers, you'll have a time-out").

Time-out from positive reinforcement has a number of advantages as a technique for reducing undesirable behaviors. It does not inflict physical harm, it is not scary, it does not result in parental estrangement, and it is easy to implement in many settings.[56] Additionally, time-out can disrupt a chain of undesirable behaviors so that a positive intervention can be implemented, such as prompting and reinforcing appropriate behavior.

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An interesting positive side effect of time-out used with children is that it gives adults a "time-out" of sorts—not from generalized reinforcers but from aversive elements of the child's misbehavior. The brief respite may lessen the chances that the adults will become overly upset and even abusive.

Although correctly applied time-out from positive reinforcement is effective with most children, it does not work well with all children. For example, children with attention deficit hyperactivity disorder may not remain in time-out for even a minute or two.[57] In such cases, undesirable consequences for failure to stay in time-out may be added to the time-out procedure.

RESPONSE COST

Response cost involves removing a valued item or privilege that the client possesses or is entitled to when the client performs a deceleration target behavior.[58] Many everyday behaviors are influenced by response cost, including fines (such as for illegal parking and failure to return library books), the loss of points for turning in school assignments late, and the loss of TV time or a favorite dessert for children's misbehavior. In each case, there is a cost for performing a particular behavior.

Ogden Lindsley developed a response cost procedure for reducing the number of personal items that his family left lying around the house.[59] Whoever found an item in an inappropriate place (such as a jacket on the piano bench) put it in a large box, called the Sunday Box. The owner was not permitted to



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PHOTO 8-2
Parking fines are an all-too-familiar form of response cost.

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retrieve the item until the following Sunday. Lindsley discovered the power of his response cost procedure the day he left his briefcase on the coffee table. He had to live without the briefcase and its contents until the beginning of the next week, which was a hardship because he was a professor and had papers in his briefcase that he needed to access for his work. You can discover for yourself how well the Sunday Box works—without necessarily repeating Lindsley's experience—by completing Participation Exercise 8-2 over the course of a couple of weeks.

PARTICIPATION EXERCISE 8-2

Boxing Your Way to a Neater Room[60]

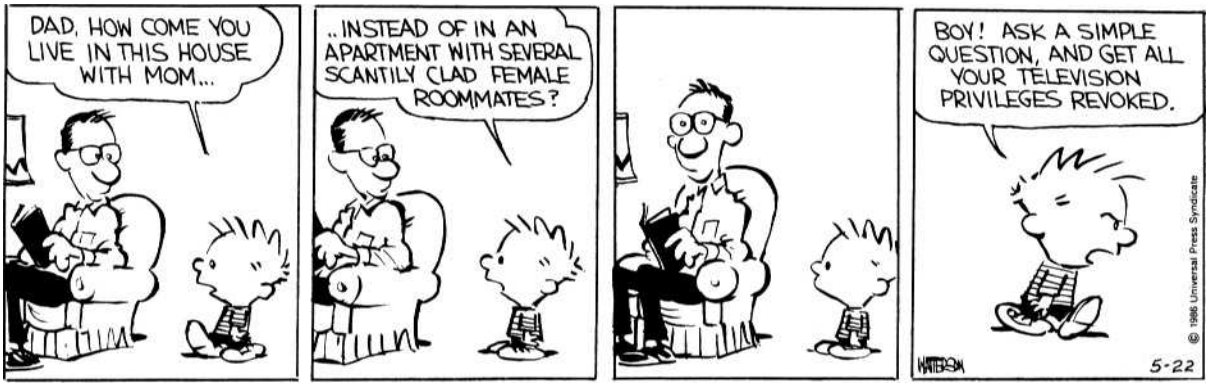
If you are a member of the Messy Room Club, this exercise, which is a variation of the Sunday Box technique, is for you. Simply follow the six steps.

1. Make a list of your personal items that are frequently out of place in one room in your house (your bedroom is a good choice). Knowing the possible fate of the items you list, you may be reluctant to include items that you "cannot live without." However, remember that the more valuable the items, the more likely it is that the procedures will help you keep them in their proper places.
2. Next to each item on your list, write the precise location in which it belongs (for example, "bookshelf," "bathroom hook," "top dresser drawer").
3. Find a cardboard box or other suitable container large enough to hold all the items on your list.
4. Specify a particular time each day for inspecting the room. A good time is when you return home in the afternoon or evening.
5. Every day at the inspection time, place all the items on your list that are out of their designated locations in the box, and *leave them there until the predetermined retrieval time* (see step 6). An alternative procedure is to have a friend/roommate inspect the room each day and put out-of-place items in the box. (Roommates who would like your common living space to be neater may be delighted to assume this responsibility.)
6. Every fourth day, at the designated inspection time, count the number of items in the box and record this number. Then remove all the items. They are yours to keep—for at least the next 24 hours until your next inspection time, when you can determine their fate.

Follow these steps for at least 3 cycles (12 days). A declining number of items in your box in successive 4-day cycles will indicate that the response cost is working. You may even be thrown out of the Messy Room Club.

Response cost has been used extensively with children in schools.[61] Its effectiveness can be equal to or greater than reinforcement procedures.[62] For example, in the treatment of attention deficit hyperactivity disorder, loss of token reinforcers (response cost) was more effective than access to token reinforcers in improving accuracy on an arithmetic task.[63] Therapists have taught similar procedures to parents to decrease children's misbehaviors at home,[64] and parents consider response cost to be a highly acceptable treatment procedure.[65]

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To treat problems of inattention in the classroom, a battery-operated device has been developed for administering response cost combined with reinforcement.[66] The student earns a point automatically, once per minute, as long as the student continues to pay attention to his or her work. A small box on the student's desk displays the cumulative points the student has earned (reinforcement), and the student can exchange the points later for desired reinforcers. The teacher deducts points (response cost) using a handheld remote-control device whenever the child is observed not paying attention to a task. When a point is deducted, a red light on top of the box on the student's desk comes on for 15 seconds. These procedures have significantly improved attention to schoolwork in boys with attention deficit hyperactivity disorder.[67] One reason this intervention has been effective is that it simultaneously accelerates a desirable behavior (on-task behavior) and decelerates an undesirable behavior (off-task behavior).

Response cost can be a highly effective procedure for decelerating a variety of target behaviors with children, adolescents, and adults. It even can be effective for severely aberrant behavior. For example, a 33-year-old woman with intellectual disability showed an 87% reduction in self-injurious and aggressive behaviors after being treated with response cost (being deprived of favorite music for 30 seconds).[68]

Problems associated with autism spectrum disorder also are responsive to response cost.[69] As an example, an 8-year-old boy with autism spectrum disorder had numerous problem behaviors, including spitting (as many as eight times a minute), for which various treatments over the previous 16 months had had little effect.[70] Response cost involved removing access to listening to a radio for 10 seconds. This simple intervention lowered the boy's spitting to zero or near-zero rates, as demonstrated with a reversal design. Moreover, follow-up assessment at 2 and 4 months indicated that the reduction in spitting was maintained.

As this last case illustrates, one of the advantages of response cost is that its effects may endure when the procedure is terminated.[71] Most people view response cost as an acceptable deceleration therapy, which facilitates its application.[72] Another advantage of response cost is that the mere *threat* of response

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cost—knowing that one will forfeit something of value for engaging in a particular behavior—often is sufficient incentive to decelerate the behavior.[73]

Extinction, time-out from positive reinforcement, and response cost are examples of negative punishment because they operate by removing reinforcers for the target behavior. They may also involve receiving undesirable consequences (positive punishment) because clients generally experience removal of reinforcers as unpleasant. However, this is a side effect of removing reinforcers, the primary operation of positive punishment. By contrast, overcorrection and physically aversive consequences are examples of positive punishment because they operate by administering unpleasant or undesirable consequences.[a]

OVERCORRECTION

Overcorrection decelerates maladaptive behaviors by having clients correct the undesirable effects of their actions and then intensively practice an appropriate alternative behavior.[74] Richard Foxx and Nathan Azrin originally developed overcorrection[75] to treat behaviors that harm and annoy others or that are destructive.[76] Overcorrection also is used for behaviors that have negative consequences primarily for the client, including self-injurious behaviors,[77] bedwetting,[78] excessive and stereotypic behaviors (such as walking in circles),[79] and persistent eating of nonnutritive substances, such as dirt, paper, and buttons.[80]

Overcorrection consists of two phases: (l) *restitution*, in which the client makes amends for the damage done, and (2) *positive practice*, in which the client repeatedly performs an appropriate adaptive behavior in an exaggerated fashion. Case 8-2 illustrates both phases of overcorrection.

CASE 8-2

Reducing Object Throwing by Overcorrection[81]

A 62-year-old woman, who had been a patient in a psychiatric hospital for 43 years, engaged in a number of inappropriate and dangerous behaviors, including throwing objects from the floor at people. Overcorrection was instituted to decelerate object throwing.

In the restitution phase, a staff member instructed the patient to apologize to individuals who had been hit. If the patient refused, the staff member apologized on the patient's behalf and prompted her to nod in agreement.

Positive practice consisted of 5 minutes of picking up trash on the floor and putting it into a garbage can. Initially, the patient refused to do this positive practice, so the staff member physically guided her through the clean-up activity. The physical prompting was discontinued when, after several sessions, the patient began to perform the positive practice voluntarily.

Before the overcorrection procedure was instituted, the patient threw objects at others an average of 13 times a day. After 2 weeks of overcorrection, the frequency of the target behavior decreased to an average of less than one incident per day. The frequency remained at or below that level for 4 months, at which point observations were terminated.

[a] Categorizing deceleration therapies as negative and positive punishment is somewhat arbitrary, but I think the way I have categorized them works best for didactic purposes.

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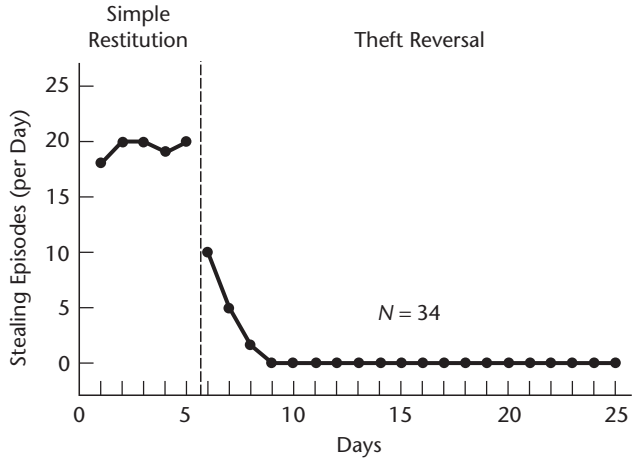


FIGURE 8-2

Daily stealing episodes for 34 institutionalized adults with mental retardation during simple restitution and theft reversal (exaggerated restitution)

Source: Azrin & Wesolowski, 1974.

Sometimes, only one phase of overcorrection is employed. When restitution alone is used, it may involve an exaggerated or augmented form of making amends.[82] This procedure was used for 34 hospitalized adults with intellectual disability who frequently stole from one another, especially food at mealtimes or snack times.[83] Before the augmented restitution was instituted, staff members had the clients return the food (or what was left of it) to its owner. However, this intervention was not potent enough, and the stealing continued at a high rate (see Figure 8-2). Accordingly, the staff tried **theft reversal**, an overcorrection procedure consisting of augmented restitution in which the offender not only returns stolen items but also buys similar items for the victim (additional food in this case). As you can see in Figure 8-2, theft reversal dramatically reduced the number of thefts.

When a maladaptive behavior results in a consequence that cannot easily be corrected, as with behaviors that do not affect others or the environment, positive practice is used without restitution.[84] For example, children in a classroom had problems with speaking out without raising their hands and leaving their seats at inappropriate times.[85] During their recess period, the children were asked to practice appropriate classroom behaviors, such as raising their hands when they wanted to speak and asking permission to leave their seats. They practiced these behaviors repeatedly for 5 minutes. Compared with response cost (losing play time), this positive practice markedly decreased the inappropriate classroom behaviors. Another example of the use of positive practice overcorrection is in reducing repetitive vocalizations (verbal stereotypy) in children with autism spectrum disorder.[86]

Two general issues concerning the practice of overcorrection should be noted. First, although overcorrection generally is applied immediately after the target behavior is performed,[87] it also appears to be effective when it is delayed, as in the example of the children who did the positive practice during recess.[88] Second, increasing the duration of positive practice does not result in greater

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reductions in maladaptive behaviors, and sometimes very brief periods are effective. For example, positive practice lasting 30 seconds was as effective as positive practice durations of 2 and 8 minutes in reducing the self-stimulatory behaviors (such as repetitive rocking) of adults with severe developmental disabilities.[89]

In one study, overcorrection was comparable to time-out from positive reinforcement for treating sibling conflicts.[90] Restitution consisted of apologizing to the sibling, and positive practice involved complimenting or giving toys to the sibling. Positive practice was continued for a period set at 1 minute for each year of the child's age, which is comparable to time-out durations. Time-out and overcorrection were *equally* effective in reducing sibling conflicts, and the children's parents rated both as acceptable deceleration strategies.

Overcorrection can augment other deceleration strategies.[91] For instance, with a group of clients who had developmental disabilities and were deaf and blind, differential reinforcement of other behaviors alone was ineffective in reducing self-injurious behaviors and hitting others. Adding overcorrection to differential reinforcement rapidly reduced the maladaptive behaviors.[92] In contrast to other deceleration therapies that only decelerate the maladaptive behavior, overcorrection that includes positive practice has the distinct advantage of accelerating an alternative adaptive behavior.[93]

Overcorrection is more limited in its range of applications than other therapies that involve punishment. Overcorrection is appropriate primarily for behaviors that have correctable adverse effects. Under these conditions, overcorrection procedures have been demonstrated to be effective in decelerating a variety of maladaptive behaviors, especially when both phases are employed.[94] Because overcorrection is viewed as an acceptable treatment, there is little resistance to using it.[95] However, not surprisingly, parents consistently rate overcorrection as less acceptable than positive reinforcement procedures for changing their children's behaviors.[96]

In Participation Exercise 8-3, you'll apply what you've just learned to designing overcorrection interventions for common undesirable behaviors (even some you may sometimes engage in). You can complete the exercise now or at a later time.

PARTICIPATION EXERCISE 8-3

Designing Novel Overcorrections

In this exercise, you will design procedures for novel applications of overcorrection to common undesirable behaviors. In the process, you may discover some useful ideas for reducing some of your own unwanted behaviors. At the very least, you will check your understanding of overcorrection.

For each of the behaviors in the list that follows, describe one or more procedures for restitution and for positive practice. Then compare your procedures with the samples in the Participation Exercise Answers at the end of the chapter.

1. Littering in a park
2. Misspelling words in a paper
3. Leaving clothes in inappropriate places
4. Arriving late for classes or appointments
5. Trashing the neighbor's lawn
6. Leaving unnecessary lights on at home
7. Putting dishes in the sink without washing them

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The principles of overcorrection procedures have been applied outside of therapy (although probably without the initiators knowing about the behavior therapy procedure). For example, some consumer protection laws mandate that businesses that are found negligent automatically pay the consumer several times the amount of loss or damage. Community service as an alternative to fines or incarceration for people convicted of crimes also is a form of overcorrection.

PHYSICALLY AVERSIVE CONSEQUENCES

Physically aversive consequences are stimuli that result in unpleasant physical sensations, including pain. Most people associate deceleration behavior therapy with physically aversive consequences, as when a parent spanks a child. In fact, physically aversive consequences are used infrequently in behavior therapy.[97] A number of potential undesirable side effects as well as ethical and humanitarian objections are associated with their use, and these will be discussed later in the chapter.

Time-out from positive reinforcement, response cost, and overcorrection are effective and do not involve physically aversive consequences. However, these therapy procedures often take longer to work than do physically aversive consequences. Thus, when rapid deceleration of a maladaptive behavior is required, physically aversive consequences may be the treatment of choice.

Self-injurious behaviors (such as head banging and slapping oneself) are the major target behaviors treated by physically aversive consequences. These behaviors can result in serious physical harm and, in extreme cases, death. They occur most frequently with clients who have severe psychological problems, such as autism spectrum disorder.

Ironically, mild electric shock often is an effective and efficient means of significantly reducing self-injurious behaviors.[98] The duration of the shock is only a second or two. It results in a sharp, stinging sensation that lasts for no more than a few minutes, and no permanent tissue damage occurs.[b] The use of shock may be justified by a cost-benefit analysis,[99] as you will see in Case 8-3.

CASE 8-3

Eliminating Dangerous Climbing With Contingent Shock[100]

A 6-year-old girl with diffuse brain damage and no verbal communication skills frequently was found climbing to dangerously high places. "Her body bore multiple scars from past falls, her front teeth were missing, having been imbedded in molding from which she had fallen while climbing outside the second story of her house."

The initial behavioral assessment revealed that her mother's attention was probably maintaining the girl's climbing. Time-out from positive reinforcement, extinction, and differential reinforcement of competing behaviors (such as sitting at a table) were tried to no avail. At this point, because of the seriousness of the problem, the therapist, in consultation with the girl's parents, decided to use contingent electric shock.

(*continued*)

[b] The shock used in deceleration therapies is not the same as that used in electroconvulsive therapy (ECT). ECT is a medical treatment used for severe depression and other serious psychological disorders. It involves passing electricity through the brain while the patient is sedated; this leads to a convulsion, temporary unconsciousness, and amnesia for the experience. ECT is not a behavior therapy.

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CASE 8-3 (*continued*)

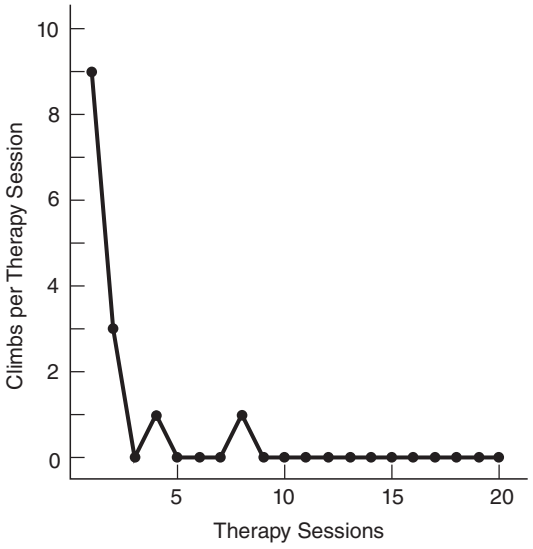


FIGURE 8-3
Rapid decline of a 6-year-old girl's climbing when the therapist administered mild shock contingent on climbing
Source: Data from Risley, 1968.

The room in which therapy was conducted had a small table and chairs in the center and a high bookcase next to the door. Each therapy session began with the therapist and girl seated at the table. Whenever the girl climbed on the bookcase, the therapist shouted, "No!" and immediately applied a 1-second shock to her calf or lower thigh. The therapist then returned to his chair. The shock was delivered by a handheld, battery-powered device resembling a long flashlight. The pain lasted only for the 1-second duration of the shock, and there were no aftereffects (such as redness, swelling, tingling, or aching).

The contingent shock rapidly reduced the girl's climbing, as Figure 8-3 shows. In the first session, the girl climbed nine times; in the second, three times; and thereafter, only twice in the next 18 sessions.

Although the girl stopped climbing in the therapy sessions, she continued to climb at home, which indicated that the treatment effects were specific to the therapy room and to the therapist. Accordingly, the girl's mother—who had observed the therapy sessions from behind a one-way mirror—began to implement treatment at home. When her daughter began to climb, the mother shouted, "No!" and applied the shock as the therapist had done. She then resumed whatever she had been doing without further interaction with her daughter.

In the 16 days before the therapy was instituted at home, the mother had observed that her daughter had climbed an average of 29 times a day. Within 4 days after therapy began at home, the rate of climbing declined to an average of twice a day. After 33 days, the number of climbing incidents decreased to zero and, with one exception, did not recur in the next 15 days, at which point the therapy was terminated.

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The Johns Hopkins University Applied Physics Laboratory

PHOTO 8-3
A child with autistic spectrum disorder wearing the Self-Injurious Behavior Inhibiting System (SIBIS)

The Self-Injurious Behavior Inhibiting System (SIBIS; pronounced sEYE-biss) allows the precise monitoring of self-injurious behaviors and immediate administration of electric shock. The client wears a lightweight device on the parts of the body that are subject to injury (see Photo 8-3).[101] The device measures the impact of the blow and automatically delivers a mild electric shock whenever the force of the impact exceeds a preprogrammed level (which is based on the intensity of an impact that will cause physical damage). The strength of the shock is like that of a rubber band snapped on the arm. The SIBIS can detect self-injurious behaviors and administer contingent electric shock more precisely and consistently than a therapist can. Another advantage of the SIBIS is that the client does not develop negative associations with the person who directly administers the shock. A small number of studies have evaluated the effectiveness of the SIBIS. Although it can result in rapid and dramatic decreases in self-injurious behaviors,[102] its effectiveness varies considerably with individual clients.[103]

Electric shock is a good aversive stimulus for four reasons. First, it is easily administered. Second, it can be activated instantaneously (at the press of a switch). Third, its intensity can be precisely controlled. Ease and precision of administration are important because physically aversive consequences are most potent when delivered immediately after the client performs the target behavior. Fourth, most clients experience electric shock as aversive.

Many people, including some behavior therapists, consider electric shock an unacceptable treatment (for example, because they think it is too harsh).[104] A number of less innocuous physically aversive stimuli have been used to treat a variety of problem behaviors; examples are listed in Table 8-1 (page 178).

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TABLE 8-1
Examples of "More Acceptable" Physically Aversive Consequences Than Electric Shock

Aversive Consequence	Problem Behavior It Has Been Used For
Rubber band snapped on wrist	Trichotillomania (pulling out one's hair)
Noxious odor	Self-stimulating behaviors
Cigarette smoke	Compulsive eating
Lemon juice	Head banging
Bitter substance	Nail biting
Mild mouthwash	Biting other children
Water mist sprayed in face	Face slapping
Loud noise	Bruxism (teeth grinding)
Bright light	Dangerous nocturnal rocking

Potential Negative Side Effects of Physically Aversive Consequences

Negative side effects of physically aversive consequences actually occur infrequently. In general, they occur less often when the physically aversive consequences are combined with procedures that accelerate alternative adaptive behaviors than when they are used alone.[105] Also, the milder the physically aversive consequences are, the fewer are the undesirable side effects.[106] Most negative side effects fall into three categories: avoidance behaviors, emotional responses, and perpetuation effects.

Avoidance Behaviors The application of physically aversive consequences may lead clients to develop negative associations toward the therapy situation, including the therapist and anyone else administering the treatment (such as a parent or teacher). The result is that clients may avoid therapy.[107] Children may run away from the person who administers the treatment, and adults may not show up for therapy sessions.

Avoidance behaviors can be minimized by having more than one person administer the therapy (for example, both parents) and by varying the setting in which the treatment takes place. The people administering the aversive consequences also should provide positive consequences for alternative behaviors so that these people are not seen solely as punishing agents. This is especially important when these people have ongoing relationships with the client, as with parents.

Emotional Responses Clients treated with physically aversive consequences sometimes exhibit disruptive emotional responses, such as crying, tantrums, soiling and wetting their clothes, and fear.[108] Occasionally, clients become physically aggressive toward the person administering the treatment[109] or toward themselves.[110] Besides creating additional psychological problems for clients, these emotional responses interfere with the treatment by making the procedure more difficult to use, and they may add to clients' negative associations with the therapy situation.

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Perpetuation Effects A third possible negative side effect of physically aversive consequences is that clients may learn to use this strategy as a means of controlling other people's behaviors. One revealing finding is that children whose parents use physically aversive consequences are more likely to behave aggressively,[111] and changing such disciplinary tactics can reduce children's aggressive behaviors.[112]

A related side effect is that the use of physically aversive consequences may be reinforced for the change agent, especially with nonprofessionals such as parents.[113] Physically aversive consequences often lead to a rapid reduction of the deceleration target behavior. Thus, their use is negatively reinforced by the relief the change agent experiences when the client stops performing the target behavior. The result may be that nonprofessionals are more likely to use physically aversive consequences in the future.

GUIDELINES FOR THE EFFECTIVE USE OF PUNISHMENT

Behavior therapists have developed guidelines for administering all punishment procedures (that is, not just the use of physically aversive consequences).

1. *The punisher* (removal of reinforcers or introduction of undesirable consequences) *should occur immediately after the target behavior is performed*. The shorter the time span between the deceleration target behavior and the punisher, the greater is the effectiveness of punisher because the client is more likely to associate the punisher with the target behavior.
2. *The punisher should be administered every time the target behavior occurs*. Greater suppression results from the continuous (that is, for each occurrence) and consistent (that is, by all change agents involved) administration of the punisher, especially at the beginning of treatment.
3. *The client should be aware of the contingency between the target behavior and the punisher*. The client should be explicitly told and reminded about the contingency (for example, "When you hit other kids, you will get a time-out").
4. *Reinforcement should not closely follow the delivery of the punisher*. If a potential reinforcer is administered shortly after a punisher, the punisher signals that a reinforcer is forthcoming, and the deceleration target behavior may *increase* because the reinforcer is associated with the target behavior. A common example is when a parent comforts a child who is crying after being reprimanded for a misbehavior (as by hugging the child and saying, "You know I love you").
5. *The punisher should be preceded by a warning cue*. After the cue (for example, "No!") becomes associated with the punisher, the cue alone may decelerate the target behavior.
6. *An adaptive behavior that competes with the maladaptive target behavior should be reinforced in conjunction with decelerating the maladaptive behavior*. Engaging in a competing adaptive behavior decreases the opportunities the client has to engage in the maladaptive target behavior.
7. *If physically aversive consequences are employed, their potential negative side effects should be looked for and minimized if they occur*.

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IN THEORY 8-1

Punishment: What's in a Name?

Is using physically aversive consequences a punishment technique? Of course it is. Are extinction, time-out from positive reinforcement, response cost, and overcorrection also punishment techniques? Yes, but until you read this chapter, you might not have thought so because most people associate punishment only with the administration of physically aversive consequences. Certainly there are legitimate humanitarian objections to the use of physically aversive consequences. However, even when physically aversive consequences are justified, they have a bad public reputation. Because the term *punishment* is primarily associated with the administration of physically aversive consequences, all punishment procedures become guilty by association.

What we call something strongly affects how we view it and our attitude toward it. Shakespeare's Juliet was wrong when she said that "a rose by any other name would smell as sweet." Similarly, punishment by any other name would not smell as sour. *Response cost*, for example, clearly does not have the same negative connotation as *punishment*. In fact, response cost gets high marks on acceptability.[114]

It is fortunate that the general public does not think of extinction, time-out from positive reinforcement, and response cost as punishment because of the term's negative connotations. I hope that you have not let the stereotypical negative bias associated with the term *punishment* taint your view of it because punishment techniques can be effective, efficient, and ethical interventions.

AVERSION THERAPY

With physically aversive consequences, an unpleasant event is administered immediately *after* the client performs the deceleration target behavior. In contrast, in *aversion therapy,* an aversive stimulus is introduced *while* the client is engaging in the deceleration target behavior, and it is terminated as soon as the client stops performing the behavior. The objective is for the client to *associate* performing the target behavior with the aversive stimulus so that performing the behavior becomes aversive. This is the same process that accounts for the development of common avoidance behaviors. A person may get airsick when a plane encounters turbulence. Subsequently, the individual may avoid traveling by plane, which is associated with the unpleasantness of airsickness.

Aversion therapy primarily has been used to treat two classes of maladaptive behaviors: substance abuse and *paraphilias*, which are sexually deviant behaviors such as exhibitionism and pedophilia.

BASIC PROCEDURES

Maladaptive behaviors can be paired with any stimulus that the client finds aversive (that is, unpleasant, distasteful, or painful). Shock[c] and nausea-producing drugs are the most frequently used physically aversive stimuli; occasionally, noxious odors as well as hot air and smoke (to decelerate cigarette smoking) are employed. Psychologically aversive stimuli include feelings of humiliation and unpleasant thoughts.

[c] The shock in aversion therapy is the same as that which is used as a physically aversive consequence and shares the same advantages described earlier (page 177).

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The aversive stimulus used may depend on the target behavior. For example, nausea generally is more effective than shock in treating abuse of alcohol[115] and crack cocaine.[116] The client determines the strength of the stimulus. For the therapy to be effective, the client must honestly tell the therapist the intensity at which the stimulus becomes aversive. For aversion therapy to be successful, clients need to experience genuine pain or discomfort. Accordingly, clients who are being treated by aversion therapy must be highly motivated to change their maladaptive behavior.

The aversive stimulus is associated with the target behavior in one of three ways. Ideally, the association is created as the client is (1) *actually engaging* in the target behavior. Because this is not always possible or efficient, the client can be (2) *symbolically exposed* to the target behavior, as by viewing pictures of the target behavior or listening to a verbal description of it, or (3) *imagine performing* the target behavior.

Case 8-4 is an example of an adult who wanted to change a long-standing sexual habit that had recently become personally distressing to him. The case illustrates how clients can be exposed symbolically to the target behavior and the use of drug-induced nausea as the aversive stimulus.

CASE 8-4

Treatment of Cross-Dressing by Aversion Therapy[117]

A 22-year-old married truck driver reported that he had experienced the desire to dress as a woman since he was 8 years old. From the age of 15 and through his military service and marriage, he had derived erotic pleasure from dressing in female clothes and viewing himself in a mirror. At the same time, he maintained a good sexual relationship with his wife. He was strongly motivated to seek therapy because of his fear of being seen wearing women's clothes and at the urging of his wife, who had just recently learned of her husband's cross-dressing.

The therapist prepared slides of the client in various stages of female attire, and the client made an audiotape that described these activities. The client then viewed the slides and listened to the tape to assess whether they induced sexual excitement, which they did.

The treatment involved pairing cross-dressing with nausea, produced by injection of the drug apomorphine, a nausea-producing drug. As soon as the injection began to take effect, the slides and tape were presented, and they were terminated only after the client began to vomit. The treatment was administered several times a day for 6 days, which was sufficient to completely eliminate the client's desire to dress in women's clothes. Follow-up over a 6-month period, including interviews with both the client and his wife, indicated that the client no longer cross-dressed.

The effects of aversion therapy may not be maintained over time because the association between the maladaptive behavior and the aversive stimulus often does not last. To deal with this problem, clients are asked to return periodically

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(such as every few months) for additional therapy sessions called **booster treatments**.[118] Re-exposing the client to the target behavior and the aversive stimulus keeps that association "alive." For example, booster treatments for alcohol abuse significantly increase the chances of continued abstinence.[119] Also, as with punishment, it is essential for clients to adopt new adaptive behaviors that substitute for the maladaptive behavior that has been decelerated. For instance, it is likely that following his successful treatment, the client in Case 8-4 who no longer was cross-dressing came to derive erotic pleasure in other ways that were not distressing to him and his wife.

COVERT SENSITIZATION

In **covert sensitization**, the therapist verbally describes both the client's engaging in the deceleration target behavior and the concomitant aversive stimulus, usually nausea. The following description was used with a college professor who wanted to stop smoking.

> You are preparing your lectures. . . . As soon as you start reaching for the cigarette, you get a nauseated feeling in your stomach . . . like you are about to vomit. You touch the pack of cigarettes and bitter spit comes into your mouth; when you take the cigarette out of the pack, some pieces of food come into your throat. Now you feel sick and your stomach cramps. As you are about to put the cigarette in your mouth, you puke. . . . The cigarette in your hand is very soggy and full of green vomit. There is a stink coming from the vomit. Snot is coming from your nose. Your hands feel all slimy and full of vomit. . . . Your clothes are all full of puke. You get up from your desk and turn away from the . . . cigarettes. You immediately begin to feel better being away from the . . . cigarettes.[120]

Covert sensitization has four advantages over other aversion therapies: (1) no equipment, such as a shock apparatus, is needed; (2) unlike some drug-induced aversion, covert sensitization can be safely carried out without medical supervision; (3) with an aversive *image*, clients can easily self-administer covert sensitization in vivo; and (4) clients may consider it more acceptable, which is an important consideration because of the high dropout rate with aversion therapy.[121]

Developed by Joseph Cautela,[122] covert sensitization most frequently has been used to treat paraphilias,[123] overeating,[124] alcohol abuse,[125] and smoking,[126] and it is used almost exclusively with adults.[127] Support for the effectiveness of covert sensitization is tenuous, however. Most of the research has been case studies,[128] and some of the few controlled studies have yielded equivocal findings.[129]

DECELERATION BEHAVIOR THERAPIES FOR ADDICTIVE BEHAVIORS

A number of deceleration behavior therapies are used to treat addictive behaviors, such as abuse of alcohol and cigarette smoking. To conclude the topic of deceleration behavior therapies, we'll looks at the application of differential reinforcement of competing behaviors, response cost, aversion therapy, and covert sensitization to treating addictive behaviors. This discussion illustrates the variety of behavior therapies that are often available for treating a particular problem.

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With differential reinforcement of competing behaviors, clients are reinforced for behaviors that compete with drug-abusing behaviors. In one study, clients attending a methadone clinic for opiate dependence earned up to $15 each week in vouchers for goods and services contingent on their completing specific tasks that competed with drug-abusing behaviors, such as applying for a job and receiving vocational training. The program resulted in significant reductions in illicit drug use.[130]

An example of response cost to decelerate substance abuse involved an African-American man who was abusing amphetamines. He gave his therapist $50 checks made out to the Ku Klux Klan (understandably the man's least favorite organization), with the proviso that the therapist would automatically mail a check to the Klan each time he took amphetamines. The therapist had to send only one check to the Klan, and at a 15-month follow-up, the client reported that he had not used amphetamines since that one incident.[131]

Aversion therapy has been used to decelerate cigarette smoking. One technique, called **rapid smoking**, has clients (1) smoke at the rate of one puff every 6–10 seconds, (2) inhale normally, (3) smoke three or more cigarettes in 8–20 minutes, and (4) continue smoking rapidly until they cannot tolerate it anymore. People typically experience nausea, dizziness, and sore throat, but there are exceptions. People with schizophrenia often smoke rapidly, and thus rapid smoking is not effective in reducing their smoking because they do not find rapid smoking aversive.[132] This finding highlights the general principle that events that most people find aversive may not be aversive for all people, just as generalized reinforcers are not universally reinforcing.

Rapid smoking can have long-lasting effects in decreasing smoking,[133] although such results have not been obtained consistently.[134] Because rapid smoking can cause temporary cardiovascular stress[135] and clients need to be medically screened prior to treatment, it is used infrequently.

Covert sensitization is yet another technique used to decelerate addictive behaviors. Earlier in the chapter, you read about the college professor who wanted to quit smoking. The simultaneous verbal description of the client's engaging in cigarette smoking and of the intensely unpleasant sensations related to this experience reduced his smoking.

The problem with using these behavior therapies to treat addictive behaviors is that they may be effective only in the short run. All too often, clients relapse—that is, revert to their addictive behaviors—after therapy has ended, and booster treatments are often needed. *Relapse prevention*, which you will read about in Chapter 14, provides an alternative strategy that specifically deals with this problem.[136]

ETHICAL ISSUES IN THE USE OF AVERSIVE THERAPIES

Physically aversive consequences and aversion therapy are the behavior therapies that have come under closest scrutiny regarding ethical concerns. Because these treatments involve physical discomfort and sometimes pain, they have the *potential* of infringing on clients' fundamental human rights. Some people believe that aversive treatments should not be used at all, especially not with clients who are vulnerable to abuse and unable to make informed decisions about their own treatment, such as clients institutionalized for schizophrenia and intellectual disability.[137]

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As you consider the ethicality of aversive procedures, keep three points in mind. First, the aversive stimulus is relatively brief and has no long-term ill effects. For example, shock is administered for only a second, the stinging sensation lasts no more than a few minutes, and no permanent tissue damage results. Second, there is nothing inherently unethical about treatment that involves pain or discomfort. We don't consider receiving an injection, doing painful physical therapy exercises, and having chemotherapy unethical because the benefits of these treatments outweigh their unpleasantness. Third, ethical issues generally do not arise when clients freely volunteer to receive aversive procedures, as did the man who wished to stop cross-dressing in Case 8-4. Ethical issues are much more likely to arise when aversive procedures are used with clients who are *required* to be in therapy, such as adults committed to institutions.

The potential for harm by aversive procedures has been exaggerated due to the widely held misconception that aversive procedures are used extensively in behavior therapy. Indeed, some people even think of aversive procedures as synonymous with behavior therapy. In fact, aversive procedures constitute a small proportion of behavior therapy techniques, and they are employed infrequently.[138] Among the reasons for their limited use is that aversive procedures generally are relatively weak treatments, especially for producing lasting change.

PRINCIPLE OF UTILITY

Aversive techniques usually are instituted as a last resort, when other therapy procedures have failed to decelerate serious debilitating behaviors. In each case, a cost-benefit analysis is made. Does the potential outcome of therapy outweigh the potential negative effects of the aversive procedure, such as temporary discomfort or mild pain? This question addresses the *principle of utility*, which holds that an action is morally right if, when compared with alternative actions, it produces more benefit than harm.[139]

The following description addresses the question: "Do the ends justify the means?" with respect to using physically aversive consequences to reduce severe self-injurious behaviors.[140] As you read it, consider the ethical issues it raises.

> A colleague . . . showed us a deeply moving film. The heroine was an institutionalized primary-grade girl. She . . . [frequently engaged in head banging], so a padded football helmet was put on her head. Because she could take it off, her hands were tied down in her crib. She kept tossing her neck and tore out her hair at every opportunity. She accordingly had a perpetually bruised face on a hairless head, with a neck almost as thick as that of a horse. She was nonverbal. My colleague and his staff carefully planned a program for her, using all kinds of reinforcers . . . but [she] persisted in her typical [self-injurious] behavior. In desperation, the ultimate weapon was unwrapped. When she tossed her head, my colleague yelled "Don't!" simultaneously delivering a sharp slap to her cheek. She subsided for a brief period, tossed again, and the punishment was delivered.
>
> My colleague reports that less than a dozen slaps were ever delivered and the word "Don't!" yelled even from across the room . . . [became] effective. Its use was shortly down to once a week and was discontinued in a few weeks. In the meantime, the football helmet was removed and

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> the girl began to eat at the table. She slept in a regular bed. Her hair grew out, and she turned out to be a very pretty little blonde girl with delicate features and a delicate neck. In less than a year, she started to move toward joining a group of older girls whose behavior, it was hoped, she would [imitate]. She smiled often.
>
> [When the girl's] . . . parents discovered that she had been slapped . . . , they immediately withdrew her from the custody of my colleague's staff. The last part of the film shows her back at the institution. She is strapped down in her crib. Her hands are tied . . . . She is wearing a football helmet. [Once again] her hair is torn out, her face is a mass of bruises and her neck is almost as thick as that of a horse.[141]

There is no doubt that the therapist violated ethical guidelines by not completely informing the girl's parents about the treatment procedures. When this situation occurred more than 40 years ago, behavior therapists were not as sensitized as they are today to the importance of fully disclosing treatment procedures and obtaining consent for their use.

The case also raises another ethical question. Given the self-destructive nature of the girl's behaviors, was the treatment ethically justified? Alternatively, was it ethical to terminate the treatment? Was the principle of utility violated? How would you answer these questions?

Finally, consider a more recent case of a 31-year-old man with a severe developmental disability who engaged in voluntary vomiting that was life threatening because it resulted in malnourishment.[142] Because alternative nonaversive treatments could not be found, two behavior therapists recommended that short-term contingent shock be used. After a court ruled against this recommendation, the man was subjected to an intrusive medical procedure (permanent nasogastric intubation) that required hospitalization and intensive nursing care for a year.

How would you evaluate the ethicality of the court's decision in terms of the principle of utility? How would you compare the ethicality of short-term contingent shock versus a permanent intrusive treatment and the yearlong restrictive environment the treatment required?

The principle of utility may also be applicable when clients voluntarily seek treatment for psychological problems that seriously interfere with their living normal lives. In the treatment of paraphilias and substance abuse, aversion therapy can be an important component of a treatment package that includes procedures to accelerate alternative, socially desirable, and adaptive behaviors. The brief discomfort experienced in aversion therapy is minimal compared with the extensive disruption of work and family life, the social ostracism, and the self-deprecation that result from long-standing socially unacceptable and personally maladaptive behaviors.[143]

MISUSE, ABUSE, AND SAFEGUARDS

Aversive procedures occasionally are misused and abused. Misuse is usually perpetrated by nonprofessional change agents who have had minimal training and experience with the procedures. For example, aversive consequences often need be applied only briefly to be effective.[144] Inexperienced change agents may continue the aversive consequences long after they have had their desired effect. This practice is unlikely to produce a further decrease in the target behavior, and

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it is likely to produce negative side effects, such as aggressive behaviors. Moreover, such treatment justifiably would be considered harsh.

Abuses of aversive techniques are more likely to arise when the deceleration target behavior is disturbing to others, as with a patient on a psychiatric ward who disrupts the ongoing activities with boisterous outbursts. Overburdened hospital staff may apply aversive procedures because they are, in the short run, more efficient. Generally, it is easier to devise an aversive consequence to stop disturbing behaviors immediately than to identify and then gradually accelerate alternative, competing prosocial behaviors.

A variety of guidelines have been proposed to promote the ethical use of aversive procedures, including the following.

1. Aversive procedures should be considered only after it is clear that nonaversive alternatives will not work effectively and efficiently.[145]
2. When possible, deceleration therapies that are not *physically* aversive should be tried before physically aversive procedures are employed.
3. If a physically aversive procedure is used, a physician should be consulted to ensure that it will be medically safe for the client.
4. The client or the client's legal guardian must be made aware of the nature of the treatment and agree to it—in other words, *informed consent* must be obtained.
5. The procedures should be implemented only by a competent professional.
6. Aversive techniques should be used along with procedures that simultaneously accelerate alternative behaviors to take the place of the behaviors being decelerated.
7. Clear-cut measures of the target behavior should be collected before, during, and after therapy to document changes.

These guidelines for the *ethical* use of aversive procedures supplement the guidelines for the *effective* use of punishment presented earlier in the chapter (page 179).

ALL THINGS CONSIDERED: DECELERATION BEHAVIOR THERAPY

Deceleration behavior therapies are an important part of the behavior therapist's armamentarium. They can be effective and efficient in treating maladaptive behaviors. In general, success rates for punishment have been higher than for aversion therapy. This difference is due, at least in part, to the fact that the primary targets of aversion therapy—substance abuse and paraphilias— are highly resistant to treatment of any kind.[146]

Behavior therapies that accelerate adaptive behaviors enhance clients' personal freedom by increasing the number of alternative behaviors they can choose to engage in. Therapies that decelerate undesirable behaviors also serve this function. A woman whose excessive drinking has been alleviated by aversion therapy has more personal freedom because now she has many more options in her life. She can engage in activities once impaired by intoxication, including holding a job and interacting with family and friends. With either acceleration or deceleration behavior therapy procedures, the client has more options for behaving after successful treatment than before treatment.

With both punishment and aversion therapy, the reduction of the target behavior may be only temporary, which can be a major limitation of these

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treatments.[147] However, in some cases, such as self-injurious and highly disruptive behaviors, even temporary suppression of the target behavior is desirable, especially when no other treatments have been effective. Moreover, temporary suppression provides the opportunity to reinforce alternative adaptive behaviors, which is the optimal strategy for creating durable change.

Besides the ethical issues regarding deceleration behavior therapies that you read about earlier in the chapter, two other concerns militate against their application: undesirable side effects and practical problems. The *potential* undesirable side effects of physically aversive consequences discussed earlier are relevant to aversion therapy as well. However, to put this concern in perspective, the undesirable side effects are not inevitable. In fact, they are the exception rather than the rule; when they do occur, they are usually temporary and decline over the course of therapy.[148] Nonetheless, behavior therapists must be alert for their possible occurrence.

Practical problems also are associated with deceleration therapy procedures. These approaches are less acceptable to both clients and therapists than other behavior therapies. Clients generally do not want to subject themselves to discomfort or pain, or even to the loss of reinforcers. Additionally, some therapists find it distasteful to administer aversive therapies.

Clients' motivation to change is a salient issue. High motivation is necessary to enter and remain in treatment that has distinctly negative aspects. Clients who are not highly motivated to change are less likely to cooperate with the therapy procedures and more likely to drop out of therapy.[149]

In sum, deceleration behavior therapy procedures can be effective means of treating maladaptive behaviors, especially when time is of the essence. Otherwise, deceleration therapy should be used after more acceptable therapies have been tried. Finally, deceleration therapy techniques always should be part of a treatment package that includes procedures for accelerating alternative adaptive behaviors.

SUMMARY

1. The preferred strategy for decelerating an undesirable behavior is to reinforce an acceleration target behavior that is an alternative to the deceleration target behavior. This differential reinforcement can be of incompatible behaviors, of competing behaviors, of alternative behaviors, of any other behaviors, and of low response rates of the target behavior. Two variants of differential reinforcement are noncontingent reinforcement and functional communication training.
2. The two strategies that decrease maladaptive behaviors directly are punishment, which changes the consequences of maladaptive behaviors, and aversion therapy, which associates unpleasant events with maladaptive behaviors.
3. Extinction, time-out from positive reinforcement, and response cost are examples of negative punishment because they remove the reinforcers maintaining the deceleration target behavior.
4. Extinction involves permanently removing or withholding the reinforcers that maintain the behavior.
5. Time-out from positive reinforcement involves immediately and temporarily removing the client's access to generalized reinforcers for a brief period.

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6. Response cost introduces a contingency in which performing a maladaptive behavior deprives a client of a valued item or privilege.
7. Overcorrection and physically aversive consequences are examples of positive punishment because they introduce undesirable consequences to decelerate maladaptive behaviors.
8. Overcorrection decelerates maladaptive behaviors by having clients correct the effects of their actions (restitution) and then intensively practice an appropriate alternative behavior (positive practice).
9. Physically aversive consequences can decelerate undesirable behaviors rapidly. Painful but harmless shock frequently serves as the aversive consequence. Physically aversive consequences are rarely used in behavior therapy because they have potential negative side effects—avoidance behaviors, emotional responses, and perpetuation effects—and because of ethical and humanitarian objections.
10. Punishment refers to any procedure that decelerates a behavior by changing its consequences, although people often erroneously associate punishment only with the use of physically aversive consequences.
11. In aversion therapy, an unpleasant or painful stimulus is introduced while the client is engaging in the deceleration target behavior. The client comes to associate the target behavior with the unpleasant stimulus (most often shock or nausea). The association can occur while the client is performing the behavior, is symbolically exposed to the behavior, or is imagining performing the behavior. Aversion therapy is used primarily to treat substance abuse and paraphilias. Because the effects of aversion therapy often are temporary, booster treatments may be necessary to increase its durability.
12. In covert sensitization, the client imagines both the target behavior and the aversive stimulus, which is usually nausea created by the therapist's vivid descriptions of disgusting events.
13. Addictive behaviors can be treated by a variety of deceleration behavior therapies, including differential reinforcement of competing behaviors, response cost, aversion therapy, and covert sensitization.
14. Aversive procedures have come under the closest scrutiny regarding ethical violations. In fact, aversive procedures constitute a small proportion of behavior therapy techniques and are used infrequently. When aversive procedures are used, a cost-benefit analysis is necessary.
15. Misuses and abuses of aversive procedures most often are perpetrated by change agents who have limited experience with the procedures and who employ them because they are easier to implement than alternative therapy approaches.
16. Deceleration therapies can be effective and efficient. Success rates have been higher for punishment than for aversion therapy. Deceleration therapies, like acceleration therapies, increase clients' freedom by expanding their options for behaving. A major limitation of deceleration therapies is that their effectiveness may be only temporary, which is one reason for simultaneously accelerating alternative adaptive behaviors. Three issues that militate against the use of deceleration behavior therapy are ethical and humanitarian objections, undesirable side effects, and practical problems.

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PARTICIPATION EXERCISE ANSWERS

PARTICIPATION EXERCISE 8-3

Designing Novel Overcorrections

1. Littering

Restitution:
Clean the mess up.
Pay for workers to clean up the littering.

Positive Practice:
Spend 1 hour a day for an entire week picking up garbage.
Empty all trash cans in the park for a week.
Hand out fliers urging people to dispose of garbage properly.
Post signs about keeping the park free of litter.

2. Misspelling

Restitution:
Rewrite the paper without spelling errors.
Apologize to person reading the paper for being careless.

Positive Practice:
Spending several hours correcting spelling errors in other students' paper.
Correctly write misspelled words 50 times.
Memorize the spelling of commonly misspelled words.

3. Leaving clothes out

Restitution:
Put clothes where they belong.
Apologize to roommates (and other people who live in the house).

Positive Practice:
Empty drawers and closets and return the clothes to their proper storage locations five times.
Put roommates' clothes away for them for 1 week.
Go through the entire house and return all misplaced items to their proper storage locations.

4. Arriving late

Restitution:
Apologize to anyone inconvenienced.

Positive Practice:
Arrive at the next 10 appointments 15 minutes early.

5. Trashing lawn

Restitution:
Clean and repair damage caused to neighbor's lawn.
Apologize to neighbor.
Apologize to other neighbors likely to have seen your "handiwork."
Pay for all clean up and repair of property.

Positive Practice:
Mow and care for neighbors' lawn for a month.
Mow three other neighbors' lawns once for free.
Volunteer to do work on the grounds at local park for 8 hours.
Spend an entire day working for a landscaper for no pay.

6. Leaving lights on

Restitution:
Turn all unnecessary lights off.
Apologize to others in the house for failing to turn lights off.

Positive Practice:
Inspect house three times a day for a week for any lights that are unnecessarily on.
Make a list of all electrical appliances in house and inspect house three times a day for a week for any appliances that are unnecessarily on.

7. Putting dishes in the sink

Restitution:
Wash the dishes you just put in the sink.
Apologize to the other people living in the house.

Positive Practice:
Wash and dry all dishes twice immediately after using them for 1 week.
Take all dishes out of cupboards and wash them.
Volunteer to wash dishes at a local soup kitchen for three meals.

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CHAPTER 9



Combining Reinforcement and Punishment:

Token Economy, Contingency Contract, and Behavioral Parent Training

Token Economy

What Is a Token Economy?
Basic Elements
The Community Training Center: A Token Economy for Patients With Chronic Psychiatric Disorders
Achievement Place: A Token Economy for Juveniles in Trouble With the Law
Token Economies for Training Individuals With Intellectual Disability
Token Economies in the Classroom
Token Economies for Individuals and Families

CASE 9-1 Increasing Adherence to a Medical Regimen With an Individual Token Economy
PARTICIPATION EXERCISE 9-1 More Than a Token Gesture: Designing and Implementing an Individual Token Economy

Token Economy in Perspective

Contingency Contract

Behavioral Parent Training

Variations of Behavioral Parent Training
SUMMARY
REFERENCE NOTES

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Now that you are familiar with the basic principles and procedures of reinforcement and punishment, we can explore their application in three standard treatment packages: token economy, contingency contract, and behavioral parent training. A wide array of acceleration and deceleration problem behaviors have been modified with these treatment packages, as you will see.

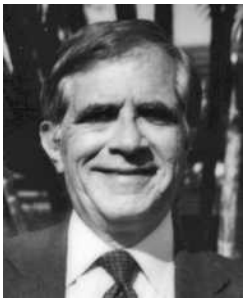
TOKEN ECONOMY

Even if you are unfamiliar with the term *token economy*, you are familiar with the concept. Every day you participate in an elaborate token economy—our monetary system.



Courtesy of Teodoro Ayllon, PhD.

Teodoro Ayllon



Courtesy of Nathan Azrin

Nathan Azrin

WHAT IS A TOKEN ECONOMY?

A **token economy** is a system for motivating clients to perform desirable behaviors and to refrain from performing undesirable behaviors.[1] Clients earn **tokens**—token reinforcers such as poker chips and points—for adaptive behaviors and lose tokens for maladaptive behaviors. The clients exchange tokens for actual reinforcers called **backup reinforcers**. Clients are made aware of what they have to do to earn or forfeit tokens and how they can spend them on backup reinforcers. Token economies are used more often for groups of clients than for individuals, so most of our discussion will deal with group programs.

Modern token economies have some highly innovative historical precursors. In Chapter 2, you read about Maconochie's point system for prisoners in Australia at the beginning of the 19th century.[2] At about the same time in England, Joseph Lancaster set up an elaborate token reinforcement system to motivate students' learning.[3] Because the school had a large number of students and few teachers, students who excelled academically were recruited to tutor other students in small groups. The students, as well as their tutors, received token reinforcers based on the students' performance. By the late 19th century, a number of school systems in the United States were using token reinforcement to promote learning and foster appropriate classroom behaviors (such as arriving on time for school).[4] The token economy as we know it today began with a program for hospitalized patients with chronic psychiatric disorders, developed by Teodoro Ayllon and Nathan Azrin in 1961 at Anna State Hospital in southern Illinois.[5]

BASIC ELEMENTS

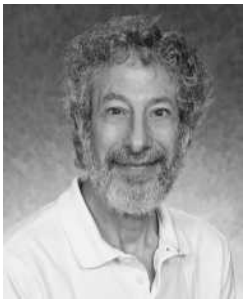
A token economy consists of four basic elements:

1. *A list of acceleration and deceleration target behaviors, including the number of tokens that clients can earn or lose for performing each.* Token economies primarily deal with acceleration target behaviors that vary with clients' problems. For a 10-year-old girl with intellectual disability, dressing herself might be a target behavior, whereas for a 10-year-old boy with attention deficit hyperactive disorder, completing an assignment might be a target behavior.
2. *A list of backup reinforcers, including the token cost of each.* The list of backup reinforcers is general for all the clients in the token economy, and it includes some reinforcers that will motivate each of the clients.

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3. *The type of token*. Tokens can be tangible or symbolic. Tangible tokens include poker chips (different colors for different values), metal washers, specially designed paper currency, stickers, stars on a chart, and money itself. Points are symbolic tokens.
4. *Specific procedures and rules for the operation of the token economy* (for example, indicating when clients can exchange tokens for backup reinforcers). Such rules are crucial when a small staff must administer the program with a large number of clients.

Token economies are used to treat diverse problem behaviors and client populations.[6] To show how token economies function, two token economies will be described in detail: the Community Training Center (a program for patients with chronic psychiatric disorders) and Achievement Place (a home-style program for juveniles who have committed minor legal offenses). Then the application of token economies to people with intellectual disability, children in classrooms, and individuals and families will be discussed.



Courtesy of Michael D. Spiegler

Michael Spiegler



Courtesy of Haig Agigian

Haig Agigian

THE COMMUNITY TRAINING CENTER: A TOKEN ECONOMY FOR PATIENTS WITH CHRONIC PSYCHIATRIC DISORDERS

The Community Training Center, a day treatment program for individuals previously hospitalized for chronic psychiatric disorders (predominantly schizophrenia), was developed by Michael Spiegler and Haig Agigian at the Palo Alto (California) Veterans Administration Hospital.[7] The goal of the program was to prepare the patients, called *trainees*, for independent living in the community. The trainees had been hospitalized for an average of more than 8 years. Most trainees were male, and their average age was 45. They lacked the self-care, home management, interpersonal, and community interaction skills necessary to live independent lives. To treat these behavioral deficits, the Community Training Center was run as a school that offered classes in which the skills were taught. The classes included such topics as social communication, problem solving, money management, health and hygiene, shopping, using public transportation, cooking, dealing with governmental agencies, social customs, and current events. This innovative program ushered in the use of social skills training for treating serious psychiatric disorders (a treatment you'll read about in Chapter 12).

For the most part, trainees had little desire to learn the skills taught. They were frightened of independent living and, through years of hospitalization, had grown accustomed to acting dependently. To motivate the trainees to develop independent living skills, a token economy, named the *credit system*, was used.

Credits and Credit Cards

The units of exchange in the credit system were points called *credits*. Each day, trainees received a new *credit card* on which the number of credits they earned and spent that day were recorded (see Figure 9-1, page 196). Trainees filled out their own credit cards, and staff members validated transactions to prevent cheating (see last column in Figure 9-1). By recording what they had done to earn credits (such as attending a class) and the number of credits they had earned, trainees were made aware of the contingency between their behaviors and the reinforcers. It also gave the trainees practice in self-reinforcement, which is important for independent living.

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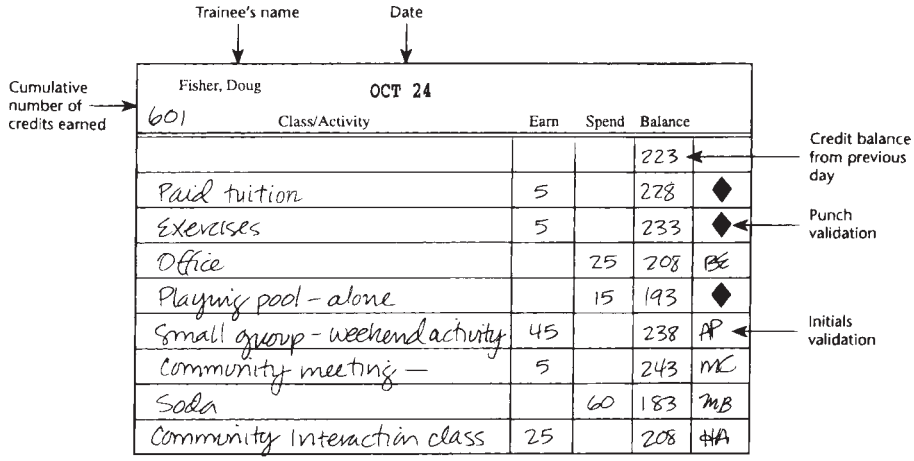


FIGURE 9-1
Example of a credit card used by trainees in the Community Training Center credit system (token economy)
Source: Adapted from Spiegler & Agigian, 1977, p. 119.

Earning Credits

Trainees earned credits for learning skills, which were assessed by written and oral quizzes and behavioral tests (such as role-playing). They also earned credits for doing homework, which was an integral part of many classes. Most homework assignments involved practicing daily living skills in the community (for instance, taking a friend to lunch).

The procedures for administering credits during classes were based on four principles, which are important in all token economies. (1) The criteria for earning credits were clearly defined. (2) The staff made trainees aware of the criteria (as by posting them in the classroom). (3) Staff members awarded credits as soon as possible after a target behavior was performed. (4) The program paired earning credits with social reinforcers (such as praise from a class instructor and other trainees in the class).

Generally, each target behavior resulted in earning a specified number of credits. Occasionally, however, the staff individualized the credit values for trainees, depending on the relative difficulty of that behavior for the trainee. For example, trainees who rarely spoke to others received substantially more credits for commenting on another trainee's performance in class than did trainees who had little difficulty speaking up.

Backup Reinforcers

Trainees spent their credits on a variety of backup reinforcers that fell into two categories: reinforcing activities and tangible reinforcers. During the planning stage of the credit system, trainees were interviewed to determine potential reinforcers. Trainees also were observed for several weeks to assess how they spent their time during the day. Activities in which they frequently engaged became potential backup reinforcers, consistent with the Premack principle.

Table 9-1 lists examples of reinforcing activities that trainees could purchase with credits. Notice that the credit costs reflected the relative therapeutic benefit

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TABLE 9-1
Examples of Reinforcing Activities and Their Credit Costs at the Community Training Center

Activity	Credit Cost
Travel club	10/hour
Photography	10/hour
Short films	10/hour
Feature films	50/film
Pool	
Playing alone	15/game
Playing with 1 or 2 others	10/game
Playing with 3 others	5/game
Ping-pong	
Singles	10/game
Doubles	5/game
Bowling	10/hour
Table games	10/hour
Ceramics	10/hour
Cooking	10/hour
Reading	15/hour
Sitting	25/hour

Source: Adapted from Spiegler & Agigian, 1977, p. 127.

of the activities. The more beneficial an activity, the lower was its cost, which encouraged trainees to spend credits on more beneficial activities. For example, activities with other people (such as playing table games) provided opportunities to practice social communication skills, and trainees paid less for social activities than for solitary activities. Whereas trainees had to pay 15 credits to play a game of pool alone, the cost was only 10 credits when they played with one or two other trainees and 5 credits when they played with three other trainees.

The Reinforcement Room was a large area in which trainees could engage in various pleasurable activities, such as playing pool, darts, and pinball; watching TV; listening to music; and reading magazines. These reinforcers could be purchased in two ways. Trainees could spend their credits for specific activities, or they could purchase a block of time in the Reinforcement Room and engage in whatever activities they chose during that period.

The Crediteria was a store where trainees used their credits to purchase a variety of tangible reinforcers (such as drinks, snacks, toiletries, and hobby items). Posters advertising items sold in the Crediteria were displayed around the Community Training Center. The posters encouraged trainees to spend their credits. In a token economy, exchanging tokens for backup reinforcers is important because it reinforces the adaptive behaviors for which the tokens were earned.

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Decelerating Maladaptive Behaviors

The major function of the credit system was to accelerate adaptive social and daily living skills by reinforcing them, initially with credits and social reinforcers, and later with backup reinforcers. Trainees' maladaptive behaviors were treated primarily by reinforcing competing adaptive behaviors.

Maladaptive behaviors sometimes were decelerated directly by requiring trainees to pay credits for engaging in them (response cost). Table 9-2 lists examples of undesirable behaviors for which trainees paid credits. Notice that the credit costs for engaging in maladaptive behaviors were considerably higher than the credit costs for engaging in reinforcing activities listed in Table 9-1. The high credit cost for the undesirable behaviors discouraged trainees from engaging in them. For instance, missing a class and sleeping in class, which were the most expensive undesirable behaviors, were rarely purchased—which means that trainees rarely engaged in these behaviors.

Evaluation of the Community Training Center Program

A number of studies have demonstrated the effectiveness of the Community Training Center program.[8] One experiment compared a sample of graduates from the program with a comparable sample of patients not in the program. The two groups were matched for age, diagnosis, length of hospitalization, type of hospital treatment, and time spent in the community. The groups were compared on eight different measures of personal adjustment. As you can see in Figure 9-2, the Community Training Center graduates had significantly higher functioning on all but one of the outcome variables.

Rehospitalization is a critical measure of the effectiveness of treatment for previously hospitalized patients. The Community Training Center program resulted in consistently lower rehospitalization rates than comparable programs. For example, during the first 2 years of the Community Training Center operation, the rehospitalization rate was 11%; during the comparable period for the

TABLE 9-2

Examples of Undesirable Behaviors and the Average Number of Credits Trainees Paid to Engage in Them at the Community Training Center

Undesirable Behavior	Average Credit Cost
Sleeping in class	75
Smoking in class	50
Leaving class early (unexcused)	50
Cutting class	100
Being late to class	15
Coming to class without having done the homework	50
Pacing in class	20
Having an unbalanced credit card	10
Making a mess (for example, flicking ashes on the floor)	25
Begging	20

Source: Adapted from Spiegler & Agigian, 1977, p. 132.

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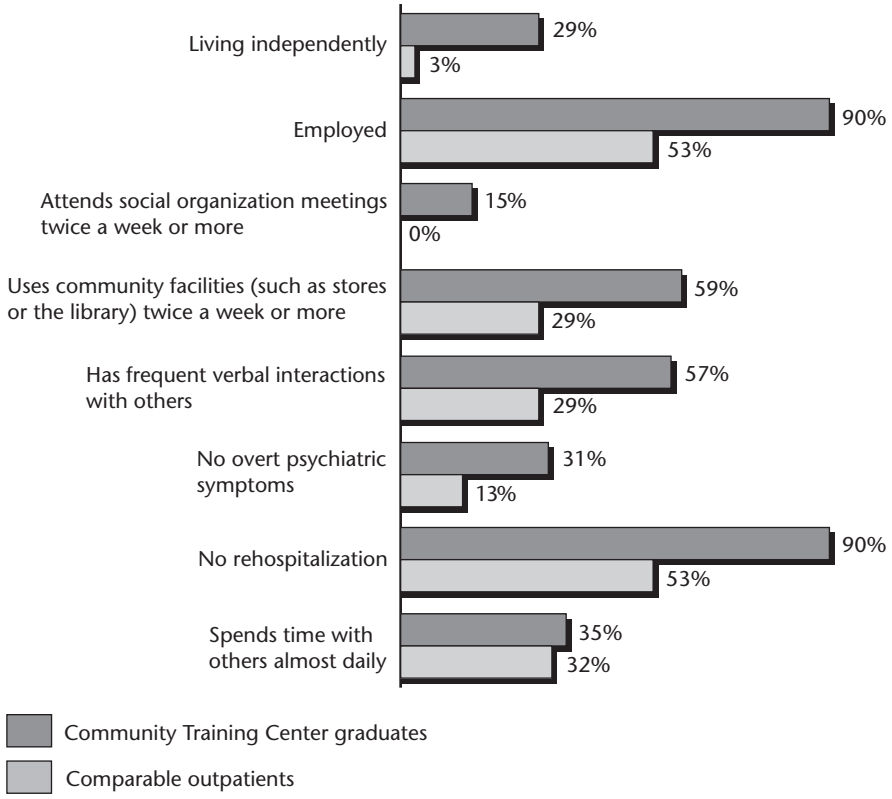


FIGURE 9-2

Comparison of personal adjustment between Community Training Center graduates and a comparable sample of outpatients. The Community Training Center graduates showed higher functioning than the comparison outpatients on all but one measure of personal adjustment

Source: Data from Spiegler & Agigian, 1977.

previous day treatment program, the rate was 73%. In another comparison, during a 6-month period, the Community Training Center rehospitalization rate was 5%, in contrast to 22% and 31% for two day treatment programs with comparable clients using different forms of treatment.

Before leaving our discussion of the Community Training Center program, one of its features is worth noting. In order to reduce the stigma associated with psychiatric treatment and emphasize the nature of the program, careful attention was paid to the names of various aspects of the program. The Community Training Center program replaced a Day Treatment Center program. The name of the program was changed to emphasize *training* rather than *treatment,* and it signified that it involved training for *community* living. *Trainee* was substituted for *patient,* which removed the stigma of being a psychiatric patient and added the dignity of someone in training. And trainees *graduated* from the program, rather than *being discharged*, the typical nomenclature when someone leaves a hospital.

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ACHIEVEMENT PLACE: A TOKEN ECONOMY FOR JUVENILES IN TROUBLE WITH THE LAW


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Montrose Wolf

Achievement Place is the prototype of the *teaching family model* for rehabilitating juveniles in trouble with the law. Achievement Place was established in Lawrence, Kansas in 1967 by Montrose Wolf and his colleagues,[9] and it has since inspired more than 200 similar programs.[10] A token economy is central to the operation of Achievement Place. To illustrate its use, the original program for boys will be described. With a few exceptions,[11] most teaching family programs have been for boys.

Achievement Place served as a residence for six to eight boys ages 10–16 from lower socioeconomic backgrounds. They had been court referred for committing minor crimes, such as petty theft and fighting. Achievement Place was set up in a large house in the boys' community. It was run by two *teaching parents*, Elery and Elaine Phillips, a married couple trained in behavior therapy.[12]

The boys earned points for appropriate social behaviors (such as using proper manners), academic performance (for example, good grades), and daily living behaviors (for instance, personal hygiene). They lost points for inappropriate behaviors in these areas. Table 9-3 lists some of the behaviors for which points were earned or lost.

The token economy was divided into three systems or levels. Initially, the boys were placed on a *daily system*, in which the points they earned were exchangeable each day for backup reinforcers (such as snacks, TV time, playing games, hobby time, and receiving an allowance). This arrangement helped them learn how the token economy operated. After the boys became familiar with the token economy, they were switched to a *weekly system*, in which the points they earned were exchanged for backup reinforcers once a week. For example, a boy could purchase snacks and television time for the entire week. Most boys were on the weekly system for the 9 to 12 months they typically lived at Achievement Place. Because ample opportunities to earn points existed, the boys usually could buy all the privileges they wanted.

TABLE 9-3
Examples of Behaviors for Which Boys at Achievement Place Earned or Lost Points

Behaviors for Which Points Were Earned	Points
Watching news on television or reading the newspaper	300 per day
Cleaning and maintaining neatness in one's room	500 per day
Keeping neat and clean	500 per day
Reading books	5 to 10 per page
Aiding houseparents in various household tasks	20 to 1000 per task
Doing dishes	500 to 1000 per meal
Being well dressed for an evening meal	100 to 500 per meal
Doing homework	500 per day
Obtaining desirable grades on school report cards	500 to 1000 per grade
Turning out lights when not in use	25 per light

(*continued*)

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TABLE 9-3 (*continued*)

Behaviors for Which Points Were Lost	Points
Failing grades on the report card	500 to 1000 per grade
Speaking aggressively	20 to 50 per response
Forgetting to wash hands before meals	100 to 300 per meal
Arguing	300 per response
Disobeying	100 to 1000 per response
Being late	10 per minute
Displaying poor manners	50 to 100 per response
Engaging in poor posture	50 to 100 per response
Using poor grammar	20 to 50 per response
Stealing, lying, or cheating	10,000 per response

Source: Phillips, 1968, p. 215.

The final level in the token economy, the *merit system*, was reserved for boys who were ready to leave Achievement Place in the near future. Under the merit system, a boy would not earn or lose points, and he would not have to pay points for any backup reinforcers—as long as he continued to demonstrate a high level of appropriate social, academic, and daily living behaviors. Instead, the teaching parents merely praised the boy for appropriate behaviors. The merit system prepared boys for returning to their home environments, where no point system existed.[13]

A Day at Achievement Place

A typical weekday at Achievement Place began when the boys arose at about 6:30 a.m., washed and dressed, and cleaned their rooms. Morning chores were followed by breakfast, and then the boys were off to school.

Each day, one boy served as *manager* and was paid points to hold this prestigious position. As one of his responsibilities, the manager assigned cleanup jobs, supervised their completion, and awarded points to other boys for doing the jobs. The manager earned points according to how well the boys performed the household chores.[14]

Academic achievement was a major goal of the program. Each boy attended the same school he had gone to before coming to Achievement Place. The teachers and school administrators worked closely with the teaching parents, providing them with systematic feedback about each boy's school performance through daily or weekly report cards. The boys earned or lost points based on how well they performed at school.[15]

After school, the boys returned to Achievement Place, had a snack (purchased with points), and then began their homework or other point-earning activities, such as household chores. Later, they engaged in various recreational activities (such as bike riding or playing games), for which they paid points.

After dinner, a "family conference" was held. The boys and the teaching parents discussed the day's events, evaluated the manager's performance, discussed problems with the program, and decided on consequences for specific rule violations.

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The conferences allowed the boys to actively collaborate in their treatment program. The boys spent the rest of the evening, until bedtime at 10:30 p.m., in group or individual activities.

Evaluation of Achievement Place and Other Teaching Family Programs

Numerous controlled studies have evaluated the effectiveness of Achievement Place and other teaching family programs.[16] These studies have shown that the programs are effective in reducing delinquent and other socially inappropriate behaviors (such as acting aggressively and using poor grammar when speaking) and increasing appropriate prosocial behaviors (such as being on time, completing homework, and saving money). Favorable attitudinal changes also have occurred for program participants, including increased self-esteem and optimism about having control over their lives.[17]

These positive changes were observed while boys were in the program and were maintained for a year or so afterward, but no longer.[18] Poor long-term maintenance of treatment gains is not completely surprising, however. The teaching family group home environment is very different from the home environments from which the boys had come and, most important, to which they returned. Most of the boys were from home environments where they received little reinforcement for prosocial behaviors and ample reinforcement for antisocial behaviors from their peers—just the opposite of the contingencies in the teaching family home.[19] Thus, when the boys left the teaching family home, the reinforcement contingencies changed: prosocial behaviors were no longer reinforced, which resulted in their eventual decline. Given the less-than-ideal home environments of most youths in teaching family programs, specific procedures had to be instituted to promote long-term maintenance of changes. One approach was to provide aftercare in specially developed foster homes, where the foster parents continue to reinforce prosocial behaviors and discourage antisocial behaviors.[20] Another approach was to give parents behavioral parent training (described later in this chapter).[21]

TOKEN ECONOMIES FOR TRAINING INDIVIDUALS WITH INTELLECTUAL DISABILITY

Individuals institutionalized because of intellectual disability display many of the same behavioral deficits as patients hospitalized for psychiatric disorders. For example, they frequently lack basic self-care and daily living skills (such as dressing appropriately and preparing simple meals). Token economies are effective in teaching such skills and motivating their consistent practice.[22] In addition to accelerating adaptive behaviors, token economies are used to decelerate various socially inappropriate behaviors (such as eating with one's fingers) and personally maladaptive behaviors (such as refusing to brush one's teeth) among institutionalized people with intellectual disability.[23]

Language skills often are target behaviors for children, adolescents, and sometimes adults with intellectual disability.[24] Because of the complexity of language and speech skills, token reinforcement programs for such target behaviors usually are administered individually and are part of a treatment package that includes modeling, prompting, and shaping.

Token economies are effective in increasing the quantity and quality of job-related tasks performed by individuals with intellectual disability.[25] In one

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sophisticated program, young adults with moderate intellectual disability earned tokens for jobs on three levels.[26] The lowest level involved janitorial-type tasks; the middle level consisted of jobs that required more skills and responsibility (such as operating machines and checking attendance); and the highest level required even more skill and responsibility as well as independence (such as sorting and distributing mail and serving as a teacher's aide). The clients advanced through the levels by meeting specified performance criteria. They exchanged tokens for a variety of backup reinforcers, including favorite snacks, money, and access to pleasurable activities. Some of the highest-level clients were placed into community-based jobs after they completed the program.

In another program, residents of a group home for adults with intellectual disability received tokens for various tasks involved in running the home and for socializing with other residents and staff members.[27] They also earned tokens for attending recreational activities in the community and for behaviors leading to gainful employment, such as contacting prospective employers and going on job interviews. Once residents were working in the community, their employers were asked to participate in the token economy program. The employers provided the staff with feedback about residents' performance on the job so that the residents could receive tokens for appropriate work behaviors.[28]

TOKEN ECONOMIES IN THE CLASSROOM

Token economies have been used in preschool, elementary, and secondary classrooms across the gamut of educational levels (special education, remedial, and mainstream). These programs, which teachers rate as highly acceptable interventions,[29] have focused on classroom conduct and academic performance.

Classroom Conduct

Token economies have modified a variety of undesirable behaviors that interfere with classroom learning, including serious problems associated with attention deficit hyperactivity disorder[30] and Asperger's syndrome.[31] Examples are aggressive behaviors, talking out of turn, being out of one's seat, disregarding instructions, throwing objects, destroying property, and disturbing others.[32] Three basic strategies are used to treat classroom conduct problems: (1) earning tokens for engaging in competing acceleration target behaviors, (2) losing tokens for performing deceleration target behaviors, and (3) both earning and losing tokens. Earning and losing tokens appear to be equally effective in modifying classroom conduct (as well as academic behaviors).[33]

Backup reinforcers in classroom token economies have included tangible reinforcers (such as toys, snacks, and school supplies) and reinforcing activities (such as extended recess time and field trips). As children grow older, in-class backup reinforcers become less potent than reinforcers available at home (such as playing video games); accordingly, arrangements are made for children to exchange tokens earned at school for backup reinforcers at home.[34]

Academic Performance

The ultimate purpose of decreasing disruptive classroom behaviors is to enhance students' academic performance. Attention and proper conduct in the classroom are necessary but not sufficient conditions for promoting

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academic skills and learning.[35] Thus, token economies also are used to directly increase learning.

Token economies have successfully improved children's academic performance in basic subject areas, such as arithmetic and reading, as well as in more complex skills, such as creative writing.[36] These programs not only have increased students' skill levels, but they also have been associated with higher grades and fewer suspensions from school.[37]

One illustrative program was designed to increase writing skills.[38] Elementary school students earned points for the number of different adjectives, verbs, and beginnings of sentences they wrote in stories. The class was divided into two teams, and a group contingency was employed. Backup reinforcers included candy and early recess. As Figure 9-3 shows, an increase in the number of different sentence parts (such as adjectives) occurred when, and only when, points were given for the specific sentence parts. For example, the average number of adjectives used increased during the 4 days that adjectives were reinforced with points but not on the following 4 days when only verbs were reinforced. When all three sentence parts were reinforced, an increase in each sentence part was observed. Moreover, people who were unfamiliar with the procedures used in the class rated the students' stories written during the token reinforcement days as more creative than those written during the baseline period, when no token reinforcers were administered.

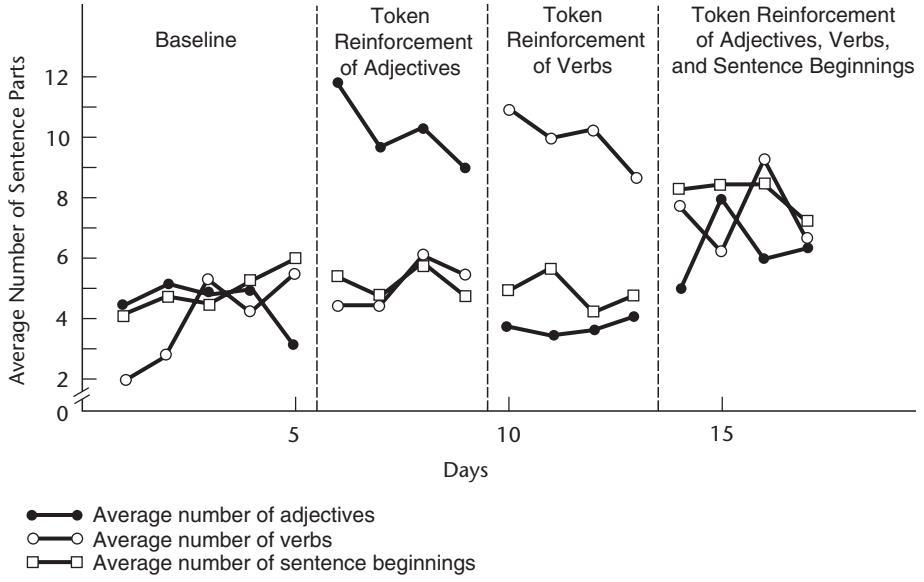
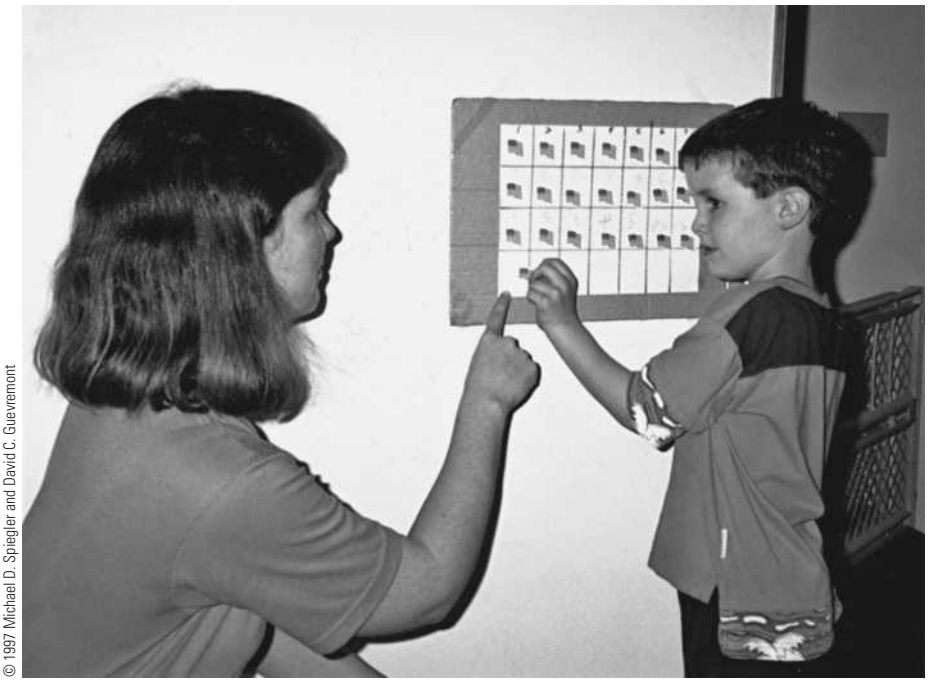


FIGURE 9-3

Average number of different adjectives, verbs, and sentence beginnings used during baseline and token reinforcement phases in a class designed to increase elementary school students' writing skills

Adapted from Maloney & Hopkins, 1973, p. 429.

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PHOTO 9-1
Parents can be trained to administer simple token economy programs for their children at home. Stickers, which are placed on a chart, may be used as tokens and exchanged for backup reinforcers.

TOKEN ECONOMIES FOR INDIVIDUALS AND FAMILIES

Token economies are used for individuals and small groups (such as families) as well as with large groups of clients. Individual token economies are most often employed with children for such problems as stuttering, inappropriate table manners, reading difficulties, poor attention to schoolwork, failure to do household chores, and noncompliance with parental instructions.[39] They have also been used for more serious issues, such as the failure to eat[40] and inappropriate social interactions[41] of teenagers with Asperger's syndrome. Stickers placed on a wall chart (see Photo 9-1) are frequently used as tokens that can be exchanged for reinforcers listed on a reinforcement menu. Individual token economies occasionally are used with adults—in particular, adults with intellectual disability and with older adults, such as in Case 9-1.

CASE 9-1

Increasing Adherence to a Medical Regimen With an Individual Token Economy[42]

Mr. A. was an 82-year-old retired longshoreman who had suffered a massive heart attack. His physician told him to exercise, to eat foods high in potassium, and to take his medication, but he failed to follow these instructions. Mr. A.'s granddaughter, who lived with him, agreed to administer a token economy in which Mr. A. earned poker

(*continued*)

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CASE 9-1 (*continued*)

chips for walking, drinking potassium-rich orange juice, and taking his medication. He exchanged the poker chips for the privilege of choosing what he wanted for dinner at home or going out to eat at a restaurant of his choice.

The token economy significantly increased each of the three target behaviors from their baseline levels. When the tokens were temporarily withdrawn in a reversal period, the target behaviors declined to baseline levels, and reinstating the token economy immediately brought the behaviors back to the treatment level (see Figure 9-4 as an example for one of the target behaviors). Instituting the token economy also appeared to improve Mr. A.'s relationship with his family by reducing arguments, especially about Mr. A.'s adherence to his medical regimen.

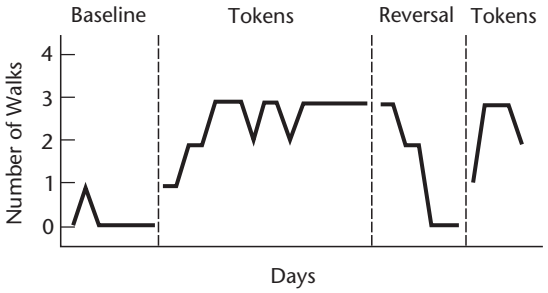


FIGURE 9-4
Number of walks per day Mr. A. took under baseline and token reinforcement conditions

Source: Dapcich-Miura, E., & Hovell, M.F. (1979). Contingency management of adherence to a complex medical regimen in an elderly heart patient. *Behavior Therapy, 10*, 193–201. Reprinted with permission.

If you'd like to experience the process of setting up and being motivated by a token economy (and also receive some personal benefits), complete Participation Exercise 9-1 over the next couple of weeks.

PARTICIPATION EXERCISE 9-1

More Than a Token Gesture: Designing and Implementing an Individual Token Economy

This exercise provides directions for setting up a simple token economy to motivate you to do those everyday chores that you'd rather not do.

Step 1: In the Chore column of Work Sheets 9-1 and 9-3 list four chores that you "must" do but dislike doing (for example, cleaning the bathroom and taking out the garbage). You will find all the work sheets for this exercise in your on-line Student Resource Manual (see page xxxi).

Step 2: To establish a baseline, over 5 consecutive days, place a check mark in the Frequency column on Work Sheet 9-1 each time you do one of the chores. After

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5 days, add the number of check marks for each chore and record it in the Sum column of Work Sheet 9-1, and then put the total at the bottom of the column.

Step 3: Rank order the four chores from most unpleasant to least unpleasant and write them *in that order* in column A (Chores) on the top half of Work Sheet 9-2. Column B (Points Earned) contains the points you will receive for doing each of the chores. Note that the more unpleasant the chore is, the higher the number of points you will earn for doing it (from most to least unpleasant: 40, 30, 20, and 10).

Step 4: Choose four activities (1) that you both *enjoy* and *engage in regularly* (for example, listening to music, texting, watching TV, reading for pleasure, and surfing the Internet) and (2) that you are *willing to temporarily forgo* (if you do not earn sufficient points to engage in them when the token economy is in effect).

Step 5: Rank order the four activities from most enjoyable to least enjoyable and write them in that order in column C (Activities) on the bottom half of Work Sheet 9-2. Column D (Point Cost) lists the points you will pay for each backup reinforcer. The more enjoyable the activity, the higher is its cost (from most to least enjoyable: 25, 20, 10, and 5).

Step 6: Begin the token economy on the same day of the week on which you started your baseline and continue it for 5 consecutive days. Each time you complete a chore, place a check mark in the Frequency column of Work Sheet 9-3 next to the chore and then write the number of points you earned for doing that chore (refer to Work Sheet 9-2, column B) in the Points Earned column of Work Sheet 9-4.

Step 7: Use the points you earn to engage in your backup reinforcing activities; record their cost (refer to Work Sheet 9-2, column D) in the Points Spent column of Work Sheet 9-4. Maintain a running balance in the Point Balance column of Work Sheet 9-4 by adding points earned and subtracting points spent (as in balancing a checkbook). For the token economy to be effective in motivating you to do the chores, you must engage in the backup reinforcing activities. While your token economy is in effect, you may engage in the reinforcing activities *only* if you have purchased them with points. If you don't have sufficient points, you must wait until you have earned sufficient points to engage in the activity. If you violate this rule, the token economy will not accelerate your doing the chores.

Step 8: After 5 days of the token economy, add the number of check marks for each chore and record it in the Sum column of Work Sheet 9-3, and then put the total at the bottom of the column. Now compare the total number of chores you did during the baseline (bottom right of Work Sheet 9-1) and during the token economy (bottom right of Work Sheet 9-3). If the token economy was effective, you should have done more chores while the token economy was in effect than during baseline. If this did not occur, you may have to increase the point values earned for each chore or select more enjoyable backup reinforcers.

TOKEN ECONOMY IN PERSPECTIVE

Since the first major token economy was developed 50 years ago,[43] numerous token economies have been implemented to treat diverse target behaviors, ranging from simple self-care skills to complex interpersonal problems that develop in couple relations. Clients of all ages—from children to elderly individuals—with a wide range of intellectual capacities have been treated. Token economies have been used in many different settings—in classrooms, group living situations, hospitals, outpatient facilities, work environments, and homes.

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Token economy programs are instituted for clients who have deficits of adaptive behaviors and/or excesses of maladaptive behaviors. Before treatment, clients' adaptive behaviors were not reinforced, and maladaptive behaviors were reinforced. The token economy reverses these reinforcement contingencies, which often results in impressive (and sometimes immediate) changes, as demonstrated in reversal and multiple baseline studies.[44] However, when clients leave the token economy, the contingencies usually revert to their pretreatment state—that is, the conditions that had been instrumental in maintaining the clients' problem behaviors.

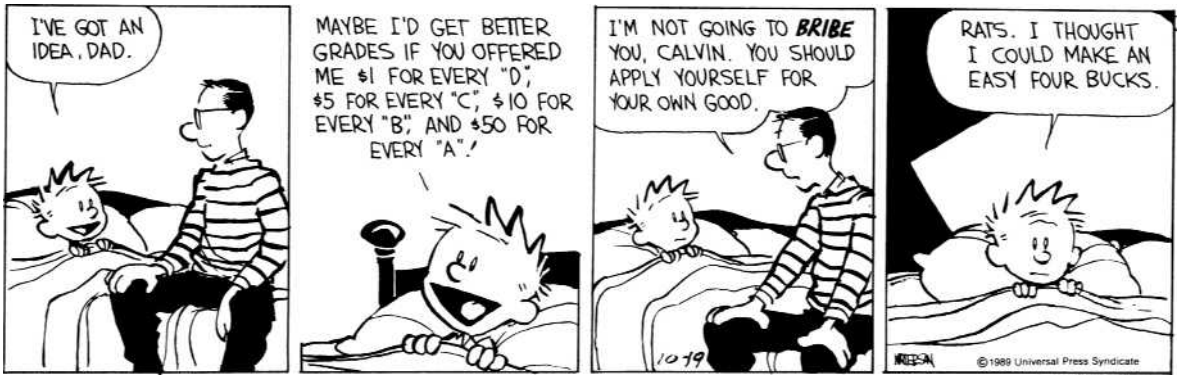
The most obvious solution to this dilemma is for clients to remain in the token program. Occasionally, this solution may be viable, as when token economies have been instituted in clients' natural environments, and it is feasible to operate them indefinitely. This was the case with token economies that were set up to promote safety practices in two mines and were continued for more than 11 years.[45] Mining is a hazardous occupation resulting in many injuries and deaths every year, and these two mines had especially poor safety records. Miners earned trading stamps for remaining injury free, and they exchanged them for a wide selection of merchandise. Each month, miners who suffered no injuries resulting in lost time or compensation earned a specified number of trading stamps, and they earned bonus stamps for making safety suggestions that were subsequently implemented. There also was a group contingency in which miners were awarded trading stamps if all the members of their work group remained injury-free during the month. The token economies resulted in large reductions in injuries. For example, the number of days lost from work due to injuries changed from eight times the national average to one-fourth of the national average at one mine and from three times to one-twelfth the national average in the other mine.

In most cases, token economies are only temporary treatment procedures and are faded as soon as practicable.[46] To ensure long-term maintenance of treatment gains, clients must be reinforced in their natural environments for the same behaviors that were reinforced in the token economy. Sometimes it is possible to change the environment to which clients return after leaving a token program. For instance, parents can be trained to reinforce their child's adaptive behaviors at home. Alternatively, rather than return to their homes, clients can go to a living situation that continues the adaptive contingencies, such as a specialized foster home in which the foster parents are trained in behavior therapy procedures.

Long-term maintenance as well as transfer and generalization also require shifting clients from token reinforcers to natural reinforcers that are available in their everyday environments. Toward this end, social reinforcers such as praise are generally administered along with tokens. Additionally, the use of tokens may be withdrawn gradually while clients are still in the token economy. This allows natural reinforcers (such as feeling good after completing a task) to assume an increasingly important role in maintaining the adaptive behaviors instituted in the token economy. One way to gradually withdraw token reinforcers is for clients to move through levels within the token economy, such as the daily, weekly, and merit systems at Achievement Place.[47] Clients also may be reinforced with tokens on an intermittent reinforcement schedule.[48]

Critics have voiced ethical and humanitarian objections to token economies. For example, token economies have been described as demeaning, especially for adults.

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The argument is that token reinforcement is appropriate for children but not for adults, who are supposedly "above" receiving tokens for behaving appropriately. Interestingly, the same people who think token reinforcement is inappropriate for adults forget that they participate in a large-scale token economy every time they earn or spend money. The token economy also has been mistakenly viewed as a form of bribery (an argument that was rebutted regarding reinforcement in Chapter 7, page 154).

In fact, there is evidence that token economies enhance clients' dignity by increasing their self-esteem, self-respect, pride, and sense of worth. The following conclusion was drawn about an early token economy at a psychiatric hospital: "The program's most notable contribution to patient life is the lessening of staff control and putting the burden of responsibility, and thus more self-respect, on the patient."[49] And consider the virtually identical comments made by two very different people in two separate token economies. The first was made by a female patient with Down syndrome who was in the Anna State Hospital token economy. The woman approached a visitor and, with obvious pride in her accomplishments that day, pointed to the card on which her points were recorded and said, "Look, I got 120 points today." The second comment was made by a 40-year-old male trainee with superior intelligence at the Community Training Center. He approached the program director and—also feeling good about what he had accomplished that day—said, "Doctor, I earned 85 credits today."[50] These expressions of pride sound very much like a sales executive's telling her husband at dinner, "I earned a bonus today for closing the deal" or a college student's telling his roommate, "I got an A on that paper I worked so hard on." Another common positive side effect of token economies is that once clients' problem behaviors have been reduced, clients' relationships with family members and other people in their lives often improve (as with Mr. A. in Case 9-1, page 205).

CONTINGENCY CONTRACT

A **contingency contract** is a written agreement that specifies the relationship between target behaviors and their consequences for a particular client. The essential components of a contingency contract are clear, unambiguous statements of (1) the

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target behaviors, (2) the consequences for performing (or failing to perform) them, and (3) the precise contingency between each target behavior and its consequences (for example, "If Benjamin does X for 3 consecutive days, then he will receive Y").[51]

The contract in Figure 9-5 illustrates other features of contingency contracts. They specify the responsibilities of the client and the other people involved in the treatment, each of whom signs the contract. With deceleration target behaviors,

Effective dates: From : 2-10-02 To : 3-9-02

Jerry agrees to:	His parents agree to:
1. Go to school each day	Reward: Give Jerry $10 spending money per week (on Sunday) Penalty: Subtract $2 from a possible $10 for each school day that Jerry fails to attend
2. Arrive home each day after school by 4 p.m. to check in with his parents	Reward: Allow Jerry to stay out until 10 p.m. on Saturday night Penalty: Subtract 1 hour from a 10 p.m. curfew on Saturday for each day Jerry fails to check in by 4 p.m.
3. Come home each day no later than 6 p.m. to have dinner with the family	Reward: Allow Jerry to play video games for 45 minutes Penalty: Lose access to video games for the day

Bonus: Each time Jerry goes 4 weeks with fewer than six infractions, his parents will give him money to purchase one compact disk (maximum of $18 per purchase).

Penalty: Each time Jerry has more than six infractions, he will be grounded (remain in the house and not be able to watch television, talk on the telephone, or use the computer) for the entire day on Saturday.

I, Jerry Michaelson, agree to the terms of the above contract.

_____
Signature Date

I, Mrs. Michaelson, agree to the terms of the above contract.

_____
Signature Date

I, Mr. Michaelson, agree to the terms of the above contract.

_____
Signature Date

FIGURE 9-5

Contingency contract with individual contingencies for each target behavior used with a 15-year-old boy

Source: © 2002 Michael Spiegler and David Guevremont.

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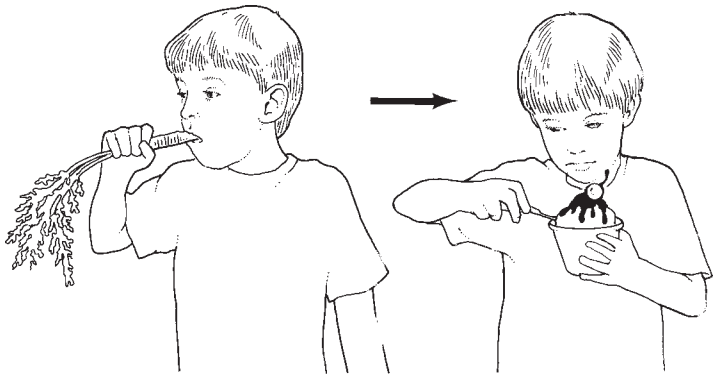


FIGURE 9-6
Pictorial contingency contract showing the target behavior and the reinforcer

contracts can include both reinforcement and punishment. For clients who cannot read, the contract can be presented pictorially, such as the simple contract in Figure 9-6.

Rather than being a treatment itself, a contingency contract is used to formalize a treatment plan. For example, contingency contracts were part of an effective substance abuse treatment program for adolescents and young adults.[52] Clients contracted to engage in specific overt behaviors that competed with drug abuse, such as attending school, complying with an early curfew, and notifying their families of their whereabouts when they were not at home, school, or work. The contracts specified the roles of the client, family members, and the therapist and were reviewed weekly. Family members administered immediate and delayed reinforcers.

Using contingency contracts to formalize treatment plans has a number of benefits. Contingency contracts minimize disagreements about the conditions of the plan. The contract is the final authority, which underscores the importance of stating the terms of the contract unambiguously. Signing the contract increases the commitment of the people involved to fulfill their roles specified in the contract. The process of designing a contingency contract makes clients active participants in their treatment. When relational problems are being addressed in therapy (as between spouses or child and parents), it is helpful for the parties involved to jointly develop a contingency contract, which may benefit the relationship by providing structure for their negotiations and opportunities to practice cooperating and negotiating.

Contingency contracts are used for clients of all ages.[53] Examples of behaviors treated with contingency contracts include disruptive classroom behaviors,[54] school attendance,[55] school and homework performance,[56] setting learning goals,[57] antisocial behaviors,[58] sibling cooperation,[59] studying,[60] physical exercise,[61] smoking,[62]overeating,[63] undereating,[64] problem drinking,[65] and marital discord.[66] Contingency contracts sometimes are used to increase compliance with behavior therapy homework assignments, such as getting parents who physically abuse their children to practice using positive reinforcement procedures with them.[67]

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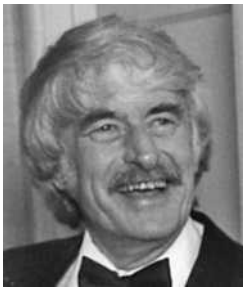
Relatively few studies have examined the essential features of contingency contracts.[68] It is clear, however, that specifying the contingency between the target behavior and the consequence is essential.[69]

Outside of therapy, contingency contracts apparently appeal to teenagers as a way of securing access to favorite Websites, which often is a bone of contention between children and parents. An article in the *Wall Street Journal* described three examples of teens' initiating the idea of a written contract that clearly spells out the rules of their Website access and the penalties for failing to follow them.[70] One parent's comments about his son's contract highlighted the benefits of contingency contracts described earlier: "The good thing about the contract is that it's all been thought out beforehand, and it's all on paper, and everyone agrees to it and knows what is expected."

BEHAVIORAL PARENT TRAINING

One-third of all referrals of children for psychotherapy involve noncompliance with parental requests and rules and disruptive behaviors (such as aggressive acts and temper tantrums).[71] When such behaviors occur occasionally, as they do with most children, they are considered normal ("growing pains" or "just a stage"). However, when they are frequent, long-lasting, or intense, parents appropriately may seek professional assistance.

One approach to dealing with children's noncompliant and disruptive behaviors is for the child to receive individual psychotherapy. However, around 1960, it became clear that traditional individual psychotherapy with children exhibiting such problems was largely ineffective.[72] The reason may be that the problem does not reside within the child, as is assumed in traditional psychotherapy. Rather, the problem may lie with the parent–child interactions. Parents who seek help for their child's noncompliant and disruptive behaviors interact differently with their child than parents who are not reporting such problems. Specifically, extensive observations have revealed that parents who are experiencing difficulty with their children's problem behaviors (1) give more vague and inconsistent instructions; (2) use more negative, threatening, and angry warnings in an attempt to modify the child's behaviors; (3) administer inconsistent and ineffective consequences for undesirable behaviors; and (4) provide fewer positive consequences for their child's prosocial, desirable behaviors.[73]



Courtesy of Gerald Patterson

Gerald Patterson



Courtesy of Rex Forehand

Rex Forehand

These observations led two prominent behavior therapists—Gerald Patterson[74] at the Oregon Social Learning Center and Rex Forehand[75] at the University of Georgia—to develop **behavioral parent training** (also called *behavioral child management training* and *parent management training*) to teach parents (most often mothers[76]) behavior therapy procedures to effectively manage their children's behavior problems.[77] A number of variations of this basic model exist,[78] and our discussion will include them.

The primary goals of behavioral parent training are to increase parents' use of (1) clear, direct, and age-appropriate instructions to their children; (2) consistent reinforcement for prosocial, desirable child behaviors; and (3) consistent and appropriate punishment for children's noncompliant and disruptive behaviors. The primary therapy skills that parents learn are positive reinforcement, including differential reinforcement, and time out from positive reinforcement; they may also learn to use contingency contracts, home token economies, and response cost.[79]

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Parents are first taught to notice and reinforce their children's desirable behaviors. Therapists teach them to use a variety of reinforcers, including enthusiastic praise (for instance, "What a great job. You came the first time I called you!"), physical affection (a hug, for example), and the provision of privileges (such as staying up 15 minutes past bedtime). Next, parents are taught how to differentially reinforce behaviors that compete with serious undesirable behaviors (such as hitting siblings) and to extinguish (often by ignoring) minor undesirable behaviors (such as whining). Parents learn to give clear-cut instructions calmly and to refrain from angry, indirect negative instructions (such as "Wait until your father gets home!"). They also learn to use time out from positive reinforcement in a consistent and effective manner.

Planned activity scheduling is another procedure taught in behavioral parent training.[80] Parents learn to change setting events in anticipation of their child's behavior problems to prevent the problems from occurring in the first place.[81] A common strategy is to provide children with an active task that they enjoy and that is appropriate for the situation. In the case of a child who is disruptive while waiting in a doctor's office, parents might bring some of the child's favorite games or toys to the doctor's office. Planned activity scheduling has been shown to be an effective treatment for families whose members have developmental disabilities[82] and for parents who abuse their children[83] as well as for families whose children have common behavior problems.[84]

Behavioral parent training is conducted with a single family or in small groups containing 4 to 10 sets of parents. Parents rehearse the therapy procedures in the training sessions and receive feedback from the therapist. The practice involves role-playing, with the therapist or another parent playing the role of the child. Occasionally, parents will practice with their own child during training sessions.[85] Homework between sessions is an integral part of the training.[86] For example, parents may be asked to self-monitor and self-reinforce their use of the behavioral skills they have learned.

Behavioral parent training has been applied to a variety of child behavior problems and psychological disorders, including noncompliance with instructions and rules;[87] oppositional, aggressive, and antisocial behaviors;[88] Asperger's syndrome;[89] attention deficit hyperactivity disorder;[90] childhood sleep problems;[91] separation anxiety;[92] eating behavior of undernourished children with cystic fibrosis;[93] and completion of homework.[94] The training has been successful with parents who physically abuse their children,[95] parents with mild intellectual disability,[96] and even with parents who are reluctant to participate in the training.[97] However, sometimes parents who have significant psychological problems of their own may have difficulty learning and implementing the child management skills.[98] Behavioral parent training is more effective when administered by trained mental health practitioners than when parents learn the procedures by following exercises in a workbook[99] and when there is a good relationship between the trainer and the parents.[100]

Meta-analytic studies have demonstrated that behavioral parent training is effective in changing children's noncompliant and disruptive behaviors.[101] In one study, children whose parents received the training showed a 63% reduction in problem behaviors compared to a 17% reduction for children whose parents received a nonbehavioral (control) treatment.[102] Another study demonstrated that behavioral parent training was more effective than the typical, eclectic treatment offered by community mental health clinics for children with disruptive behavior problems.[103]

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For children with behavior problems, behavioral parent training can result not only in increased compliance with their parents' instructions but also a greater degree of compliance than that typically exhibited by children who have no significant behavior problems.[104] Besides changing children's behaviors, the training modifies parents' interactions with their children[105] and with each other (enhancing marital satisfaction)[106] and may reduce parents' stress.[107] Behavioral parent training also has been part of a multicomponent intervention for preventing serious conduct problems in school-age youth.[108]

The findings regarding the long-term maintenance of behavioral parent training are mixed, with some studies indicating that the effects are consistently maintained over time, as demonstrated in follow-up studies ranging from 4 to 10 years,[109] and others showing a decrease in the effects over time.[110] However, following successful training, transfer to other settings (such as from home to school)[111] and generalization to untreated behaviors[112] may not occur, so additional specific interventions to promote transfer and generalization may be required. One exception is the finding that behavioral parent training specifically for dealing with one child sometimes decreases problem behaviors of siblings.[113]

Relatively little is known about the process of behavioral parent training. A study of its use with recently separated mothers of 6- to 10-year-old sons shed light on the manner in which some of the parenting practices that are part of the training interact and reinforce one another: "positive parenting supported better subsequent monitoring of behaviors, and positive parenting and better monitoring supported subsequent effective discipline."[114] Another study indicated that improvement in child conduct was mediated by increased parent competencies and doing prescribed homework.[115] Understanding these change processes can be used to enhance the effectiveness and efficiency of behavioral parent training.

VARIATIONS OF BEHAVIORAL PARENT TRAINING

A number of modifications of the basic behavioral parent training intervention just described have been made to deal with specific child problems, such as hyperactivity[116] and anxiety.

Confident Kids, a program developed in Australia to train parents to help 4- to 7-year-olds with anxiety,[117] first educates groups of parents in four 2-hour sessions about childhood anxiety and ways in which they may inadvertently reinforce their children's anxiety.[118] Parents are taught strategies to use when their children display anxiety, including graduated in vivo exposure (see Chapter 10) to anxiety-triggering situations. Parents also are taught to recognize and manage their own anxiety. Homework assignments provide practice in the skills they learn.

The second four weekly sessions consist of 20-minute telephone consultations to check on how parents are implementing the skills they learned in the group sessions and to address specific issues for their children. In a recent pilot study with 26 children with anxiety problems that were first identified by health care professionals, Confident Kids reduced the children's anxiety and behavioral inhibitions.[119] This brief and economical intervention that educates and empowers parents is promising, but more rigorous research (larger samples and inclusion of a control group) is needed.

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SUMMARY

1. A token economy is a system for motivating clients to perform desirable behaviors and to refrain from performing undesirable behaviors. Clients earn token reinforcers for the former and lose them for the latter. Tokens can be tangible, such as poker chips, or symbolic, such as points. Clients exchange tokens for backup reinforcers. Token economies most often are used for groups of clients.
2. The basic elements of a token economy are (1) a list of target behaviors, including the number of tokens clients can earn or lose for performing each; (2) a list of backup reinforcers, including the token cost of each; (3) the type of token used; and (4) specific procedures and rules for running the token economy.
3. The Community Training Center, a day treatment program for individuals previously hospitalized for chronic psychiatric disorders, employed a token economy to motivate learning daily living and social skills needed for independent living. The Community Training Center was run as a school in which the skills were taught in classes. The program was shown to be superior to other comparable day treatment programs.
4. Achievement Place was a home-style, residential rehabilitation program for juveniles in trouble with the law that employed a token economy. Points were earned for appropriate social behaviors, academic performance, and daily living behaviors; points were lost for inappropriate behaviors. The program was effective while the clients were in treatment and up to a year afterward.
5. Token economies have been applied to teach self-care and daily living skills to clients with intellectual disability and to modify classroom conduct and academic performance in schoolchildren.
6. Token economies have been used with both individuals and small groups, such as families.
7. Evidence from reversal and multiple baseline studies clearly shows that token economies can modify clients' target behaviors. However, treatment gains often decline rapidly when token reinforcement is discontinued unless specific procedures to foster durability of change are instituted. Such procedures include gradually withdrawing tokens while increasing natural reinforcers, using intermittent reinforcement, and establishing the same reinforcement contingencies used in the token program in clients' natural environments.
8. A contingency contract is a written agreement that specifies the relationship between target behaviors and their consequences for a particular client and responsibilities of all the participants in the contract.
9. Behavioral parent training involves teaching parents behavior therapy procedures to effectively change their children's noncompliant and disruptive behaviors. The major therapy procedures taught are positive reinforcement, differential reinforcement, and time out from positive reinforcement.

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CHAPTER 10



Exposure Therapy:
Brief/Graduated

Variations of Exposure Therapy

Systematic Desensitization

Progressive Relaxation as a Competing Response to Anxiety

PARTICIPATION EXERCISE 10-1 Progressively Making a Difference in Your Life With Progressive Relaxation

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IN THEORY 10-1 How Does Brief/Graduated Exposure Therapy Work?

All Things Considered: Brief/Graduated Exposure Therapy

SUMMARY

REFERENCE NOTES

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When something makes you anxious or fearful, the last thing you want to do is re-experience it. But often that is the best way to reduce your distress—the common wisdom of getting back on the horse that has just thrown you. **Exposure therapies** are used to treat anxiety, fear, and other intense negative emotional reactions (such as anger) by exposing clients—under carefully controlled and safe conditions—to the situations or events that elicit their emotional reactions.

The terms *anxiety* and *fear* will be used interchangeably to refer to intense, inappropriate, and maladaptive reactions that are characterized by uneasiness, dread about future events, a variety of physical responses (such as muscle tension, increased heart rate, and sweating), and avoidance of the feared events.[a] (Incidentally, the word *anxiety* comes from the Latin *anxius*, which means "constriction or strangulation.")

Some strong fears are realistic and adaptive, such as the fear of walking alone at night in high-crime neighborhoods. Further, mild anxiety can be adaptive when it motivates us to act. For example, most students require some anxiety about an upcoming exam to get them to study.

Anxiety becomes problematic when its intensity is disproportionate to the actual situation and it interferes with normal, everyday functioning. Anxiety disorders are the most prevalent psychological problem in the United States; between 24% and 42% of the population will suffer from an anxiety disorder in their lifetime, and, in any given year, more than 18% of the population do.[1]

The goal of exposure therapies is to reduce clients' anxiety to a level that allows them to function effectively and feel comfortable.

VARIATIONS OF EXPOSURE THERAPY

When ordering in some restaurants, you start with a basic dish. Then you customize it by specifying how you want it cooked (for example, grilled) and for how long (for instance, medium-rare) and by picking and choosing toppings and sides. Even the basic dish may be a variation involving "holding" an ingredient (such as no cheese on your cheeseburger) or changing a main component (such as substituting turkey for corned beef in a Reuben sandwich). As you are about to see, exposure therapy involves an analogous process. The customization involves four variables (which are depicted in Figure 10-1, page 220).

1. *Paradigm of exposure*. There are two basic paradigms of exposure therapy. **Brief/graduated exposure therapy** exposes the client to threatening events (a) for a *short period* (ranging from a few seconds to a few minutes) and (b) *incrementally,* beginning with aspects of the events that produce minimal anxiety and progressing to more anxiety-evoking aspects. Graduated exposure is a prime example of the stepwise progression that characterizes many behavior therapy procedures. In contrast, **prolonged/intense exposure therapy** exposes the client to threatening

[a]Early theorists made a distinction between fear and anxiety. *Fear* referred to apprehension concerning a tangible or realistic event, whereas *anxiety* referred to apprehension about something intangible or unrealistic. Some theorists have considered fear to be emotional and anxiety to be cognitive in nature (for example, Beck & Emery, 1985). In general, behavior therapists have not found it useful to distinguish between the two concepts (for example, Rachman, 1990), which is the position I have adopted in this book.

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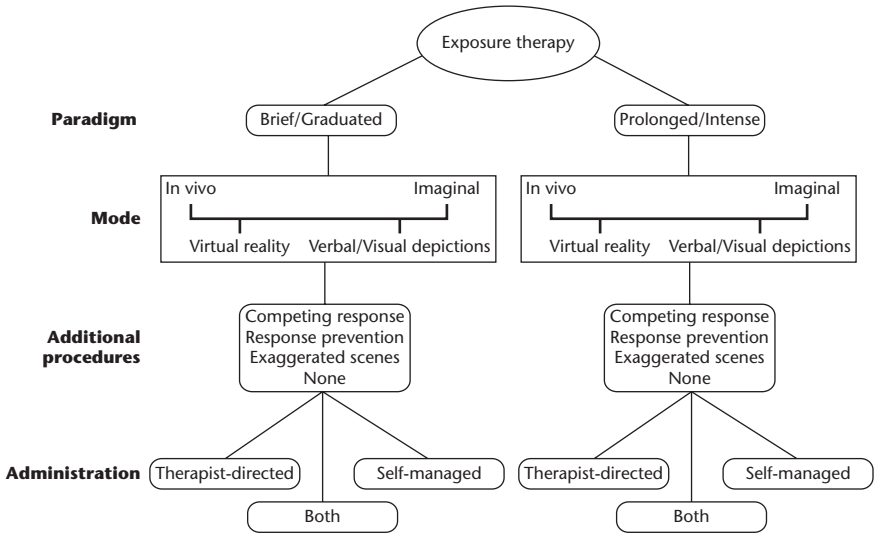


FIGURE 10-1
Variations of exposure therapy
Source: © 2008 Michael D. Spiegler.

events (a) for a *lengthy period* (usually 10 to 15 minutes at a minimum and sometimes more than an hour) and (b) at a *high intensity* from the outset.

Although many applications of exposure therapy fit neatly into one of the two paradigms, in some applications they do not. For instance, a client may be exposed to anxiety-evoking stimuli for an extended period, but the stimuli are introduced incrementally; this means that it is prolonged/graduated exposure, a hybrid.

2. *Mode of exposure*. The mode of exposure in both paradigms can occur in four basic ways that fall on a continuum. At one end is *in vivo exposure*—actually encountering the event (such as taking a flight in the case of fear of flying). At the other end is *imaginal exposure*—vividly imagining the event, as one does in a daydream (for example, visualizing taking a flight). Close to the in vivo end of the continuum, *virtual reality* technology allows clients to be exposed to anxiety-evoking events through interactional computer simulations that appear almost real.[2] Toward the imaginal end, clients can listen to detailed *verbal descriptions*[3] (read by the therapist or client) or view *visual* (video) *depictions*[4] of anxiety-evoking events.
3. *Additional procedures*. Exposure therapies may use one or more additional procedures. The two most common additional procedures are use of a competing response and response prevention. Using a *competing response,* the client engages in a behavior that competes with anxiety, such as relaxing muscles while visualizing an anxiety-evoking event. With *response prevention,* the client is kept from engaging in the maladaptive avoidance or escape behaviors he or she typically uses to reduce anxiety, such as repeatedly washing one's hands because of the possibility of having touched something containing germs.
4. *Administration of exposure*. The exposure can be either *therapist-administered* in or outside therapy sessions[5] or *self-managed* by the client outside of the

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sessions.[6] Or both methods can be used, beginning with therapist-administered exposure (as you will see in Case 10-4 later in the chapter).

If the variety of paradigms, modes, and other procedures that make up exposure therapies is slightly overwhelming, have no fear. You will be gradually exposed to examples of exposure therapy procedures that mix and match these variables, and in context, their use will become clear.

So let's see what exposure therapy looks like in practice. We begin with the brief/graduated paradigm (which includes systematic desensitization, in vivo desensitization, and virtual reality exposure therapy) because it was the first to be developed; in the next chapter, we turn to the prolonged/intense paradigm (in vivo and imaginal flooding).

SYSTEMATIC DESENSITIZATION



Courtesy of Joseph Wolpe

Joseph Wolpe

Systematic desensitization, developed by Joseph Wolpe more than 50 years ago, was the first exposure therapy and the first major behavior therapy.[7] In **systematic desensitization**, the client imagines successively more anxiety-arousing situations while engaging in a behavior that competes with anxiety (such as skeletal muscle relaxation). The client gradually (systematically) becomes less sensitive (desensitized) to the situations. The therapy involves three steps:

1. The client learns a response that competes with anxiety.
2. The specific events that cause anxiety are ordered in terms of the level of anxiety they engender.
3. The client repeatedly visualizes the anxiety-evoking events, in order of increasing anxiety, while performing the competing response.

PROGRESSIVE RELAXATION AS A COMPETING RESPONSE TO ANXIETY



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Edmund Jacobson

Skeletal muscle relaxation is the most frequently used competing response in systematic desensitization (other competing responses will be discussed later). Muscle relaxation counters some of the physiological components of anxiety, including increased muscle tension, heart rate, blood pressure, and respiration.

Training in **progressive relaxation** (also called *progressive muscle relaxation*) involves relaxing various skeletal muscle groups: arms, face, neck, shoulders, chest, abdomen, and legs. When Edmund Jacobson originally developed progressive relaxation in 1929 (making it the oldest behavior therapy technique), it required as many as 200 hours of training.[8] However, today progressive relaxation, as it is used in systematic desensitization, requires far less training and sometimes can be administered in a single session.[9] Clients first learn to differentiate relaxation from tension by tensing and then releasing each set of muscles (see Photo 10-1, page 222). Later, they learn to induce relaxation without first tensing their muscles.[10] While the client is sitting or reclining comfortably, the therapist guides the client through the relaxation process. Clients practice progressive relaxation at home, often with a prerecorded CD of the relaxation instructions. The following is an excerpt from relaxation instructions:

> Close your eyes, settle back comfortably. . . . Let's start with your left hand. I want you to clench your left hand into a fist, clench it very tightly and study those tensions, hold it . . . *[5-second pause]* and now release the tension. Relax your left hand and let it rest comfortably.

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PHOTO 10-1
Progressive relaxation teaches clients to relax their skeletal muscles by first tensing and then relaxing various muscle groups. Clenching the fist results in tension in the hand, wrist, and forearm.

> Just let it relax . . . *[15-second pause]*. Once again now, clench your left hand . . . clench it very tightly, study those tensions . . . *[5-second pause]* and now release the tension. Relax your hand and once again note the very pleasant contrast between tension and relaxation.

Progressive Relaxation as a Stand-Alone Treatment

In addition to being used as a competing response for anxiety in systematic desensitization, progressive relaxation alone can be effective in treating anxiety disorders and in some cases is as effective as exposure therapy.[11] By itself or in combination with other treatments, progressive relaxation is used to treat anxiety associated with a wide range of disorders, including schizophrenia, substance abuse, and high stress in college students and call center agents.[12] It also is used to treat anxiety associated with a host of physical problems, including asthma, eczema (skin inflammation), headaches, hypertension, pain, side effects of chemotherapy, postsurgical distress, complicated pregnancy, multiple sclerosis, and insomnia.[13]

Progressive relaxation most often is taught to clients by a live trainer and may be supplemented with audiotaped instructions for home practice. Occasionally, audiotaped instructions are provided without any live instruction. A third alternative is immersive video that involves virtual reality technology; an initial comparison of immersive video and live instruction has shown that they are comparable.[14]

If you'd like to learn progressive relaxation, Participation Exercise 10-1 will guide you through the process. It involves practice over several days, but you should read through it now so that you will see what is involved when clients learn progressive relaxation.

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PARTICIPATION EXERCISE 10-1

Progressively Making a Difference in Your Life With Progressive Relaxation

Progressive relaxation can benefit your psychological and physical well-being. In this exercise, you will learn progressive relaxation in two phases. In the first phase, you will tense each muscle group before relaxing it. This procedure will make you aware of the sensations associated with muscle tension and with relaxation and will teach you to differentiate between these two sensations. In the second phase, you will relax your muscles without first tensing them.

Preparation

A recliner is often used for learning and practicing progressive relaxation, but any comfortable, firm surface on which you can recline or lie down (such as a rug, mat, or bed) will do. Find a location free of distractions and then ensure that you won't be interrupted by turning off your phone and placing a "Do Not Disturb" sign on the door. If you are interrupted, just resume where you left off.

Place this book, opened to Table 10-1, next to you so that you can read the specific relaxation instructions for each muscle group. Loosen tight clothing and remove your shoes and any articles of clothing or jewelry that might interfere with the relaxation exercises. Recline or lie on your back with your legs slightly apart and your arms at your sides. Adjust your body so that you are comfortable. To remove visual distractions, keep your eyes *lightly* shut (except when you read the relaxation instructions in Table 10-1, of course).

TABLE 10-1
Tensing Instructions for Learning Progressive Relaxation

Muscle Group	Tensing Instructions
1. Dominant hand and forearm (right hand if you're right-handed)	1. Make a tight fist.
2. Dominant biceps	2. Push your elbow down against the surface you are on, and simultaneously pull the elbow inward toward your body.
3. Nondominant hand and forearm	3. Follow instruction 1.
4. Nondominant biceps	4. Follow instruction 2.
5. Upper part of face (forehead and scalp)	5. Lift your eyebrows as high as you can. (Alternative: Make an exaggerated frown.)[b]
6. Central part of face (upper cheeks and nose)	6. Squint your eyes tightly and simultaneously wrinkle up your nose.
7. Lower part of face (jaw and lower part of cheeks)	7. Clench your teeth together and pull the corners of your mouth back. *Caution:* Do not clench your teeth very hard—just enough to feel tension in your jaw and cheeks.

(*continued*)

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TABLE 10-1 (*continued*)

Muscle Group	Tensing Instructions
8. Neck and throat	8. Pull your chin down toward your chest and simultaneously try to keep you chin from touching your chest. (You should feel a small amount of trembling or shaking in your neck.)
9. Chest, shoulders, and upper back	9. Take a deep breath and hold it; at the same time, pull your shoulders back as if you were trying to make your shoulder blades touch each other. (Alternative: Pull your shoulders upward as if you were trying to touch your shoulder blades to your ears. It may help to imagine that puppet strings are attached to your shoulders and they are pulling your shoulders upward.)[b]
10. Abdomen	10. Make your stomach hard, as if you were bracing before being hit in the stomach. (Alternatives: Pull your stomach in as far as it will go. Or push your stomach out as far as it will go.)[b]
11. Dominant thigh (upper leg)	11. Keeping your leg straight, lift it a few inches off the surface you are on.
12. Dominant calf (lower leg)	12. Pull your toes upward toward your head (without moving your legs).
13. Dominant foot	13. Point your toes downward, turn your foot inward, and curl your toes downward (as if you were burying them in the sand). *Caution:* Do not tense these muscles very hard or very long—just enough to feel the tightness under your arch and the ball of your foot for about 3 to 5 seconds. (You may also feel some tension in your calf.)
14. Nondominant thigh	14. Follow instruction 11.
15. Nondominant calf	15. Follow instruction 12.
16. Nondominant foot	16. Follow instruction 13.

[b] Use the alternative tensing strategy only when the first one presented does not create tension in the appropriate muscle group.

Before you begin, remember two things. Concentrate on the sensations associated with tension and with relaxation; when your mind wanders, just refocus on the sensations in your muscles. And do not fall asleep while practicing. (However, once you learn progressive relaxation, you can use it to help you fall asleep.)

Phase 1: Tension and Relaxation

When you are ready to begin, take a few deep breaths. Start with the first of the 16 muscle groups (instruction 1 in Table 10-1). *Tense those muscles tightly for about 5 seconds without straining them* (count to yourself, "one-thousand-one, one-thousand-two," and so on). You should definitely feel tension in your muscles, but it should not hurt. As you tense your muscles, concentrate on the physical sensations you experience.

(*continued*)

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After 5 seconds of tensing, say "relax" or "calm" to yourself and *gradually* relax the muscles you have just tensed. *Make your muscles loose; smooth them out*. Pay attention to the sensations of relaxation, *noting the difference between relaxation and tension*. Continue relaxing your muscles for at least 30 seconds, until they feel quite relaxed. Now repeat the tension–relaxation sequence for the same muscle group (instruction 1). Next, proceed to the next muscle group (instruction 2) and go through the tension–relaxation sequence twice. Continue until you have gone through the tension–relaxation sequence twice for each of the muscle groups (instructions 1 through 16). This should take about 45 minutes at first, and less time as you practice.

After you have tensed and relaxed each of the muscle groups twice, remain in a relaxed state for several minutes. If you feel tension in any of your muscles, relax away that tension by making your muscles *loose and smooth.*

To conclude your practice sessions, slowly count backward from 5 to 1, following these instructions for each number:

- At *5* begin to move your legs and feet.
- At *4* move your arms and hands.
- At *3* move your head and neck.
- At *2* open your eyes.
- At *1* stretch (as you do when you wake up in the morning).

When you reach *1, you should feel relaxed and calm, as if you had just awakened from a restful sleep*. Sit up slowly. When you are ready, stand up.

You should devote at least three practice sessions to tensing and relaxing each of the muscle groups (instructions 1 through 16); do more practice sessions if you still are feeling tension in any of your muscles at the end of a session.

Phase 2: Relaxation Only

In this phase of training, you will just relax your muscles (without any initial tensing) by concentrating on making your muscles *loose and smooth*. Begin with the first muscle group (muscle group 1 in Table 10-1) and relax those muscles as deeply as you can. Even when you think your muscles are completely relaxed, it is always possible to relax them a bit more. Proceed through each of the muscle groups, relaxing each for at least 30 seconds, until they are completely relaxed. When you have relaxed all of the muscle groups, follow the same procedure described earlier for concluding the practice session. Remember: Now you are *only relaxing* your muscles; do not tense them first.

Spend a minimum of two sessions just relaxing each of the 16 muscle groups. Many people find that a few of their muscle groups are especially hard to relax, so you may need to spend more time practicing relaxing "troublesome" muscles.

ANXIETY HIERARCHY CONSTRUCTION

An **anxiety hierarchy** is a list of specific events that elicit anxiety, ordered in terms of increasing levels of anxiety. To construct an anxiety hierarchy, clients, often with their therapist's assistance, identify a number of specific, detailed *scenes* that would make them anxious and then order the scenes from highest to lowest anxiety evoked. Once in order, a SUDs (subjective units of discomfort; see

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Chapter 6, page 98) rating maybe assigned to each hierarchy scene. Optimally, there will be approximately equal intervals of SUDs between the scenes. If there is an especially large interval of SUDs, compared with the average interval, additional scenes are added so that the transition between scenes is gradual.

Anxiety hierarchies generally consist of events that share a common theme (see Table 10-2). When a client is anxious about more than one class of situations,

TABLE 10-2
Two Examples of Anxiety Hierarchies (with least anxiety-evoking items at the bottom)

Item		*SUDs*	*Item*		*SUDs*
	DEATH			FLYING	
19.	Death of a close friend or loved one	100	20.	Plane is flying in rough weather	100
18.	Death of strangers in a dramatic fashion	85	19.	Plane is touching down on runway	95
17.	Watching horror movies	80	18.	Pilot turns on seatbelt sign and announces turbulence ahead	90
16.	Seeing others in dangerous situations	75	17.	Plane is banking	85
15.	Hearing about a fatal and especially gruesome disease	70	16.	Plane is descending for landing	80
14.	Being around guns	60	15.	Announcement of preparation for final descent for landing	75
13.	Swimming in the ocean at night	55	14.	Plane is taking off	65
12.	Riding as a passenger in a car on the highway	50	13.	Plane is taxiing to the runway	60
11.	Flying in an airplane	48	12.	Plane is climbing to cruising altitude	55
10.	Driving in a car on the highway	45	11.	Plane is cruising to good weather	50
9.	Thoughts of fire	43	10.	Sitting down and fastening seatbelt	45
8.	Climbing on high objects	40	9.	Announcement that the plane is ready for boarding	40
7.	Being alone in a house at night	38	8.	Boarding the plane	35
6.	Thinking about auto crashes	35	7.	Waiting on line to board the plane	30
5.	Thinking of earthquakes	25	6.	Checking in at the airport	25
4.	Thinking of witches and ghosts	20	5.	Driving to the airport	22
3.	Swimming in a pool at night	15	4.	Calling the airport to find out if the flight is on time	20
2.	Seeing a snake	10	3.	Packing for the plane trip	15
1.	Hearing a siren	5	2.	Purchasing ticket 10 days before the flight	10
			1.	Making reservations 3 weeks before the flight	5

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multiple hierarchies are constructed. Completing Participation Exercise 10-2 will give you the experience of constructing an anxiety hierarchy. You can do the exercise before you continue reading (it will take about 10 minutes) or at a later time, but you should read it now to fully appreciate the nature of anxiety hierarchies.

PARTICIPATION EXERCISE 10-2

Constructing an Anxiety Hierarchy

From Table 10-3, choose a situation in which you could easily imagine yourself feeling anxious. Alternatively, choose a situation that actually makes you anxious. Then complete the following steps in order.

1. Assume the role of a person who is experiencing anxiety related to the situation.
2. Write eight brief scenarios (scenes) related to the situation that would cause you to experience varying levels of anxiety. Be sure you include one scenario that would elicit very high anxiety and one that would elicit very little anxiety.
3. Assign SUDs to each scenario (using a scale of 1 to 100).
4. Write the numbers 8 through 1 in descending order on a sheet of paper. List the scenarios from lowest anxiety (SUDs) to highest anxiety (SUDs), with number 1 being lowest.
5. Optimally, the six scenarios between your lowest and highest will be approximately spaced at even intervals of SUDs levels. For example, if your lowest scenario was rated 5 and your highest 95, then the six intermediate scenarios should be *roughly 15* SUDs apart. If you find that you have large gaps, fill them in with additional scenarios that you would assign intermediate SUDs to.

You have now constructed an anxiety hierarchy that could be used in systematic desensitization.

TABLE 10-3
Hypothetical Situations to Be Imaginally Role-Played for Constructing an Anxiety Hierarchy

1. You receive an email instructing you to make an appointment with the dean before the end of the week to discuss "concerns" about your academic standing. You know that you have not been doing as well as you would like in your classes, but you didn't know your academic standing was in jeopardy.
2. You have a dentist appointment next week to have several cavities filled. You always have hated going to the dentist, and you have put off this visit for months.
3. You got into an automobile accident with your parents' car after borrowing it for the weekend. The accident was your fault, and the damages are estimated at $2,800. You have not yet told your parents, but you are supposed to return the car in an hour.
4. You have a final exam in 2 days. The exam is in your most difficult course, and you need a high grade on the exam just to pass the course. You haven't started studying for the exam yet, and you have two other final exams before the one you are dreading most.
5. You have to give an oral presentation in one of your classes in 2 days. You have always had difficulty speaking in public, and this is a particularly large class. One-third of your grade is based on this oral presentation.

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DESENSITIZATION

Desensitizing anxiety-evoking events begins as soon as the client has learned progressive relaxation (or another competing response) and has constructed an anxiety hierarchy. The therapist instructs the client, who is seated or reclining comfortably, to relax all of his or her muscles. The therapist then describes scenes from the anxiety hierarchy for the client to imagine, starting with the lowest item on the hierarchy. The scenes are described in detail and are specific to the client. For example, "initially greeting a date" might be elaborated as follows:

> You arrive at your date's apartment and knock on the door. There is no immediate answer and the waiting seems endless. Finally, your date opens the door, smiles, and says, "Hi!"

The client imagines each scene for about 15 seconds at a time. Whenever the client experiences anxiety or discomfort, the client signals the therapist, usually by raising a finger. When this occurs, the therapist instructs the client to "stop visualizing the scene and just continue relaxing"; thus, the client visualizes anxiety-evoking scenes *only when relaxed*. The aim is for relaxation to replace the anxiety previously associated with the scene. Each scene in the hierarchy is presented repeatedly until the client reports little or no discomfort. Typically, clients use SUDs to report the degree of anxiety they feel while visualizing scenes. When the anxiety associated with a scene has reached a low level, the next highest scene in the hierarchy is visualized. Case 10-1 illustrates the desensitization process.

CASE 10-1

Systematic Desensitization for Severe Test Anxiety[15]

A 24-year-old female art student entered therapy complaining of severe test anxiety that had caused her to fail a number of tests. When she discussed her anxiety with the therapist, the therapist discovered that other situations also made her anxious. Accordingly, the client and therapist constructed four different anxiety hierarchies: taking tests, witnessing discord between other people, being scrutinized by others, and being devalued by others. The therapist taught the client progressive relaxation, and she practiced it at home between therapy sessions.

The desensitization process began with the therapist's instructing the client to become deeply relaxed. Then, the therapist said:

> I am now going to ask you to imagine a number of scenes. You will imagine them clearly and they will generally interfere little, if at all, with your state of relaxation. If, however, at any time you feel disturbed or worried and want to attract my attention, you will be able to do so by raising your left index finger. First, I want you to imagine that you are standing at a familiar street corner on a pleasant morning watching the traffic go by. You see cars, motorcycles, trucks, bicycles, people, and traffic lights; and you can hear the sounds associated with all these things. *[15-second pause]* Now stop imagining that scene and shift all your attention once again to relaxing. If the scene you imagined disturbed you even in the slightest degree,

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I want you to raise your left index finger *now. [Client does not raise finger.]* Now imagine that you are at home studying in the evening. It is the 20th of April, exactly a month before your examination. *[5-second pause]* Now stop imagining the scene. Go on relaxing. *[10-second pause]* Now imagine the same scene again—a month before your examination. *[5-second pause]* Stop imagining the scene and just focus on your muscles. Let any tension go, and enjoy your state of calm. *[15-second pause]* Now again imagine that you are studying at home a month before your examination. *[5-second pause]* Stop the scene, and now think of nothing but your body and how it is feeling. *[5-second pause]* If you felt any disturbance whatsoever to the last scene, raise your finger. *[Client does not raise finger.]* If the amount of disturbance decreased from the first presentation to the third, do nothing; otherwise, again raise your finger. *[Client does not raise finger.]* Just keep on relaxing. *[15-second pause] [At this point, the therapist switched to another anxiety hierarchy.]* Imagine that you are sitting on a bench at a bus stop and across the road are two strange men whose voices are raised in an argument. *[10-second pause]* Stop imagining the scene and just relax. *[10-second pause] [The process continued as it did for the test anxiety hierarchy.]* Now I am going to count backward from five to one, and when I get to one, you will open your eyes, feeling very calm and refreshed.

A total of 17 sessions were required for the client to report no anxiety while visualizing the highest scene in each hierarchy. Following therapy, the client successfully passed a series of examinations, which demonstrated that the anxiety reduction transferred from the imagined scenes to the actual situations.

Three features of Case 10-1 are typical of systematic desensitization. First, before presenting scenes from the hierarchy, the therapist assessed if the client was deeply relaxed by presenting a neutral scene (standing on a street corner)—a scene not expected to elicit anxiety. Second, scenes from more than one hierarchy were visualized in the same session. Third, the systematic desensitization was relatively brief. Although an entire therapy session could be devoted to systematic desensitization, typically only part of the session is utilized.

ESSENTIAL AND FACILITATIVE COMPONENTS OF SYSTEMATIC DESENSITIZATION

Therapies usually have both essential and facilitative components. An *essential component* is a procedure that is necessary for the therapy to be effective; the therapy will not work without it. A *facilitative component* is a procedure that is not always necessary but that may enhance the therapy's effectiveness and efficiency. Researchers isolate the essential components by systematically omitting components and then comparing the abbreviated treatment with the full treatment.[16] If an abbreviated treatment is shown to be as effective as the complete one, then the missing component is not essential.

The three major components of systematic desensitization are (1) *repeated safe exposure* to anxiety-evoking situations (2) in a *gradual manner* (3) while

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engaging in a *competing response*. Research indicates that generally, desensitization can be effective when the client is exposed to the highest items in the hierarchy first[17] or only to the highest items,[18] and desensitization with and without relaxation training can be equally effective.[19] The only essential component is *repeated exposure to anxiety-evoking situations without the client experiencing any negative consequences*.[20] However, there are exceptions.

The facilitative components—gradual exposure and engaging in a competing response—are more likely to be beneficial when the client's anxiety is severe. For example, in a study with cancer patients, both gradual exposure and relaxation were *necessary* to alleviate nausea that patients experienced in anticipation of chemotherapy.[21] One effect of the facilitative components of desensitization may be to render the therapy more acceptable (less disturbing) to clients, which in turn may motivate clients to fully participate in their treatment and to remain in therapy.

VARIATIONS OF SYSTEMATIC DESENSITIZATION

The standard systematic desensitization procedures just described are still widely used. Since Wolpe developed them, a number of variations have been devised, including competing responses other than muscle relaxation, target behaviors other than anxiety, group treatment, a coping model of systematic desensitization, and interoceptive exposure.

Other Competing Responses

Skeletal muscle relaxation is not always the most appropriate competing response. Some clients, especially young children but also some adults, have difficulty learning progressive relaxation. **Emotive imagery** employs pleasant thoughts to counter anxiety and often is used with children.[22] It was part of the treatment of Paul's school-phobic behavior in Case 4-1. Amusing tasks on an iPad were used to compete with anxiety in the treatment of selective mutism in a 17-year-old girl.[23] Other examples of competing responses include eating, listening to music, and behaving assertively.

Appreciating humor and laughing also can compete with anxiety.[24] Indeed, research in psychology and medicine has demonstrated the effectiveness of humor and laughter in treating a wide array of problems,[25] including coping with AIDS.[26] One advantage that humor and laughter have over progressive relaxation is that the client does not have to learn the response. Thus, with laughter as the competing response, it is possible to carry out "crisis" desensitization in a single session, as Case 10-2 illustrates.

CASE 10-2

One-Session Systematic Desensitization for Fear of Humiliation[27]

A 20-year-old woman contacted a behavior therapist with a pressing problem. She was distressed about having to attend a banquet that evening because she feared that she might be embarrassed by her former boyfriend and his new girlfriend. The client and the therapist constructed an anxiety hierarchy of humiliating situations that might arise at the banquet. The therapist presented the scenes to the client with details that elicited laughter. In one scene, for example, the

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client pictured herself sitting at the banquet and seeing her old flame enter the room. In describing the scene, the therapist added that the man was dressed in tights. The client found the recast scenes quite humorous, and she completed the hierarchy in a single therapy session. Several hours later, she attended the banquet and experienced only minor discomfort.

Other Target Behaviors

Anxiety is, by far, the most frequent problem treated by systematic desensitization. However, systematic desensitization as a general model of treatment is applicable to diverse problems, including anger,[28] complicated grief,[29] asthmatic attacks,[30] insomnia,[31] motion sickness,[32] nightmares,[33] problem drinking,[34] compulsive buying,[35] gambling,[36] sleepwalking,[37] speech disorders,[38] body image disturbances,[39] and hallucinations.[40] Even racial prejudice can be influenced by desensitization. In a racially integrated high school in the South, White students who reported anxiety related to unwanted prejudicial feelings received 3 months of biweekly desensitization sessions.[41] Following treatment, not only did the students report less racial-related anxiety, but they also acted in ways that indicated that their prejudice had declined (for example, attending social functions involving predominantly African Americans, which they would not have done before the treatment).

Case 10-3 illustrates the application of systematic desensitization to the treatment of anger, using laughter as a competing response. The woman's anger was intense and sometimes resulted in her physically abusing her child and husband.

CASE 10-3

Systematic Desensitization for Anger With Laughter as the Competing Response[42]

A 22-year-old woman referred herself for treatment because of her reported inability to control her extreme anger toward her husband and 3-year-old son. She described her son as "a very active child whose almost constant misbehavior appeared to be attempts to antagonize his mother and gain her attention." Behavioral observations of the mother and child supported this description. The client reported that she generally reacted to her son's misbehavior by "screaming at the top of her voice, jumping up and down, smashing things, and physically attacking [him]." She said she could not control these responses. The client also reported that, when angry, she screamed at her husband and berated him, and she occasionally physically assaulted him. At the time of her self-referral, the client indicated that she had been contemplating suicide because "my temper makes everyone, including me, miserable."

After seven sessions of systematic desensitization using muscle relaxation as the competing response, little progress was made. Because of the strength of the client's anger responses, she was able to imagine only the most innocuous scenes involving her son or husband without experiencing anger. At this point, it was

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decided to try laughter as a competing response. When the client signaled that a scene evoked anger, the therapist introduced and emphasized humorous aspects of the situation—generally in the form of slapstick comedy—such as in the following scene.

> As you're driving to the supermarket, little Pascal the Rascal begins to get restless. Suddenly he drops from his position on the ceiling and trampolines off the rear seat onto the rear view mirror. From this precarious position, he amuses himself by flashing obscene gestures at shocked pedestrians. As you begin to turn into the supermarket . . . Pascal alights from his perch and lands with both feet on the accelerator. As the car careens through the parking lot, you hear Pascal observe, "Hmm . . . 25–80 in 2 seconds . . . not bad." But . . . your main concern is the two elderly . . . women that you're bearing down upon. [They are] . . . limping toward the door of the supermarket clutching their little bargain coupons. One, who is clutching a prayer book in the other hand, turns and, upon seeing your car approaching at 70 mph, utters a string of profanities, throws her coupons into the air, . . . sprints out of the way, and does a swan dive into a nearby [ditch]. The other [elderly woman] . . . nimbly eludes your car and takes refuge in a nearby shopping cart, which picks up speed as it rolls downhill across the parking lot.

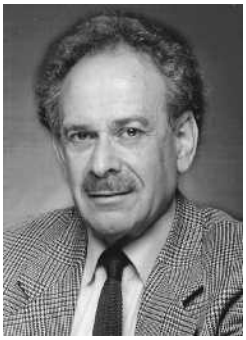
The client reacted to the scenes with laughter and amusement, and rarely reported experiencing anger in response to any of the scenes in the hierarchy. Subsequently, she reported major reductions in the frequency and intensity of her anger responses to her son and husband. She also reported that she was able to remain calm in situations that previously had infuriated her. The client's self-reports were confirmed by relatives and by comparing behavioral observations of playroom interactions with her son before and after treatment. Moreover, the client reported that she no longer experienced depressive episodes and suicidal thoughts.

Group Systematic Desensitization

Groups of clients can be treated using systematic desensitization by making slight modifications in the standard procedures.[43] Progressive relaxation is simultaneously taught to the entire group. When the clients share a common problem (such as public speaking anxiety), a **group hierarchy** is constructed, which combines anxiety-evoking situations from each client.[44] When a group hierarchy is not appropriate, individual hierarchies are used; the hierarchy items are written on cards to which each client refers during desensitization.

When one of the clients signals that he or she is experiencing anxiety, the scene is terminated and then repeated for all group members. Although this procedure is inefficient for some group members, it does not decrease the effectiveness of the treatment, as repetition is helpful. Compared with individually administered desensitization, group desensitization requires less therapist time, and sharing similar problems and solutions can be beneficial for clients.

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Courtesy of Marvin R. Goldfried

Marvin Goldfried

Coping Desensitization

In standard desensitization, anxiety associated with specific stimuli is replaced with a competing response. In **coping desensitization**, a variation developed by Marvin Goldfried, the *bodily sensations* of anxiety, rather than specific stimuli, are used to cue the client to engage in a coping response, such as muscle relaxation.[45] When a client signals that a scene is producing anxiety, the therapist instructs the client to "stay with the scene and use relaxation to cope with the anxiety"—rather than terminating the scene and just relaxing (as in standard desensitization). In addition, the client continues visualizing the anxiety-evoking scene while thinking such thoughts as, "I'm handling things; I don't have to be anxious." Muscle relaxation is just one possible coping response clients might use while visualizing a scene that elicits anxiety. Other examples include visualizing themselves approaching the feared stimulus or acting assertively. For religious clients, praying has been used as a coping response.[46] A hybrid form of coping desensitization called *active-imaginal exposure* has clients physically perform coping responses while imagining the feared stimulus.[47] An example might involve a client who walks down the street in a nonthreatening, friendly manner toward an imagined feared dog (in other words, as if there were a dog at the end of the block).

In coping desensitization, the anxiety hierarchy need not have a common theme, as it often does in standard desensitization. Because bodily sensations generally associated with anxiety are desensitized, rather than specific anxiety-producing stimuli, the hierarchy items only must result in increasing levels of anxiety. This feature makes coping desensitization applicable to nonspecific anxiety (generalized anxiety disorder).[48]

Coping desensitization is an example of the self-control approach that is inherent in many behavior therapies.[49] First, clients practice reducing their anxiety while visualizing anxiety-evoking scenes by imagining themselves actively coping with the situation. Then they use bodily sensations associated with anxiety as reminders to use coping skills whenever they experience these sensations in their daily lives.

From the few studies that have evaluated the effectiveness of coping desensitization, it appears to be at least as effective as standard desensitization in reducing anxiety.[50] Additionally, there is some evidence that the coping skills generalize to unrelated anxiety-evoking events other than the ones specifically treated in therapy.[51]

Anxiety Management Training, originally developed by Richard Suinn and Frank Richardson,[52] is a variant of coping desensitization in which clients learn to use feelings of anxiety as cues to begin relaxing or to use emotive imagery. The training is highly structured and brief (six to eight sessions)[53] and does not employ an anxiety hierarchy. Although Anxiety Management Training typically is used to treat anxiety disorders,[54] it has been applied to other negative emotions, including anger associated with road rage.[55]

Coping Cat is a program for children that teaches them to recognize signs of anxious arousal and use the signs as cues to implement anxiety management techniques.[56] Although Coping Cat involves a standard 16-session manual-based protocol, it has been adapted for individual learning styles (such as for children with autism spectrum disorder[57]) and different cultures (for example, Iranian[58]).

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Courtesy of David Barlow

David Barlow

Interoceptive Exposure for Panic Attacks

Panic disorder is characterized by repeated, unexpected, and sudden attacks of intense apprehension and terror, which are accompanied by physical symptoms, such as shortness of breath, dizziness, heart palpitations, and chest pain. Clients with panic disorder are hypersensitive to bodily sensations that can trigger a panic attack (for example, slight chest pain may be misinterpreted as a heart attack).

David Barlow and his colleagues have developed a specific treatment package for panic attacks.[59] The novel treatment component is **interoceptive exposure**, in which the bodily sensations associated with panic attacks are artificially induced while the client visualizes panic-evoking events.[60] *(Interoceptors* are specialized nerve receptors that respond to sensations in internal organs.) For example, increased heart rate can be artificially induced by any strenuous exercise such as quickly climbing stairs and running in place; dizziness by rapidly spinning in a chair; hyperventilation by fast, shallow breathing; feelings of suffocation by breathing through a straw; and gagging or choking by pressing the back of the tongue with a depressor.[61] During the interoceptive exposure, clients cope with their anxiety by viewing the situation and sensations in a less threatening manner. Clients are also taught to use *breathing retraining*—diaphragmatic breathing that results in slow, steady inhalations and exhalations to combat hyperventilation that is often associated with panic attacks.

This treatment package has been found to be highly effective in treating panic disorder in both individual and group treatment[62] as well as social phobia and generalized anxiety disorder.[63] It also has been found to be at least as effective as medication[64] and significantly more effective than medication for long-term maintenance.[65] Recently, interoceptive exposure has been incorporated into treatment packages for agoraphobia (which often involves panic attacks),[66] posttraumatic stress disorder,[67] irritable bowel syndrome,[68] and substance abuse.[69] It also has been successfully modified to fit the cultural beliefs and culture-specific symptom interpretations of Cambodian refugees who have been severely traumatized.[70]

Interoceptive exposure may also be useful in preventing anxiety disorders by targeting *anxiety sensitivity* (fear of anxiety-related symptoms) that predicts the development of anxiety disorders.[71] For example, a single session of interoceptive exposure and psycho-education (compared to a control group) resulted in a substantial reduction in anxiety sensitivity that was maintained at a 6-month follow-up.[72]

A recent study of therapists' delivery and perceptions of interoceptive exposure indicated that therapists' concerns about potential negative side effects were common, despite the fact that they found such effects to be very rare in their own practices. This finding may account for the fact that many therapists report administering interoceptive exposure in low doses,[73] which may be less effective than intense exposure.[74]

SYSTEMATIC DESENSITIZATION IN PERSPECTIVE

More than half a century after Wolpe developed systematic desensitization, it remains a versatile and highly effective and efficient treatment that is still widely practiced.[75] However, it is not applicable to all clients suffering from anxiety. Young children, for example, have difficulty carrying out the procedures.[76] Techniques more suitable for children include emotive imagery, in vivo desensitization (covered later in this chapter), flooding (see Chapter 11), and modeling therapy (see Chapter 12).

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When anxiety is maintained by a skill deficit, systematic desensitization is not an appropriate treatment. For instance, people who have problems with dating often do not know how to act appropriately while on a date. The anxiety they experience in dating situations may be a by-product of the skill deficit rather than the primary maintaining condition of the problem. Thus, the appropriate treatment is skills training (see Chapter 12). When both a skill deficit and anxiety are maintaining conditions of a problem, as is often the case with social anxiety, treatment must address both maintaining conditions.[77]

Clients consider systematic desensitization to be an acceptable treatment. It does not involve much discomfort because clients are gradually and symbolically exposed to anxiety-evoking situations. Further, clients control the process by proceeding at their own pace and terminating exposure when they begin to feel anxious.

Efficiency of Systematic Desensitization

Systematic desensitization is efficient in three ways. First, exposure to problematic situations in one's imagination is less time consuming (for both client and therapist) than in vivo desensitization, which involves venturing into the actual anxiety-provoking situations. In addition, clients do transfer the anxiety reduction they experience with imagined scenes to the real-life situations. Second, compared with traditional psychotherapies that treat anxiety disorders, systematic desensitization requires relatively few sessions. Third, the procedures can be adapted for groups of clients.

Desensitization can be automated by using audio-recorded instructions,[78] written instructions,[79] or computer programs.[80] Self-managed desensitization obviously reduces the amount of time therapists need to spend with clients. In some instances, such procedures can be as effective as therapist-administered treatment.[81] However, self-administered desensitization is used infrequently because it has limitations, especially for clients who are extremely anxious or who have problems with the standard procedures (such as difficulty visualizing scenes).[82] When the treatment is therapist administered, the therapist can modify standard procedures on the spot to handle unexpected problems that arise (as in Case 10-3, where the therapist introduced humorous scenes) and can provide support and encouragement for the client.[83]

Effectiveness of Systematic Desensitization

There is no doubt that systematic desensitization is an effective procedure for treating a variety of anxiety disorders. The findings of hundreds of studies assessing the effectiveness of systematic desensitization over the past 55 years are overwhelmingly positive.[84] As early as 1969, a review of the controlled outcome studies of systematic desensitization concluded that "for the first time in the history of psychological treatments, a specific treatment . . . reliably produced measurable benefits for clients across a broad range of distressing problems in which anxiety was of fundamental importance."[85] Seven years and many studies later, another comprehensive review concluded, "Systematic desensitization is demonstrably more effective than both no treatment and every psychotherapy variant with which it has so far been compared."[86] Moreover, the treatment effects are relatively durable. For example, one study found that 70 clients with dental phobias still were maintaining regular dental checkups between 1 and 4 years after being treated by systematic desensitization.[87]

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IN VIVO DESENSITIZATION

In vivo desensitization essentially is systematic desensitization except that the client is exposed to the actual feared event rather than imagining it. The exposure is brief and graduated, and the client has the option of terminating the exposure if it becomes too uncomfortable.

During in vivo desensitization, clients often employ muscle relaxation to compete with their anxiety as they progress through their anxiety hierarchy. Because clients are using a variety of muscles to actually engage in the behaviors in their hierarchy, they cannot relax all of their skeletal muscles, as in systematic desensitization.[88] However, it is possible for clients to relax all their muscles that are not needed to engage in the actions they are performing and to tense the required muscles only as much as is needed. This procedure is known as **differential relaxation**.[89] For example, standing requires some tension in the neck, back, and leg muscles, but facial, arm, chest, and abdominal muscles do not have to be tensed. Other competing responses used for in vivo desensitization include pleasant images, laughter, and sexual arousal. (In case you are wondering about the last competing response, it's use will be explained later in the chapter.) Sometimes merely the therapist's presence—which is reassuring and calming to the client—competes with anxiety (see Photo 10-2). Case 10-4 illustrates the basic procedures of in vivo desensitization.



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PHOTO 10-2
In this in vivo desensitization session, the young girl who is afraid of dogs is asked to approach the dog while the therapist provides reassurance and support.

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CASE 10-4

Fear of Leaving Hospital Grounds Treated by In Vivo Desensitization[90]

A 36-year-old man who had been hospitalized for 7 years for a serious psychiatric disorder was intensely afraid of venturing outside the hospital. Spending increasing amounts of time outside the hospital grounds was established as an acceleration target behavior.

> After several [differential] relaxation sessions in the office, the relaxation sessions were continued while the patient was seated in an automobile. Each week the automobile was driven by the therapist closer to the gate of the hospital grounds, and then farther and farther away from the hospital, until a 5-mile drive took place during the third session in the car. During each trip outside the hospital, the patient was let out of the car for increasing lengths of time, going from one minute to a half-hour in three weeks. Concomitant with therapy sessions outside the hospital grounds, the patient was encouraged to go on trips with other patients. By the seventh week, the patient had been to a country fair in the neighboring state, an art show across the river, a local fireman's carnival, and a fishing trip. The art show was the only trip on which the therapist accompanied the patient, and even then, he was alone for half of the 2-hour show. After the seventh session, it was no longer necessary to encourage the patient to go out on day passes, since he signed up for passes and outside activities on his own. At the end of seven in vivo [exposure] . . . sessions, the patient felt comfortable enough to venture outside the hospital without the support of the therapist [or other patients].

Case 10-4 is a textbook case of in vivo desensitization. Exposure was graduated both *spatially*, by increasing the distance the patient ventured from the hospital, and *temporally*, by increasing the time he spent outside the car. Differential relaxation was employed as a competing response.

In an unusual application of in vivo desensitization to anorexia nervosa, a 24-year-old man was treated for his pronounced anxiety related to consuming high-fat/high-calorie foods.[91] At the time of treatment, the client reported that in the past year, he had lost approximately 100 pounds through diet and exercise. The anxiety hierarchy consisted of foods that made the client anxious and that he routinely avoided, ranging from a plain bagel to pizza and cookies. The client brought foods listed in his hierarchy to the therapy session, where, encouraged by the therapist, he ate them in hierarchical order. The therapist's support served as a competing response for the client's anxiety. By the 10th session, the client was able to consume as many as 2500 calories a day. By the end of treatment (34th session), he had integrated more foods into his diet and no longer had an intense fear of high-calorie foods.

SELF-MANAGED IN VIVO DESENSITIZATION

Although self-managed systematic desensitization is used occasionally, self-managed in vivo desensitization is used more frequently. Self-managed in vivo desensitization was part of a treatment package for a 28-year-old teacher suffering from

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body dysmorphic disorder[92] (preoccupation with a perceived physical defect that is not noticeable to others[93]). The teacher was convinced that she had a "bad" complexion. She repeatedly checked her face in the mirror to look for blemishes, which significantly interfered with her work and home life. Self-managed in vivo desensitization involved having the client gradually apply less makeup and get physically closer to people at work when she talked to them (which she had avoided because of her "bad" complexion). After the 11th session, the therapist instructed her to wear no makeup at all and to expose herself to a broader range of people in stores and restaurants. By the end of the treatment, she was spending no time checking for physical defects, in contrast to 4 hours a day before treatment.

A number of years ago, commercial airline flight attendants were called stewardesses because they were all women, and good looks seemed to be a major criterion for hiring them. A man who became very anxious while flying, though he needed to fly on a regular basis for business, was advised by his therapist to use the attractiveness and sexual appeal of the stewardesses on his flights as a competing response for his anxiety. Although initially skeptical, the man tried this self-managed in vivo desensitization and found that it was effective in lowering his anxiety.

Case 10-5 is an example of self-managed in vivo desensitization that provides a further illustration of the flexibility of the procedure.

CASE 10-5

Self-Managed In Vivo Desensitization for Fear of Dogs[94]

A man sought the help of a behavior therapist to deal with his overwhelming fear of dogs. Between the first and second therapy sessions, a fortuitous incident occurred. A friend told the client that his dog had just had puppies, and he jokingly asked the client (whom he knew was afraid of dogs) if he wanted one of them. After consulting with his therapist, the client decided to take one of the dogs because he believed he could tolerate a *puppy* in his home.

The situation contained all the essential ingredients for self-managed in vivo desensitization. The client would be exposed to a dog that gradually became bigger. Moreover, his exposure to the dog would be in the context of happy interactions with his children, and the accompanying pleasure would serve as a competing response to his fear of dogs. After 6 months of raising the puppy, the client no longer reported any fear of dogs.

Self-managed exposure clearly is more efficient than therapist-administered exposure. Moreover, clients may be less likely to drop out of therapy when they fully control their own exposure.[95] Self-managed treatment at home can be implemented through the use of treatment manuals written for clients and with the assistance of family members.[96] The therapist may make occasional home visits to ensure that the client is carrying out the exposure correctly.[97] It also is possible for clients to carry out self-managed in vivo desensitization with guidance from the therapist via telephone calls.[98] Telephone-administered therapy has obvious advantages for clients who are housebound or who live far from available therapists.

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Self-Managed In Vivo Desensitization in the Treatment of Sexual Dysfunctions

Self-managed in vivo desensitization is especially useful when the therapist's presence is inappropriate, such as in the treatment of sexual dysfunctions.[99] *Sexual dysfunctions* include diminished sexual desire, problems achieving orgasm, and pain during intercourse. Typically couples, rather than individuals, are treated because sexual dysfunctions are most usefully viewed in the context of a sexual relationship and not as a problem of one of the partners and because the treatment requires a partner.[100]

Anxiety is a frequent maintaining condition of sexual dysfunctions, and in vivo desensitization typically is part of a treatment package for such problems. At home, the couple is instructed to gradually engage in physically intimate behaviors, which are arranged in an anxiety hierarchy. For example, at the bottom of the hierarchy might be holding hands and at the top might be sexual intercourse. The couple's physical intimacies produce sexual arousal (often mild at first), which competes with their anxiety. The couple proceeds up the hierarchy, stopping whenever one partner begins to experience anxiety and his or her sexual arousal starts to diminish. Only when both partners feel comfortable engaging in a particular sexual behavior is the next behavior in the hierarchy attempted. Sexual performance, including intercourse and orgasm, is not a goal of the treatment. Couples are instructed to follow the rule that pleasurable physical contact alone is the goal of each in vivo desensitization session. In such a *nondemand situation*, couples learn to enjoy sexual activity by gradually coming to feel comfortable while sexually aroused.

IN VIVO DESENSITIZATION IN PERSPECTIVE

Like systematic desensitization, in vivo desensitization can be used to treat many different anxiety disorders.[101] For example, it is at least as effective as medication in treating clients with panic attacks.[102] It is superior to other psychological interventions (such as educational information-based approaches and social support) and behavior therapies (such as cognitive restructuring and relaxation training) in reducing anxiety associated with social phobias.[103] The versatility of in vivo desensitization is illustrated by its successful application to a 71-year-old man who was suffering from a delusional disorder.[104] The man believed that electricity caused cancer and therefore he avoided anything related to electricity, which, understandably, significantly interfered with his daily life.

In vivo desensitization can reduce both overt behavioral and cognitive components of anxiety. For instance, clients treated by in vivo desensitization for public speaking anxiety showed fewer overt behavioral signs of anxiety (such as pacing while talking) and reported fewer cognitive indications of anxiety (such as worrying about others' negative evaluations of them).[105]

There are three advantages that in vivo desensitization has over systematic desensitization. First, in vivo desensitization can be effective for clients who have difficulty imagining scenes, which occasionally occurs with adults and often with young children.[106] Second, the exposure to the anxiety-evoking events can be monitored directly with in vivo desensitization; this is not possible with

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systematic desensitization because the therapist does not have access to the client's mental images.[107] Third, in some instances, in vivo desensitization is more effective than systematic desensitization because the therapy often takes place directly in the anxiety-evoking situation, which eliminates the need for transfer from the imagined to the actual situation.

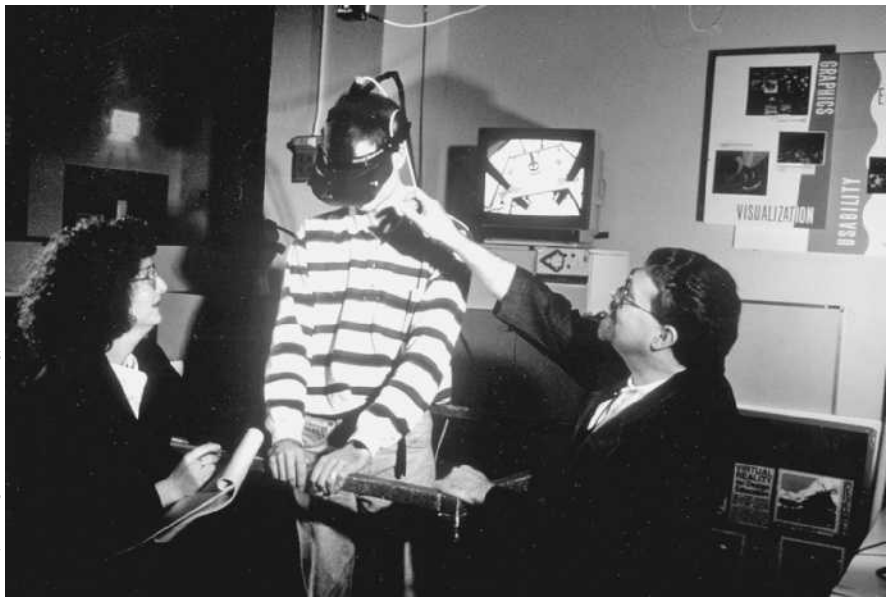
In vivo desensitization has three limitations. First, because it frequently involves going to the actual environment where the client's anxiety occurs, considerable therapist time is required. In Case 4-1, two therapists were required to implement the in vivo desensitization for Paul's school phobia. Self-managed in vivo desensitization is one way to deal with the problem of inordinate demands on therapists' time. A second limitation is that in vivo desensitization is not feasible with certain anxiety-evoking events (for example, natural disasters such as floods and earthquakes). Third, some clients cannot tolerate being in the actual threatening situation, even when exposure is graduated and the client is engaging in a competing response. Imaginal exposure in systematic desensitization may be all that the client can tolerate, at least initially. A promising strategy for dealing with children's resistance to in vivo desensitization incorporates behavioral parent training.[108] The parents are taught to use child management techniques (such as prompting and shaping) to facilitate their children's exposure to anxiety-evoking situations.

VIRTUAL REALITY EXPOSURE THERAPY

Reaping the advantages of in vivo desensitization without its disadvantages may seem like having one's cake and eating it too. In fact, this is possible by exposing clients to anxiety-evoking stimuli through computer-generated virtual reality technology.[109] Clients wear a head-mounted display that provides a computer-generated view of a virtual reality environment (see Photo 10-3).[110] Electromagnetic sensors placed on the client's head and arms monitor movements so that the client is able to "interact" with objects in the virtual environment. For example, clients treated for fear of flying virtually sit in the window seat of a commercial airliner. As clients move their heads, they look out the window or inside the plane. Not only are visual cues simulated, but sounds, vibrations, and odors can be also. Clients are gradually exposed to increasingly more anxiety-evoking scenes and sensations, such as sitting on a plane with its engines off, sitting on a plane with its engines running, taxiing, taking off, cruising in smooth air, flying around a thunderstorm with turbulence, and landing.

As is implied by the term *virtual reality*, what clients experience is almost as real as if they were in the actual situation,[111] as the following incident illustrates. Before an early test of the effectiveness of virtual reality exposure therapy for fear of heights, the therapists who had developed the therapy exposed themselves to the virtual reality scenes before exposing clients to them. One of the scenes was an open elevator door with only space below in the elevator shaft. Despite the fact that the therapists knew that they were in a virtual environment, they would not "walk off the elevator into midair" without being prompted to do so and being reassured that it was perfectly safe.[112]

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Courtesy of Georgia Institute of Technology

PHOTO 10-3
Client with fear of heights undergoing exposure therapy using virtual reality technology

Virtual reality exposure therapy has been used to treat a variety of phobias, including fear of flying,[113] acrophobia (fears of heights),[114] fear of spiders,[115] claustrophobia (fear of enclosed spaces),[116] social phobia,[117] and public speaking anxiety.[118] After September 11, 2001, it was used to treat posttraumatic stress disorder (PTSD) related to the terrorist attacks on the United States,[119] and a virtual reality environment is being developed for victims of bus bombings in Israel.[120]

Various virtual environments are being tested for PTSD in military personal who have served in combat.[121] Virtual Iraq/Afghanistan, spearheaded by Alfred "Skip" Rizzo, presents clients with typical scenes they would have encountered while stationed in Iraq or Afghanistan, including a marketplace, old buildings, desolate streets, and mosques as well as combat situations (see Photo 10-4, page 242 for an example). The therapist adds or subtracts various elements depending on the needs of the client. For example, vehicles and civilian and military personnel can move about the streets. The client can be positioned inside a HUMVEE as driver, as passenger, or in the turret position; the number of other soldiers in the vehicle can be varied, and they can be wounded in attack scenarios. Clients can navigate the environment using a gamepad controller or a thumb mouse that is part of a replica of an M4 weapon. The therapist can manipulate the time of day and weather as well as introduce in real time a variety of visual, auditory, tactile, and olfactory stimuli associated with combat in Iraq or Afghanistan.[122]

One advantage of Virtual Iraq/Afghanistan as a treatment for combat veterans is that it can be advertised as "postcombat reintegration training" rather than therapy. This might help to overcome the stigma of seeking treatment that exists in the military.[123] And the technology is user friendly for young military service members who have grown up with digital gaming.

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Courtesy of Albert Rizzo/USC Institute for Creative Technologies

PHOTO 10-4
Combat scene used in virtual reality exposure therapy with veterans of the Iraq war suffering from PTSD

Results from case studies[124] and clinical studies of exposure therapy through Virtual Iraq/Afghanistan have been encouraging.[125] Based on these promising findings and the urgency to provide treatment for PTSD for an increasing number of armed service members, an updated and expanded version of Virtual Iraq/Afghanistan has been developed and is being tested.[126] It has additional scenarios, such as slum and high-end residential areas; separate Iraqi and Afghan cities; and a Bagram Air Force Base setting (in Afghanistan). The new version has higher-fidelity graphic art and animation to enhance the realism and credibility of the exposure stimuli. The goal is to produce the program with a total cost of less than $5,000 to make it more available. Virtual Iraq/Afghanistan is also being developed to treat PTSD in combat medics and victims of sexual assault in the military.

There is a growing body of controlled studies that demonstrates the effectiveness of virtual reality exposure therapy for a variety of anxiety-related disorders.[127] The most substantial evidence for its effectiveness is with fear of flying and acrophobia; results with more complex anxiety disorders such as social phobia,[128] agoraphobia,[129] and panic disorder with agoraphobia[130] are promising. Evidence for the effectiveness of virtual reality exposure therapy with PTSD is limited.[131] However, for practical reasons, virtual reality exposure therapy is likely to be more suitable for treating combat-related trauma than civilian trauma. In contrast to the similar combat events that soldiers are likely to have experienced (such as those in Virtual Iraq/Afghanistan), civilian traumatic events typically are too idiosyncratic to develop stereotypic virtual scenes.[132]

In general, virtual reality exposure therapy seems to be as effective and sometimes more effective than in vivo exposure,[133] which may indicate that virtual reality scenes are equivalent to actual scenes for the purposes of exposure. Its

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potential benefits are exciting to consider, including the ability to expose clients to anxiety-evoking situations that they could not be exposed to in vivo for practical and ethical reasons (such as actual combat), the savings in time compared with in vivo exposure, and the increasing familiarity and comfort that people have with virtual reality technologies.[134]

IN THEORY 10-1

How Does Brief/Graduated Exposure Therapy Work?

Why does brief/graduated exposure reduce anxiety? A number of theoretical explanations have been advanced, and the five most common are: counterconditioning, reciprocal inhibition, extinction, cognitive factors, and nonspecific factors.

Counterconditioning

Wolpe's original theory involved a *counterconditioning process* in which an adaptive response (feeling relaxed, for example) is substituted for a maladaptive response (anxiety) to a threatening stimulus.[135] To understand this process, it is helpful to first see how anxiety may develop according to a classical conditioning model of learning. Anxiety develops when a neutral event (a conditioned stimulus) that does not elicit anxiety is associated with an event that naturally causes anxiety (an unconditioned stimulus). Consider the simple example diagrammed in Figure 10-2. You *speak up in class* and *students laugh at you*. Being laughed at (unconditioned stimulus) typically results in feeling embarrassed and humiliated (unconditioned response). If you are laughed at on a number of occasions when you speak in class, speaking in class will come to be associated with feeling embarrassed and humiliated, and speaking in class becomes a conditioned stimulus. The result is that you now become anxious (conditioned response) when you have to speak in class (conditioned stimulus) because you anticipate being embarrassed and humiliated.

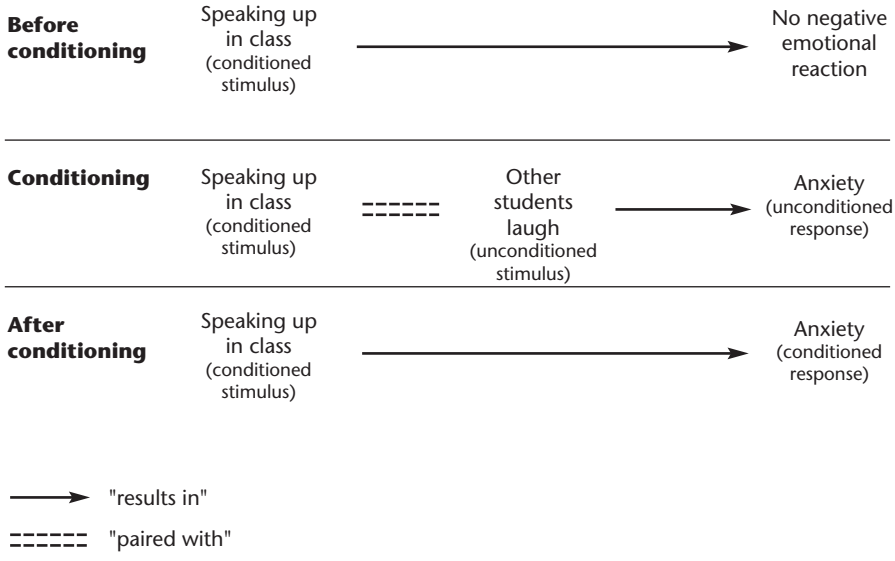


FIGURE 10-2
Development of anxiety through classical conditioning

(*continued*)

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IN THEORY 10-1 (*continued*)

Brief/graduated exposure counters this conditioning by associating the anxiety-evoking event with relaxation or another anxiety-competing response (see Figure 10-3). One problem with the counterconditioning explanation is that brief/graduated exposure without a competing response can be effective (which Wolpe did not anticipate when he advanced this explanation).

Reciprocal Inhibition

In theorizing about the process of systematic desensitization, Wolpe also posited a more basic, neurophysiological explanation. Our physiological responses associated with anxiety (for example, increased heart rate and sweating) are largely controlled by the autonomic nervous system, which is divided into two branches: sympathetic and parasympathetic. The physical symptoms of anxiety are primarily sympathetic functions, whereas relaxation is primarily a parasympathetic function. At any given moment, either our sympathetic or our parasympathetic system predominates. Thus, during brief/graduated exposure therapy, the client's anxiety (sympathetic) is *inhibited* by a *reciprocal* or opposite physiological response, relaxation (parasympathetic). This process is known as *reciprocal inhibition*. One potential problem with this explanation is that sympathetic activity and parasympathetic activity are only partially independent because both branches of the autonomic nervous system always are active to some degree.

Extinction

Another explanation of how brief/graduated exposure works suggests that extinction is the basic underlying mechanism.[136] The extinction explanation, like Wolpe's counterconditioning explanation, assumes that anxiety develops by classical conditioning. Extinction involves terminating reinforcement. In classical conditioning, *reinforcement* occurs when the unconditioned stimulus is followed by the conditioned stimulus. This pairing is broken in brief/graduated exposure when the client is repeatedly exposed to the conditioned stimulus (speaking in class) *in the absence* of the unconditioned stimulus (being laughed at). Recent basic research on the underlying mechanisms of extinction of fears reveals that the biochemical changes that occur during the process may result in fear reduction.[137]

Cognitive Factors

There are at least three ways in which changes in clients' thought processes might explain the effectiveness of brief/graduated exposure therapy. One explanation is that the safe exposure to anxiety-arousing situations may result in clients' *thinking about the situations more realistically*,[138] which renders the situations less threatening. Relaxation, or another competing response, may help clients think more objectively about their reactions to anxiety-evoking situations and see that they are exaggerated or otherwise inappropriate.[139]

A second cognitive explanation suggests that brief/graduated exposure leads clients to *expect that they will be less anxious* than they had assumed they would be when exposed to anxiety-evoking events. This explanation is consistent with the finding that when people are led to believe that they are less afraid (as through false feedback), they actually feel less afraid.[140]

The first two cognitive explanations are indirectly supported by research indicating that anxiety disorders seem to be maintained by people's faulty appraisals of threat. Specifically, people with anxiety disorders exhibit judgment biases, such as anticipating an unrealistically high probability of harm or exaggerated negative consequences associated with feared stimuli.[141] Research has revealed an association between successful treatment of social anxiety and reduction of these judgment biases.[142]

A third cognitive explanation holds that brief/graduated exposure may *strengthen clients' beliefs that they are capable of coping with their anxiety*.[143] These beliefs would be expected to develop from clients' repeated successes during treatment—that

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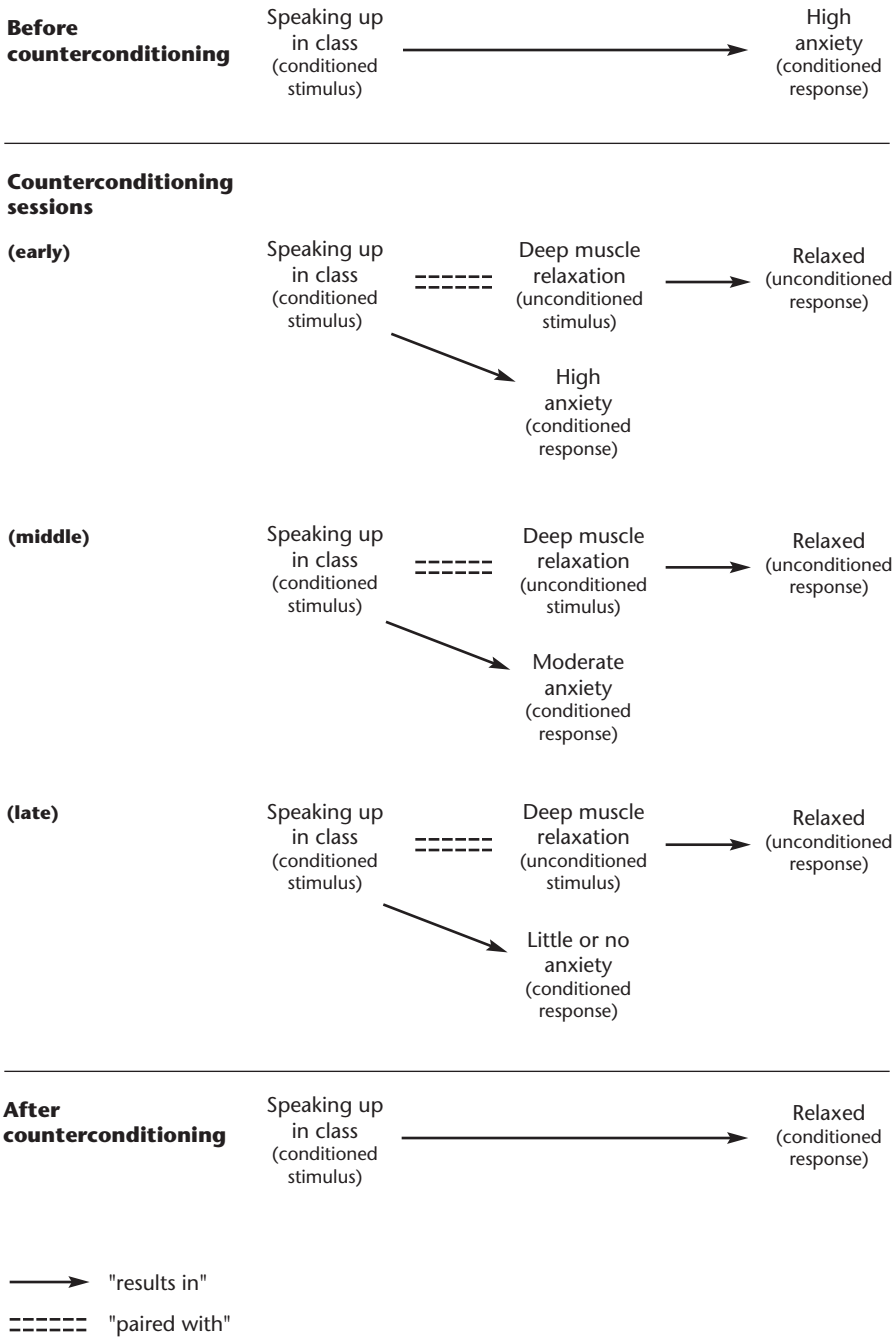


FIGURE 10-3
Reduction of anxiety through counterconditioning via systematic desensitization

(*continued*)

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IN THEORY 10-1 (*continued*)

is, clients are repeatedly exposed to anxiety-evoking situations without experiencing negative consequences, including feeling anxious.

Nonspecific Factors

Finally, the effects of brief/graduated exposure therapy may be explained by *nonspecific factors*, which are elements common to all forms of therapy. For example, the attention a therapist gives the client is a generic nonspecific factor. Research studies have controlled for therapist attention to assess its effect on treatment outcome. This is done by comparing clients who receive brief/graduated exposure with clients in an attention-control condition who spend time with the therapist but receive no therapy. Studies evaluating the effects of nonspecific factors such as therapist attention indicate that they can play a role in the success of brief/graduated exposure.[144] However, the studies also show that nonspecific factors alone do not account for the effectiveness of brief/graduated exposure therapy.[145]

Obviously, there are many answers to the question: Why does brief/graduated exposure therapy work? You've just read about the most prominent theoretical explanations; a variety of other explanations have been proposed, including those based on shaping and modeling.[146]

In the next chapter, we turn to the other paradigm of exposure therapy, prolonged/intense. The extinction, cognitive, and nonspecific factors explanations of brief/graduated exposure therapies just described also may explain why prolonged/intense exposure therapies work.

ALL THINGS CONSIDERED: BRIEF/GRADUATED EXPOSURE THERAPY

The first exposure therapies to be developed were brief and graduated, starting with systematic desensitization and then in vivo desensitization. These early exposure therapies all employed a competing response for anxiety, usually muscle relaxation. In more recent applications of brief/graduated exposure, a competing response sometimes is omitted, which is legitimate given that a competing response is not an essential component of the treatment.[147]

Increasingly, imaginal and in vivo desensitization are being combined for clients,[148] which is consistent with current practice in behavior therapy to use treatment packages to enhance therapy effectiveness and bring about change more rapidly.[149] Another trend has been to supplement visualization of anxiety-evoking scenes with their verbal descriptions during imaginal exposure and for the descriptions to be audiotaped and used during homework practice.[150]

The results from hundreds of studies evaluating brief/graduated exposure therapies clearly indicate that they are effective treatments for a variety of anxiety-related disorders. Justifiably, then, relatively few outcome studies of these therapies have been done in recent years.[151] However, brief/graduated exposure therapies are still widely used in clinical practice.[152] There even has been a trend toward incorporating graduated exposure in exposure therapies that are more consistent with the prolonged/intense paradigm (the topic of the next chapter).[153]

When exposure is brief and graduated, the distress clients experience in treatment is minimized. This probably accounts for the finding that clients generally evaluate brief/graduated exposure as more acceptable than prolonged/intense exposure, and clients are more likely to begin and less likely to drop out of brief/graduated exposure therapies.

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SUMMARY

1. Exposure therapies are used to treat anxiety, fear, and other intense negative emotional responses by exposing clients to the events that evoke the negative emotions.
2. There are two paradigms of exposure therapy. With brief/graduated exposure, the client is gradually exposed to increasingly threatening events for a brief period. With prolonged/intense exposure, the client is exposed all at once to highly threatening events for a lengthy period. In both paradigms, the client can be exposed to the threatening events imaginally or in vivo (or a combination of the two). The exposure can be therapist administered or self-managed by the client. Procedures that may be used to augment exposure include the use of an anxiety-competing response and response prevention.
3. In systematic desensitization, the client is exposed imaginally to successively more anxiety-arousing situations while engaging in a response that competes with anxiety. First, the client learns the competing response, most often skeletal muscle relaxation. Second, the client and therapist construct an anxiety hierarchy, which is a list of events ordered in terms of increasing levels of anxiety they elicit. Third, the client visualizes the anxiety-evoking events in the hierarchy, beginning at the low end, while performing the competing response. If the client experiences anxiety while visualizing a scene, the client stops visualizing it and relaxes.
4. The essential component of systematic desensitization is repeated exposure to anxiety-evoking situations without experiencing any negative consequences. Gradual exposure and a competing response are facilitative components.
5. Variations of systematic desensitization include using competing responses other than muscle relaxation (such as thinking pleasant thoughts and laughing); target behaviors other than anxiety (such as anger); group desensitization; and coping desensitization, in which clients use bodily sensations of anxiety as cues to relax and cope with an anxiety-evoking event. Interoceptive exposure artificially induces the bodily sensations the client experiences while gradually visualizing panic-inducing events.
6. Systematic desensitization was the first exposure therapy to be developed, and it is still widely used. It is both effective and efficient, and clients consider it an acceptable treatment.
7. With in vivo desensitization, clients are exposed to the actual feared events. The competing response is usually differential relaxation, which involves clients' relaxing all nonessential muscles. The exposure is brief and graduated. Self-managed in vivo desensitization is efficient and useful when it is impractical or inappropriate for the therapist to be present.
8. In vivo desensitization is a versatile procedure that sometimes is superior to systematic desensitization. Its limitations include the extensive amount of therapist time required, its not being applicable to some anxiety-evoking events, and the inability of some clients to tolerate being in the actual threatening situation.
9. Virtual reality exposure therapy exposes clients to anxiety-producing stimuli through computer-generated virtual reality technology. It is a promising

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new method of treatment for a variety of anxiety disorders, including phobias and posttraumatic stress disorder.

10. Brief/graduated exposure can be explained in terms of learning (counter-conditioning and extinction), physiological processes (reciprocal inhibition), cognitive variables, and nonspecific factors. The learning explanations are predicated on anxiety being developed and maintained through classical conditioning.

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CHAPTER 11



Exposure Therapy:
Prolonged/Intense

CASE 11-1 Debugging a Cockroach Phobia: A Case of Informal Self-Managed Flooding

In Vivo Flooding

CASE 11-2 Fear of Riding on Escalators Treated by In Vivo Flooding

IN THEORY 11-1 The Two-Factor Theory of the Development and Maintenance of Fear

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Eye Movement Desensitization and Reprocessing

All Things Considered: Prolonged/Intense Exposure Therapy

All Things Considered: Exposure Therapy

Exposure Therapy for Culturally Diverse Clients

IN THEORY 11-2 Exposure Therapies or Therapy?

SUMMARY

REFERENCE NOTES

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Exposure therapy was introduced in the previous chapter by likening its rationale to getting back on the horse that has thrown you. In fact, brief/graduated exposure is more like getting back on an old mare, whereas prolonged/intense exposure is more like mounting a wild stallion. Brief/graduated exposure minimizes anxiety during treatment by presenting clients with small doses of anxiety-evoking stimuli that gradually become more intense. In contrast, prolonged/intense exposure *maximizes* clients' anxiety with large doses of anxiety-evoking stimuli that are intense from the outset. The exposure can occur in vivo or imaginally.

Because prolonged/intense exposure therapies reduce anxiety by initially increasing it, they are sometimes called **anxiety-induction therapies**. In a sense, these therapies fight anxiety with anxiety. **Flooding** or *prolonged exposure therapy* is the generic name for prolonged/intense exposure because the client is flooded with anxiety[1] for a prolonged period (sometimes for more than an hour).[2] Although the client experiences significant anxiety during exposure, the feared negative consequences do not actually occur—a characteristic of all exposure therapies.

Occasionally, people inadvertently find themselves in circumstances that are analogous to flooding and can use them to overcome a strong and even long-standing fear, as is illustrated in Case 11-1.

CASE 11-1

Debugging a Cockroach Phobia: A Case of Informal Self-Managed Flooding[3]

Early in his first year of graduate school, V. W., a world-renowned entomologist (insect specialist), was given a lab assignment to draw blood from a cockroach. For someone who was about to embark on a career studying insects, this seemingly innocuous task created intense anxiety for V. W. Although he had been fascinated with insects from an early age, he detested cockroaches. His aversion to cockroaches began when he first encountered them in his home as a child. Although his repulsion to and avoidance of cockroaches had persisted into adulthood, it had not generalized to other insects.

To complete his lab assignment, V. W. had to go with other students in his class to an underground passageway that was populated with thousands of cockroaches. He went to the passageway feeling intensely anxious. As his classmates nonchalantly picked up cockroaches and returned to the lab, V. W. stood there frozen, not knowing what he would do. At that moment, he realized that if he could not complete this lab assignment, he would have to drop out of graduate school. Although he was terrified, he reached out and grabbed a cockroach. Almost immediately, his anxiety began to diminish. By the time he reached the lab holding the cockroach, the anxiety was completely gone. More than 60 years later, V. W. has remained free of his former intense aversion to cockroaches.

IN VIVO FLOODING

In vivo flooding involves prolonged/intense exposure to *actual* anxiety-producing stimuli. It is used to treat an array of problems, including phobias,[4] obsessive-compulsive disorder,[5] posttraumatic stress disorder,[6] anorexia nervosa,[7] and body dysmorphic disorder.[8]

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The essential component in flooding is *exposure to a highly anxiety-evoking situation long enough for the client's discomfort to peak and then start to decline*.[9] Not only does this component appear to be necessary for the flooding to be successful, but it also demonstrates to clients that when they face their fears without trying to escape or engage in safety behaviors, their anxiety will decrease.[10] The decline in anxiety is typically assessed by the client's self-reported SUDs.

Case 11-2 illustrates the basic procedures of in vivo flooding. It is noteworthy that at the outset, the therapist explained in vivo flooding to the client, including telling her that the treatment would cause some discomfort.

CASE 11-2

Fear of Riding on Escalators Treated by In Vivo Flooding[11]

The patient was a 24-year-old female student with an intense fear . . . of escalators. She had developed this phobia about 7 years previously. She had ascended an escalator with some of her immediate family with relative ease, but had expressed fear of descending because of the apparent height. The relatives had jokingly forced her on to the escalator, and ever since she had experienced an aversion toward escalators, always taking the stairs or the elevator. . . . On one occasion she had unexpectedly come upon an escalator while shopping, and had become so overwhelmed with anxiety that it was only with great difficulty that she had prevented herself from vomiting. Whenever she was in the company of anyone who proposed riding an escalator to another floor, she would experience a quickening of the pulse and would bluntly refuse. Before [entering therapy] . . ., she had made some unsuccessful attempts to overcome the fear by attempting, in the company of friends, to get on to an escalator. On those occasions when she could bring herself to stand at the foot of the escalator, she would not step on [because she feared] . . . that by holding on to the hand rail she would be pulled downward and so miss her step.

At the single session during which the history of the disorder was obtained, the in vivo flooding procedure was explained to the patient. She was told that the technique had been successfully employed in the treatment of numerous phobias and was almost certain to work in her case. She was also informed that she would experience some emotional distress but was assured that [the therapist] would be with her throughout the experience to ensure no resulting adverse effects. [The therapist] then arranged to meet her at a large department store with four levels of escalators. Initially, the patient manifested an intense anxiety reaction when requested to approach the escalator, and it was only through much coaxing, reassurance, and physical [prompting] . . . that she finally stepped on to it. She then threatened to vomit and seemed at the verge of tears, all the time clinging tightly to [the therapist's] shirt. Getting on to the second flight of the escalator was much easier, but she still manifested the same signs of anxiety. After 27 minutes of riding up and down the escalator, she was approaching it with increasing readiness and reported a dramatic decrease in anxiety. She was then instructed to ride

(*continued*)

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CASE 11-2 (*continued*)

the escalator alone, and did so with relative ease. When she felt that there was no need for further treatment the session was terminated, after 29 minutes. Six months later the patient reported that she still experienced no anxiety on escalators except on rare occasions when descending.

Nesbitt E. B. (1973). An escalator phobia overcome in one session of flooding in vivo. *Journal of Behavior Therapy and Experimental Psychiatry, 4,* 405–406. Reprinted with permission.

The woman in Case 11-2 clearly was motivated to rid herself of her intense fear. Before seeking therapy, she had been unsuccessful in her attempts to overcome her fear on her own. In the single session, the woman experienced considerable initial anxiety during the flooding procedure, followed by a rapid decrease in anxiety. Although flooding occasionally can involve just a few sessions of intense exposure, as in Case 11-2, typically more sessions are required.

The description of the development and maintenance of the patient's fear of riding on escalators in Case 11-2 is worth noting. Her intense fear began with a single traumatic experience. From that time on, she avoided going on escalators, which reduced her fear and negatively reinforced her avoidance behaviors. This sequence of events is consistent with the two-factor learning theory (see In Theory 11-1).

IN THEORY 11-1

The Two-Factor Theory of the Development and Maintenance of Fear

The two-factor learning theory of how debilitating fear develops and is maintained involves both classical and operant conditioning.[12] Fear initially develops through classical conditioning (see Figure 10-2, page 243). A neutral event (conditioned stimulus)—one that does not elicit fear—is associated with a threatening event (unconditioned stimulus), which elicits fear. Because of the association between the conditioned and unconditioned stimuli, the previously neutral event comes to evoke fear. For instance, a man who previously had no fear of being in an automobile may develop an intense fear of driving in cars after being in an automobile accident. Being in an accident naturally results in fear. Through the association of being in a car and having an accident, just being in a car comes to elicit fear.

Once a person's fear has developed, it is maintained through operant conditioning. The person learns to engage in a fear-reducing response whenever he or she is faced with the fear-evoking event. Usually, this response involves avoiding or escaping from the fear-evoking event. The response continues and is strengthened because it is negatively reinforced—that is, it terminates the unpleasant experience of fear.[13] For example, when the man who is afraid of driving in cars refuses an offer of a ride, his fear declines because the threatening situation is avoided. On one hand, the avoidance behavior serves the function of keeping the man from feeling fearful. On the other hand, the behavior is maladaptive because the man never learns that driving in a car can be safe, which is important in our automobile-dependent world. Fortunately, exposure therapy can facilitate such learning.

In vivo flooding is a versatile therapy, which the following atypical case illustrates. Not only was the client an infant, but the flooding was carried out at home by the child's parents.

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CASE 11-3

Parental Treatment of Acute Traumatic Stress in an Infant Through In Vivo Flooding[14]

Following a major surgical procedure (cranial remodeling), 5-month-old Michael began to exhibit a number of emotional and physical symptoms that were in all likelihood due to the physical and emotional traumas he had experienced as part of the surgery. He exhibited a change in sleep and feeding patterns, increased crying, night terrors, regression in motor skills, fear of strangers, and terror when lying on his back. The last symptom was made the target of in vivo flooding. Before surgery, Michael loved to lie on his back while his diaper or clothes were changed. After surgery, he screamed in terror, flailed his arms, and kicked his legs when he was placed on his back. Michael's parents were taught how to use in vivo flooding to reduce Michael's terror responses when he lay on his back.

One week after surgery, the parents began treatment. When Michael exhibited the terror responses after being put on his back, the parents left him on his back, but stayed close enough to him so that he could touch their faces. They touched him, talked lovingly to him, and occasionally held him and then laid him down again. This procedure did not diminish his terror responses. However, after an extended period, as long as an hour, Michael spontaneously ceased crying and became calm.

After eight flooding sessions during the first month after surgery, Michael no longer exhibited terror responses while in the supine position and showed the same delight of spending prolonged periods in that position that he had shown before surgery. At a 2-month follow-up, none of his emotional and physical symptoms remained, and he was symptom free at a 1-year follow-up.

RESPONSE PREVENTION

In vivo flooding often includes **response prevention**, which involves specifically preventing clients from engaging in their typical maladaptive anxiety-reducing responses. (Response prevention sometimes is used with in vivo desensitization.[15]) Safety-seeking behaviors, which response prevention eliminates during treatment, are ubiquitous to anxiety disorders. Avoiding an anxiety-evoking event is the most common safety-seeking behavior. It is crucial to prevent such behaviors because they interfere with exposure therapy.[16]

Response prevention is an essential component of in vivo flooding for *obsessive-compulsive disorder*, in which a person is preoccupied (obsessed) with particular anxiety-evoking events and alleviates the resulting anxiety by performing maladaptive ritualistic behaviors (compulsions).[17] *Ritual prevention*, as the technique is referred to in the treatment of obsessive-compulsive disorder, keeps the client from performing the ritualistic behaviors, as you will see in Case 11-4.

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CASE 11-4

Home Treatment of Obsessive-Compulsive Behaviors by In Vivo Flooding[18]

A 45-year-old divorced woman suffered from an obsessive-compulsive disorder that consisted of washing and cleaning rituals whenever she came in contact with objects that she thought might be even remotely associated with death. For example, holding a newspaper article about someone who had been killed would make her intensely anxious. The disorder first occurred at the time of her mother's death, when the client was 15.

When the client entered treatment, she was to be remarried in 2 weeks. Almost daily, she was experiencing panic attacks and heart palpitations related to her fear of contamination. As time passed, the number of objects she considered potentially contaminated increased. Because her fiancé was a widower, he became a "carrier" of contamination by association with his dead wife. The client did not think she could deal with marriage in her present condition. In vivo flooding was indicated because the client wanted to alleviate her problem within 2 weeks and because her high motivation for treatment allowed her to undergo the discomfort of an anxiety-induction therapy.

The client chose to be treated in her home environment, but the in vivo flooding began in a hospital mortuary. There, the client and the therapist became "contaminated" by handling a corpse, which made the client intensely anxious. Later, the therapist and the client completely "contaminated" the client's apartment with objects associated with death (such as a newspaper photograph of a man shot to death in the street). The therapist instructed the client to refrain from engaging in her typical rituals of washing and cleaning at home. That evening and the next morning, she successfully resisted engaging in her rituals.

During daily hour-long therapy sessions over the course of 11 days, the therapist gave the woman various "contaminated" objects, encouraged her not to resort to her rituals, and praised her for complying. By the third day of flooding, she was not performing the rituals. However, when the client's fiancé brought some groceries from his house to her apartment, the client was unable to touch them, fearing that they were contaminated by association with his deceased wife. She called the therapist, and over the phone, the therapist guided her through a flooding session that consisted of "contaminating" her entire apartment by placing the groceries throughout the apartment.

After 12 days of therapy, the client reported that she had made considerable progress with her problem, and she was married the next day. She continued to have periodic episodes of tension over the next 8 months, but she no longer felt the urge to engage in her compulsive rituals.

Although the client engaged in many hours of flooding, the entire therapy was accomplished in 12 days. The therapist directed each of the in vivo flooding sessions, including one by telephone. The therapist's presence and guidance no doubt makes it easier for clients to undergo in vivo flooding. In contrast to self-managed in vivo desensitization (described in Chapter 10), in which the exposure is brief and gradual, self-managed in vivo flooding is especially difficult for clients. Nonetheless, it is

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occasionally successfully employed, such as in the treatment of social phobias where the therapist's presence in the client's actual social circumstances is impractical.[19]

An alternative means of making exposure and response prevention more tolerable for clients involves partner-assisted exposure in couple-based therapy.[20] Working with couples in which one partner has obsessive-compulsive disorder has two additional advantages. The therapy can assess and change aspects of the couple relationship that may be maintaining the client's obsessive-compulsive behaviors. For example, couple discord may be a contributing stressor, and the client's partner may inadvertently reinforce the compulsions because he or she reduces the client's distress (see Broad Strokes 14-1 [page 388] for more about using couple-based cognitive-behavioral therapy).

Case 11-4 is an example of a relatively severe obsessive-compulsive disorder. The woman's anxiety was intense, as evidenced by her panic attacks. Moreover, her obsession was extensive because virtually any object she touched in the course of the day could potentially be associated with death. Given the level of her anxiety, it is not hard to understand how difficult the prolonged/intense exposure might have been for the woman. Like most clients who decide to undergo in vivo flooding, she was highly motivated to alleviate her problem behaviors.

Antidepressant medication such as Prozac is frequently prescribed for obsessive-compulsive disorder. However, in vivo flooding can be as effective as medication, and it has a lower relapse and dropout rate.[21]

In vivo flooding with response prevention also is used to treat body dysmorphic disorder. In one treatment study, clients went to public places where perceived bodily imperfections could potentially be easily observed by others.[22] The clients were asked to make eye contact with people, talk to strangers, and ask salespeople for assistance. From the outset of therapy, they were instructed to refrain from using any tactics that would minimize their perceived flaws, such as wearing special clothing or makeup that covered up the "flaws." (Compare this prolonged/intense exposure and response prevention with the brief/graduated in vivo desensitization treatment of body dysmorphic disorder described in Chapter 10, page 238.) Additionally, half the clients in the study also received specific training in dealing with relapses, including information about the nature of relapse, self-managed exposure exercises, and a contingency contract specifying that they attend emergency sessions with the therapist to address relapses. All the clients in the study showed a significant reduction in body dysmorphic perceptions and in avoidance of situations that had previously triggered intense anxiety (such as being seen in public). Those who participated in the relapse prevention component were better at managing minor relapses that occurred over time and had significantly lower self-reported depression and anxiety.

Cue Exposure

The odor of a favorite food wafting from a kitchen or restaurant often creates a craving for that food. Even the thought of how the food tastes can result in a craving for it. This general phenomenon occurs with people with substance-related disorders. When they are exposed to the cues associated with the drug use, they are likely to experience a strong urge for the drug. Those cues include the drug itself, the setting in which the drug is used (such as a bar), and related paraphernalia (such as a syringe).

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Studies in which people with substance-related disorders are exposed to the cues associated with the substance have revealed that there are common brain substrates correlated with cravings for a variety of substances, including alcohol, cocaine, heroin, marijuana, and nicotine.[23] Interestingly, gambling addiction activates brain areas similar to those related to substance addition.[24]

Cue exposure is a specialized form of exposure with response prevention used to treat substance-related disorders. The client is exposed to cues associated with addictive behaviors but is prevented from using the drug. For example, a client with a drinking problem might spend time in a bar. There, the client would experience the visual cues (such as seeing other people drinking), auditory cues (such as hearing people order drinks), and olfactory cues (such as smelling alcohol) associated with drinking. However, the client would refrain from drinking alcohol (see Photo 11-1). The cues can be presented in vivo (as in the previous example), by exposure to pictures and imagery, and through virtual reality.[25] Repeated exposure to the conditioned stimuli (cues) in the absence of the unconditioned stimuli (consuming the drug) eliminates reinforcement, which results in extinction of cravings for the drug (see In Theory 10-1, page 243). Moreover, one study of the treatment of alcohol addiction has revealed that cue exposure affects areas of the brain associated with addiction memory and attentional focus to alcohol-related cues and impacts reward pathways that are thought to be related to addiction.[26]



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PHOTO 11-1

In cue exposure, a client is exposed to cues associated with an addictive behavior, but the client refrains from engaging in the addictive behavior. Here, the client (far right) interacts with others who are drinking in a bar, but he himself does not drink.

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Cue exposure by itself can be effective in reducing clients' cravings for the addictive substance.[27] However, it is more effective when combined with coping strategies, such as differential relaxation, to deal with cravings.[28] In essence, clients learn to substitute coping strategies for their habitual addictive behaviors when they encounter the salient cues that previously have prompted the addictive behaviors. Cue exposure has been used to treat a number of different substance-related disorders, including those involving alcohol,[29] nicotine,[30] and opiates[31] (the last with mixed results[32]) as well as the addictive-like behaviors of bulimic binge eating and vomiting.[33]

IMAGINAL FLOODING

Imaginal flooding follows the same basic principles and procedures used with in vivo flooding except that exposure occurs in the client's imagination. One advantage of imaginal exposure is that there are no restrictions on the nature of the anxiety-evoking situations that can be treated. This feature has proved useful in the application of imaginal flooding to help victims of traumatic experiences, such as natural disasters and physical assault. Such people may suffer from posttraumatic stress disorder (PTSD), which is characterized by highly disturbing recurrent recollections of the event (such as nightmares and flashbacks), avoiding any stimuli associated with the event (for example, refusing to go to the neighborhood where one was assaulted), and a variety of emotional and cognitive symptoms, including anxiety, depression, and an inability to concentrate.

Exposure to the actual traumatic events often is not possible (as with a tornado) or is inappropriate for ethical reasons (as with rape).[34] Imaginal flooding is well suited for recreating the circumstances of the trauma safely—that is, without the actual negative consequences occurring.[35] Imaginal flooding was first used to treat PTSD in Vietnam War veterans,[36] and it is frequently used today to treat military casualties stemming from the recent wars in Iraq and Afghanistan.[37] It now is being applied to stress disorders stemming from rape,[38] nonsexual assault,[39] war-related traumas in civilians,[40] and natural disaster-related traumas.[41] Case 11-5 illustrates the procedures used in imaginal flooding.

CASE 11-5

Treatment of an Adolescent's Posttraumatic Stress Disorder by Imaginal Flooding[42]

A 14-year-old Lebanese boy was referred for evaluation by his school principal because of academic and behavioral problems. Six months earlier, the client had been abducted in Beirut by the Lebanese militia for 2 days. At the time of the evaluation, the client was experiencing anxiety related to recollections of his traumatic experience. He also reported avoiding the area where he had been abducted, having difficulty concentrating and remembering information, and being depressed. The client had not experienced these problems before he was abducted.

(*continued*)

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CASE 11-5 (*continued*)

The therapist described the pros and cons of imaginal flooding and systematic desensitization, and the client and his parents chose flooding. To assess the client's level of anxiety and functioning, before therapy began, the client completed a number of direct self-report inventories (of general anxiety and depression) and cognitive measures (of memory and concentration). The client also was given a 12-step behavioral approach test that included leaving his home, walking to the area of his abduction, entering a store, making a purchase, and walking home by another route. During the test, two assistants unobtrusively observed the client through a store window and by following the client at a distance. During flooding, the client reported his level of discomfort using a SUDs scale.

The client was asked to imagine four different scenes (described in Table 11-1) in detail—what he saw, heard, thought, and felt. This included visualizing the location of the abduction, hearing the voices of his abductors, and recalling the thoughts he had of being executed. Each of the six therapy sessions involved 60 minutes of flooding, which was preceded and followed by 10 minutes of relaxation exercises.

Scenes 1, 2, and 4 were each successfully treated in the course of a single therapy session, and scene 3 required three sessions. The client's anxiety and depression decreased, and his memory and concentration increased. This improvement was evident immediately after treatment and was maintained at a 4-month follow-up. Also, immediately after treatment and at the follow-up, the client completed all 12 steps of the behavioral approach test, compared with only 4 steps before therapy.

Because the area in Beirut where the client had been abducted remained a dangerous locale, he generally continued to avoid going there. However, after the termination of therapy, he did visit the area several times out of necessity. He reported that he experienced no abnormal anxiety on these occasions. Finally, the client expressed satisfaction with the flooding treatment, and he commented that the success of the therapy was adequate compensation for the discomfort he experienced during the flooding sessions.

TABLE 11-1
Scenes Used in Imaginal Flooding for a 14-Year-Old Boy With Posttraumatic Stress Disorder

Scene Number	Content
1	Approaching the area where the abduction occurred and being stopped, forced into a car at gunpoint, blindfolded, and driven away
2	Walking into a building while blindfolded, being questioned and accused, and listening to the militia argue over the merits of his execution
3	Being interrogated, responding, receiving repeated blows to the head and body, and experiencing intermittent periods of isolation
4	Learning that he was going to be released and not trusting the militia to keep its word

Source: Saigh, 1987, p. 148.

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Case 11-5 illustrates all the basic elements of imaginal flooding. Clear and detailed visualization of scenes is critical, so the client was asked to use multiple senses. Exposure to these cues was both prolonged (60 minutes) and intense (highly anxiety inducing).

Another means of enhancing the vividness of traumatic scenes in imaginal flooding is to have clients verbally describe, in detail and in the present tense, the scenes they are imagining.[43] Consistent with flooding, this is done for prolonged periods, sometimes with the therapist's prompting the client about omitted details.

The versatility and efficiency of imaginal flooding was demonstrated in its use in treating victims of an earthquake in Turkey who suffered from PTSD.[44] The initial therapy sessions were used to assess the particular problems each client was having (for example, fear of earthquakes, avoidance behaviors, re-experiencing the trauma), explain the treatment and its rationale (which focused on gaining a sense of control), develop target behaviors, and provide clients with self-exposure instructions. Clients carried out self-exposure at home on their own. Subsequent sessions involved reviewing progress, troubleshooting, reinforcing progress, and giving new homework. The length of the treatment varied, depending on the number of sessions needed to obtain clinically significant improvement, which occurred in 76% of cases after a single session and 88% after two sessions. Not only was the treatment highly effective, but given that a minimal amount of therapist time was required (the mean number of sessions was 4.3), it was also efficient and allowed a large number of earthquake victims to be treated.

Imaginal and in vivo flooding are often used together, as Case 11-6 illustrates.

CASE 11-6

Religious-Related Obsessions and Compulsions Treated by In Vivo and Imaginal Flooding[45]

R. H., a 36-year-old Catholic man, had a 14-year history of religious-related obsessions and compulsions. He obsessed about being "damned to hell" because he had said or done things that he mistakenly believed were against Catholic doctrine (such as laughing at a tasteless joke). To alleviate his guilt about his assumed transgressions, R. H. compulsively sought reassurance that he had not sinned, such as by mentally reviewing the events or by talking to a priest. He spent more than 8 hours a day preoccupied with his obsessional doubts and seeking reassurance about his religious piety.

To expose R. H. to events that triggered anxiety, the therapist instructed R. H. to deliberately behave in ways that he considered sinful (for example, telling a tasteless joke). Response prevention entailed refraining from engaging in any behaviors he had previously used to reduce his uncertainty about the sinfulness of his behaviors. Imaginal flooding also was used to expose R. H. to the consequences he feared would occur for his "sinful" acts. Figure 11-1 (see page 262) shows the expected peaking and subsequent decline of anxiety during R. H.'s imaginal flooding.

(*continued*)

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CASE 11-6 (*continued*)

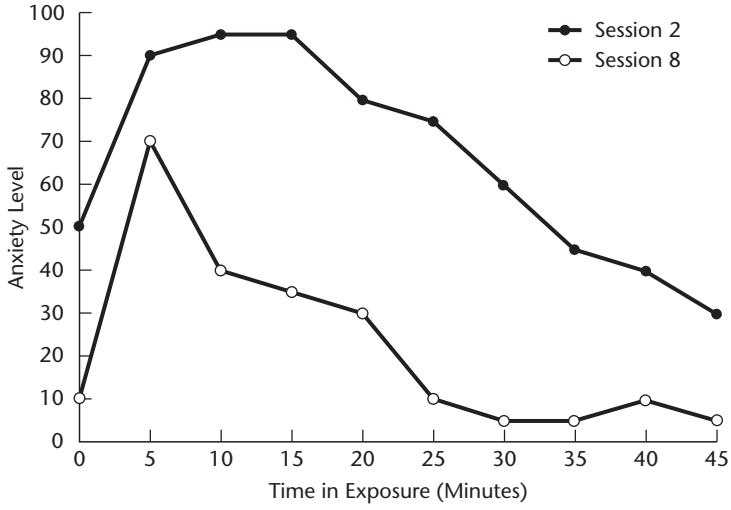


FIGURE 11-1
Client's levels of anxiety during imaginal flooding for religious obsessions and compulsions, showing the expected peaking and declining of anxiety in an early session (2) and a session (8) at the end of therapy
Source: Adapted from Abramowitz, 2001.

At home, R. H. engaged in daily in vivo and imaginal flooding (using audiotapes of in-session imaginal exposure). At the end of 8 weeks of treatment, R. H.'s obsessions and compulsions had decreased significantly and remained at that level through a 6-month follow-up. Additionally, R. H. reported being more hopeful about his life and more interested in engaging in social and recreational activities that had not been part of his life prior to treatment.

In the report of R. H.'s case, the therapist commented on the unique challenges of treating religious obsessions and compulsions, which generally requires consultation with clergy.

> Differences between normal and pathological religious practices must be clarified and . . . [clients] should understand that the purpose of treatment is to restore normal religiosity. Moreover, a clear explanation of how exposure is consistent with this goal seems crucial for fostering a successful therapeutic relationship and maintaining high motivation.[46]

The use of homework assignments involving self-managed exposure, as in Case 11-6, makes the treatment more effective (it provides additional exposure as well as promotes transfer to everyday situations) and efficient (fewer therapy sessions may be needed). To make this process easier and more comprehensive, a smartphone app is being tested for implementing homework and monitoring progress.[47] Among its capabilities are recording and playback of exposure sessions, constructing in vivo hierarchies, recording completed homework assignments, tracking symptom severity over time, and making and checking on appointments.

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Courtesy of Francine Shapiro

Francine Shapiro

EYE MOVEMENT DESENSITIZATION AND REPROCESSING

Eye movement desensitization and reprocessing (EMDR) was developed by Francine Shapiro to treat upsetting memories and thoughts about traumatic experiences.[48] EMDR is a hybrid imaginal exposure therapy in that it does not cleanly fit into either the prolonged/intense or the brief/graduated paradigm. Although clients visualize anxiety-evoking scenes for relatively brief periods, the scenes often engender intense anxiety. The treatment consists of three basic phases: assessment and preparation, imaginal exposure, and cognitive restructuring.

In the *assessment and preparation* phase, clients (1) identify a traumatic image (memory) that results in anxiety or distress, (2) identify the bodily sensations associated with the anxiety (such as tension in the chest), (3) assess the level of anxiety they are experiencing using a 0 to 10 SUDs scale, (4) identify a maladaptive belief that is strongly associated with the event (for example, in the case of a rape, "I should have run away"), and (5) construct an adaptive belief that would alleviate the distress associated with the traumatic event (for instance, "I did the best I could") and rate how personally believable the adaptive belief is on a scale of 1 to 7.

Next, in the *imaginal flooding* phase, the client visualizes the traumatic image while verbalizing the maladaptive belief and concentrating on his or her physical sensations associated with the trauma. During this process, the client is asked to visually track the therapist's index finger as the therapist moves it rapidly and rhythmically back and forth across the client's line of vision (from left to right, twice per second, 12 to 24 times). (Shapiro theorized that the eye movements produce a neurological effect—similar to what occurs during rapid eye movement sleep, which is associated with intense dreaming—that facilitates the processing of emotionally charged, stress-related material.[49]) After the period of eye movements, the client is instructed to block out the experience momentarily, take a deep breath, and then report what he or she is imagining, thinking, and feeling and rate the experience using SUDs.

When the client's SUDs rating has been reduced to 0 or 1, the client is ready for the final phase of treatment that involves *cognitive restructuring* (described in detail in Chapter 13). The client again is asked to imagine the traumatic image (which now elicits little, if any, anxiety), but this time while thinking about the adaptive belief. The aim is to associate the traumatic image with the adaptive belief so that the image no longer results in emotional distress and maladaptive thinking. The believability of the adaptive belief and the client's anxiety level are reassessed at this time. If the client can generally accept the adaptive belief as believable and experiences little anxiety, therapy is terminated. If either criterion has not been met, then additional exposure with eye movements is required.

Following Shapiro's first published account of EMDR in 1989,[50] a slew of reports about the procedure were published in professional journals, and EMDR was touted in the popular media.[51] It was suggested that EMDR results in rapid and dramatic improvement in trauma-based anxiety problems (such as complete elimination of symptoms in a single session[52]).[53] However, these claims were misleading[54] because most of the early evidence for the effectiveness of EMDR came from case studies, and the few experiments had serious methodological flaws.[55]

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More recently, the quality of the research has improved (although some recent studies are methodologically weak[56] and are case studies[57]). There is now empirical evidence that demonstrates that EMDR can be an effective treatment for posttraumatic stress disorder. However, it is no more effective than other exposure therapies[58] and, in some cases, it is less effective.[59] In its favor, EMDR is a relatively efficient treatment for PTSD, often requiring fewer sessions and less homework than other exposure therapies.[60] Finally, there is no clear evidence that lateral eye movements make a difference in the effectiveness of EMDR.[61] Thus, because eye movements are the only unique component of EMDR, the success of EMDR seems to be due to its combination of imaginal exposure and cognitive restructuring, two evidence-based therapies.

ALL THINGS CONSIDERED: PROLONGED/INTENSE EXPOSURE THERAPY

Prolonged/intense exposure therapy is most often used to treat anxiety-related disorders, including phobias,[62] obsessive-compulsive disorder,[63] posttraumatic stress disorder,[64] and agoraphobia.[65] Other problems treated include bulimia,[66] complaints of cardiac-like symptoms,[67] psychogenic urinary retention,[68] and agitated depression.[69]

Outcome studies indicate that flooding, in vivo and imaginal, is an effective treatment. Although some studies have found in vivo flooding to have more striking results,[70] no general statement can be made about the superiority of one mode over the other.[71] In specific cases, one mode of presentation may be superior (for example, imaginal flooding is necessary when the threatening event cannot actually be reproduced).[72] In vivo and imaginal flooding sometimes are combined, as for clients with intense social phobias[73] and with severe trauma-based anxiety.[74] The use of imaginal flooding prior to in vivo flooding may actually facilitate subsequent in vivo flooding for clients who initially are unable to tolerate exposure to the actual threatening events.[75] Studies comparing the efficacy of flooding with that of systematic desensitization also have not found either of these two exposure therapies to be clearly superior.[76]

Besides being effective, flooding is an efficient means of reducing clients' anxiety, often in a relatively brief time (as in Case 11-4) and occasionally in a single session (as in Case 11-2).[77] Group treatment using imaginal flooding for anxiety disorders is an effective and efficient alternative to individual treatment.[78]

One of the consequences of the recent extended deployment of US troops in battle conditions in Iraq and Afghanistan is an alarming number of soldiers who are developing debilitating posttraumatic stress disorder. The military's standard one-session debriefing (Critical Incident Stress Management) has been ineffective in preventing PTSD.[79] A promising, but as not yet properly tested, treatment involves repeated imaginal and in vivo flooding administered in four therapy sessions over a 5-week period.[80]

A major drawback of flooding is the discomfort it produces.[81] In one study, clients were treated for test anxiety with flooding, modeling, or systematic desensitization.[82] Nearly all the clients who received modeling and about half who received systematic desensitization indicated satisfaction with their treatment. In contrast, clients who had undergone flooding said they would not recommend

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the treatment because of the discomfort they had experienced—even though the flooding had significantly reduced their anxiety! Moreover, clients may be more likely to refuse to enter therapy or to drop out of therapy that involves flooding, compared with less upsetting exposure therapies.[83] These potential drawbacks may be specific to the problem being treated. In a comparison of 25 controlled studies of the treatment of PTSD, no differences in dropout rates were found among exposure therapy (including EMDR), cognitive therapy (Chapter 13), and stress inoculation training (Chapter 14).[84] Moreover, both civilians and veterans preferred prolonged exposure to the other two therapies.[85]

In an effort to make flooding more palatable for clients, prolonged exposure that includes response prevention occasionally is presented *gradually*.[86] In other words, the client is exposed to increasingly more anxiety-evoking events, rather than the very highest anxiety-evoking events initially. However, the exposure is for a prolonged period and is terminated only when the client's anxiety begins to diminish.

Some therapists have considered the possibility that flooding might be made less aversive for clients if the exposure occurred with the presence and assistance of a family member.[87] Three studies have systematically examined this possibility, and only one demonstrated additional benefits of family-assisted exposure beyond those achieved with therapist-administered or self-managed exposure.[88] When the relationship between the client and the relative is marked by conflict or overdependence, the relative's presence may diminish the effectiveness of the therapy.[89] Despite procedures aimed at making prolonged/intense exposure more tolerable, the fact remains that clients often experience discomfort. As a consequence, clients may not elect such treatment, even though it may be the treatment of choice for their problem.

One concern with prolonged/intense exposure is that clients may become even more anxious or fearful than before therapy as a result of the treatment—a concern more prevalent among therapists than clients![90] This possibility exists because prolonged/intense exposure therapies induce anxiety in order to reduce it. Fortunately, serious negative side effects appear to be rare. In a survey of behavior therapists who had used prolonged/intense exposure therapies, serious negative side effects were reported in only 0.26% of the clients treated (9 out of 3493).[91] The major exception to this general finding is the use of prolonged/intense exposure therapy for PTSD with clients who have a history of other serious psychiatric disorders.[92] In such cases, the chances of being retraumatized and experiencing increased anxiety and other adverse reactions to the treatment are substantially increased.[93] However, a recent study assessing the feasibility of using prolonged exposure and EMDR in treating PTSD in patients with psychotic disorders showed no adverse effects or increase in psychotic symptoms.[94]

The major ethical or humanitarian objection to prolonged/intense exposure therapy is that it increases clients' anxiety. The question is: Should already traumatized clients, such as victims of rape or incest, be subjected to therapy procedures that further disturb them?[95] Such treatment runs counter to the ethical principle "First, do no harm." However, the following two caveats should be kept in mind. First, clients have prior knowledge about the process of prolonged/intense exposure therapy, and they consent to undergo the *temporarily* stressful

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treatment. Second, some discomfort is part of all psychotherapies because clients inevitably confront distressing feelings, thoughts, and actions as well as disturbing events in their lives.

Ultimately, the decision to use prolonged/intense exposure therapy should be based on a cost-benefit analysis of the discomfort associated with the treatment and its practical advantages. For example, sometimes prolonged/intense exposure can bring about a marked reduction in anxiety in a few sessions and occasionally in a single session, which is generally quicker than brief/graduated exposure therapies.[96] More rapid treatment has obvious practical, ethical, and humanitarian advantages for distressed clients. In some cases, only a limited time may be available for treatment (such as in Case 11-4, where the woman wanted relief from her obsessive-compulsive disorder before getting married in 2 weeks).[97]

Another factor that enters into the choice of therapy is that clients differ in their tolerance for discomfort.[98] Some clients find that getting the treatment over with quickly compensates for the distress they experience. For example, the teenage boy who was treated for recurring disturbing thoughts about his abduction in Case 11-5 reported that the success of his treatment was adequate compensation for the unpleasantness he experienced during the flooding sessions.

ALL THINGS CONSIDERED: EXPOSURE THERAPY

All exposure therapies share the common procedural element of *exposure to anxiety-evoking stimuli without actual negative consequences occurring*. Exposure therapies differ with respect to the basic paradigm into which they fit (brief/graduated or prolonged/intense), the mode of exposure (ranging from in vivo to imaginal), whether the exposure is therapist administered or self-managed, and whether additional features are employed (such as a competing response and response prevention).

Systematic desensitization, the parent of exposure therapies, is a tried-and-true treatment that is broadly applicable. Because exposure is imaginal, the nature of the anxiety-evoking events is limited only by the client's imagination. Because the exposure is brief, graduated, and imaginal, systematic desensitization is the least distressing exposure therapy. It also has the practical advantage that it can be implemented in a therapist's office.

In vivo desensitization shares with systematic desensitization the advantages associated with brief/graduated exposure without the potential limitation of clients' inability to imagine scenes vividly. Exposure to the actual situations is likely to be more upsetting, but the treatment may be quicker and may transfer more readily to actual situations in the client's life. Therapist-administered in vivo exposure is always costly in terms of a therapist's time, but self-managed in vivo exposure, when viable, is highly cost-effective.[99] In vivo exposure now is recognized as one of the critical components in the treatment of *agoraphobia*. Agoraphobia involves intense fear and avoidance of public places or situations from which escape might be difficult or help might not be available should the individual experience incapacitating panic-like symptoms.

In vivo flooding can rapidly reduce fear, and it also is used to treat agoraphobia. It is the treatment of choice for obsessive-compulsive disorder,[100] and

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research has shown long-term maintenance for at least 5 years.[101] The studies that provide strong support for the effectiveness of in vivo flooding for obsessive-compulsive disorder predominantly have examined Caucasian clients. More recently, studies have included African-American clients and have obtained the same results.[102]

In vivo flooding is applicable to a wide range of clients, including elderly individuals.[103] With children (as young as 4 years old),[104] in vivo flooding is used more frequently than imaginal flooding. Two potential limitations of in vivo flooding are that (1) clients must be willing to subject themselves to the discomfort of prolonged/intense exposure to the actual situations that make them anxious and (2) a therapist's assistance generally is necessary, which is not always practical. Imaginal flooding also can result in rapid reduction of fear and shares with systematic desensitization the advantages of imaginal exposure. Imaginal flooding does involve discomfort for the client, although usually to a lesser degree than in vivo flooding.

As these brief synopses of specific exposure therapies indicate, each is a viable treatment for some clients and some anxiety-related disorders. None, however, is useful in all cases. A similar conclusion can be drawn regarding mode of exposure (imaginal versus in vivo) and exposure paradigm (brief/graduated versus prolonged/intense).

Although some behavior therapists believe that exposure in vivo generally is superior to imaginal exposure,[105] there is reason to question this broad conclusion.[106] Studies involving clients with serious anxiety-related problems show that exposure in vivo has no clear-cut, general superiority to imaginal exposure. This is true when in vivo desensitization is compared with systematic desensitization[107] and when in vivo flooding is compared with imaginal flooding.[108]

When the actual feared events cannot be reproduced, imaginal exposure must be used. For some specific populations and disorders, either imaginal or in vivo exposure may be the superior treatment. For example, in vivo desensitization is generally more effective than systematic desensitization for treating childhood fears,[109] whereas imaginal flooding has been shown to be superior to in vivo flooding in preventing relapse for clients with obsessive-compulsive disorder who compulsively check (for example, whether they have locked their apartment door).[110] Nonetheless, the safest general conclusion that can be drawn about imaginal versus in vivo exposure is that both are useful and effective procedures.

The decision to employ brief/graduated or prolonged/intense exposure depends, in part, on the psychological disorder being treated, as there is no general superiority of either paradigm.[111] For instance, in vivo desensitization (brief/graduated) is particularly useful with agoraphobia, whereas imaginal flooding (prolonged/intense) is the treatment of choice for posttraumatic stress disorder.[112] In the case of obsessive-compulsive disorder, both types of exposure may be warranted because each affects different aspects of the disorder. Brief/graduated exposure reduces anxiety and avoidance behaviors, whereas prolonged/intense exposure reduces ritualistic acts.[113]

Other factors likely to influence the decision about the optimal paradigm of exposure include the severity of the complaint and the client's preference. The actual decision about which exposure therapy to employ is a joint

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one, drawing on the behavior therapist's knowledge about and experience with exposure therapies and the client's personal preference. In some cases, the therapist clearly can recommend one exposure therapy based on research findings regarding its relative effectiveness with the client's particular disorder. The therapist describes the procedures of each potentially beneficial therapy as well as its pros and cons. For example, both systematic desensitization and flooding may alleviate a client's fear of flying. Desensitization is likely to take longer and be less "painful," whereas the reverse is true for flooding. With exposure therapies, the issue of how much discomfort the client is willing to endure must be considered in addition to effectiveness and efficiency.

As a group, exposure therapies appear to be the single most potent behavior therapy for anxiety disorders[114] and can have long-lasting effects. This does not mean that exposure alone always is sufficient. Indeed, with severe and multifaceted disorders, the use of more than one type of therapy often is required. This is often the case with posttraumatic stress disorder. Besides the intense emotional distress and behavioral avoidance that is best treated by exposure therapy,[115] people suffering from PTSD often have a variety of skill deficits and comorbid disorders, such as substance abuse, that need to be treated.[116]

EXPOSURE THERAPY FOR CULTURALLY DIVERSE CLIENTS

To date, the vast majority of research studies on exposure therapies have been conducted with clients from the majority White, European-American culture. Fortunately, evidence is accumulating for the applicability of exposure therapies to culturally diverse clients. For example, for the treatment of anxiety disorders, exposure therapies in both individual and group formats seem to be as effective with Latino-American youths as with European-American youths.[117] Flooding for obsessive-compulsive disorder has been demonstrated to be effective for African Americans and Caribbean Americans.[118]

Although minority clients may benefit from exposure therapies, the anxiety reduction they experience may not be as great as it is for European Americans.[119] One possible reason is that existing racial prejudice may interfere with the process, and hence with the outcome, of therapy. This can be seen in the following reconstructed dialogue between a European-American behavior therapist and her African-American client as they attempted in vivo flooding for anxiety about going to a shopping mall.[120]

Client: I really don't want to do this today.

Therapist [thinking anticipatory anxiety was the issue]: I know you are anxious about going there, but think of it as a chance to confront and overcome the fear.

Client: No, you don't understand. I don't have any money with me. I can't buy anything.

Therapist: That's okay. You can window shop. A lot of people do that. For some people, it's a cheap way to have a good time.

Client: That's okay for you. White people can go into a store and just browse. But if a Black person does it, the store security people will watch her like a hawk. If I don't act like I'm really buying something, they'll think I'm stealing.

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Clearly, behavior therapists must consider possible diversity factors—including racial, cultural, socioeconomic, gender, sexual orientation, and age factors—that may be relevant to the maintenance and treatment of problem behaviors. As another example, consider the case of a 39-year-old African-American physician suffering from a chronic and severe social phobia.[121] The client reported experiencing anxiety when she interacted with other medical professionals and in social situations, especially with strangers. Consequently, she avoided such encounters whenever possible. Initially, imaginal and in vivo flooding resulted in a moderate reduction of her anxiety. However, the flooding achieved its greatest effectiveness only after her therapist discovered that interaction with European-American physicians was particularly troublesome for the client and introduced issues of race into the exposure situations.

IN THEORY 11-2

Exposure Therapies or Therapy?

More than any other category of behavior therapy, exposure therapy mixes and matches approaches and procedures. In terms of treating individual clients, this practice clearly allows clients' treatment plans to be individualized to meet their specific problems and personal preferences. In research, the practice requires behavior therapists to specify the components that make up the exposure therapy being studied. Unfortunately, all too often this is not done. Behavior therapists have been notoriously inconsistent in their use of terms to describe exposure therapies, with the exception of systematic desensitization. In some cases, the same term is used to designate more than one therapy (see Table 11-2, page 270). The inconsistency leads to confusion about the specific therapy procedures being employed. At the same time, it may reflect the current state of affairs—namely, a genuine overlap among exposure therapy applications, which makes it difficult to categorize them.

To begin with, all of the exposure therapies share common theoretical explanations (see In Theory 10-1, page 243). Although the major exposure therapies differ in a variety of procedural aspects, in fact, they may share more similarities than differences. One example of overlapping procedures is that whichever mode of exposure clients receive—in vivo or imaginal—they often indirectly receive the other mode. With in vivo flooding, clients have had experience with the exposure procedures in previous sessions. Thus, it is likely that before an in vivo flooding session, clients think about (imagine) the exposure procedure, including the events to be presented; this process approximates imaginal flooding.[122] Likewise, imaginal flooding may involve in vivo flooding. Therapists may recommend that clients engage in self-managed in vivo flooding at home.[123] Even without this suggestion, clients may naturally undergo in vivo flooding when they encounter the threatening stimuli during the course of their daily activities.[124]

Another instance of procedural overlap is in the use of competing responses. It is standard practice to include a competing response in brief/graduated exposure therapies. Although a competing response is not standard practice in prolonged/intense exposure therapies, the presence and support of the therapist may serve an equivalent function. It also is possible that clients spontaneously employ coping responses (such as reassuring themselves) that compete with the high levels of anxiety encountered in prolonged/intense exposure.

(*continued*)

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IN THEORY 11-2 (*continued*)

TABLE 11-2
Terms Used to Designate Exposure Therapies

Most Common Term	Other Terms
Systematic desensitization	Desensitization
In vivo exposure	In vivo desensitization Graduated exposure Graded exposure Exposure
In vivo flooding	Flooding In vivo exposure Exposure Prolonged exposure Response prevention In vivo exposure with response prevention Rapid exposure
Imaginal flooding	Flooding In vitro flooding Fantasy flooding Prolonged exposure

The similarities among exposure therapies raise the question of whether it would be more fruitful to classify such procedures as *exposure therapy with variations* than as different exposure therapies. Uncovering the similarities among exposure therapies may increase our understanding of the fundamental nature of exposure as a treatment and help account for the effectiveness of seemingly different exposure procedures.

SUMMARY

1. Prolonged/intense exposure therapies, generally called flooding, expose clients for extended periods to anxiety-evoking stimuli that, from the outset, are intense. Exposure is continued until the client's anxiety peaks and then begins to decline.
2. In flooding, the exposure can be in vivo or imaginal. In vivo flooding often includes response prevention, in which clients are kept from engaging in their typical anxiety-reducing but maladaptive behaviors. In vivo flooding is a treatment of choice for obsessive-compulsive disorder and involves clients' engaging in anxiety-evoking behaviors without engaging in their typical compulsive rituals.
3. Cue exposure is a specialized form of response prevention used to treat substance-related disorders; clients are exposed to cues related to addictive behaviors, but they are not permitted to use the drug.

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4. Imaginal flooding makes it possible to expose clients to any anxiety-evoking event. It can be used to treat posttraumatic stress disorder, for which it might be impractical and unethical to employ in vivo flooding.
5. The development and maintenance of fear that often is treated by exposure therapies can be explained by a two-factor learning theory. Fear is initially learned by association of a neutral event with one that naturally elicits fear (classical conditioning). Then the person's anxiety-reducing responses (avoidance) are maintained through negative reinforcement (operant conditioning).
6. Both in vivo and imaginal flooding are effective treatments. Because of the discomfort caused by prolonged/intense exposure therapies, clients may not choose these treatments, despite their effectiveness.
7. Eye movement desensitization and reprocessing (EMDR) is a relatively new variant of exposure therapy that essentially involves imaginal flooding (including rapid, rhythmic eye movements) and cognitive restructuring.
8. Each of the major exposure therapies is a viable treatment for some clients and some anxiety disorders. Increasingly, evidence is accumulating for the applicability of exposure therapies to culturally diverse clients.
9. Although exposure therapies differ in a variety of procedural aspects, they overlap sufficiently to raise the question of whether they should be considered variations of a single therapy.

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CHAPTER 12



Modeling Therapy:
Vicarious Extinction and Skills Training

Do What I Do: Basics of Modeling

IN THEORY 12-1 Three Stages of Observational Learning

Self-Modeling Therapy

CASE 12-1 Modifying Inappropriate Social Behaviors by Self-Modeling

The Nature of Modeling Therapy

CASE 12-2 Accelerating a Prescribed Oral Hygiene Practice Through Modeling

Vicarious Extinction: Reducing Fear by Modeling

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CASE 12-6 Assertion Training for Refusing Inappropriate Requests

PARTICIPATION EXERCISE 12-2 Assertion Training for Refusing Unreasonable Requests

All Things Considered: Modeling Therapy

SUMMARY

REFERENCE NOTES

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Just shy of 4 months after two hijacked airliners were deliberately flown into the World Trade Center in New York City on September 11, 2001, fifteen-year-old Charles Bishop intentionally flew a stolen small private plane into a bank building in Tampa, Florida. He carried a note in which he expressed sympathy for Osama bin Laden, the alleged mastermind of the terrorist attacks on the World Trade Center. Although the reasons for Bishop's suicidal act are unknown, there is no doubt about where he got the idea for ending his life as he did. In the same vein, ever since two students at Columbine High School in Littelton, Colorado, went on a shooting rampage on April 20, 1999, there have been many other school shootings as well as numerous plots by teenagers to murder students and teachers in their own schools.

Learning by observing and then imitating other people's behaviors is a pervasive part of our lives. Fortunately, most of the time such learning and imitation is prosocial. We learn language, attitudes and values, preferences, standards for how to act, mannerisms, emotional responses, and countless skills by observing the behaviors of others (see Photo 12-1 as a common example). We borrow many of our habits, such as verbal expressions and body language, from people we know well, such as our parents or older siblings. Think about some of your own mannerisms, favorite expressions, and even your general ways of dealing with everyday situations. Do these behaviors remind you of anyone you know?



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PHOTO 12-1
Children readily learn many skills, such as teeth brushing, by imitating their parents.

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Modeling can play a role in the development and maintenance of psychological and physical disorders. For example, the aggression people have observed in their families of origin correlates with the amount and type of aggression in their own marriages.[1] How we experience pain seems to be influenced by how significant people in our lives have dealt with pain.[2] There even is evidence that observing mass media depictions of suicide, actual or fictional, may foster imitation; suicide rates typically rise following such media presentations.[3] Fortunately, the same basic modeling processes can be used to alleviate problem behaviors, as you will see shortly.

DO WHAT I DO: BASICS OF MODELING

The basic ingredients for modeling are a **model** who engages in a behavior and an **observer** who attends to the model. Observing a model provides two pieces of information: (1) what the model did and (2) what happened to the model as a result of the model's actions. The consequences of a model's behaviors—known as **vicarious consequences**—are important because they indicate the consequences observers are likely to receive for imitating the model. When the model's behavior is reinforced—**vicarious reinforcement**—the observer is more likely to imitate the model; when the model's behavior is punished—**vicarious punishment**—the observer is less likely to imitate the model. Consider whether you'd be more or less likely to speak up in class if your professor praised (vicarious reinforcement) or ridiculed (vicarious punishment) other students who spoke up in class.[4]

Up to this point in our discussion, I've not defined *imitation* because it is a familiar term. Formally, **imitation** occurs when someone observes a model and then behaves like the model. However, observing a model does not necessarily result in imitation, as In Theory 12-1 explains.

IN THEORY 12-1

Three Stages of Observational Learning

Observational learning is the process by which people are influenced by observing others' behaviors. The process involves three sequential stages: exposure, acquisition, and acceptance (see Figure 12-1).[5] Ensuring that each of these stages occurs is crucial for the success of modeling therapy.

The first stage is *exposure* to (observation of) the model's behaviors. The second stage is *acquisition* of (learning) the model's behaviors. Acquisition requires that the observer pay attention to and remember what the model does. Vicarious consequences are one of the factors that influence acquisition because the consequences a model receives enhance paying attention to the model. In effect, when there are consequences (either reinforcing or punishing) for the model's behavior, the observer is more likely to attend to what the model did than if there were no consequences or the consequences were neutral (that is, neither reinforcing or punishing).

The third and final stage of observational learning is the observer's *acceptance* of the model's behaviors as a guide for her or his own actions. Four types of acceptance are possible. Table 12-1 contains everyday examples of the possible outcomes in the acceptance stage. Acceptance can involve imitation or counterimitation, each of which can be either specific or general.

Imitation involves behaving *like* the model, and *counterimitation* involves behaving *differently than* the model. In *specific imitation*, the observer engages in the *same* behavior as the model; in other words, the observer *copies* the model. In *specific counterimitation*, the observer does *exactly the opposite* of what the model did. In *general imitation*, the observer behaves *similarly* (but not in precisely

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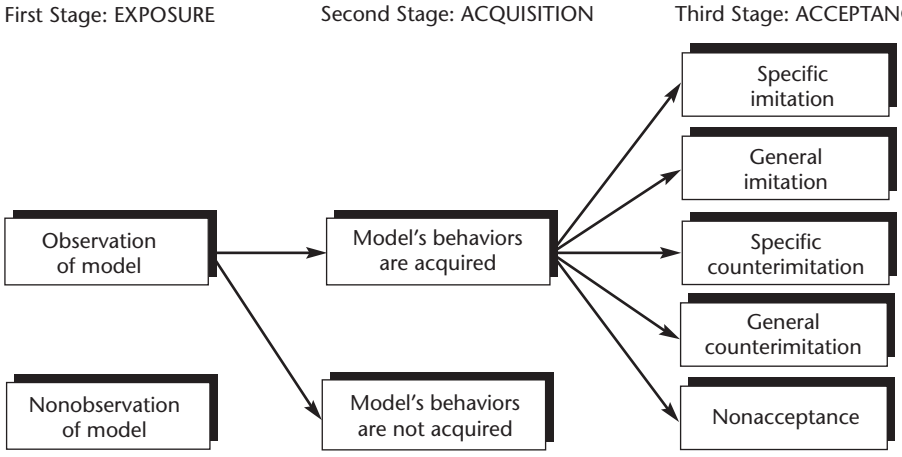


FIGURE 12-1
Three stages of observational learning and the possible outcomes in each stage

the same way) to the model. In *general counterimitation*, the observer behaves *differently* (but not in the directly opposite manner) from the model. Finally, an observer may be exposed to a model and remember what the model did but may not be influenced by the model, which is called *nonacceptance*.

Exposure and acquisition are necessary but not sufficient conditions for modeling to influence an observer. The observer also must accept the model's behavior as a guide for his or her own behavior. The form of acceptance is largely determined by the vicarious consequences that occur. Vicarious reinforcement generally leads to imitation, whereas vicarious punishment generally results in counterimitation.

For modeling therapy to be effective, all three stages of observational learning must occur. Thus, the therapist must ensure that the client observes the model (exposure). Then the client must accurately remember and later recall what the model did (acquisition). The therapist may facilitate exposure and acquisition through verbal prompts (for example, "Watch the model carefully" or "Remember what the model did"). Finally, the client must use the model's behavior as a guide for her or his own behavior (acceptance). To enhance the chances of acceptance, reinforcers can be given for imitating or counterimitating the model, which is direct reinforcement to the observer and not vicarious reinforcement.

TABLE 12-1
Examples of the Five Possible Outcomes in the Acceptance Stage of Observational Learning

Modeled Behavior: Miri observes her roommate putting coins in a beggar's cup.	
Acceptance Outcome	**Example of Miri's Behaviors**
SPECIFIC IMITATION	Miri puts coins in a beggar's cup.
GENERAL IMITATION	Miri shares her belongings with her friends.
SPECIFIC COUNTERIMITATION	Miri walks past the beggar without putting coins in the cup.
GENERAL COUNTERIMITATION	Miri does not share her belongings with her friends.
NONACCEPTANCE	Miri is unaffected by observing her roommate's donating behaviors.

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TABLE 12-2
Five Functions of Modeling

Function	Description	Example
TEACHING	Observer learns a new behavior by observing a model	Children learn language by hearing adults speak
PROMPTING	Observer is cued (reminded) to perform a behavior after observing a model engage in the behavior	People laugh when they hear other people laugh, as with laugh tracks on TV sitcoms
MOTIVATING	Observing a model's behavior and the favorable consequences it receives (vicarious reinforcement) serves as an incentive for an observer to engage in the same behavior	Students volunteer to read aloud when they observe other students' reading aloud and the teacher's responding favorably
REDUCING ANXIETY	Observing a model safely engage in an anxiety-evoking behavior reduces an observer's anxiety	People overcome their anxiety about going swimming by watching other people who are enjoying swimming
DISCOURAGING	Observing a model's behavior and the unfavorable consequences it receives (vicarious punishment) decreases the likelihood that the observer will imitate the model's behavior	Children who see peers punished for hitting others are less likely to engage in the same or even a similar behavior

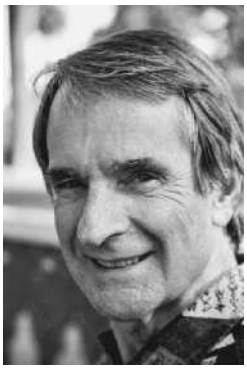
There are two types of models. A model who is physically present ("in person") is known as a **live model**; a model who is not physically present is called a **symbolic model**. We often are exposed to symbolic models on television, in books and movies, and through oral descriptions (such as when we hear about what someone has done). Myths and fairy tales are time-honored sources of culturally shared symbolic models.[6] Hansel and Gretel are models of courage, and Beauty (in "Beauty and the Beast") is a model of compassion. **Covert modeling** is a familiar form of symbolic modeling in which people *imagine* how someone would perform a particular behavior.[7] For instance, a child might imagine how a favorite cartoon character would handle a difficult or feared situation.[8]

Modeling can serve five functions for observers: (1) teaching, (2) prompting, (3) motivating, (4) reducing anxiety, and (5) discouraging (see Table 12-2 for a description of each).[9] Modeling therapies often serve multiple functions. Social skills training, for example, involves teaching, prompting, and motivating clients to engage in socially adaptive behaviors. Although the discouraging function of modeling has potential for treating deceleration target behaviors in behavior therapy,[10] it is rarely used.[11]

SELF-MODELING THERAPY

Similarity between a model and the observer tends to enhance imitation.[12] With children, for example, peer models are usually more effective than adult models.[13] Observer–model similarity is maximized by **self-modeling**, in which clients serve as their own models of adaptive functioning.[14] *Covert self-modeling*, in which

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Peter Dowrick

clients imagine themselves performing the target behavior, is the simplest application. *Video self-modeling therapy*, developed by Peter Dowrick,[15] has clients view videos that show their performing acceleration target behaviors. For example, self-modeling was used to teach a 9-year-old boy with Asperger's syndrome to recognize and understand emotions by watching himself express a variety of emotions.[16]

If the purpose of self-modeling therapy is to accelerate target behaviors that clients cannot perform or aren't performing, how are self-modeling videos made of clients engaging in the behaviors? The answer lies in clever recording and editing techniques, including off-camera prompting and deleting errors. When the target behavior has multiple components, the client can be taped performing each one separately; when each component has been performed correctly, they can be combined so that the full behavior appears to have been performed fluidly. When clients' inability to perform the target behavior is maintained by threatening setting events (such as on a job site where their work is scrutinized), clients can be videotaped as they engage in the target behavior in a neutral (nonthreatening) situation and then, during editing, the performance can be superimposed on scenes of the threatening situation. The standard procedures used in self-modeling therapy are illustrated in Case 12-1.

CASE 12-1

Modifying Inappropriate Social Behaviors by Self-Modeling[17]

Ten-year-old Chuck, a resident of a treatment center for patients with bronchial asthma, spent most of his time alone. His peers rebuffed his attempts to interact with them by calling him "boob" and "baby." Chuck would respond by retreating to his room and having a temper tantrum. Chuck also displayed inappropriate behaviors with adults, such as giggling constantly, attempting to tickle them, and jumping onto their laps during interviews.

To deal with these problems, a self-modeling video was prepared. Chuck and two other boys enthusiastically agreed to make a "television film." In one self-modeling sequence, Chuck came into an adult's office and seated himself in a chair (rather than on the adult's lap).

After Chuck viewed the self-modeling tape daily for 4 weeks, the frequency of Chuck's socially appropriate behaviors in his daily interactions increased substantially. After treatment ended, Chuck maintained his appropriate social behaviors for the remaining 6 months that he was at the center. It is noteworthy that many of the reports of Chuck's improved behaviors came from staff members who were unaware that he had undergone self-modeling therapy.

Not only does self-modeling provide demonstrations of skills, but it also shows people's succeeding. As one student pilot commented while watching a video of his landings, "I can see what I did right and what I did wrong, but mostly I can see that I *did* it."[18] This phenomenon is the basis for using video self-modeling to facilitate the maintenance of the gains people make after completing a standard speech restructuring program for stuttering. Having people

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see brief videos of their talking without stuttering has been demonstrated in initial research to help maintain reduced stuttering.[19]

Self-modeling can also highlight the possibility of future success by depicting clients' acting adaptively in challenging situations that they will encounter.[20] This *video futures* or *feedforward* technique was used with an Alaska Native man ("Albert") in his late 20s with intellectual disabilities and a history of pedophilic behaviors. Albert was trained to engage in self-control behaviors that competed with his pedophilic behaviors.[21] The competing behaviors involved avoiding children when he encountered them in his daily activities. Once every other day for 10 days, Albert watched the 2-minute self-modeling tape he had made. He quickly began to perform the self-control behaviors and transferred them to other situations. These gains were maintained at a 9-month follow-up.

Self-modeling therapy has been applied to clients across the age spectrum[22] for such diverse problems as social, daily living, and academic skills deficits;[23] selective mutism;[24] stuttering; [25] tic disorders;[26] aggressive behaviors;[27] hyperactivity;[28] problematic classroom behaviors;[29] public speaking anxiety;[30] depression;[31] sexual unresponsiveness;[32] and inappropriate sexual behaviors.[33]

Self-modeling has been used to treat social communication, functional, vocational, and behavioral problems associated with autism spectrum disorder and Down syndrome.[34] In a small multiple-baseline study, video self-modeling was found to be superior to peer video modeling in teaching language skills.[35] A meta-analysis of video self-modeling with children and adolescents with autism spectrum disorder revealed that the skills that they had learned transferred across people and settings and were maintained over time.[36]

Outside of therapy, video self-modeling has been applied to such diverse endeavors as reading,[37] language skills,[38] and math instruction;[39] job skills;[40] reducing carpal tunnel injury among office workers using computers;[41] increasing teachers' behavior-specific praise;[42] parenting education for first-time fathers;[43] and athletic performance.[44] One study of athletic performance compared video self-modeling and mastery (expert) modeling of batting for women's intercollegiate softball players.[45] Both interventions increased batting statistics and ball exit velocities, and the two types of modeling were not significantly different from each other. Because it would be expected that batting performance would benefit more from a mastery than a coping model (a model just learning batting techniques, which self-modeling provided), the findings of this study indicate the potential potency of self-modeling.

Self-modeling can create rapid, clinically significant changes, sometimes requiring as little as 12 minutes of self-observation.[46] A possible alternative to video self-modeling is self-modeling through virtual reality in which a person performs an acceleration target behavior in a virtual environment where the variety of behaviors that can potentially be modeled is greatly expanded.[47]

THE NATURE OF MODELING THERAPY

Modeling procedures generally are combined with other behavior therapies, such as prompting, shaping, reinforcement, in vivo desensitization, and **behavior rehearsal**, in which clients practice performing acceleration target behaviors and coping skills. Although modeling often is part of a treatment package, it can be highly effective by itself, as you will see in Case 12-2.

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CASE 12-2

Accelerating a Prescribed Oral Hygiene Practice Through Modeling[48]

Julie was a 25-year-old married woman who recently had had oral surgery for serious, progressive gum disease. The dentist had instructed Julie to use a Waterpik, a device that squirts water to clean between the teeth. She had bought a Waterpik months before her surgery, but she had never used it. The dentist warned that if she did not use the Waterpik daily, her gum condition would regress.

Several months after Julie's surgery, her husband, Art, became concerned because Julie was not using the Waterpik, and he mentioned this to her. She said she would start using it. Another month passed, and the Waterpik remained unused. Art became increasingly worried and began to remind Julie to use the Waterpik. Julie became annoyed at Art's nagging and told him to stop worrying about *her* teeth.

At this point, Art called the dentist. The dentist suggested that Art use the Waterpik himself on a daily basis and record the times that his wife used it to see if his modeling made a difference. The results of Art's modeling were striking. As Figure 12-2 shows, Julie had not used the Waterpik once in the 30 weeks before Art's modeling. During the first week of modeling, Julie used the Waterpik 6 of 7 days; the next week, she used it every day; after a drop to 5 times in the third week, she used the Waterpik every day for the next 3 weeks.

No modeling or recording took place during the next 2 weeks because Art was out of town on business. The day he returned from his trip, he called the dentist to report on the success of his modeling. The dentist suggested that Art discontinue his modeling and just continue to record how often Julie used the Waterpik. During the next 5 weeks, Julie used the Waterpik an average of 5 times per week (see Figure 12-2). This was a vast improvement from her baseline rate, which was zero. Moreover, the outcome of the informal modeling therapy was clinically significant because 5 times a week was sufficient to keep her gums healthy.

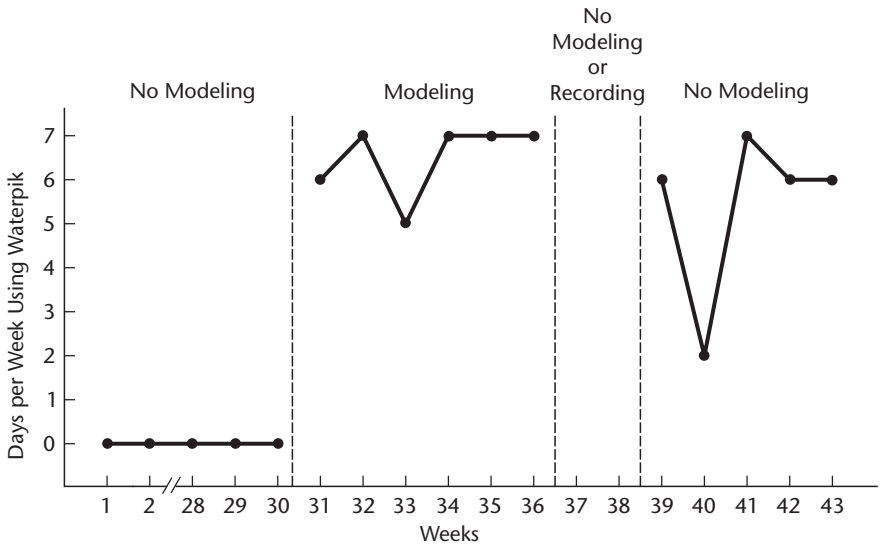


FIGURE 12-2
Frequency of Julie's use of her Waterpik

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In the preceding case, modeling was the sole treatment. Art merely performed the target behavior, which Julie could observe. No prompting to pay attention to the modeling or reinforcement for imitating was used, as often is done, which illustrates the potency of modeling by itself.

Case 12-2 also illustrates the *subtleness* of modeling, which can be advantageous when clients resist direct instructions from others to change their behaviors. Julie did not use the Waterpik when Art reminded her; in fact, Art's prompting probably made Julie more resistant to using the Waterpik. Children often resist parents' telling them what to do ("Mom, I'd rather do it myself!") but will respond to more subtle prompts. For example, when parents bring their own plates and silverware to the sink after a meal, this modeling may be more effective in getting their children to do so than reminding them each time. Similarly, modeling therapy is useful with clients from cultures in which subtlety and self-determination are valued (for example, Cambodian, Native American, and Slavic cultures).[49]

Modeling therapies have been used primarily to reduce fear/anxiety and alleviate skills deficits, and we will examine a variety of modeling therapy procedures used to deal with both types of problems.

VICARIOUS EXTINCTION: REDUCING FEAR BY MODELING

Fear or anxiety is maintained by the anticipation of negative consequences (such as expecting to be turned down when asking for a date) and by skills deficits (such as not knowing how to ask for a date). Modeling can treat both of these maintaining conditions simultaneously when a client observes a model engage in anxiety-evoking behaviors without incurring negative consequences, a process known as **vicarious extinction**.[50]

Vicarious extinction typically employs a **coping model**—a model who is initially fearful and incompetent and who gradually becomes more comfortable and skilled performing an anxiety-evoking behavior.[51] Coping models are appropriate because clients are initially fearful and incompetent, so a coping model increases model–observer similarity. In contrast, a **mastery model** is highly competent and confident from the outset and shows no fear.[52] Mastery models are more suitable for precise skill development, such as learning to physically defend oneself from sexual assault.[53]

LIVE MODELING TO REDUCE FEAR

Live models have been used to treat a variety of anxiety disorders, such as specific phobias (for example, fear of small animals),[54] test anxiety,[55] social phobia,[56] and obsessive-compulsive disorder.[57] Case 12-3 is an unusual application of parental modeling and in vivo desensitization to reduce a child's fear of dental treatment.

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CASE 12-3

Planned and Unplanned Treatment of Fear of Dental Procedures by Parental Modeling and In Vivo Desensitization[58]

Four-year-old S. Z. needed restorative dental work, but she was intensely afraid of the dentist. In the six attempted visits to the dentist, S. Z. would "scream, cry, [and] shake violently as [she] walked to the dentist, was short of breath and would adamantly refuse to cooperate." S. Z.'s mother reported that she too was terrified of dentists, and she believed that her daughter had learned to fear dentists from her.[59] Although S. Z.'s mother did not want to be treated for her own fear, she did agree to serve as a model for her daughter.

In the first five weekly visits to the dentist's office, S. Z. and her mother viewed a video depicting various dental procedures (modeling) and spent time in the office with no dental procedures being performed (in vivo desensitization). During the sixth visit, the therapist and the mother both modeled experiencing a 1-minute dental checkup. As coping models, they exhibited initial hesitancy; then they cooperated with the dental procedures and commented that it "wasn't that bad at all." The mother was able to do this despite her own fear. During the seventh session, S. Z. received dental treatment while her mother was present to provide reassurance.

The eighth and final session served as a posttherapy assessment. The dentist performed two procedures on S. Z. under local anesthesia. S. Z. sat by herself in the chair and showed no overt signs of fear. Before therapy and during the final session, S. Z.'s mother used a 100-point scale to rate her daughter's overt signs of disturbance regarding 10 dentistry-related behaviors, which ranged from "telling S. Z. about a dental appointment" to "the dentist's using the drill." During the final session, the average rating was 6, compared with 78 before therapy. Over the next 6 months, S. Z. received considerable dental treatment. At a 6-month follow-up, S. Z.'s average rating of disturbance was 3. A 1-year telephone follow-up with both the mother and the dentist indicated that S. Z. continued to display little or no fear of dental procedures.

S. Z.'s mother was not specifically treated for her own dental fears. However, she had participated in S. Z.'s in vivo desensitization, and her modeling for S. Z. constituted self-modeling and behavior rehearsal for her. Apparently, this indirect therapy was sufficient to almost eliminate her own fear.[60] The mother's pretherapy, posttherapy, and 6-month follow-up average disturbance ratings were 54, 3, and 7, respectively. A year later, the mother and her dentist reported that she was experiencing very little fear about dental visits.

Participant Modeling

In **participant modeling**, the therapist models the fear-evoking behavior for the client and then verbally encourages and physically guides the client's practicing the behavior. Developed by Brunhilde Ritter,[61] participant modeling combines modeling, verbal and physical prompting, behavior rehearsal, and in vivo

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desensitization. Participant modeling also is known as *contact desensitization*[62] or *guided participation*.[63] The three basic steps in participant modeling are:

1. *Modeling*: The therapist first models the fear-evoking behavior for the client.
2. *Prompting, behavior rehearsal, shaping*, and *in vivo desensitization*: The therapist verbally prompts the client to imitate the behavior she or he has just modeled. The therapist physically prompts the client to perform the behavior (such as by actually holding the client's hand while petting a dog) and reinforces the client as she or he successfully completes a task. Besides guiding the behavior, the physical contact between the therapist and client reassures and calms the client, which competes with fear.
3. *Fading prompts*: The therapist gradually withdraws the verbal and physical prompts. The client begins to perform the behavior with the therapist present but without physical contact, and finally without the therapist present.

The behaviors that are modeled and practiced are arranged in a hierarchy, and treatment proceeds from the least to the most threatening behaviors. The rate of exposure is determined by the client's level of fear, as with in vivo desensitization. Case 12-4 illustrates the basic steps in participant modeling.

CASE 12-4

Fear of Crossing Streets Treated by Participant Modeling[64]

Bhagwan was a 37-year-old man who had lived all but the last 7 months of his life in a small village in the mountains of northern India. Bhagwan was living with relatives who had brought him to the United States for medical treatment. When Bhagwan recovered from his illness, his relatives asked him to remain with them. He adjusted well to his new culture and life except that he was intensely afraid of crossing streets, which meant that he had to remain at home except when he was driven someplace by his relatives. Bhagwan was highly motivated to overcome his fear, and a behavior therapist who spoke Hindi was found.

The initial therapy sessions were held in a residential area with narrow streets and little traffic. The therapist first modeled walking across a street a number of times as Bhagwan watched. Then the therapist firmly took Bhagwan's arm and walked with him across the street. This was done repeatedly until Bhagwan reported minimal anxiety. The street crossing was continued as the physical contact was gradually reduced (first holding the client's arm lightly and then only touching it) until it was eliminated and the therapist just walked with the client. This, too, was gradually reduced: first, the therapist walked slightly behind Bhagwan; then several feet behind him; and finally, the therapist remained on the sidewalk. In later sessions, these procedures were repeated on increasingly wider and busier streets. Between sessions, Bhagwan practiced walking across streets on his own. After 11 sessions, Bhagwan felt comfortable crossing most streets on his own.

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Participant modeling has been used to treat a variety of anxiety disorders, including small animal phobias with adults[65] and young children,[66] fear of dental treatment,[67] public speaking anxiety,[68] fear of water,[69] fear of heights,[70] and agoraphobia.[71] In some studies, participant modeling has been shown to be superior to live modeling,[72] film modeling,[73] and in vivo desensitization.[74] The potency of participant modeling may be due to its being a treatment package consisting of modeling, prompting, behavior rehearsal, and in vivo desensitization. Clients' fears are reduced both by what they see and by what they do.[75]

FILM/VIDEO MODELING TO REDUCE FEAR

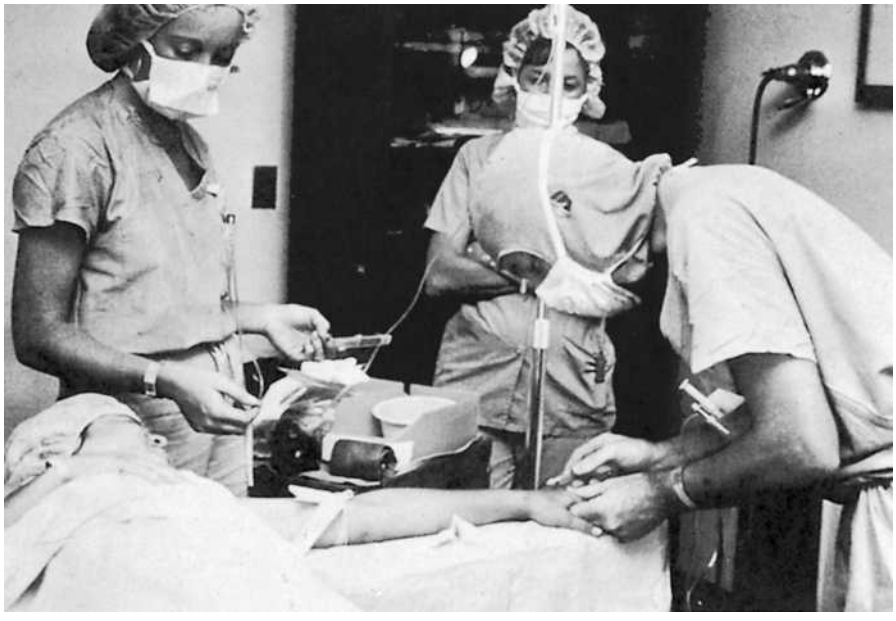
Fear of medical and dental procedures can have far-reaching consequences because it can keep people from seeking regular health checkups and obtaining necessary treatment. Film/video modeling has been highly successful in reducing such fear and avoidance behaviors. One survey has indicated that 37% of all pediatric hospitals in the United States use film/video modeling to prepare children for hospitalization and surgery.[76] We will look at film/video modeling therapies for reducing fear of surgery and related medical procedures. Parallel modeling therapies have proven effective in reducing fear of dentistry in children and adults.[77]



Courtesy of Barbara Melamed

Barbara Melamed

Barbara Melamed spearheaded the use of films to reduce children's anxiety about hospitalization and medical procedures with *Ethan Has an Operation*, a 16-minute modeling film depicting the experiences of a 7-year-old boy hospitalized for a hernia operation (see Photo 12-2).[78]



Courtesy of Barbara Melamed, produced at Case Western Reserve University

PHOTO 12-2

Scene from the film *Ethan Has an Operation*, showing Ethan in the operating room as the surgeon inserts an intravenous needle

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> This film . . . consists of 15 scenes showing various events that most children encounter when hospitalized for elective surgery from the time of admission to the time of discharge, including a child's orientation to the hospital ward and medical personnel such as the surgeon and anesthesiologist; having a blood test and exposure to standard hospital equipment; separation from the mother; and scenes in the operating and recovery rooms. In addition to explanations of the hospital procedures provided by the medical staff, various scenes are narrated by the child, who describes his feelings and concerns at each stage of the hospital experience. Both the child's behavior and verbal remarks exemplify the behavior of a coping model, so that while he exhibits some anxiety and apprehension, he is able to overcome his initial fears and complete each event in a successful and nonanxious manner.[79]

Compared with children who viewed a control film (depicting a boy on a nature trip), children who viewed *Ethan Has an Operation* had less postoperative anxiety and fewer conduct problems at home.[80]

An 18-minute film was developed to minimize children's fear of receiving injections.[81] At the moment the child in the film receives the injection, a close-up shot of the child's upper body and face shows the child's wincing, exclaiming "Ouch," and frowning, which is a realistic reaction to the injection. Children (ages 4 to 9) viewed the film at home 36 hours before receiving their preoperative injections. These children, who had seen the realistic coping model, were compared with children who saw the same basic film, except that the patient/model did not show any signs of pain or discomfort. Such behavior is unrealistic because injections do hurt. Another group of children saw no movie at all. Children who had seen the realistic film indicated experiencing the least pain when they received their injections; those who had viewed the unrealistic film reported experiencing the most pain.[82]

Modeling films have been combined with other behavior therapies to reduce children's fear of medical procedures. For example, a 12-minute modeling film, *Joy Gets a Bone Marrow and Spinal Tap*, was part of a treatment package for reducing the distress of five children with cancer (ages 3 to 7) undergoing two very painful treatments: a bone marrow aspiration and a spinal tap.[83] Joy, the model in the film, is a 6-year-old patient with leukemia who comes to the clinic for treatment.

> She describes her thoughts and feelings. . . . As a coping model, Joy admits she is scared about the procedures, exhibits some signs of distress, but then copes effectively. . . . Joy explains *why* she has to have the procedures and she illustrates *what* happens at each point in the procedures.[84]

The treatment package (which also included breathing exercises, reinforcement, emotive imagery, and behavior rehearsal) successfully reduced the distress for each of the children in the study.

Modeling films to treat adults' fear and distress experienced *during* medical procedures also are beneficial.[85] Sexual anxiety in women is yet another target behavior that has been treated with video modeling.[86] In Theory 12-2 offers one explanation for how such modeling treatments work.

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IN THEORY 12-2

Perceived Self-Efficacy as a General Explanation of the Effects of Modeling and Other Behavior Therapies

Perceived self-efficacy (or **self-efficacy**, for short) refers to the belief people have that they can be successful at a task.[87] The self-efficacy is *perceived* because it totally depends on how the individual views his or her chances of success, independent of the external odds. A person can have high perceived self-efficacy for an impossible task, such as swimming across the Pacific Ocean, and low self-efficacy for a relatively easy task, such as swimming across a pool.

According to Bandura's theory of perceived self-efficacy, people's level of self-efficacy determines (a) whether they will attempt a task, (b) the effort they will expend to complete it, and (c) the time they will spend on the task.[88] The stronger a person's perceived self-efficacy, the more vigorous and persistent the person tends to be in the face of obstacles and setbacks.[89] Self-efficacy is situation specific—it varies with the particular task.[90] For example, people's self-efficacy expectations about their ability to stop smoking predict success in smoking cessation but not in remaining on a diet.[91]

Bandura has speculated that modeling and other behavior therapies (as well as other forms of psychotherapy) are effective because they create and strengthen a client's perceived self-efficacy.[92] Recall that one of the cognitive explanations of exposure therapies is that they heighten clients' belief that they are capable of handling their anxiety (see In Theory 10-1, page 243). In the treatment of marijuana dependence, one study indicated that optimal treatment involves increasing abstinence self-efficacy,[93] and treatment for

TABLE 12-3
Examples of Behavior Therapies That Provide Clients With Each of the Four Sources of Self-Efficacy (numbers in parentheses refer to chapters in which the therapies are discussed)

Self-Efficacy Source	Behavior Therapies
PERFORMANCE ACCOMPLISHMENTS	Reinforcement therapies (7) Token economy (9) In vivo desensitization (10) In vivo flooding (11) Behavior rehearsal (12) Participant modeling (12) Stress inoculation training (14) Problem-solving therapy (14) Acceptance and Commitment Therapy (15) Dialectical behavior therapy (15)
VICARIOUS EXPERIENCE	Vicarious extinction (12)
VERBAL PERSUASION	Rational emotive behavior therapy (13) Cognitive therapy (13) Self-instructional training (14)
EMOTIONAL AROUSAL	Systematic desensitization (10) Imaginal flooding (11) Eye movement desensitization and reprocessing (11) Mindfulness-based cognitive therapy (15)

(*continued*)

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IN THEORY 12-2 (*continued*)

insomnia has been shown to be more effective when older clients are more confident in their ability to sleep.[94]

Self-efficacy is strengthened by information provided by four sources.

1. *Performance accomplishments*: Direct experience in succeeding at a task may be the most powerful source of self-efficacy.
2. *Vicarious experience*: Observing models succeed at tasks helps clients believe that they themselves can succeed.
3. *Verbal persuasion*: Telling or logically proving to clients that they can succeed is the most common source of self-efficacy in verbal psychotherapies and also plays a role in behavior therapies, especially cognitive-behavioral therapies (as you will see in Chapters 13 and 14).
4. *Emotional arousal*: People's levels of emotional arousal influence their perceived self-efficacy. Generally, high arousal is associated with anxiety and doubt and hence low self-efficacy; low arousal tends to be associated with calm and confidence and hence high self-efficacy. Thus, therapies that lower clients' arousal levels (such as progressive relaxation) can enhance clients' perceived self-efficacy.

Table 12-3 (page 287) presents examples of behavior therapies that provide clients with each of the four sources of self-efficacy. Each of the therapies is listed under its primary source of self-efficacy, but each therapy may provide more than one source of self-efficacy.

STORYTELLING TO REDUCE FEAR AND OTHER NEGATIVE EMOTIONS

Storytelling is a form of symbolic modeling used to treat fear. For example, a story told through a puppet show depicting a teddy bear who goes through a typical hospital visit has been shown to be as effective as film modeling, including the benchmark *Ethan Has an Operation*.[95] Many commercially available books and pamphlets describing various diagnostic and treatment procedures, such as those found in physicians' offices, include modeling in that they describe the experiences of actual or hypothetical patients. For instance, one page in *My Tonsillectomy Coloring Book*[96] is a picture of a young boy on a gurney moving toward the open doors of the operating room where the surgeon is waving to him; the caption reads: "With Joe and the nurse, Tim drove to a room and met a doctor there/Who wore a mask upon his face and a funny cap to hide his hair." Another page shows Joe lying on the operating table with an anesthesia mask over his mouth and nose; the caption reads: "The doctor let him breathe through it and that was quite a treat./He felt just like an astronaut and drifted into sleep."

Uncle Lightfoot is an 85-page book designed to reduce children's fear of the dark.[97] Michael, a young boy who is afraid of the dark, visits his uncle Lightfoot, who teaches him fun games to play in the dark, such as making shadow puppets on the wall. As a coping model, Michael learns to deal with progressively more threatening situations in the dark. The games have been adapted so that children can engage in behavior rehearsal with their parents after reading the book.

Covert modeling can be used to treat anxiety-related problems, such as social anxiety,[98] specific phobias,[99] anxiety anticipatory to surgery,[100] and

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obsessive-compulsive disorder.[101] Covert modeling implicitly is part of storytelling because the observer imagines the characters' actions.

Parents and teachers frequently use stories, rather than direct instructions, to influence children's behaviors and emotions. For example, stories and comic strips that model adaptive ways of dealing with potentially stressful events can be customized for a child, as by using the child's name. Such modeling stories have been used with children and adolescents suffering from autism spectrum disorder, Asperger's syndrome, and mild to moderate disabilities.[102] Modeling can be more effective than instructions because modeling provides *suggestions* rather than directives, which gives children a greater sense of independence. Consider the following example. A 7-year-old girl told her father that she was intimidated by a bully at school. Rather than directly suggest how she might handle the situation, the father wisely chose to give her vicarious advice by telling her a story about the way he handled a bully when he was a child.[103] In the same vein, to reduce children's fears in the wake of the 9/11 terrorist attacks, parents were advised to expose their children to stories depicting similar-age models coping with fear. For young children, *Sesame Street* produced a segment in which Elmo, the furry red monster, is a coping model who deals with his fear after a fire in his neighborhood.

SKILLS TRAINING

Skills deficits are often maintaining conditions of clients' problems. To perform a skill, a person must (1) know how to perform the skill, (2) be proficient at the skill, (3) know when it is appropriate to use the skill, and (4) be adequately motivated to perform the skill. Thus, a client's skill deficit may be due to a deficiency in one or more types of deficiencies: *knowledge, proficiency, discrimination*, and/or *motivation* (see Table 12-4). Clients may be deficient in one or more of these four components that are prerequisites for performing a skill: *knowledge, proficiency, discrimination,* and *motivation* (see Table 12-4).

TABLE 12-4
Types of Skills Deficits

Type	Description	Example
KNOWLEDGE	Client does not know how to perform the skill	A woman with a developmental disability has not learned to read
PROFICIENCY	Client is not competent at performing the skill because of inadequate practice	A psychiatric patient who has been hospitalized for many years is not accustomed to managing money
DISCRIMINATION	Client does not know the conditions (time and place) in which it is appropriate to perform the skill	A teenager with Asperger's syndrome loudly comments on a movie being shown in a theater
MOTIVATION	Client does not have adequate incentives to perform the skill	A nursing home resident who has no desire or reason to engage in self-care skills

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Skills training refers to treatment packages designed to overcome clients' skills deficits.[104] The training focuses on the specific deficient components (knowledge, proficiency, discrimination, or motivation) that are maintaining the client's problem. Modeling is a key component in skills training, which also may involve direct instruction, prompting, shaping, reinforcement, behavior rehearsal, role-playing, and corrective feedback.[105] Modeling is important in skills training because direct instruction often is insufficient to communicate the subtleties of performing complex skills, and prompting and shaping alone may be insufficient.[106] The client may need to "see" the behavior performed,[107] which often involves live modeling, although symbolic modeling in the form of virtual reality has been used.[108] Learning to tie your shoe is an example of the critical role modeling can play in learning some skills for which a verbal description would be wholly inadequate—just try describing how to tie a shoe.

The major components of skills training are illustrated in the following excerpt from a social skills training session with a high school student who was having difficulty calling to ask a girl to go on a date.

Therapist: Suppose you wanted to ask Cornelia to go to a party. What might you say?

Client: Well, I'm not exactly sure. I guess I'd just ask her if she wanted to go.

Therapist: Why don't you pretend that you are calling Cornelia and actually say what you might say on the phone to her?

Client: Okay, but don't expect much.

Therapist: Remember, we are only practicing. Just give it a try. *[prompting]*

Client: "Hello, Cornelia, this is Clint. How y'all doin'? Listen, if you've got nothing better to do, would you want to go to Grace's party with me?" *[role-playing]*

Therapist: That's a reasonable start. *[feedback, shaping]* Let's see if you can do even better. For one thing, you don't want to make it sound like going to the party with you is a last resort. *[direct instruction]* Let me demonstrate one way you might continue the conversation after you've said hello. Listen and see if you can hear a difference. *[prompting]* "Grace is having a party Saturday night, and I'd like to take you." *[modeling]*

Client: Yeah, I can hear the difference.

Therapist: Why don't you try to say something like that.

Client: "Grace told me about her party on Saturday, and I was wondering if you'd like to go with me." *[behavior rehearsal]*

Therapist: Very good. *[reinforcement]* That's much better. Just a straightforward statement of what you'd like. *[feedback]*

An early application of skills training targeted the major skills deficits that children and adolescents with autism spectrum disorder have,[109] and it continues to be a mainstay of therapy for autism spectrum disorder and Asperger's syndrome.[110] Language skills are a prime example, and modeling is a critical component in teaching such children to speak (see Photo 12-3). Most children learn to imitate in the course of normal development by being reinforced for emulating the behaviors of others, but children with autism spectrum disorder usually do not. The ability to imitate is a social skill called **generalized imitation**,[111] and

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Nir Alon/Alamy

PHOTO 12-3
Modeling is a key component in language training for children with autistic disorder. The therapist models the correct mouth and tongue positions and the sound for the child to imitate.

if it is not learned naturally, it can be specifically taught through shaping. This is done by initially reinforcing *any* behavior the child imitates, whether or not it is an adaptive behavior, so that the child begins to imitate. Once generalized imitation is established, modeling can be used to teach children with autism spectrum disorder the host of adaptive behaviors they have never learned to perform.

Other populations who may suffer from major skills deficits and who have benefited from skills training include clients with intellectual disability,[112] learning disabilities,[113] attention deficit hyperactivity disorder,[114] head injuries,[115] posttraumatic stress disorder,[116] and bipolar disorder.[117] Skills training has been employed to alleviate a wide array of specific skills deficits, including cognitive,[118] problem solving,[119] self-appraisal,[120] stress management,[121] academic,[122] consumer,[123] work-related,[124] and child management.[125] And skills training is a central component of a number of behavior therapies, including problem-solving therapy and stress inoculation training (Chapter 14) and dialectical behavior therapy (Chapter 15). Particularly innovative treatment packages have been developed to teach children skills for preventing abduction and sexual abuse.

PREVENTING ABDUCTION AND SEXUAL ABUSE THROUGH SKILLS TRAINING

Child abduction is a serious problem in the United States and other countries. Only 10% to 17% of abductors use force to lure their victims.[126] Typically, abductors attempt to develop a relationship with the child or to verbally

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entice the child, and children usually are unskilled at resisting abductors' inducements.[127]

Skills training interventions for teaching children to protect themselves from abduction was spearheaded by Cheryl Poche.[128] In one of her studies, three preschool children, who were at risk for being abducted, were taught abduction prevention skills.[129] Potential susceptibility was assessed by having an adult male role-play an abductor who approached the child and asked the child to leave the preschool with him. The "abductor" used three strategies commonly employed to lure children, which are described in Table 12-5.

The children were taught an appropriate response to each of the three common lures through modeling, behavior rehearsal (see Photo 12-4), feedback, and social reinforcement. A fully appropriate response required the child to succinctly tell the "abductor" that he or she will not go with him (for example, saying, "No, I have to ask my teacher") and running away within 3 seconds.

Before training, the appropriateness of the children's responses, based on a rating from 0 to 6, was near 0. After training, the appropriateness was near 6, and the responses transferred to a different setting in the community. A 12-week follow-up for the two children who had remained at the preschool demonstrated that the treatment effects were maintained.

The same treatment components were incorporated in a 20-minute interactive video in which a child models demonstrated two safety rules: (1) saying, "No, I have to go ask my teacher [or parent]" and then (2) quickly running to the teacher [or parent]. After each enticement scene, the narrator asked viewers if the child had done and said the right things.[130] After a pause, the narrator praised appropriate responses and corrected inappropriate ones by saying, "If you said ____, you're right, good listening! If you said ____, then I've fooled you. Watch again."[131] The video also provided an opportunity for behavior

TABLE 12-5
Lures Used in Naturalistic Role-Played Assessment of Children's Ability to Avoid Abduction

Type of Lure	Definition	Role-Played Scenario
SIMPLE	Simple request to go with the "abductor"	The "abductor" approaches child, says "Hello" or "Hi, there," and engages in small talk (for example, saying "Nice day, isn't it?"). Then the "abductor" says, "Would you like to go for a walk?"
AUTHORITY	Request with the implication that an authority figure (such as a parent or teacher) approves	After small talk, the "abductor" says, "Would you like to go with me for a walk? Your teacher won't mind."
INCENTIVE	Request with the promise of an incentive	After small talk, the "abductor" says, "I've got a nice surprise in my car. Would you like to see it?"

Source: Based on Poche, Brouwer, & Swearingen, 1981.

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PHOTO 12-4
In child-abduction prevention training, children practice self-protection skills (such as yelling "No" and running away) in response to an adult who role-plays an abductor.

rehearsal of the skills that the children learned through the video. For children ages 5 to 7, the combination of viewing the video modeling and behavior rehearsal was more effective than just the modeling. This finding, and more recent research,[132] makes it clear that direct practice, particularly in a real-life setting, is important in teaching children to protect themselves from potential abductors.

In a skills training program developed by Sandy Wurtele, children as young as 4 learned to discriminate between situations in which it is appropriate and inappropriate for "bigger people" to touch children's "private parts"; then they were taught what to say and do if an adult tried to abuse them.[133] The program effectively increased children's knowledge of sexual abuse and skills for protecting themselves from abuse without upsetting the children,[134] which is an important consideration given the frightening nature of sexual abuse.[135]

Similar skills training packages have been used to prevent sexual abuse among adult women with intellectual disability.[136] Research evaluating these treatment packages has demonstrated not only that the women learned protective skills but also that they were able to use them when they encountered

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inappropriate sexual advances.[137] The latter finding was obtained by having adult male assistants, whom the clients did not know, make inappropriate sexual solicitations toward the women while other assistants unobtrusively observed the women's responses.

SOCIAL SKILLS TRAINING

Social skills are the interpersonal competencies necessary to successfully interact with others. Their absence is correlated with a host of adjustment problems throughout the life span.[138] In childhood and adolescence, social skills deficits are associated with social isolation, poor academic achievement, and delinquency;[139] in adulthood, social skills deficits are associated with depression, social anxiety, and schizophrenia.[140] Not surprisingly, many clients treated in psychotherapy have social skills deficits. Skills training has been extensively used to teach social skills to both children[141] and adults,[142] including specific social interaction skills related to social isolation,[143] anger control,[144] couple relationships,[145] and sexual behaviors.[146]

Social Skills Training With Children and Adolescents

Children who exhibit low levels of social interaction with peers are prime candidates for social skills training. Film modeling has been used to improve the social interactions of nursery school children.[147] One such modeling film, 23 minutes in length,

> portrayed a sequence of 11 scenes in which children interacted in a nursery school setting. In each of these episodes, a child is shown first observing the interaction of others and then joining in the social activities, with reinforcing consequences ensuing. The other children, for example, offer him play material, talk to him, smile, and generally respond in a positive manner to his advances into the activity. The scenes [are] graduated on a dimension of threat in terms of the vigor of the social activity and the size of the group. The initial scenes involve very calm activities such as sharing a book or toy while two children are seated at a table. In the terminal scenes, as many as six children are shown gleefully tossing play equipment around the room.[148]

Viewing such modeling films once or twice has been sufficient to increase children's social interactions to a normal level, and these gains have been maintained over time.[149] Film modeling is highly efficient, compared with other procedures such as shaping.[150] Live peer modeling also is effective in increasing children's social interactions.[151] In one case, two sixth-grade boys with poor social skills were taught to conduct social skills training with two kindergarten boys with low rates of peer interaction.[152] Not only did the kindergarten boys show an increase in positive social interactions with peers following the intervention but so did their sixth-grade trainers.

The latter finding illustrates the potential reciprocal effects of live modeling—by modeling a behavior, the model is engaging in behavior rehearsal (as with the mother who modeled comfort with dental procedures for her daughter in Case 12-3). To prevent children from developing their own fears,

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parents may force themselves to engage in fear-evoking behaviors. I did this with my daughter when she wanted to visit the reptile house at the zoo. Despite my longstanding aversion to snakes, I became a model snake lover that day. Not only did I look at the snakes with Heather, but I pointed out their beautiful colors and graceful movements. Heather never developed an aversion to snakes, and her dad's aversion noticeably decreased.

Poor social interaction skills are a serious handicap for adolescents, for whom socializing is so important. Case 12-5 illustrates the use of social skills training for this problem.

CASE 12-5

Social Skills Training With a Young Adolescent[153]

Fourteen-year-old Sherman interacted with children who were 5 to 8 years younger. He had no friends his own age and had difficulty engaging in even simple conversations with peers.

Social skills training for Sherman was conducted twice weekly for 20 to 30 minutes. The training focused on (1) asking appropriate questions, (2) making positive or acknowledging comments, (3) maintaining appropriate eye contact, and (4) acting in a warm and friendly manner. For each skill, the therapist provided Sherman with a rationale for learning it and modeled each component of the skill. Then Sherman rehearsed each of the skills with the therapist. After demonstrating proficiency in the skills with the therapist, Sherman practiced them with peers of both sexes for 10 minutes at a time. The therapist prompted Sherman to use the four conversational skills and gave him feedback. Sherman also practiced his new conversational skills at home and at school.

Whereas Sherman rarely had engaged in the four targeted social skills before therapy, after social skills training, he showed significant increases in each. To assess the social validity of Sherman's behavior changes, 10 peers who attended a different school and did not know Sherman rated videos of Sherman's conversations before and after training. The peer ratings consistently indicated that Sherman's social skills had improved considerably. Ratings made by Sherman's parents and teachers after training indicated significant improvements in Sherman's overall social adjustment, ability to make friends, ease of interacting with peers, and involvement in extracurricular activities. A telephone follow-up 16 months after treatment revealed that Sherman's improved social skills and peer relations had been maintained. Sherman had classmates to his home, he had begun to date, and he was trying out for a school athletic team.

Social skills training has been beneficial with children and adolescents who engage in aggressive and disruptive behaviors. Examples include adolescents who are being treated for sexual offenses,[154] youths hospitalized for conduct disorder (habitual violation of others' rights),[155] juveniles who are incarcerated,[156] inner-city minority children,[157] and children with attention deficit hyperactivity disorder.[158]

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Social skills training also has been successfully extended to children and adolescents with special needs. For instance, children diagnosed with cancer who received social skills training reported receiving greater social support from classmates and teachers.[159] Likewise, adolescents with language and hearing disabilities benefited from social skills training and then were able to use self-control strategies (such as self-reinforcement) to maintain their use of the newly acquired skills.[160]

Social skills training is not just appropriate for children and adolescents. Elderly people have been taught specific social skills,[161] such as conversational skills to decrease feelings of loneliness and the fundamentals of reinforcement and extinction to influence people in their lives.[162] Another population for which social skills training has been applied extensively is adults with schizophrenia.

Social Skills Training for Adults With Schizophrenia

Social withdrawal and social skills deficits are hallmarks of schizophrenia.[163] Even when disabling symptoms such as hallucinations and delusions are absent (usually as a result of medication), significant social impairment often continues to be problematic.[164] Moreover, the rate of relapse and rehospitalization is higher for clients who are socially isolated and who cannot function effectively within the community.[165] The use of skills training in the treatment of schizophrenia was first developed by Michael Spiegler in 1970 in the Community Training Center program that you read about in Chapter 9.[166]

The goals of social skills training for clients with schizophrenia are (1) to increase social interactions, (2) to teach the specific social skills needed to function in the community (such as talking to neighbors), and (3) to reduce stress by teaching clients to cope with problematic social situations that arise in their daily lives.[167]

The specific skills taught depend on the severity of the client's social deficits. For clients with the most severe deficits, social communication skills might include basic nonverbal behaviors, such as appropriate eye contact, facial expressions, posture, and proximity to others. Clients who are able to perform basic skills are trained in holding a conversation, behaving assertively, interviewing for a job, asking for a date, and general social problem solving that can be applied to any interpersonal difficulty that arises in daily life.[168]

Social skills training has been effective in teaching social skills to adults with schizophrenia,[169] including older adults.[170] Although clients often transfer the skills from therapy sessions to their hospital living setting, transfer outside the hospital is a major challenge.[171] Assigning and prompting homework carried out in clients' natural environments and reinforcing clients for engaging in social skills at home enhance transfer to different settings and to people other than the trainers.[172] Other ways to enhance transfer of training are covered in the next section.

Social skills training for people with schizophrenia reduces social anxiety and improves hospital discharge rates.[173] It moderately reduces relapse rates in comparison with other forms of psychological treatment (such as family education and family therapy), particularly within the first 3 to 6 months after treatment.[174] Teaching clients general problem-solving skills that can be applied to diverse social situations may enhance the durability of behavior changes following social skills training.[175]

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Skills training that heavily relies on modeling also has been used to teach clients with schizophrenia daily living skills, such as personal hygiene, self-care, self-administration of medication, personal recreation skills, food preparation, home maintenance, vocational skills, job finding, use of public transportation, management of personal finances, and assertive behaviors.[176]

Promoting Transfer of Skills Training

Transfer of skills from the training environment to the client's natural environment is not an inevitable outcome of skills training. Often, clients will only use the skills they have learned in the training setting and with their specific trainers.[177] This is especially true for clients with significant handicapping conditions,[178] as in the case of people with schizophrenia and attention deficit hyperactivity disorder.[179] Accordingly, active strategies to promote transfer may be necessary. They include:

- Providing a sufficient number and variety of examples during training[180]
- Using intermittent reinforcement during training, which simulates the natural environment where behaviors are not continually reinforced[181]
- Training with similar setting events to those that exist in the client's natural environment[182]
- Providing opportunities to practice newly acquired skills[183]
- Teaching general self-control skills (such as problem solving) that can be applied in novel situations[184]
- Using natural reinforcers, such as praise[185]
- Providing prompts in the natural environment[186]

Mobile phone applications are being developed that prompt clients to use the skills they have learned in therapy sessions in their natural environments where the skills are intended to be used.[187] Such technology is promising for ensuring transference and maintenance of skills training.

ASSERTION TRAINING

Assertive behaviors are actions that secure and maintain what one is entitled to in an interpersonal situation without infringing on the rights of others, which includes expressing desires and feelings.[a] Deficits in assertive behaviors are extremely common[188] and, in some cases, can result in dire consequences, such as not being forthright about wanting to practice safer sex.[189] Assertive behaviors generally fall into five categories that are relatively distinct: (a) asking for what you are entitled to, (b) standing up for your rights, (c) refusing unreasonable or inappropriate requests, (d) expressing opinions and feelings (even when they are negative or unpopular), and (e) expressing personal desires and requests (see Table 12-6 [page 298] for examples).[190]

[a] *Assertive behavior* has been variously and vaguely defined and even equated with socially adaptive behavior. My definition is an attempt to combine widely accepted but restrictive definitions (for example, Alberti & Emmons, 2001; Lazarus, 1971; Wolpe, 1990).

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TABLE 12-6
Five Relatively Distinct Types of Assertive Behavior

Type of Assertive Behavior	Example
ASKING FOR WHAT YOU ARE ENTITLED TO	Asking a professor to explain the rationale for the grade you received on a paper
STANDING UP FOR YOUR RIGHTS	Objecting when a person steps ahead of you in line
REFUSING UNREASONABLE OR INAPPROPRIATE REQUESTS	Saying no when a friend asks to borrow money you can't spare
EXPRESSING OPINIONS AND FEELINGS (EVEN WHEN THEY ARE NEGATIVE OR UNPOPULAR)	Voicing your conservative views in a group of liberals
EXPRESSING PERSONAL DESIRES AND REQUESTS	Telling your sexual partner what you enjoy

Assertive behaviors are, for the most part, situation specific, which has three important implications.[191] First, a person should not be characterized as assertive or unassertive. Rather, a person's *behavior* in a particular situation or class of situations could be assertive or unassertive. Although some people typically act assertively or unassertively in many different contexts, it is highly unlikely that they do so in all situations and every time. Second, training in one type of assertive behavior may not generalize to other types.[192] For example, refusing unreasonable requests and expressing one's desires usually requires separate training. Third, assertive behaviors are not always appropriate or adaptive.[193] How appropriate or adaptive they are is determined by the consequences, for oneself and others, of being assertive in a particular situation.[194] For instance, if a server overcharges you by a small amount, you can act assertively and bring it to his or her attention. If you are in a rush, however, you may decide to pay the higher amount, which would be an unassertive but adaptive response under the circumstances.

The appropriateness of acting assertively varies in different cultures.[195] Assertive behaviors generally are considered admirable and appropriate in Western cultures where individualism and independence are valued. In contrast, in cultures that value collectivism and interdependence (such as Japanese and Puerto Rican cultures), assertive behaviors are likely to be seen as socially inappropriate. In some cultures, appropriate assertive behavior involves subtle nuances that must be incorporated into assertion training (for example, the need to demonstrate respect for others in Latino cultures).[196]

Even in cultures that do consider asserting one's rights to be socially desirable (such as mainstream United States), fostering assertive behaviors should not be considered a goal for all people and in all situations. This caveat is consistent with the practice in behavior therapy of providing individualized treatment and

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TABLE 12-7
Comparison of Assertive, Aggressive, and Unassertive Responses to Common Situations

Situation	Assertive Response	Aggressive Response	Unassertive Response
You don't drink alcohol. At a party someone offers you a drink.	**"No, thank you."**	"No! I don't want any alcohol; just get it away from me."	"Oh & thanks but & I guess it won't hurt me."
You are rushing off to class and don't want to be late. A friend stops you and asks you to help move furniture in his room right then.	**"Sorry, I'm on my way to class. If you still need help this evening, let me know."**	"You must be kidding! I'm on my way to class. Find someone else."	"Well, I'm on my way to class, but I guess I could give you a hand for just a few minutes."

for clients to set their own treatment goals. Thus, if a behavior therapist thinks that a client would benefit from behaving more assertively in certain situations but the client does not, assertion training would not be part of the client's treatment plan.

Assertive and aggressive behaviors are not the same. Although they may result in the same end—obtaining what one wants or is entitled to—they differ in the *means* by which they accomplish the goal.[197] Assertive behaviors achieve their goal without violating others' rights, whereas aggressive behaviors do so at someone else's expense. Table 12-7 compares examples of assertive, aggressive, and unassertive behaviors (also see Table 12-8, page 301).

Assessing Assertive Behavior Deficits

Clients' deficits in assertive behaviors are assessed by a variety of methods, including interviews, direct self-report inventories, self-monitoring, systematic naturalistic observations, simulated observations, and role-playing.[198] The assessment provides information about the specific details of the client's assertive skills deficits, including the type(s) of skills deficits the client has (that is, in knowledge, proficiency, discrimination, and motivation), which is necessary for selecting the most appropriate treatment.

Two types of direct self-report inventories are used to assess deficits in assertive behavior. With one type, clients indicate how they would respond to a number of situations (described in writing) by choosing one of several responses provided. Figure 12-3 (page 300) shows an item from the Conflict Resolution Inventory[199] that assesses refusing unreasonable requests. The other type of self-report inventory has clients rate the degree to which they engage in a variety of common assertive behaviors.[200] You can assess your own assertive behaviors with this type of inventory by taking just a couple of minutes to complete Participation Exercise 12-1 before you continue reading.

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A person *you do not know very well* is going home for the weekend. He or she has some books that are due at the library and asks if you would take them back so they won't be overdue. From where you live, it is a 25-minute walk to the library, the books are heavy, and you hadn't planned on going near the library that weekend.

_____ 1. I would *refuse* and would not feel uncomfortable about doing so.

_____ 2. I would *refuse* but would feel uncomfortable doing so.

_____ 3. I would *not refuse* even though I might prefer to, but would feel uncomfortable because I didn't.

_____ 4. I would *not refuse* even though I might prefer to, but would not feel particularly uncomfortable because I didn't.

_____ 5. I would *not refuse*, because it seems to be a reasonable request.

FIGURE 12-3

Item on the Conflict Resolution Inventory

Source: McFall, R. M., & Lillesand, D. B. (1971). Behavior rehearsal with modeling and coaching in assertion training. *Journal of Abnormal Psychology, 77*, 313–323. Reprinted with permission.

PARTICIPATION EXERCISE 12-1

Assessing Your Assertive Behaviors by a Direct Self-Report Inventory

In this exercise, you will respond to a brief self-report inventory for assessing assertive behaviors.[201] List the numbers 1 to 13 on a sheet of paper. Read each item and write the number from the following scale that best describes your typical behavior. There are no right or wrong answers.

0 = Never
1 = Rarely
2 = Sometimes
3 = Usually
4 = Always

1. When someone is unfair to me, I call it to the person's attention.
2. When I am not receiving service to which I am entitled, I ask for it.
3. I speak up when someone steps ahead of me in line.
4. When a salesperson tries to sell me something that I don't want, I tell the salesperson that I am not interested.
5. I freely speak up when I am in a group.
6. If a person has borrowed something from me (such as money or a book) and is late in returning it, I say something to the person.
7. I express my positive feelings to others.
8. I express my negative feelings to others.
9. If food I have ordered in a restaurant is served improperly, I ask to have it corrected.

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10. I return merchandise that I find to be defective.
11. I refuse unreasonable requests made of me.
12. I compliment and praise others.
13. If someone is disturbing me, I say something to the person.

Your responses to this inventory may make you aware of how you deal with various situations that generally call for assertive behaviors (in Western cultures). The higher the score for an item, the more assertive you tend to be in the particular situation described. However, it is not appropriate to add the scores to obtain a total assertiveness score because the items are related to different situations and assertive behaviors are situation specific.

Complete assessment of assertive behavior deficits usually requires behavioral observations. If feasible, systematic naturalistic observations are made of the client in the situations in which the client is having difficulty behaving assertively. However, simulated observations are more typical because they are easier to arrange. Generally, the simulated observations involve the client's role-playing responses to hypothetical situations that call for assertive behaviors.

Behavioral observations, either naturalistic or simulated, make it possible to assess the stylistic components of the client's attempts to act assertively, such as voice tone and body posture (see Table 12-8), which are critical components of effective assertive behaviors.[202]

Assertion Training Procedures

Assertion training refers to the specific social skills training procedures used to teach clients how and when to behave assertively. Modeling is especially valuable in teaching assertive behaviors because stylistic components that are

TABLE 12-8
Physical and Vocal Stylistic Components of Assertive, Unassertive, and Aggressive Behaviors

Stylistic Component	Assertive Behavior	Unassertive Behavior	Aggressive Behavior
EYE CONTACT	**Looking at the person while talking**	Looking away from the person while talking	Intently staring at the person while talking
FACIAL EXPRESSION	**Appropriate to message**	Sheepish or expressionless	Hostile no matter what the message is
GESTURES	**Moderate; appropriate to message**	None or inappropriate to message	Excessive; overenthusiastic
BODY POSTURE	**Erect; at an appropriate distance; leaning slightly toward the person**	Slouched; a bit too far from the person; leaning away from the person	Erect; either too close or too far from person; exaggerated leaning either toward or away from the person
VOICE QUALITY	**Firm (confident); appropriate volume; appropriate expression**	Apologetic; whisper; monotone	Overzealous; shouting; "soapbox" speech

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TABLE 12-9
Hierarchy of Assertive Behaviors Practiced by a Client Having Difficulty With Refusing Unreasonable Requests (beginning with the least difficult behavior at the bottom of hierarchy)

9. Refusing an unreasonable request from a close friend when the request is very important to the friend
8. Refusing an unreasonable request from a close friend when the request is moderately important to the friend
7. Refusing an unreasonable request from an acquaintance when the request is very important to the acquaintance
6. Refusing an unreasonable request from an acquaintance when the request is moderately important to the acquaintance
5. Refusing an unreasonable request from a close friend when the request is relatively unimportant to the friend
4. Refusing an unreasonable request from an acquaintance when the request is relatively unimportant to the acquaintance
3. Refusing an unreasonable request from a stranger when the request is very important to the stranger
2. Refusing an unreasonable request from a stranger when the request is moderately important to the stranger
1. Refusing an unreasonable request from a stranger when the request is relatively unimportant to the stranger

Note: The rank ordering is an individual matter and will vary from client to client.

difficult to describe verbally can be modeled for the client (for example, appropriate body posture, speech volume, and verbal expression to show confidence).

Homework assignments are routinely part of assertion training and proceed in a stepwise progression, as in graduated exposure (see Table 12-9). Feedback on the client's performance both in the therapy sessions and on homework assignments is an important aspect of the training. The therapist reinforces the client for acting assertively but not for obtaining a favorable outcome. The reason is that the outcome of an assertive behavior rarely is totally in the client's control (for instance, securing a day off from work may depend on the availability of other workers). Accordingly, clients are taught, through modeling and behavior rehearsal, how to react and cope when their appropriate assertive responses fail to obtain the desired outcome.

Covert modeling can be used in assertion training,[203] as in the case of a 7-year-old girl who had been sexually abused and responded with emotional outbursts and sexually inappropriate behaviors whenever she felt taken advantage of.[204] The therapist asked the girl to visualize scenes in which a peer model similar to the girl constructively dealt with her negative feelings, such as by saying something to a teacher who treated her unfairly.

Table 12-10 has examples of typical scenes used in covert modeling of assertive behaviors. Covert modeling may be supplemented with **covert behavior**

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TABLE 12-10
Covert Modeling Scenes Used in Assertion Training

Situation	Modeled Assertive Behavior	Vicarious Reinforcement
A woman is eating in a restaurant with friends. She orders a salad and tells the server to put the dressing on the side. When the salad arrives, it has the dressing directly on it.	The woman immediately turns to the server and says, "I asked for my salad with the dressing on the side. Please bring me another salad without dressing and the dressing in a separate dish."	A few minutes later the server returns with the salad correctly prepared and says that he is very sorry for the error and hopes that the woman enjoys the salad.
A man who is trying to stop drinking is at a party where most people are drinking. The host offers him a beer.	The man says, "No, thanks. But I would like something to eat."	The host replies, "Sure thing. The food is in the dining room."

rehearsal, in which clients imagine themselves performing target behaviors. We often do this informally to rehearse how we are going to act. For example, right before going to see a professor about getting an extension on a paper, you might mentally rehearse making the request. Virtual reality, a hybrid between covert and overt behavior rehearsal, provides another way in which clients can engage in behavior rehearsal.[205]

The following case illustrates the nature of assertion training.

CASE 12-6

Assertion Training for Refusing Inappropriate Requests[206]

Amira, a 33-year-old woman from Yemen, had immigrated to the United States 3 years ago. She worked as an insurance agent in an office where there were only three female agents, and she was the newest agent. The male agents frequently asked Amira to do a variety of demeaning tasks, such as getting coffee for them. Because Amira had been raised with the traditional Yemenite value that serving men is appropriate, she acquiesced. However, as she became increasingly assimilated into the dominant US culture, she became conflicted about being the "office housewife." The following is an excerpt from the initial assertion training session.

Client: I know that my traditional upbringing feeds into my complying with my colleagues' requests, but I don't think it's appropriate—this is not Yemen. It's the United States. They are taking advantage of me.

Therapist: You know, you can refuse to comply with their inappropriate requests.

Client: I've never done it before. It's scary.

Therapist: What we can do is to teach you appropriate assertive behaviors for the situation and then you can practice them with me. When you feel comfortable enough, you can gradually begin to use them in your office. What do you think?

Client: I guess so, but it goes against all I've known for most of my life.

Therapist: Well, let's just try a simple role-play and see how it goes.

(*continued*)

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CASE 12-6 (*continued*)

Client: Okay.

Therapist: For the moment, let's role-play a typical situation for you. You pretend that you are one of your male co-workers, and I'll pretend I am you. You ask me to do something inappropriate, and I'll give you an example of a suitable assertive response. Let's try it. Ask me to do something that is an inappropriate request.

Client: All right. Bob might say, "Hey, Amira, you're not doing anything important. How about going to get us some coffee and donuts, like a good little girl." *[role-playing]* He said something just like that yesterday.

Therapist: "I'd love some coffee, Bob, but I'm in the middle of working up a quote. Maybe you or someone else could get us all coffee." *[modeling]*

Client: I couldn't say that.

Therapist: Well, you certainly don't have to use my exact words. I'm just giving you an example. What would you feel comfortable saying for a start? Let's switch roles. You be yourself, and I'll be Bob. You respond to what I say. "Amira, some of us would like some coffee. How about getting it for us?" *[role-playing]*

Client: "Oh, I guess so. But I am busy right now. As soon as I finish, I guess I could." *[behavior rehearsal]*

Therapist: Not bad. *[shaping]* It sure isn't totally giving in to the request; and you're not exactly saying that you will. *[feedback]* Do you think you could go one step further and tell Bob you don't want to get the coffee?

Client: What would I say?

Therapist: How about something like, "I'd rather not go for coffee." *[modeling]* Words to that effect make it clear that you don't want to, but you aren't actually saying no, which may be hard for you to say at first. *[direct instruction]* Let's try again. "Amira, some of us would like some coffee. How about getting it for us?" *[role-playing]*

Client: "I'm really busy, Bob, so this isn't a good time for me to get coffee." *[behavior rehearsal]*

Therapist: Very good. *[reinforcement]* Much better. *[feedback]* Your first response indicated you probably would get the coffee later. Now you are saying no, albeit indirectly. *[shaping]* Do you see the difference?

After seven sessions of assertion training, Amira felt comfortable enough to attempt responding assertively to inappropriate requests in everyday situations but not at work. After 3 weeks of in vivo practice, however, she began to assert herself with her male co-workers.

How well do you do refusing unreasonable or inappropriate requests? Most people have some trouble with doing that; it's hard to say no. In Participation Exercise 12-2, check out your assertive behavior skills for refusing unreasonable requests. You can completed it before you continue reading or at a later time.

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PARTICIPATION EXERCISE 12-2

Assertion Training for Refusing Unreasonable Requests

In this exercise, you will engage in assertion training consisting of modeling, behavior rehearsal, and feedback (all in written form) to teach you to appropriately refuse unreasonable requests. Table 12-11 contains four hypothetical situations

TABLE 12-11
Hypothetical Situations and Letters Requiring Responses

Situation	Letter to Respond To
1. You are invited to a party by a student who was in a class you took during the summer. She asks you to pick up someone you don't know, which will mean your driving 30 miles out of your way.	1. Dear Classmate, How's it going? We're having a little party at my house next Thursday, and I'd like you to come. My cousin wants to come, but he's having trouble getting a ride down. Do you think you can give him a lift? He lives about 45 minutes out of town, so I've enclosed a map. See you on Thursday. Regards, Classmate
2. A CD company you recently joined has sent you four CDs you never ordered. In fact, you promptly returned the order card stating that you didn't want any CDs sent.	2. Dear CD Club Member, We have, up to this time, sent you four CDs for a total of $59.80. We have not received any payment. Please send full payment immediately, plus shipping and handling costs, as indicated on the enclosed bill. Thank you, President, Ripoff Recordings, Inc.
3. You receive a letter asking for a contribution to a religious group you have never heard of.	3. Dear Neighbor, In order for our organization to grow and to build new places of worship, it is essential that we receive financial backing from people like you. Please open your heart and send your check today. Return this card with your contribution so that we can continue sending you news and information about our ministry. Most sincerely, President, United Affluent Church
4. A close friend writes you asking if you would pick up an important package for him at the local post office, which you pass every day, and pay the delivery charge.	4. Dear Friend, I won't be in the city until some time next week, and I'm expecting an important package to arrive at the main post office. I would really appreciate it if you could pick it up for me and pay the delivery charge. It should only be a few dollars. I'll pay you when I get back. Thanks, Your friend

(*continued*)

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PARTICIPATION EXERCISE 12-2 (*continued*)

in which requests are made in a letter. For each, read the letter, keeping in mind the particular situation. Assume that you have received the letter and write an appropriate reply. If the request is unreasonable, refuse the request; if the request is reasonable, agree to it.

Here are some general guidelines for writing an *appropriate* refusal to an unreasonable request:

1. Be polite.
2. Be direct; say what you mean. If you mean that you *don't want* to do something, say that directly (and politely) instead of saying that you are not sure whether you can do it. The former reply would be honest and unambiguous, whereas the latter would be dishonest and ambiguous.
3. Do not apologize excessively. It might, however, be appropriate to wish the writer luck in obtaining a positive response from others.
4. Tailor the letter to the degree of unreasonableness of the request. For example, a mildly unreasonable request should be responded to with mild refusal, such as, "Sorry that I can't help you out."
5. Consider your relationship, present and future, with the writer. If the relationship is important to you, you may want to tone down your reply.
6. In *some* cases, it may be appropriate to compromise, which, in effect, would render the request more reasonable so that you feel comfortable doing part of what the writer requested.
7. Remember: You are entitled to refuse others' unreasonable requests—and even reasonable ones.

After you have replied to the first letter, look at Table 12-12 and read the modeled reply along with the explanation, which will give you feedback on what you have written. Your reply need not match the model, but it should contain the same basic elements. Repeat the process for each situation and letter. To benefit from this exercise, refer to the modeled reply (in Table 12-12) only for the specific letter you are responding to (in other words, don't cheat by looking ahead!).

TABLE 12-12
Model Letters for Refusing Unreasonable Requests, With Explanations

Model Letter	Explanatory Note
1. Dear Classmate, Thanks for the invitation to the party. I'll sure be there, but I really won't be able to pick up your cousin. Thirty miles is just too far for me to go out of my way. I'm looking forward to seeing you at the party.	1. Polite and friendly; states what you will and will not do; ends on an upbeat note
2. Dear President: I did not order the four CDs you have sent. I promptly returned the order card and checked off that I did not want the CDs. Therefore, I refuse to pay for them, although I will return them at your company's expense.	2. Clearly explains situation; categorically says no; gives company a reasonable option for recouping the lost revenue, which demonstrates good faith

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TABLE 12-12 (*continued*)

Model Letter	Explanatory Note
3. Dear President, I am not interested in your organization or in receiving any further news or information from you.	3. Very brief, formal reply, appropriate for the impersonal letter received; unequivocally states your position
4. Dear Friend, I'll be glad to pick up the package for you. Give me a call when you get back in town, and we'll arrange for you to pick it up.	4. *Reasonable* request in this case, and you have chosen to do the favor for your friend

Assertion Training in Perspective

Hundreds of studies have demonstrated the effectiveness of assertion training for clients with diverse problems and across the age spectrum.[207 b] For example, assertive behaviors are especially important in preventing HIV infection in vulnerable populations, including women who are chronically hospitalized for schizophrenia and depression,[208] inner-city low-income African-American men[209] and women,[210] people with intellectual disability,[211] and high-risk adolescents such as those with other sexually transmitted diseases[212] and those with poor heterosexual social skills.[213] Assertion training with these populations has been effective in reducing the risk of contracting HIV as assessed by such measures as the number of sexual partners, the number of sexual contacts with strangers, and the use of condoms.

Senior citizens are another population for which assertive behaviors are important in order to stand up for their rights that are often violated. A small controlled experiment using a placebo control group has demonstrated the effectiveness of teaching the elderly assertive social skills.[214]

Research also has been directed at identifying the components of optimal assertive behavior. For example, people are considered competent and likable if their assertive responses are empathic[215] and complimentary.[216] An example would be: "You guys are doing a great job given how shorthanded you are; I just hope you'll be able to have my car fixed by the end of the day."

Assertion training is frequently used in conjunction with other behavior therapies. For example, assertion training was combined with cognitive therapy (used to identify and change negative thoughts) in a group setting to treat Iranian adolescents for shy behaviors.[217]

Although clearly a behavior therapy, assertion training has been incorporated into many different kinds of psychotherapy (such as Gestalt therapy).

[b] Research on assertion training has decreased significantly over the past 25 years. This is not due to a decline in assertive behavior skill deficits in the population or in the use of assertion training in clinical practice. Rather it may be due, in part, to the fact that an assertive behavior deficit is not classified as a disorder in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1987, 1994, 2000a, 2013), which generally has been necessary for research funding.

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Assertion training has been a hot topic in "pop" psychology for many years. Consider the large number of books on the subject written for the general public, including "treatises . . . on the technique of how, when and why to say no; what to say no to; and why you should not feel guilty in saying no."[218]

ALL THINGS CONSIDERED: MODELING THERAPY

Modeling is effective in treating anxiety disorders and skill deficits.[219] Overall, modeling therapies have been found to be at least as effective as other behavior therapies with which they have been compared. For a number of specific applications, such as in reducing children's fears,[220] modeling procedures have been shown to be more effective.[221]

Modeling therapies are very efficient. Significant changes sometimes are obtained in one or two brief sessions.[222] Even in teaching socially expressive behaviors to children with autism spectrum disorder, only a few viewings of a modeling video can be effective.[223] One reason that modeling therapy is especially efficient may be that modeling simultaneously teaches clients adaptive behaviors, prompts their performance, motivates their practice, and reduces anxiety about performing the behaviors.

Symbolic modeling is highly cost effective. Once produced, modeling videos and books do not require therapists' time. Modeling videos to reduce fear of dental procedures now are routinely shown in some dentists' offices. The major limitation of standard symbolic modeling presentations is that they are aimed at the "average" client, so they are not individualized. However, present technology makes it possible to customize symbolic modeling relatively easily. For instance, individualized modeling videos can be made using digital camcorders,[224] and written stories can be customized with a word processor by changing a few significant phrases (such as names and locations). Symbolic modeling can be supplemented with individualized live modeling, in which case the live modeling may not have to be as extensive and time consuming because the client has already been exposed to symbolic modeling.

The use of natural models is another way in which modeling therapy can be highly cost effective. **Natural models** are people in clients' everyday environments who exhibit behaviors that clients need to learn and practice. Natural models are abundantly available, and clients can observe them on their own.[225] David Fisher, an innovative early behavior therapist in Sausalito, California, regularly gave his clients with social skills deficits an assignment to observe natural models of appropriate social interactions by attending social gatherings, such as a large party where they could mingle without drawing attention to themselves. Parents and teachers naturally serve as models for children and adolescents, which can be used to therapeutic advantage. For instance, children who give up easily when tasks are difficult could benefit from observing adults in their lives who model appropriately dealing with frustration, such as by persevering at difficult tasks until they are completed.[226]

Generally, clients are advised to observe natural models to foster imitation of adaptive and socially desirable behaviors. However, the same procedure can be

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used to foster counterimitation of maladaptive and socially undesirable behaviors. Such "negative modeling" can be beneficial because it includes vicarious punishment and thus dissuades the client from engaging in the model's behaviors. As an example, I treated a woman for a recent first-time problem with alcohol abuse.[227] The client had told me about her mother's chronic alcoholism and how it had ruined her life. I suggested that the client use her mother as a negative model to remind her of the disastrous consequences of alcohol dependence.

Although the use of natural models is a potentially potent and efficient form of modeling therapy, the extent to which behavior therapists instruct clients to observe appropriate natural models is unknown.

Modeling therapy can be administered in a variety of modalities—live, symbolic (primarily through videos), and in combination with behavior rehearsal (participant modeling)—and each has its advantages. For example, for vicarious extinction of fears, participant modeling generally is most effective (perhaps because it incorporates behavior rehearsal), video modeling is least effective (perhaps because it is generic rather than individualized for the client), and live modeling is of intermediate effectiveness.[228]

Modeling therapies can easily be implemented in naturalistic settings by nonprofessional behavior change agents, which is another way in which modeling therapies are efficient. In one application, social skills training for preschoolers with low levels of peer social interaction consisted of modeling and prompting by teachers' aides, followed by behavior rehearsal.[229] The training significantly increased the children's social interactions in a short time.

Clients rate modeling as an acceptable therapy. It is subtle and unintrusive. Modeling indirectly influences clients merely by presenting an example of how one might behave, which may result in clients' feeling more in control of their behavior changes because they are not directly told how to behave. This is important because behavior change is more effective when people believe that they are personally responsible for the change.

A related advantage of modeling is that it does not involve verbal instructions or the necessity of verbal communication between therapist and client. Clients can benefit solely from observing models engaging in adaptive behaviors. This is especially helpful for clients who have minimal verbal comprehension.

Modeling increases clients' personal freedom by providing them with alternative ways of behaving. This is equally true for the child with intellectual disability who learns to ask for assistance and for the business executive who learns appropriate assertive behaviors to use in complex social interactions. Competency-based treatments that involve skills training can enhance self-efficacy, independent functioning, and the overall quality of life even for clients with serious, chronic psychiatric disorders.[230]

Modeling is intrinsically part of many behavior therapies. For example, modeling is part of in vivo desensitization and in vivo flooding when the therapist demonstrates the desired behavior for the client.[231] The therapist's modeling not only prompts the target behavior but also shows the client that no harm comes from performing it. Modeling also is a component of many cognitive-behavioral coping skills therapies (which you will read about in Chapter 14).

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Besides being a treatment modality, modeling is used to teach therapy skills to therapists and nonprofessional change agents, including clients themselves.[232] For instance, modeling is an essential component in behavioral parent training (as you saw in Chapter 9).[233] The therapist first models a behavior management procedure, such as shaping. Then parents practice shaping their children's behaviors and receive feedback from the therapist. A similar process can be used to teach parents to perform a functional analysis to assess the maintaining antecedents and consequences of their children's problem behaviors and design an appropriate intervention.[234] Family members can learn to care for elderly relatives with physical and psychological impairments through modeling.[235] Modeling also has potential for encouraging clients to seek therapy[236] and in preparing clients for psychotherapy.[237]

SUMMARY

1. Modeling requires two people: a model who demonstrates a behavior and an observer who attends to what the model does. Live models are actually present, and symbolic models are not physically present, as people seen on TV.
2. Observing a model provides information about what the model does as well as the consequences of the model's actions, which are called vicarious consequences (vicarious reinforcement or vicarious punishment).
3. Observational learning is the process by which people are influenced by observing a model's behaviors. It involves three stages: exposure (to the model), acquisition (of the model's behaviors), and acceptance (of the model's behaviors as a guide for one's own actions). The observer can be influenced by the model in four ways: specific imitation, specific counterimitation, general imitation, and general counterimitation.
4. Modeling can serve five functions for observers: teaching, prompting, motivating, reducing anxiety, and discouraging.
5. Self-modeling, in which clients serve as their own models (in a video or in their imagination), maximizes observer–model similarity, which enhances imitation.
6. Modeling generally is part of a treatment package, which often includes behavior rehearsal. However, modeling can be effective by itself.
7. Modeling therapies have been used primarily for two broad classes of problems—fear/anxiety and skills deficits.
8. Vicarious extinction involves reducing fear or anxiety by having a client observe a model who performs the feared behavior without incurring negative consequences. A coping model is initially fearful and incompetent and then gradually becomes comfortable and competent performing the feared behavior. A mastery model shows no fear and is competent from the outset. Coping models are more appropriate for reducing fear.
9. In participant modeling, the therapist models the anxiety-evoking behaviors for the client, then verbally and physically prompts the client to perform the behaviors, and finally fades the prompts.
10. Film/video modeling has been used to treat fear of medical and dental procedures in both children and adults. Storytelling is another form of

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symbolic modeling used to reduce fear and other negative emotions in children.

11. Perceived self-efficacy is the belief that one will be successful at a task. Modeling and other therapies may be effective because they increase clients' self-efficacy through performance accomplishments, vicarious experiences, verbal persuasion, and emotional arousal.
12. Skill deficits can involve deficiencies in knowledge, proficiency, discrimination, and motivation. Skills training is a treatment package that may include modeling, direct instruction, prompting, shaping, reinforcement, behavior rehearsal, role-playing, and feedback. Occasionally, clients, such as children with autism spectrum disorder, may have to be taught generalized imitation—the ability to imitate—so that they will be able to imitate a model during treatment.
13. Social skills training, which can employ modeling films/videos and live modeling, often is used to increase social interactions. It is an important component in the treatment of clients with schizophrenia, where the major goals are to increase social interactions, to teach skills needed for functioning in the community, and to reduce stress by teaching clients how to cope with problematic social situations.
14. Specific procedures often must be used to promote transfer of skills learned in social skills training.
15. Assertive behaviors are actions that secure and maintain what one is entitled to in an interpersonal situation without infringing on the rights of others. Assertive behaviors are situation specific.
16. Assertion training begins by assessing the specific details of the client's assertive skill deficits, including the type(s) of skill deficit the client has. Live or symbolic modeling and behavior rehearsal are the primary components of assertion training.
17. Modeling therapies are effective and efficient treatments for anxiety disorders and skill deficits. They simultaneously teach clients adaptive behaviors, prompt performance, motivate practice, and reduce anxiety about performing threatening behaviors. Modeling is a subtle and unintrusive therapy and is acceptable to clients. It is a component of many behavior therapies because therapists often model adaptive behaviors. Modeling also is used to train therapists and other change agents.

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CHAPTER 13



Cognitive-Behavioral Therapy:
Cognitive Restructuring

Nature of Cognitive-Behavioral Therapy

Operationalizing Cognitions: Making Private Thoughts Public

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SUMMARY

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Michael stood at the top of the black diamond (expert level) ski slope contemplating his fate. "Do you think I can make it?" Michael asked Daryl, his ski instructor. Daryl smiled and matter-of-factly said, "Whether you think you can, or whether you think you can't, you're right."

The way we think about events in our lives exerts a powerful and pervasive influence on how we act and feel.[1] *Cognitions* are thoughts—including beliefs, assumptions, expectations, attributions, and attitudes. *Cognitive behavioral therapy*, which changes cognitions that play a role in maintaining a wide array of psychological disorders and problems, has proliferated during the past 35 years[2] and is at the forefront of behavior therapy.[3]

NATURE OF COGNITIVE-BEHAVIORAL THERAPY

Clients' cognitions are modified in two ways: (1) *directly* through cognitive interventions and (2) *indirectly* through overt behavioral interventions. Changing our actions in order to change what we think is the time-honored strategy for attitude change.[4] For example, if you argue *for* a political position with which you *disagree,* you are likely to become more favorably disposed toward it. The emphasis on cognitive (direct) versus overt behavioral (indirect) change varies in different cognitive-behavioral therapies and for different problems; however, usually both cognitive and (overt) behavioral components are included, hence the hyphenated term *cognitive-behavioral therapy*.[5]

Cognitive-behavioral therapies fit into two basic models.[a] **Cognitive restructuring therapy**, one model, teaches clients to change distorted and erroneous cognitions that are maintaining their problem behaviors. **Cognitive restructuring** involves recognizing maladaptive cognitions and substituting more adaptive cognitions for them.[6] It is used when clients' problems are maintained by an *excess of maladaptive thoughts*.

Cognitive-behavioral coping skills therapy, the other model, teaches clients adaptive responses—both cognitive and overt behavioral—to deal effectively with problematic situations. When clients act adaptively, they begin to think differently about troublesome situations. This model is appropriate for problems that are maintained by a *deficit in adaptive cognitions*. Table 13-1 summarizes the two models. Cognitive restructuring therapy is covered in this chapter, and cognitive-behavioral coping skills therapy is the topic of Chapter 14.

OPERATIONALIZING COGNITIONS: MAKING PRIVATE THOUGHTS PUBLIC

Originally, behavior therapists focused on overt behaviors, which excluded covert behaviors such as thoughts, beliefs, and attitudes. With the advent of cognitive-behavioral therapy in the 1970s, that changed, and behavior therapists

[a] This conceptualization of two models of cognitive-behavioral therapy is consistent with Kendall and Braswell's (1985) distinction between cognitive distortions and deficits, and it shares commonalities with the categories of mechanisms used to change cognitions proposed by Ross (1977) and Hollon and Beck (1986).

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TABLE 13-1
Comparison of the Two Models of Cognitive-Behavioral Therapy

	Cognitive Restructuring	Cognitive-Behavioral Coping Skills
TARGET OF THERAPY	Excess of maladaptive cognitions	Deficit of adaptive cognitions
GOAL OF THERAPY	Substituting adaptive cognitions for maladaptive cognitions	Using cognitive-behavioral coping skills
EXAMPLES OF THERAPIES	Thought stopping Rational emotive behavior therapy Cognitive therapy	Self-instructional training Problem-solving therapy/ training Stress inoculation training Cognitive-behavioral couple therapy

were faced with the dilemma of how to treat cognitions, which cannot be directly observed. You will discover the solution to this quandary by taking just 2 minutes to complete Participation Exercise 13-1 before reading further.

PARTICIPATION EXERCISE 13-1

Thinking About Thinking

Identify a problem that you must solve or deal with in the near future. The problem can be a major one (such as having to make a decision that will influence your future in a significant way) or it can be a minor one (such as planning what you should do next weekend). The only requirement is that the problem be detailed enough so that you can easily spend several minutes thinking about it.

Once you have chosen a problem, think about it for a minute or two. And as you think about the problem, *be aware of your thoughts, particularly the form they take*. In other words, "listen" to yourself thinking. After doing this for a minute or two, continue reading.

What form did your thoughts take? They probably included words, phrases, and perhaps full sentences. Much of our thinking involves the explicit use of language (see In Theory 13-1, page 318). Capitalizing on this fact, behavior therapists often operationally define cognitions as **self-talk**, what people say to themselves when they are thinking. Thus, when behavior therapists want to know what a client is thinking, they ask: "*What are you saying to yourself?*" Cognitions also include sensory images (including visual, auditory, and tactile), but the focus in cognitive-behavioral therapy is on inner, verbal language.[7]

We often are not aware of our "inner speech" because we do not think about our thinking. Thinking is a habitual, automatic process that goes on even when we are not specifically engaged in mental endeavors, such as when we are exercising and eating.

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IN THEORY 13-1

Talking to Yourself Isn't Necessarily Crazy

> The world is such and such or so-and-so only because we tell ourselves that it is the way it is . . . . You talk to yourself. You're not unique at that. Every one of us does that. We carry on internal talk . . . . In fact we maintain our world with our internal talk.[8]

This brief description, by cultural anthropologist and author Carlos Castaneda, sums up the salience of inner speech in our lives. More specifically, inner speech has been described as the

> soundless, mental speech, arising at the instant we think about something, plan or solve problems in our mind, recall books read or conversations heard, read and write silently. In all such instances, we think and remember with the aid of words which we articulate to ourselves. Inner speech is nothing but speech to oneself, or concealed verbalization, which is instrumental in the logical processing of sensory data, in their realization and comprehension within a definite system of concepts and judgments. The elements of inner speech are found in all our conscious perceptions, actions, and emotional experiences, where they manifest themselves as verbal sets, instructions to oneself, or as verbal interpretations of sensations and perceptions. This renders inner speech a rather important and universal mechanism.[9]

Only after clients can identify what they are saying to themselves can they change the cognitions that are maintaining their problems. Thus, the first step in cognitive restructuring therapy is for clients to become aware of their self-talk, especially before, during, and after their problem behaviors occur.

This chapter is devoted primarily to two cognitive-behavioral therapies that make extensive use of cognitive restructuring: *rational emotive behavior therapy* and *cognitive therapy*. *Thought stopping*, a simple technique that employs cognitive restructuring to reduce persistent, intrusive thoughts, will also be described. However, first things first—that is, assessing cognitions, the initial step in cognitive restructuring therapy.

ASSESSING COGNITIONS

Four basic methods are used to assess clients' cognitions: *interview, self-recording, direct self-report inventory*, and *think-aloud procedures*. Each method elicits clients' self-reports of their cognitions, which is the only way to gain direct information about another's thoughts. The methods differ along five dimensions: (1) *timing* (for example, retrospective or concurrent), (2) *degree of structure* (for example, open-ended or forced choice), (3) *mode of response* (for example, written or oral), (4) *nature of the stimulus* (for example, written scenario or simulated situation), and (5) *source of evaluation* (for example, by the client or by the therapist).[10] Later in the chapter, interview techniques and self-recording will be covered. Here, we'll look at self-report inventories and think-aloud procedures.

Direct self-report inventories for assessing cognitions consist of common self-statements related to a particular problem area.[11] Clients indicate how often

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TABLE 13-2
Examples of Items on the Social Interaction Self-Statement Test (heterosexual dating interactions rated on a 5-point scale from "hardly ever" to "very often")

I hope I don't make a fool of myself.
She/he probably won't be interested in me.
This will be a good opportunity.
It would crush me if she/he didn't respond to me.
This is an awkward situation but I can handle it.
Maybe we'll hit it off real well.
What I say will probably sound stupid.

they make each self-statement (or similar self-statements).[12] For instance, the Social Interaction Self-Statement Test, developed by Carol Glass, lists 15 positive and 15 negative self-statements about problematic heterosexual dating interactions (see Table 13-2 for examples).[13]Adults rate each statement on a 5-point scale to indicate how frequently they have had each thought (from "hardly ever" to "very often"). Children's cognitions also can be assessed with self-report inventories. For instance, the Children's Negative Affectivity Self-Statement Questionnaire assesses maladaptive thoughts associated with anxiety.[14] Standardized self-report inventories are efficient methods for initial screening purposes. They give the therapist a general idea about the type of thoughts the client is having. Specific, individualized assessment requires other methods of assessing cognitions.

Think-aloud approaches to assessing cognitions have clients verbalize their thoughts (usually by talking into a voice recorder) while engaging in a simulated task or role-playing situation.[15] The Articulated Thoughts in Simulated Situations method, developed by Gerald Davison, is an example of a think-aloud procedure.[16] Clients listen to audiorecorded scenarios designed to elicit different cognitions. A social criticism scenario, for instance, describes a person's overhearing two acquaintances talking about him or her in negative terms (such as ridiculing the person's choice of clothes). Clients are asked to imagine themselves in the situation and to "tune in" to their thoughts. Every 30 seconds, a tone prompts clients to say their thoughts aloud into a microphone connected to a recording device. The therapist assures clients that there are no good or bad, right or wrong thoughts and encourages them to verbalize their thoughts without concern about whether the thoughts seem appropriate.

There are five distinct advantages that think-aloud approaches to cognitive assessment have over direct self-report inventories.[17] First, think-aloud approaches have an open-ended response format so that clients do not have to make forced choices from a predetermined and limited array of responses. Second, they tap clients' cognitions immediately following the simulated situation, which eliminates problems associated with retrospective reporting, such as forgetting.[18] Third, think-aloud approaches can be customized for each client.

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Fourth, audiorecorded simulated presentations of stressful stimuli may more readily elicit emotionally ladened responses than written stimuli, resulting in a more realistic sampling of potentially maladaptive cognitions. Finally, children as young as 9 are able to respond to think-aloud approaches.[19]

Think-aloud procedures are designed for simulated situations rather than actual situations because talking into an audiorecorder while engaging in everyday activities usually is not practical. Thus, an important potential limitation of think-aloud approaches is that they may miss highly relevant but low-frequency thoughts that are likely to occur only in vivo.

THOUGHT STOPPING

Thought stopping is designed to decrease the frequency and duration of persistent and intrusive disturbing thoughts by interrupting them and substituting pleasant thoughts for them.[20] Examples of the problems treated with thought stopping are obsessive ruminations (such as constantly worrying about being contaminated by germs), depressive ideas (for example, "Nothing seems to go right"), and self-deprecating thoughts (for instance, "I'm just not good at anything"). Thought stopping involves two phases: first (1) interrupting the disturbing thoughts and then (2) focusing on a competing adaptive thought.[b]

In the first phase, whenever disturbing thoughts occur, the client says, "Stop!" The word is said with a sharp, jolting expression, as if warning of imminent danger. Initially, clients say, "Stop!" aloud; then they switch to saying "Stop!" silently to themselves. Although saying "Stop!" usually is the interrupting stimulus, another appropriate stimulus could be used, such as pinching oneself or imaging a stop sign.[21]

Therapists sometimes introduce thought stopping to clients with a dramatic demonstration of its effect. The therapist asks the client to concentrate on the disturbing thought and to signal (as by raising a finger) when the thought is clear. As soon as the client signals, the therapist shouts, "Stop!" The client is then asked, "What happened?" Typically, clients report that they were startled and that the disturbing thought vanished.

Although "Stop!" momentarily eliminates the intrusive thought, the thought is likely to quickly recur because the void temporarily created is likely to be filled by the intrusive thought. Thus, in the second phase of thought stopping, immediately after saying "Stop!" the client focuses on a prepared thought that competes with the disturbing thought. Therapists assist clients in selecting one or more adaptive competing thoughts that can be used in the second phase of thought stopping. The basic procedures of thought stopping are illustrated in Case 13-1.

---

[b] Thought stopping should not be confused with *thought suppression*, which involves deliberate attempts *not* to think about something. Unlike thought stopping, thought suppression can result in either an immediate or delayed increase of the distressing thoughts (Zeitlin, Netten, & Hodder, 1995).

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CASE 13-1

Eliminating Jealousy by Self-Prescribed Thought Stopping[22]

A 27-year-old man, K. F., discovered that the woman he was living with had had a brief affair a week before they had moved in together. After an initial period of feeling intensely hurt and angry, K. F. resolved to forget the incident. He wanted the relationship to continue, and he believed the woman's feelings for him had not changed. However, K. F. frequently thought about the woman's affair and became extremely upset whenever he imagined her being sexually intimate with the other man. These thoughts not only were disturbing, but they also prevented him from concentrating on whatever he was doing at the time.

Several years previously, K. F. had learned thought stopping as part of the treatment for another problem. Recalling the procedure, he applied thought stopping to his jealous thoughts. Whenever he began ruminating about the woman's affair, he yelled, "Stop!" to himself and then imagined one of two prearranged pleasant thoughts. One involved the woman's acting lovingly toward him. The other was completely unrelated to the woman or the relationship; it concerned his playing a good game of tennis, which was a source of personal satisfaction. Both pleasant thoughts successfully kept him from thinking of the woman's affair.

Before thought stopping, the distressing thoughts had lasted from several minutes to as long as an hour and had occurred on the average of 10 times a day. Thought stopping immediately reduced the duration of the intrusive thoughts to only a few seconds, and the frequency of the intrusive thoughts gradually declined. By the end of the second week, the thoughts occurred about 5 times per week; after a month, they occurred no more than once a week. Three months after K. F. initiated thought stopping, he was completely free of the disturbing thoughts, and they did not return during the 2-year span of his relationship with the woman.

The substitute thoughts that K. F. used in Case 13-1 were completely different from his jealous thoughts. Another technique, called *imagery rescripting*, has the client modify the disturbing thought, image, or belief so that it is more tolerable and even pleasant.[23] For example, a client experienced the frightful thought of falling from a great height and hearing his bones breaking as he hit the ground. He rescripted the thought to an image of hitting the ground and bouncing up in the air in a humorous cartoon-like manner. Another client who had been sexually abused as a child rescripted intrusive images of the abuse by creating a new scenario in which she visualized herself as an adult entering the scene to help herself as a child. Imagery rescripting may be particularly helpful for clients who experience recurrent distressing thoughts related to prior traumatic experiences.[24] In the same vein, *imagery rehearsal therapy* is used to treat recurrent nightmares by having clients rescript them in a more positive light and then, while awake, rehearse the rescripted dream.[25] It is possible that exposure, which is inherent in this procedure, as well as cognitive-restructuring, is at work in imagery rehearsal therapy.[26]

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THOUGHT STOPPING IN PERSPECTIVE

Thought stopping is a simple, straightforward procedure used to treat persistent and intrusive disturbing thoughts. Such thoughts not only upset the individual, but they result in a variety of serious problems that thought stopping has been successful in treating, including anxiety,[27] compulsive behaviors,[28] depression,[29] headaches,[30] insomnia,[31] excessive masturbation,[32] deviant sexual arousal,[33] physical aggression,[34] and self-injurious behaviors.[35]

Clients can quickly learn and easily apply thought stopping on their own with little or no therapist supervision. As was illustrated in Case 13-1, thought stopping, like other cognitive-behavioral therapies, gives clients self-control skills that they can generalize to other problems.[36]

Thought stopping usually is part of a treatment package.[37] It is used relatively frequently, which seems to indicate that it is effective.[38] However, little controlled research has been done to validate its effectiveness.[39] Further, it is difficult to draw conclusions from the few existing outcome studies because the effects of thought stopping cannot be isolated from the other treatments with which it is combined or because the studies contain methodological weaknesses.[40] Although there is no definitive evidence for its effectiveness, no risks appear to be associated with clients' using thought stopping.

RATIONAL EMOTIVE BEHAVIOR THERAPY

Rational emotive behavior therapy[41] **(REBT)** is a well-known treatment that primarily employs cognitive restructuring to change the irrational thoughts that cause psychological problems such as anxiety, depression, anger, and guilt.[42] Albert Ellis designed REBT more than 50 years ago.[43] The procedures follow from Ellis' theory of how psychological disorders develop and are maintained.[44] Before reading about his theory, and to fully grasp its impact, take just 2 minutes to complete Participation Exercise 13-2.

PARTICIPATION EXERCISE 13-2

What Are You Mad About?

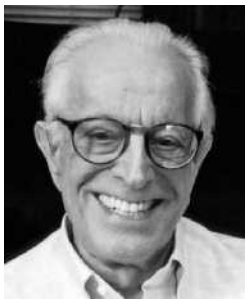
First, get a sheet of paper and a pen. Then read the following scenario and picture yourself in the situation described—in other words, role-play it in your mind *as if it were happening to you*.

> You are taking a close friend out for a birthday celebration that you want to be especially nice. You have made a reservation at a fancy restaurant and have dressed up for the occasion. When you arrive at the restaurant, you give your name to the hostess, who goes to check the reservation book to see which table you've been assigned. As you are waiting, your friend remarks, with obvious appreciation, how elegant the restaurant is. When the hostess returns, she tells you that she cannot find your reservation, that they are fully booked for the evening, and that it will not be possible to seat you. Not surprisingly, you are mad!

Now write brief answers to the following two questions.

1. What has made you mad?
2. What are you saying to yourself?

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Courtesy of Dr. Debbie Joffe Ellis

Albert Ellis

RATIONAL EMOTIVE THEORY OF PSYCHOLOGICAL DISORDERS

According to Ellis' rational emotive theory, psychological problems—negative emotions and maladaptive behaviors—are maintained by the *interpretations* people make of events in their lives. As the Greek Stoic philosopher Epictetus succinctly stated 2000 years ago, *people are disturbed not by things, but by the views they take of them*.

What is striking about this simple idea is that most people implicitly disagree with it. Generally, people believe that external events ("things") cause negative emotions. When someone takes the parking spot you are about to pull into, you get angry *because* someone took "your" spot. In Participation Exercise 13-2 that you just completed, did you answer the question, "What made you mad?" by attributing your upset to the situation or to the hostess?

In contrast, Ellis' theory holds that our *beliefs* about events—not the event themselves—are what make us angry, frustrated, annoyed, upset, and depressed. The sequence is always the same: (a) *Some event activates* (b) *an irrational belief* (c) *that results in negative consequences* (negative emotions as well as maladaptive behaviors). In the parking spot example, your anger is likely to be the *direct* result of irrational beliefs such as "That was *my* parking spot," "It's *not fair,*" and "That so-and-so *made* me late for my appointment." In Participation Exercise 13-2, was your self-talk related to similar beliefs?

Psychological problems are maintained by irrational beliefs that come from faulty reasoning or logical errors, such as absolute thinking, overgeneralizing, and catastrophizing.[45] *Absolute thinking* is viewing an event in an all-or-none, black-or-white fashion, such as, "I must always do well" and "I got a B in the course, which means I'm a lousy student."

Overgeneralization is drawing the conclusion that all instances of a situation will turn out a particular way because one or two did. For example, after having delivered one poor lecture, a professor told himself, "I'll never be a good lecturer." *Catastrophizing* involves seeing minor situations as disastrous. For instance, a woman who spilled her coffee on the way to work told herself, "This is going to be one of those days when nothing goes right."

Ellis identified two themes that often run through the irrational ideas that lead to psychological problems: personal worthlessness and a sense of duty. *Personal worthlessness* is a specific form of overgeneralization associated with failure. For example, a business executive decides that she is a "total failure" because she was unable to get all her work done by the end of the day.

To appreciate the second theme, *before* you continue reading, write down three things you *have* to do this week.

A *sense of duty* is evident in the use of the words *must, have to, should*, and *ought to* in speech and thoughts. Ellis colorfully called the use of these words *musturbation*.[46] (Ellis believed that whereas masturbation is not harmful, musturbation is harmful to one's psychological well-being.) Musturbatory statements are irrational because, in fact, there are only a few behaviors that people *must* do. Consider what happens when you are physically ill and unable to attend to normal activities, such as the three things you *have* to do this week. At such times, all the tasks you *had* to get done do not, in fact, get done—yet somehow you survive, and the consequences rarely are catastrophic.

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Insisting that you *must* do something is abdicating personal choice. It often may be convenient to blame an external source for what is actually a *personal choice*. When Juanita responds "I *have* to study" to her friends' invitation to go out for the evening, her friends readily accept her reason. However, they are likely to find it difficult to accept "I *want* to study." How can Juanita want to study and not want to go out with her friends? Something must be wrong with her! In fact, Juanita may want to go out with her friends, but she wants to study more because of the negative consequences of not studying, such as failing an exam the next day. Yet, however disagreeable those consequences, she still has the choice to study or go out with her friends. Participation Exercise 13-3, which is easy to do over the course of the next few days, will help you understand the degree to which you musturbate and how you can break the habit.

PARTICIPATION EXERCISE 13-3

Kicking the Musturbation Habit

Most people are unaware that they frequently use the words *must, have to*, *should*, and *ought to*. For example, students tell teachers, "I can't take the exam on Friday because I *have to* go home for a wedding"; teachers inform students, "You *must* turn in your papers by Friday." Countless times each day, people speak as if the world will end if they do not do one thing or another.

The purpose of this exercise is to make you aware of your own musturbation and to give you practice in the REBT technique of disputing irrational thoughts and substituting rational thoughts for them. Divide a lined sheet of paper into three equal columns, labeling the first column *Musturbatory Thoughts*, the second column *Rational Rebuttals*, and the third column *Rational Thoughts* (see Figure 13-1).

Over the course of the next few days, write down examples of your use of the words *must, should, have to*, and *ought to* in your speech and thoughts. Record them in the first column of the work sheet you have prepared, skipping several lines between each. Because we generally are oblivious to our musturbatory thoughts, ask friends to point out your use of *must*-type words.

When you have 10 musturbatory statements, write a brief rebuttal of each in the second column of your work sheet. The rebuttal should explain why the statement is irrational. Finally, write a rational statement in the third column as an alternative to the irrational, musturbatory statement. The rational statement should reflect your taking responsibility for directing your actions. It should state what you *want* or *choose* to do rather than what you believe you must do. Part of a student's record sheet is shown in Figure 13-1 to give you examples of possible rebuttals and rational thoughts.

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Musturbatory Thoughts	Rational Rebuttals	Rational Thoughts
I can't go to class because I have to study for next period.	I could go to class if I chose to. I just feel it's important to be well prepared for the exam.	I would rather miss class than risk not being prepared.
I must clean up my room before my parents visit this weekend.	My parents are going to be upset with a messy room, but they won't disown me if my room is a mess.	I'd like to get my room neat before my parents get here.
I have to get home in time to see my favorite TV program.	I sure do enjoy my favorite TV show, but my life won't end if I miss an episode.	I hope I can get home in time for my favorite TV show.

FIGURE 13-1
Excerpts from a student's record sheet used in Participation Exercise 13-3

Although irrational beliefs play an important role in maintaining psychological disorders, they are not the only maintaining conditions. Psychological disorders also are influenced by a complex interaction of biological, developmental, and environmental factors.[47] By changing clients' irrational beliefs, cognitive restructuring therapies modify an important—albeit not the only—class of maintaining conditions.

THE PROCESS OF RATIONAL EMOTIVE BEHAVIOR THERAPY

The aim of REBT is to modify irrational beliefs, which is accomplished by (1) identifying thoughts based on irrational beliefs, (2) challenging the irrational beliefs, and (3) replacing thoughts based on irrational beliefs with thoughts based on rational beliefs.

First, to identify thoughts based on irrational beliefs, clients are asked about the specific self-statements they make when they feel upset (for example,

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depressed) or when they are engaging in maladaptive behaviors. As with other cognitive restructuring therapies, clients may have to learn to attend to their self-talk, such as by writing it down whenever their problems occur.

Once the client's self-talk associated with the problem has been identified, the therapist teaches the client to challenge irrational statements by stating the reasons that they are irrational.[48] For example:

Client: I feel awful because Lily wouldn't go out with me. I don't seem to attract women that I am attracted to.

Therapist: That doesn't make any sense. You are blowing up the situation, overgeneralizing. I'm sure you don't feel great being turned down, but it's not the end of the world. And it certainly does not follow that just because Lily isn't interested in going out with you that you are not attractive to other women you like.

Active disputing of irrational beliefs is the key element that distinguishes REBT from other cognitive restructuring therapies.[49] As much as 90% of the therapy session may involve the therapist's challenging the rationality of the client's thoughts and debunking the client's myths about how the world "should be."[50]

Finally, the client learns to substitute rational thoughts for irrational thoughts. In the previous example, the therapist might suggest that the client tell himself, "I'm disappointed that Lily wouldn't go out with me, but she's not the last woman in the world." Table 13-3 presents an example of the changes in clients' thinking and emotional reactions that are expected over the course of REBT.

Case 13-2 will give you a snapshot of a typical REBT session.

TABLE 13-3
Example of the Changes in Client's Thinking and Emotional Reactions That Are Expected Over the Course of Rational Emotive Behavior Therapy

	Situation	Client's Self-Talk About Situation	Client's Emotional Reaction
BEFORE THERAPY	Failed course	(Unaware of or not focusing on self-talk)	Angry, depressed
DURING THERAPY	Failed course	1. "This is horrible." 2. "My parents will hit the roof." 3. "I am just plain stupid."	Angry, depressed
AFTER THERAPY	Failed course	1. "This sure won't help my average." 2. "My parents aren't going to be pleased, but they'll get over it." 3. "It's not the end of the world; I can make up the course."	Upset, disappointed

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CASE 13-2

Rational Emotive Behavior Therapy for Depression[51]

The client was a 34-year-old assistant professor who was experiencing depression. The dialogue that follows is a reconstructed excerpt from the initial therapy session. It is annotated with comments about the process and procedures of REBT.

Therapist:	When did you begin to feel depressed?	
Client:	It started last spring.	
Therapist:	Was there anything troublesome that occurred last spring?	*Therapist (T) asks client (C) about possible activating events.*
Client:	I had my third-year review to give me feedback about my progress toward getting tenure.	
Therapist:	How did that go?	
Client:	Although most of the faculty in my department gave me a favorable report, one senior professor was quite negative.	
Therapist:	Well, that seems mostly positive.	
Client:	Yes, but suppose that faculty member influences the others to vote against me?	
Therapist:	I understand how that might be a potential concern. Of course, you don't know that will happen. But tell me how you are feeling about the senior faculty member influencing the other faculty to vote against you.	*T begins to focus on the rationality of C's thinking.* *T begins to explore how C is interpreting the external event.*
Client:	Really shitty, to put it bluntly. If I don't get tenure, I'd be a failure . . . I'd be worthless.	
Therapist:	I don't understand how not getting tenure makes you worthless. It doesn't follow logically. Can you explain?	*T points out C's illogical thinking and its resulting in Ellis' theme of personal worthlessness.*
Client:	It just makes sense.	
Therapist:	I don't think so. It seems like you're saying to yourself, "I'm a total failure, worthless" *because* you *might* not get tenure.	*T confronts C and introduces the concept of self-talk.*
Client:	Well, I *would* be a total failure if I didn't get tenure.	*C is engaging in absolute thinking.*
Therapist:	You seem to be thinking in an absolute way, all or none, which is not logical. Does getting tenure define your worth as a person?	*T identifies the nature of C's illogical thinking.*

(*continued*)

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CASE 13-2 (*continued*)

Client:	No, not completely, I guess, but it sure is a big part of it. The bottom line is that I've got to get tenure.	*C is musturbating—Ellis' theme of sense of duty.*
Therapist:	By thinking that you *must* get tenure to feel worthwhile, you are making tenure a life-or-death thing. Is it really? If you listen to what you are telling yourself, does it sound logical?	
Client:	Well, it feels that way to me. A person's worth is based on what she achieves in life, and my professional accomplishments are very important to me.	
Therapist:	I certainly understand that. But surely there is more to your life than your being a college professor. You've told me that you have a loving husband and two wonderful children.	*T is modeling logical thinking to counter C's illogical thinking.*
Client:	That's true, but that still doesn't address my academic career. I *have* to get tenure.	*Again, C is musturbating.*
Therapist:	You aren't thinking logically. You are saying you absolutely *must* get tenure. Is that really what you mean? Don't you actually mean that you'd very much *like* to be tenured . . . that it would be wonderful if you were granted tenure?	*T is identifying C's illogical thinking (musturbation).* *T offers a logical alternative.*
Client:	It certainly would be wonderful. It's what I've been working for ever since I started grad school. But if I don't get it, that would really be a terrible blow. I can't think of anything worse.	*C is catastrophizing.*
Therapist:	I really don't think you mean that. I agree that it would be very unfortunate if you didn't get tenure, but you are viewing not getting tenure as a catastrophe, which does not compute logically.	*T points out irrational thinking.*
Client:	I don't see an alternative.	
Therapist:	I know you don't, and that's because you are not thinking rationally. Logically, your not getting tenure would be very unfortunate, but it wouldn't be the end of the world . . . the end of your life. Would it?	*T continues to challenge C's irrational thoughts.*
Client:	I know my life would go on. But not getting tenure would make me feel like a failure.	

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Therapist: I disagree. *You* are responsible for your feeling like a failure. It is the things you are telling yourself—your self-talk or inner dialogue—that make you feel worthless . . . not any external events, such as your not getting tenure. Can you convince me, logically, that not getting tenure would mean you're a failure?

T directly challenges C's irrational conclusion and introduces the basic premise of REBT.

Client: Well, it sure would contribute to my being a failure.

Therapist: Yes, but it is not the direct cause. You may not have total control over whether you get tenure, but you have total control over how you view that possible outcome and how you react to it.

Client: I can't see viewing it positively . . . it sure wouldn't be a good situation. I'd be out of a job; I'd have to leave the university.

Therapist: And what would happen then?

Client: I guess I'd could look for another job. I know other faculty who didn't get tenure found other teaching positions. I guess I could look elsewhere, but that would take time, maybe several years. I might be able to do some part-time teaching at a community college while I searched for a full-time appointment. I guess . . . looking at it that way, it wouldn't be the end of the world. I'd survive.

C begins to think rationally.

Therapist: Yes, you would. Now, you are thinking rationally. Good for you. When we interpret events using illogical thinking—such as absolute thinking, overgeneralizing, and catastrophizing—we experience negative emotions, such as depression. Your thinking you are a failure and worthless results in your feeling depressed. Your depression is a consequence of your negative self-appraisal and not any external events, such as not getting tenure.

T reinforces C's rational thinking—the goal of REBT. T presents Ellis' rational emotive theory of psychological disorders in context of C's problem.

The remainder of this first therapy session was devoted to teaching the client to identify logical errors in her thinking and to counter them with logical thoughts. Before leaving the session, the therapist asked the client to practice these skills at home.

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Many of the characteristics of REBT are contained in the therapist–client dialogue in Case 13-2. The therapist actively challenges the client's irrational thoughts, which provides a model of what the client needs to do routinely. The therapist's style is confrontational, almost argumentative. The client's task is to learn to identify and dispute irrational thoughts and beliefs and then to substitute rational thoughts for them. The client first rehearses these skills in the therapy sessions and then is asked to use them at home. Besides practicing identifying and disputing irrational beliefs, clients in REBT engage in a variety of homework assignments, including engaging in behavior rehearsal of skills learned in therapy sessions (such as appropriate assertive behaviors), keeping mood diaries, and reading material related to REBT principles.[52]

RATIONAL EMOTIVE EDUCATION

Rational emotive behavior therapy is used primarily with adults. REBT's basic format of disputing irrational beliefs is not as well suited for children, especially young children,[53] whose verbal reasoning skills are not fully developed. A few cases using standard REBT with children have been reported, but its effectiveness has not been evaluated.[54]

Rational emotive education is an adaptation of REBT for children and adolescents.[55] Although it can be used to treat problems, rational emotive education is typically used to prevent them. The curriculum includes (1) identifying emotions and differentiating them from thoughts; (2) learning how thoughts, rather than situations, influence emotions; (3) recognizing rational and irrational thoughts; and (4) dealing with common difficult situations (such as being teased) by using these concepts and skills. Children learn experientially, as through the Expression Guessing Game that involves trying to guess the emotions pantomimed by other children. By playing the game, children discover for themselves that the most reliable way to know what other people are feeling is to ask them. Such user-friendly formats for children are increasingly being used in cognitive-behavioral approaches.[56]

Compared to the research literature on REBT, only a relatively small number of studies have evaluated rational emotive education. A meta-analysis of 26 studies indicates that rational emotive education reduces irrational beliefs and negative emotions and to a lesser degree dysfunctional behaviors.[57] However, many of the studies employed only self-report outcome measures, which limits the strength of the evidence.[58] Potentially, rational emotive education could prevent psychological disorders,[59] but longitudinal studies have not been carried out to evaluate this possibility.[60]

Becoming aware of how one's emotions (especially negative emotions but also positive emotions) are influenced by one's thoughts is central to rational emotive education and REBT, and you will become more aware of that connection in your own life by completing Participation Exercise 13-4 over the next few days.

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PARTICIPATION EXERCISE 13-4

I Think, Therefore I Feel: Making the Connection

Identifying the cognitions that are associated with our emotions and recognizing how our thoughts may influence the way we feel are essential goals of REBT and rational emotive education. This exercise can help you become more aware of how your thoughts influence your emotions.

Over the next few days, whenever you experience a strong emotion (positive or negative), be aware of what you are thinking at the moment—in other words, what you are saying to yourself. Immediately write the emotion and the associated cognitions on an index card or sheet of paper you carry with you. Divide the card into two columns: the first column for the *emotion* you are experiencing and the second for your *cognitions* at the time.

After you have collected a sample of different emotions and associated cognitions, consider the following questions: (1) What did you learn from this exercise? (2) Did you find yourself becoming more aware of your self-talk? (3) What were the basic differences between your cognitions associated with positive emotions and your cognitions associated with negative emotions? (4) Did your emotions seem to come from your thoughts or vice versa? Your answers to these questions will provide some insight into the basic assumptions and practices of REBT and cognitive restructuring therapies in general.

RATIONAL EMOTIVE BEHAVIOR THERAPY IN PERSPECTIVE

Rational emotive behavior therapy is popular among therapists and clients for a number of reasons. After all, its approach is rational and logical! Ellis' theory of the development and maintenance of psychological problems is easy to understand. Further, the "direct, persuasive, and authoritative approach . . . conforms to culturally sanctioned doctor–patient roles."[61] The notoriety of REBT has been enhanced by a multitude of self-help books based on the REBT approach, many of which have been written by Albert Ellis.[62] Ellis, who died in 2007, was an outspoken advocate of REBT, and he drew attention to REBT because of his colorful personality,[63] which has been described as inspired and charismatic.[64]

Potentially, REBT could be used to treat any problem maintained by irrational beliefs.[65] Problems that have been treated include stress, generalized anxiety, agoraphobia and other phobias, unassertive behaviors, obsessions, anger, depression, antisocial behaviors, headaches, stuttering, sexual anxiety and sexual dysfunctions, obesity, Type A behaviors, and chronic fatigue syndrome.[66] An intriguing possible application of REBT is being explored to prepare soldiers and their families for combat deployment by enhancing their resiliency and thriving.[67]

REBT has been applied to culturally diverse client populations. Self-defeating beliefs about mathematical ability in African-American high school students have been changed by REBT.[68] Components of REBT have been successfully employed in the treatment of Puerto Rican adolescents with depression.[69] REBT has been used with elderly clients who may become vulnerable to irrational thoughts and

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beliefs related to aging[70] (such as "I must do as well as I did when I was younger or else I'm inadequate," "Other people must treat me kindly and fairly because I'm old," and "I should have the good health I used to have and not be ill and disabled"). Although variations of REBT have been devised for children and adolescents,[71] REBT is more suitable for adults and rational emotive education for children.

For clients with strong religious beliefs, REBT can capitalize on those convictions to challenge clients' irrational beliefs and reinforce the use of adaptive thoughts.[72] For example, using a Christian approach, clients are asked to examine what the Bible has to say about their beliefs.[73] One woman who believed that anger is always sinful was able to cognitively restructure this thought by considering that in the Bible, both God and Jesus were angry, and their behavior was not sinful.

The reliance on direct confrontation of clients' beliefs, a hallmark of REBT practice, has some limitations. Direct confrontation may not work with clients with certain disorders, such as substance dependence, paraphilias, panic disorder, anorexia and bulimia, and obsessive-compulsive disorder.[74] REBT may also be inappropriate for clients from cultures that eschew direct confrontation (such as Native American and Japanese). There is even some evidence that confrontation generally is associated with clients' noncompliance with treatment procedures.[75]

Despite proponents' enthusiastic claims for the clinical effectiveness of REBT, its empirical support is only modest.[76] For example, although REBT for alcohol abuse results in changes in irrational thinking, there are limited changes in drinking.[77] Many of the studies that have evaluated the effectiveness of REBT were poorly designed, so their findings are inconclusive.[78] One major methodological weakness has been a failure to operationally define REBT.[79] Thus, it is unclear which specific therapy procedures were used in different studies. In general, REBT has been found to be superior to no-treatment and wait-list control groups,[80] but often REBT is only equivalent to or less effective than other behavior therapies (such as exposure therapies and progressive relaxation). Finally, few long-term follow-up studies have been conducted.

No systematic process research has been carried out to identify the essential components of REBT, which leaves important questions unanswered.[81] For example, is direct confrontation of the client's irrational beliefs a necessary component? Would the therapy work as well with a gentler exploration of the client's irrational beliefs?[82] These are crucial questions to answer because some clients and therapists feel uncomfortable with REBT's "tough-minded," confrontational approach.[83]

COGNITIVE THERAPY



Courtesy of the University of Pennsylvania Medical Center

Aaron Beck

Cognitive therapy is a cognitive restructuring therapy that emphasizes empirically testing the validity of maladaptive beliefs. Aaron Beck[84] conceived of cognitive therapy in the early 1960s, at the same time Ellis was developing REBT. Apparently, Beck and Ellis created their theories and therapy techniques independently.[85] Both therapies rest on the fundamental assumption that psychological disorders are maintained by distorted cognitions, and they share the goal of modifying these cognitions. Both therapies involve challenging distorted, irrational beliefs, but the strategies they use to do this differ. Cognitive therapy has the client view beliefs as tentative hypotheses; the client then tests the validity of these hypotheses by gathering evidence that refutes (or supports) them.[86] In contrast, REBT primarily relies on direct instruction, persuasion, and logical disputation to challenge distorted

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TABLE 13-4
Major Differences Between Rational Emotive Behavior Therapy and Cognitive Therapy

	Rational Emotive Behavior Therapy	Cognitive Therapy
GUIDING PRINCIPLE	Rationality	Empirical evidence
PROCEDURE	Instruction, persuasion, disputation	Empirical hypothesis testing
MECHANISM	Primarily cognitive restructuring	Combination of cognitive restructuring and overt behavioral interventions
ROLE OF THERAPIST	A model of rational thinking (recognizing and disputing irrational beliefs)	A co-investigator seeking empirical support for client's beliefs
STYLE OF THERAPIST	Confrontational	Collaborative
ROLE OF HOMEWORK	Practice disputing irrational beliefs and cognitive restructuring	Gather empirical evidence to demonstrate that beliefs are not valid

beliefs. Another difference is that cognitive therapy is more empirically based, whereas REBT tends to be more philosophically based.[87] Table 13-4 summarizes the major differences between REBT and cognitive therapy.

Cognitive therapy evolved from Beck's research on the distorted thinking of clients suffering from depression,[88] and treating depression has been its primary focus. More recently, the scope of cognitive therapy has been widened to include anxiety disorders,[89] including panic attacks[90] and panic disorder,[91] phobias,[92] and obsessive-compulsive disorder;[93] personality disorders;[94] marital distress;[95] anger;[96] suicidal behaviors;[97] anorexia;[98] bulimia;[99] obesity;[100] and schizophrenia.[101]

COGNITIVE THERAPY THEORY OF PSYCHOLOGICAL DISORDERS

Beck's theory of the development and maintenance of psychological disorders shares the same fundamental premises as Ellis' theory. Differences emerge in the specific concepts each theory employs. To begin with, Beck refers to maladaptive (irrational) cognitions as **automatic thoughts**, a term that emphasizes how clients experience their distorted thinking.[102] Clients report that their distorted thoughts arise "reflexively," without prior reflection or reasoning. Automatic thoughts seem totally plausible and valid to the client, which may help explain their powerful influence on emotions and actions. According to Beck's theory, psychological disorders occur when people perceive the world as threatening.

> When this happens, there is a functional impairment in normal cognitive processing: Perceptions and interpretations of events become highly selective, egocentric, and rigid. The person has a decreased ability to "turn off" distorted thinking . . . to concentrate, recall, or reason. Corrective functions, which allow reality testing and refinement of global conceptualizations, are weakened.[103]

Thus, the person makes systematic errors in reasoning. For example, children who are anxious tend to misinterpret benign situations as hostile;[104] adults with panic disorder make catastrophic interpretations of their physical sensations

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TABLE 13-5
Cognitive Distortions Associated With Psychological Distress

Cognitive Distortion	Definition	Example
ARBITRARY INFERENCE	Drawing conclusions without sufficient evidence, or when the evidence is actually contradictory	Believing that you have been laid off from a job because of personal incompetence, although the company has gone out of business
OVERGENERALIZATION	Drawing a general conclusion on the basis of a single incident	Concluding that you will never succeed after failing on the first attempt
SELECTIVE ABSTRACTION	Attending to a detail while ignoring the total context	Feeling rejected because a friend who was rushing to an appointment did not stop to talk
PERSONALIZATION	Erroneously attributing an external event to yourself	Thinking that people who are laughing are laughing at you
POLARIZED (DICHOTOMOUS) THINKING	Thinking in extremes, in a black-or-white or all-or-none fashion	Believing that you are a pauper after having lost your wallet
MAGNIFICATION OR MINIMIZATION	Viewing something as far more or far less important than it is	Thinking that you are a poor writer after getting back a paper with several corrections or thinking that you are a great writer after getting back a paper with multiple corrections

Source: Beck & Weishaar, 1989.

(such as increased heart rate means a heart attack);[105] and people who are depressed tend to automatically view *themselves, the world* (including other people), and *the future* negatively, which Beck has called the *cognitive triad*.[106]

Beck has identified six common *cognitive distortions* or logical errors that frequently are found in the thoughts of people experiencing psychological distress; these cognitive distortions are described in Table 13-5. Not surprisingly, there is some overlap with the common forms of irrationality Ellis identified. Note that overlap also exists among the different types of cognitive distortions, so distorted thoughts may consist of more than one type of cognitive distortion.

THE PROCESS OF COGNITIVE THERAPY

Ongoing assessment of the client's problem is central in cognitive therapy and allows the treatment to be modified based on the client's progress. When depression is being treated, each session starts with a review of the client's responses to the Beck Depression Inventory.[107] This brief self-report inventory asks clients to rate their feelings regarding key symptoms of depression, such as sadness, pessimism, self-dislike, loss of interest, and suicidal thoughts.

The goals of cognitive therapy are to (1) correct clients' faulty information processing, (2) modify clients' dysfunctional beliefs that maintain maladaptive

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behaviors and emotions, and (3) provide clients with the skills and experiences that create adaptive thinking.[108] The therapist and client collaborate to identify the client's dysfunctional beliefs and challenge their validity. Cognitive therapy requires clients' active participation, including completing homework assignments that are considered an integral part of the treatment. Compliance with and the quality of homework have been found to be positively correlated with the effectiveness of cognitive therapy.[109]

Because collaboration between the client and therapist is a key element in cognitive therapy, establishing a good therapeutic relationship is considered a prerequisite for effective treatment.[110] Toward this end, cognitive therapists focus on clients' ways of viewing the world in general as well as understanding their cognitive distortions.[111]

Cognitive therapists help clients recognize dysfunctional beliefs through *Socratic dialogue* (also called *guided discovery*). They ask clients a series of easily answerable questions that lead clients to recognize dysfunctional beliefs and automatic thoughts for themselves[112]—rather than directly pointing out such beliefs to clients, as is done in REBT. This process is illustrated in the following excerpt from a cognitive therapy session with a college senior who was seriously abusing alcohol.[113]

Therapist: How are you going to deal with all the drinking that will occur at the party you and your roommates are throwing this weekend?

Client: There's no way I am going to not drink! I'll just have to deal with it afterward.

Therapist: You're very adamant about that. What bothers you about not drinking at the party?

Client: I wouldn't be any fun if I didn't drink.

Therapist: So, if you weren't fun, what would be so bad about that?

Client: People would ignore me.

Therapist: If they ignored you, what would that mean?

Client: They didn't like me?

Therapist: So, suppose people ignored you and that meant they didn't like you. What would be the consequences for you?

Client: Well, I guess word would get out on campus, and I'd be a social outcast. I'd have no friends, no one to hang out with; no girl would be interested in me.

Therapist: And all of that would happen just because you weren't drinking at your own party?

Client: Well, I guess that's a bit of an exaggeration.

Therapist: It sure is. I think it is important for you to realize that one irrational belief builds on another and leads you to assume that the worst will happen—just because in this one instance you didn't drink.

Client: I didn't realize that was what I was doing. Without analyzing it, it did seem catastrophic; but maybe it's not.

The therapist asks the client to view automatic thoughts as *hypotheses* that are subject to empirical verification rather than as "the way things are" (established facts). Then the therapist and client design homework "experiments" to test these hypotheses, a process Beck calls **collaborative empiricism**.[114]

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For instance, because he did not talk to her, a woman believed that a coworker she found attractive disliked her. The therapist suggested that the woman check out the validity of this *hypothesis* by observing how frequently the man interacted with other women in the office. Much to her surprise, she found that the man rarely spoke to any of the women. Thus, her dysfunctional belief, which was based on arbitrary inference and personalization, was refuted with empirical evidence based on observations of actual events.

Once clients in cognitive therapy learn to challenge the validity of their dysfunctional beliefs, they are taught to replace them with adaptive beliefs. The woman in our previous example came to see the man she was attracted to as "uninterested in women in general." This view not only was more accurate but also was more adaptive because it allowed her to feel better about herself.

Sometimes testing the validity of a dysfunctional belief reveals that the belief is valid—that it is consistent with what actually is occurring. This would have been the case if the woman had discovered that the man was interacting with other women in the office, excluding only her. In such instances, the therapist helps the client view the situation in a way that fits the data but does not lead to maladaptive reactions. The woman might have changed her thoughts to "The man doesn't know what he is missing by not paying attention to me. It's his loss, not mine."

The specific techniques used in cognitive therapy to change clients' dysfunctional thinking fall into two categories: cognitive interventions and overt behavioral interventions.

COGNITIVE INTERVENTIONS

Cognitive interventions, which are based on cognitive restructuring, change clients' cognitions directly. For example, to dispel unrealistic fear, the therapist and the client would *analyze faulty logic* the client is using, and the therapist might *provide relevant information* about what makes the fear unrealistic (for instance, people rarely are injured riding in elevators).

Clients are asked to keep records of their automatic thoughts during the course of the day, including such information as the situation in which the thought occurs, their emotions at the time, the logical errors they are making, and possible rational responses to the situation.[115] Figure 13-2 shows an example of such a record, sometimes called a *three-column technique*.

Generating alternative interpretations is a crucial aspect of cognitive restructuring. For example, a student who is anxious about being one of the last to finish exams could counter the thought "I must be stupid" with more adaptive thoughts, such as "I knew the material well and had a lot to say" and "Writing good answers takes time." The therapist first models generating alternative interpretations of anxiety-evoking events and then the client rehearses this skill.

Reattribution of responsibility is helpful when clients believe they have more control over potentially negative outcomes than they actually do. A young man who was highly anxious about an upcoming date feared that the woman would not have a good time. Through Socratic dialogue, the therapist helped the man accept that he could plan the evening and enjoy it himself, but he had no control over the woman's feelings.

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Situations	Automatic Thoughts	Logical Errors
Wearing new outfit for first time	People are going to laugh at me.	No evidence
Giving an oral report in class	I froze last time, and I'll freeze again.	Overgeneralization
	I'll die if I don't do well.	Magnification
Family moved away	They just don't want to be around me anymore.	Personalization
Rejected by date	My life is ruined.	Magnification
Getting a B on a paper	I just have no grasp of the material in this course.	Polarized thinking

FIGURE 13-2
Example of a client's use of a three-column technique

Decatastrophizing is a specific form of reattribution that is useful when clients anticipate dire consequences, which is common in anxiety disorders. Through Socratic dialogue, the therapist guides the client to see the absurdity of highly unlikely consequences and to entertain more probable, noncatastrophic outcomes. For example, a headache is much more likely to be caused by fatigue, hunger, or stress than by a brain tumor.

Participation Exercise 13-5 lets you try your hand (actually brain) at cognitive restructuring and will not only demonstrate its process, but it may also be beneficial for dealing with your everyday negative self-talk (which we all have). You can do the Participation Exercise before you continue reading or at a later time.

PARTICIPATION EXERCISE 13-5

Turning Your Thinking Upside Down: Cognitive Restructuring

You can use cognitive restructuring to cope with difficult or stressful situations in your daily life. In this exercise, you will read brief descriptions of everyday situations followed by examples of negative self-statements someone faced with the situations might make. These self-statements are maladaptive because they present the consequences of the situation as so terrible that nothing can be done to cope with them. In fact, the situations may be unfortunate, but they are not necessarily disastrous.

Your task is to think of alternative self-statements that are positive, optimistic, and adaptive. The self-statements also must be realistic. For example, if your new car is stolen, it would be unrealistic to think "I didn't need the car" because that is not likely to be true. For each situation and negative self-statement, write two possible alternative self-statements that are positive, optimistic, adaptive, and realistic. Then

(*continued*)

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PARTICIPATION EXERCISE 13-5 (*continued*)

compare your self-statements with the examples given in the Participation Exercise Answers at the end of the chapter.

Situation	Negative Self-Statement
1. Having to hand in a long, difficult assignment the next day	1. "There is just no way I can get this work done for tomorrow."
2. Getting into an automobile accident	2. "Oh no, my father will kill me."
3. Being asked to dance but not being a skillful dancer	3. "I can't dance; I'll make a fool of myself."
4. Losing your job	4. "I'll never get another job."
5. Moving to a new home, away from family and friends	5. "Everything I care about is left behind."
6. Having a roommate with whom you don't get along	6. "We'll never get along. What a horrible year this is going to be!"
7. Breaking up with the person you are in love with	7. "She (or he) was everything to me . . . my whole life. I have nothing else to live for."

OVERT BEHAVIORAL INTERVENTIONS

Besides changing clients' cognitions directly, cognitive therapy changes clients' overt behaviors, which indirectly modifies their cognitions and emotions. In general, the more serious the client's disorder and cognitive distortions, the more reliance is put on overt behavioral interventions, at least at the beginning of therapy. For example, clients with severe depression frequently have difficulty engaging in Socratic dialogue and generating alternative interpretations. From their perspective, "Everything is hopeless, so what's the use?" Further, their reasoning abilities may be too impaired to benefit from direct cognitive interventions. Thus, changing their overt behaviors may be the better strategy.[116]

Three particular overt behavioral interventions commonly are used in cognitive therapy: activity schedules, mastery and pleasure ratings, and graded task assignments.

Activity Schedules

An **activity schedule** is a written plan of a client's daily activities and is especially useful for clients who are anxious or depressed. The client and therapist schedule activities for most hours of each day (see Figure 13-3). The activity schedule provides clients who are anxious with a sense of direction and control. It counteracts feelings of disorganization and being overwhelmed and serves to distract clients from anxiety-evoking thoughts. Clients who are depressed often are inactive and have difficulty doing even the simplest tasks. An activity schedule provides a structure that encourages clients to engage in active behaviors throughout the day, which also is a key component of behavioral activation (Chapter 7).

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	Monday	Tuesday	Wednesday
8–9	Get out of bed, get dressed	Get out of bed, get dressed	Get out of bed, get dressed
9–10	Clean bathrooms	Do grocery shopping	Vacuum house
10–11	Go to museum	↓	Go to library
11–12	Exercise	Exercise	Exercise or take walk
12–1	Lunch	Lunch with friend	Lunch
1–2	Do therapy homework	↓	Clean bedrooms
2–3	Do laundry	Clean living room	Pay bills
3–4	Housework	Visit with mother	Attend therapy
4–5	Read newspaper	Read newspaper	Read newspaper
5–6	Fix dinner	Go out to dinner	Fix dinner
6–7	Eat dinner with family	Do therapy homework	Eat dinner with family
7–8	Clean kitchen	Take walk	
8–9	Watch TV, read novel	Work on computer	Watch TV, read novel
9–11	↓	Read novel	↓

FIGURE 13-3
Portion of an activity schedule for a 45-year-old man suffering from depression

Mastery and Pleasure Ratings

Clients suffering from depression and anxiety not only need to be active, but they also need to feel competent at and enjoy what they are doing. The **mastery and pleasure rating** technique provides clients with feedback about the sense of accomplishment and pleasure they actually are experiencing. *Mastery* refers to a sense of accomplishment (though not perfection as the word connotes), and *pleasure* refers to feelings of enjoyment or satisfaction while performing a task. Clients rate each activity on their activity

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schedule for mastery and for pleasure using a 0 to 5 rating scale (with 0 representing no mastery/pleasure and 5 representing high mastery/pleasure).[117] Using a rating scale encourages clients to recognize *partial* accomplishments and *small* pleasures. Mastery and pleasure ratings are especially useful in treating depression because they penetrate clients' " 'blindness'. . . to situations in which they are successful and their readiness to forget situations that do bring them some satisfaction."[118] The same clients who make statements such as "I can't do anything right" and "Nothing is enjoyable" may rate specific activities with scale scores higher than zero. These partial successes and small pleasures can be used as empirical evidence to refute clients' beliefs that they can't accomplish anything and that nothing they do brings them any pleasure.

Using an activity schedule and making mastery and pleasure ratings are typically combined when clients rate each activity they do during the day for mastery and pleasure. Participation Exercise 13-6 provides an opportunity to experience this process and may even be personally beneficial to you. You'll need to do it over the course of a couple of weeks, but it will not require much time.

PARTICIPATION EXERCISE 13-6

Are You Completing Tasks Competently and Enjoying Doing Them?

Many of us make lists of things we want to accomplish each day and check off each task as it is completed. This exercise enhances that practice by combining making a daily activity schedule and using mastery and pleasure ratings.

Scheduling daily activities in time slots may increase the chances of your doing them. Additionally, rating how well you completed each activity and the pleasure you derived from it will give you a greater sense of accomplishment than just checking off a list of daily tasks, and the feedback about the pleasure each activity provided might tell you which activities you want to do more and less of.

Make a daily work sheet with four columns. Title the first column "Hour" and write each hour of the day beginning with the time you usually wake up and ending with the time you usually go to bed. Title the second column "Activity" and write the activity you plan to do in each hour. Title the third column "Mastery" and the fourth column "Pleasure."

Keep the work sheet with you during the day and rate Mastery and Pleasure on a scale of 0 to 5 (with *0* indicating no mastery/pleasure and *5* indicating high mastery/pleasure) after you complete each activity. Over the course of 6 days (or more if you like), alternate using the work sheet one day and not using it the next day.

After you've completed the exercise, consider the following questions. Did you accomplish more during the days you used the work sheet than the days you did not? Did rating mastery enhance your feeling of accomplishment? Did rating pleasure indicate activities that you might want to do more or less?

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Graded Task Assignments

Graded task assignments involve clients' engaging in a series of small sequential step that lead to a therapeutic goal, which essentially is shaping. Case 13-3 illustrates the impact that graded task assignments can have on a client who is depressed and whose activity level is minimal.

CASE 13-3

Using Graded Task Assignments to Accelerate Walking in a Japanese-American Man With Somatic Complaints[119]

Makoto S. was a 42-year-old Japanese-American man who had been admitted to a hospital with multiple physical complaints. His attending physician had found no physical basis for his complaints. Somatic complaints often are key symptoms of depression in Japanese clients, which made depression a likely diagnosis.

Because nonverbal communication is valued in Japanese culture, the therapist primarily used overt behavioral interventions. A series of graded task assignments were employed to get Makoto to walk. He claimed that he could not walk, and he was taken to his therapy sessions in a wheelchair. The therapist introduced the initial graded task assignment as follows.

Therapist: Why is it that you think you can't walk?

Client: I don't have the strength.

Therapist: What would happen if you tried?

Client: I'd fall.

Therapist: Are you sure of that?

Client: Yes.

Therapist: Well, you could be right. But you also might be mistaken. How about our testing that out?

Client: I know I can't walk.

Therapist: You may be right. People who are depressed often think that way, but they usually find that when they try to walk, they can. Do you think you could take just a few steps to the sofa?

Client: Suppose I fall.

Therapist: I'll walk with you and hold on to you.

At this point the therapist took Makoto's arm, and Makoto was able to walk to the sofa. The therapist pointed out that Makoto had done better than he had thought he could and suggested that Makoto try to walk to the office door. With much skepticism, Makoto attempted this and succeeded. Over the course of the next three therapy sessions, increasingly longer walks were achieved, which provided evidence to refute Makoto's automatic thought that he could not walk. As this occurred, Makoto's mood became more positive for a short time, which typically occurs with clients who are depressed.[120] This provided the motivation for Makoto to attempt increasingly more active behaviors. The more active Makoto became, the harder it was for him to tell himself that he was unable to engage in normal, everyday activities and the more positive his mood became.

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As this case shows, the graded task assignments helped the client increase his activity level and provided him with immediate success experiences. The assignments served as informal investigations to test his hypothesis that he could not walk. When the client's experiences provided evidence that his belief about himself was invalid, he was able to view himself differently. In turn, this new perspective allowed him to attempt new behaviors that were consistent with the belief that he was healthy and capable of functioning. As a consequence, his depression—manifested in his somatic complaints—declined.

COGNITIVE THERAPY FOR ANXIETY-RELATED DISORDERS

Anxiety-related disorders are the second most frequent problem that cognitive therapy is used to treat. Although exposure therapies often are considered the treatment of choice for obsessive-compulsive disorder, cognitive therapy can be used to challenge and replace obsessive thoughts related to the need to be perfect, exaggerated views of responsibility (for instance, "If anything goes wrong, it is my fault"), and magical ideas (for example, "It is dangerous to step on the cracks on the sidewalk").[121]

Posttraumatic stress disorder is another anxiety-related disorder for which cognitive therapy is employed with such diverse traumatic precipitants as war[122] and sexual assault.[123] Victims of sexual assault often perceive the world as dangerous and themselves as incapable of coping with stress. Cognitive therapy is well suited to addressing victims' maladaptive automatic thoughts related to fear (for example, "That man is going to attack me"), guilt and shame (for example, "I could have stopped my attacker"), anger and rage (for example, "Why me?"), and sadness (for example, "I'll never be the same again"). Cognitive therapy has been shown to be as effective as imaginal exposure in treating PTSD.[124] Combined with exposure therapies, cognitive therapy is an effective treatment for social phobia and can be as effective as medication, which is often prescribed for social phobia.[125] In treating clients with generalized anxiety disorder, cognitive therapy has been found to be as effective as relaxation training.[126]

Irritable bowel syndrome is a stress-related disorder that results in abdominal pain and discomfort associated with altered bowel function, including constipation and diarrhea. It is not caused by a specific organic condition, and psychological events, such as stress and anxiety, can contribute significantly to the symptoms. The general goal of cognitive therapy is to help clients reconceptualize their bowel-related symptoms.[127] Clients are taught to shift their view that their symptoms are all-encompassing and constitute an uncontrollable medical condition to the belief that the symptoms are subject to their mood and are therefore controllable. Other applications of cognitive therapy in stress management have been with gay men who are HIV-infected[128] and with women in treatment for early-stage breast cancer.[129]

Although Beck's *cognitive therapy* (as described and discussed in previous sections) is widely used for anxiety and other disorders, it is often part of a cognitive-behavioral treatment package that principally includes the cognitive and overt behavioral interventions components of cognitive therapy, exposure therapy, and sometimes other cognitive-behavioral therapies such as problem solving

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(Chapter 14). All too often, the terms *cognitive therapy* and *cognitive behavioral therapy* are used interchangeably,[130] which results in ambiguity as to the specific therapy procedures clients received in a reported study. (I'll have more to say about the general issue of imprecise terminology in Chapter 18.)

COGNITIVE PROCESSING THERAPY FOR STRESS DISORDERS



Courtesy of Patricia Resick

Patricia Resick

Cognitive processing therapy, developed by Patricia Resick, is an adaptation of cognitive therapy for clients who have experienced trauma and are suffering from stress disorders.[131] The therapy includes exposure and cognitive components, is typically structured in 12 sessions, and can be administered individually or in groups.[132]

Clients first write a statement that describes the impact of the trauma on their lives—that is, what the trauma means to them—which helps the therapist and the client identify maladaptive thoughts and feelings related to the trauma. Then clients are exposed to the traumatic event by writing a detailed account of it that includes thoughts, feelings, and sensory details. Clients read this account to the therapist and then reread it to themselves at home on a daily basis. Although exposure through expressive writing about traumatic events is only the initial phase of cognitive processing therapy, such expressive writing by itself can reduce PTSD symptoms.[133]

The remainder and majority of cognitive processing therapy consists of challenging clients' maladaptive thoughts and beliefs concerning the trauma using Socratic questioning and replacing them with more adaptive cognitions. Initially, the focus is on thoughts and beliefs concerning irrational self-blame and attempts to change aspects of the traumatic event after the fact (for example, "It was my fault" or "If I only had run away"). The last five sessions cover common problem areas for trauma victims: safety, trust, control, esteem, and intimacy. For instance, victims of trauma may overgeneralize and believe that they are no longer safe in any circumstances, that no one can be trusted, or that they have no control over what happens to them. Clients are taught to challenge and cognitively restructure single maladaptive thoughts at first, and later they apply these skills to broad, pervasive maladaptive themes in their thinking.

Cognitive processing therapy was initially used to treat adult victims of rape,[134] and research indicates that lasting changes in PTSD and related symptoms over a 5- to 10-year period occur for female rape victims with extensive histories of trauma.[135] Military-related PTSD in men and women has been a prime target of cognitive processing therapy.[136] Among the benefits of treating PTSD with cognitive processing therapy is that it results in a decline of comorbid depression along with posttraumatic stress symptoms[137] and improvements in social adjustment.[138] Cognitive processing therapy has been used to treat adult female survivors of childhood sexual abuse,[139] female victims of interpersonal violence,[140] incarcerated adolescents with PTSD,[141] and adolescents suffering from PTSD who had been physically and sexually abused.[142] Cultural adaptations of the therapy have been effective for Bosnian war refugees[143] and torture victims in Kurdistan, Iraq.[144] Single cases of cognitive processing therapy have been reported for the treatment of PTSD in a female survivor of the

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World Trade Center bombing;[145] acute stress disorder in a 30-year-old gay man following a homophobic assault;[146] PTSD in a 42-year-old woman who was deaf;[147] and a complex case of trauma involving a 41-year-old woman with a history of childhood sexual, physical, and psychological abuse and multiple rapes in adulthood.[148] Preliminary data indicate that cognitive processing therapy may be particularly effective for dealing with trauma-related guilt.[149]

Cognitive processing therapy is an evidence-based therapy for posttraumatic stress disorder.[150] Among its advantages is that it is effective with many different types of trauma, it is applicable with clients with varying demographics, and it appears to be amenable to administration by people with little training,[151] which may make it suitable in parts of the world where there are a limited number of professional therapists.[152]

COGNITIVE THERAPY FOR DELUSIONS AND HALLUCINATIONS

Delusions and hallucinations are the hallmark of schizophrenia, and they are occasionally seen in other disorders. They are very disturbing to the person experiencing them (as well as to other people) and seriously impair the person's functioning. Until recently, they were treated almost exclusively with antipsychotic medication. Over the past two decades, cognitive therapy has been used to treat these serious symptoms.[153]

Cognitive Therapy for Delusions

Delusions are blatantly false beliefs people steadfastly hold in the face of contradictory evidence (for example, a client's believing that she is Joan of Arc). Cognitive therapy for schizophrenic delusions involves the same basic procedures used to treat depression and anxiety. First, cognitive distortions are identified; then evidence for their validity is sought; and finally, adaptive cognitions are substituted for the distorted cognitions. A few special procedures and precautions are required, however, because of the nature and severity of schizophrenic delusions and the fragility of the clients. For example, the therapist–client relationship is especially important because clients must trust their therapists if the clients are to talk about delusions that are frightening, threatening, and bizarre.[154] The therapist avoids directly challenging the delusions because such confrontation often meets with negative reactions.[155] This is especially likely with *paranoid delusions*, which involve thoughts that people are following, plotting against, and wanting to harm the client.

To help identify specific delusional beliefs, the client maintains a daily log of his or her delusions. The log includes a measure of the client's *strength of conviction* that the delusion is true, rated on a 0 to 100 scale.

Treatment of delusions proceeds in a stepwise fashion.[156] Initially, the focus is on beliefs having the lowest conviction ratings. As the client begins to feel more comfortable in therapy, more strongly held delusions are addressed.[157] Clients are encouraged to consider alternative interpretations of events.[158] For instance, a 22-year-old man believed that a "haggly witch" followed him around wherever he went.[159] Considering alternative interpretations of his delusion (such as "Maybe I just have a wild imagination") dramatically decreased the frequency and strength of his delusions as well as his need for medication to control them.

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The client and therapist collaborate to empirically evaluate the evidence on which the client bases the delusions.[160] For example, a client believed that to avoid being physically attacked, he had to get angry and shout back at the voices.[161] The client agreed to refrain from becoming angry and shouting back at the voices and just to observe whether he was attacked. When the client discovered that he was not attacked, he was greatly relieved and became much less concerned about his safety. Such empirical investigations are useful because they allow clients to draw their own conclusions about the validity of their delusions.[162]

Cognitive Therapy for Hallucinations

Hallucinations, the other core symptom of schizophrenia, are sensory perceptions that have no external stimulus and that people experience as real. Auditory hallucinations predominate and typically involve hearing nonexistent voices that are extremely disturbing, such as a man who hears a voice that commands him to do penance by cutting himself.

According to the prevailing theoretical explanation of auditory hallucinations,[163] they arise from clients' thoughts that they falsely attribute to an external source. Further, clients' beliefs about the source of the voices influence how distressing the voices are, so condemnation from God is more distressing than condemnation from a preacher. Based on these formulations, cognitive therapy for auditory hallucinations involves challenging the interpretations and content of hallucinatory voices.[164]

To challenge clients' interpretations of the source of their voices, they are asked to generate alternative explanations for their voices and to rate how believable they are (0% to 100%). Next, the evidence for each alternative explanation is examined, which may include homework assignments involving collaborative empiricism. In addition to these steps, which parallel standard cognitive therapy procedures, special techniques applicable to schizophrenic hallucinations are included. Clients are educated about the nature of hallucinations, stressors that tend to trigger them, and the prevalence of hallucinatory experiences in the general population (which is higher than most people think, and learning this helps make the clients' hallucinations more normative). Therapists also help clients examine the advantages of hearing voices (such as increased attention from hospital staff) as well as its disadvantages.

Clients frequently use what voices say as "evidence" to support the source of the voices (for example, "It must be the CIA who has been telling me what to do because only the CIA could know so much about me"). If disconfirmatory evidence for the content can be found, then the source may be discredited. Thus, it may be necessary to challenge the content of the hallucinations, which involves the same basic procedures employed in challenging the client's interpretations of them.

In addition to the basic cognitive therapy procedures for delusions and hallucinations just described, clients are taught various coping strategies.[165]

- *Awareness training* helps the client attend to the onset of a delusion or hallucination and allows the client to engage in active coping strategies.
- *Attention switching* changes the client's focus from a delusion or hallucination to an alternative stimulus (such as a pleasant scene).

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- *Attention narrowing* restricts the client's focus and thereby reduces the stimulus overload often experienced in schizophrenia.
- *Self-instructions* involve specific adaptive self-statements (such as "I don't need to be afraid").
- *Activity scheduling* increases the client's activity level, which is important because clients are more likely to experience delusions and hallucinations during periods of inactivity.

Cognitive Therapy for Delusions and Hallucinations in Perspective

Meta-analyses of studies examining the benefits of cognitive therapy for delusions and hallucinations (in conjunction with antipsychotic medication) indicate that cognitive therapy is an effective treatment.[166] Because a majority of patients with schizophrenia are on antipsychotic medication, it has not been until recently that research has demonstrated that cognitive therapy alone can be effective in reducing delusions and hallucinations.[167] Moreover, a 5-year follow-up study indicated that the benefits of cognitive therapy were maintained.[168] The effects of cognitive therapy may be delayed, with greater effectiveness occurring in follow-up than right after treatment has ended.[169] Additionally, it appears that more therapy sessions (20 or more) have greater effectiveness than fewer (16 or less).[170] Cognitive therapy for clients with schizophrenia has an additional benefit in that it has been shown to significantly reduce thoughts of suicide, which is important because there is a high risk of suicide in schizophrenia.[171]

Clients treated with cognitive therapy for their delusions and hallucinations consider it an acceptable treatment, both immediately and 3 months after therapy. The extent to which clients believe that they have acquired specific skills and knowledge predicts their overall satisfaction.[172]

SCHEMA-FOCUSED COGNITIVE THERAPY

So far, we have primarily looked at the application of cognitive therapy to changing clients' *discrete* cognitive distortions that are maintaining conditions of their psychological disorders. In contrast, a **schema** is a broad and pervasive cognitive theme about oneself, others, or the world.[173] Schemas often stem from childhood experiences and are further developed throughout one's lifetime. For example, a woman who had received little nurturing, empathy, or protection from her parents as a child developed an "emotional deprivation" schema.[174] It involved an exaggerated theme of not being cared for or understood by others—which remained even in light of contradictory evidence—and it pervaded the woman's view of the world.



Courtesy of Jeffrey Young

Jeffrey Young

Schema-focused cognitive therapy, spearheaded by Jeffrey Young, has extended traditional cognitive therapy to address the needs of clients with long-standing psychological problems, such as personality disorders, which often are maintained by maladaptive schemas.[175] Although schema-focused cognitive therapy should be considered a behavior therapy, it integrates aspects of a number of other theoretical orientations, including object relations, Gestalt therapy, and psychoanalysis.[176]

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TABLE 13-6
Broad-Based Schemas That Have Been Tentatively Identified as Core Cognitive Structures of Clients with Chronic Treatment-Resistant Psychological Problems

Schema	Description
ABANDONMENT/INSTABILITY	The perceived instability or unreliability of others for support and stable, trustworthy relationships
MISTRUST/ABUSE	The expectation that others will intentionally hurt, abuse, humiliate, cheat, or manipulate you
EMOTIONAL DEPRIVATION	The expectation that others will not adequately meet your desire for emotional support, including nurturance, empathy, and protection
DEFECTIVENESS/SHAME	The feeling that you are defective, inferior, bad, or unlovable, which results in hypersensitivity to criticism, rejection, and blame as well as self-consciousness about perceived flaws
SOCIAL ISOLATION/ ALIENATION	The feeling that you are isolated from the rest of the world, different from others, and unconnected to any group or community

Source: Young, 1994.

Unlike discrete cognitive distortions, schemas serve as templates for processing a wide range of experiences, are self-perpetuating, and are far more irrefutable and rigid, which makes them highly resistant to change.[177] Table 13-6 describes five broad-based schemas that have been tentatively identified as core cognitive structures of clients with chronic, treatment-resistant psychological problems.[178]

Although schemas are long-standing, they are triggered by present experiences. A client's "abandonment" schema that developed in childhood may be triggered when his wife goes out of town for a business meeting. Once activated, schemas generate significant psychological distress, including depression, anxiety, feelings of intense loneliness, interpersonal conflicts, and addictive behaviors.

Assessment of Schemas

The assessment phase of schema-focused cognitive therapy involves four components: (1) schema identification, (2) schema activation, (3) schema conceptualization, and (4) schema education (which involves teaching clients about the nature of schemas and their role in maintaining psychological disorders). Schemas are identified from information gathered in a variety of ways, including self-report inventories,[179] interviews, and clients' self-recorded observations at home, such as filling out the Schema Identification Worksheet (see Figure 13-4 [page 348]).[180] From the data obtained, the therapist identifies the underlying themes around which the client's automatic thoughts are organized.[181]

Once a client's specific schemas have been identified, the therapist intentionally activates them through imagery or role-playing (which might involve a painful childhood experience associated with the schema). The purpose of schema

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Situation	Mood Intensity (1–10)	Automatic Thought	Underlying Assumption	Schema
Was not invited to Julie's party	depressed (7)	There's something wrong with me. I'm abnormal.	If I were normal, I'd be popular.	Defectiveness/ Shame
	depressed (5)	No one likes me. I'm the class outcast.	She didn't invite me because she doesn't like me.	Social Isolation/ Alienation

FIGURE 13-4
Example of an entry on the Schema Identification Worksheet

activation is to determine those schemas that elicit strong emotional responses; such schemas are considered critical for the client and are dealt with during the change phase of therapy.

Next, the therapist formulates a schema conceptualization for the client. This includes the specific schemas impacting the client's life experiences, the situational cues that activate the schemas, and the specific cognitions, emotions, and actions the client displays when the schemas are activated. Finally, the therapist explains the schema conceptualization to the client, and the therapist and client formulate a treatment plan. Throughout, therapists educate clients about the nature of schemas and their role in maintaining psychological disorders.

Schema-focused Cognitive Therapy Interventions

Schema-focused cognitive therapy employs the same basic cognitive and overt behavioral change techniques used in traditional cognitive therapy, but they may be modified for dealing with schemas. For instance, *life review* is a cognitive exercise in which therapists ask clients to provide evidence from their lives that supports and contradicts their schemas. This helps clients see how their schemas distort their perceptions and begins a process of distancing themselves from their schemas, rather than identifying with them. A graded task assignment in which clients gradually perform new behaviors that contradict their schemas is an example of an overt behavioral technique used in schema-focused cognitive therapy.

Experiential and interpersonal change techniques also are part of schema-focused cognitive therapy. *Schema dialogue* is an experiential technique in which clients role-play both the "voice" of the schema and the "voice" of their own healthy responses to the schema. They do this while alternating sitting in two chairs (each chair representing one of the voices) as they defend and refute

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the schema. Experiential techniques may be the most effective interventions in schema-focused cognitive therapy.[182]

Interpersonal change interventions are used because clients treated with schema-focused cognitive therapy often have core interpersonal problems, including difficulty establishing a relationship with the therapist. With *limited reparenting*, for example, the therapist provides a therapeutic relationship that counteracts maladaptive schemas. In the case of a client with a "rejection" schema who experienced extreme criticism as a child, the therapist would be as accepting as possible and praise the client frequently.[183]

Schema-focused Cognitive Therapy in Perspective

Schema-focused cognitive therapy differs from traditional cognitive therapy in four important respects: (1) a greater use of the therapist–client relationship as a change vehicle, (2) the exploration of the earliest expression (often in childhood) of a schema to understand the nature of its current expression, (3) a greater emphasis on emotions and the use of experiential change strategies, and (4) a longer course of treatment.

Schema-focused cognitive therapy has been shown to be effective in treating personality disorders, substance dependence, clients with histories of childhood abuse, eating disorders, and chronic pain as well as in preventing relapse in depression and anxiety disorders.[184] However, conclusions about the relative efficacy and effectiveness of schema-focused versus traditional cognitive therapy and other therapies await more controlled clinical outcome studies.[185]

ADAPTATIONS OF COGNITIVE THERAPY TO DIVERSE POPULATIONS

Cognitive therapy primarily has been used with outpatient adult clients. However, increasingly, it is being adapted to other populations, including hospitalized clients[186] and elderly clients.[187] Adaptations of cognitive therapy for children have been particularly innovative.[188] For example, the Adolescent Coping with Depression program[189] uses popular cartoon strip characters (such as Garfield) to illustrate how negative thoughts contribute to depression and how positive thoughts can improve mood. This therapy program has been modified to be relevant for African-American adolescents.[190] As another example, cognitive therapy has been adapted for Turkish children with test anxiety.[191]

Cognitive therapy, like all behavior therapies, is most effective when it is tailored to the particular characteristics of the client.[192] As an example, a creative adaptation of cognitive therapy for religious clients treated for depression employed religious rationales for the therapy procedures and religious arguments to counter clients' irrational beliefs (similar to the use of REBT for religious clients described earlier in the chapter).[193] The religious-oriented cognitive therapy was more effective than standard cognitive therapy for this population.

Cognitive therapy that involves examining and correcting negatively biased maladaptive beliefs may be useful for gay clients who are having difficulty accepting their homosexual orientation.[194] Examples of such beliefs are "A gay lifestyle means forgoing experiences that are only for heterosexuals" (such as

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having a stable relationship and rearing children) and "Being gay requires acting in certain ways that fit with mainstream stereotypes" (for instance, going to art galleries instead of sporting events). Through collaborative empiricism, gay clients can learn about the lives and habits of other gay men and collect data that refute their false assumptions. Clients can discover, for instance, that many homosexual couples raise children in stable long-term relationships and that many gay men enjoy sports.

COGNITIVE THERAPY IN PERSPECTIVE

Beck's studies of the distorted thinking of depressed clients led him to develop cognitive therapy more than 50 years ago.[195] Subsequently, it has become clear that distorted thinking is also associated with many other psychological disorders, and the general principles of cognitive therapy appear to be applicable to a variety of disorders. Specialized cognitive therapy procedures have been designed to treat anxiety disorders,[196] personality disorders,[197] marital distress,[198] and schizophrenic delusions and hallucinations.[199] In some cases, such as in the treatment of sexual dysfunctions,[200] obesity,[201] and problem gambling,[202] therapists have employed cognitive therapy along with other behavior therapy procedures to deal with clients' cognitive distortions that are contributing to their problems.

A substantial body of research clearly demonstrates the efficacy of cognitive therapy for the treatment of depression.[203] Although the majority of studies have been conducted with women, cognitive therapy appears to be equally effective with men suffering from depression.[204] The quality of studies has been especially high (in contrast to outcome research on REBT).[205] The specific interventions are well defined,[206] so clinicians using cognitive therapy and researchers evaluating it are employing standard procedures (which is not the case with REBT[207]). Moreover, clients consider cognitive therapy to be highly useful for depression.[208] In addition to the many efficacy studies of cognitive therapy, research has demonstrated that it is effective in real-world clinical practice in community settings.[209]

Cognitive therapy is especially effective for acute episodes of major depression[210] and somewhat less effective for chronic depression.[211] Successful cognitive therapy for chronic depression may require more sessions and repetition, narrowing the focus to one or two pivotal problems, and enriching mastery and pleasure exercises.[212] Cognitive therapy is versatile in terms of its implementation in a variety of formats (such as in groups[213] and Web-based[214]) and settings (for example, at home with new mothers suffering from postpartum depression[215]). Cognitive therapy also has been used to treat bipolar disorder, which is characterized by mood fluctuations between depression and manic states.[216]

It is especially noteworthy that cognitive therapy has been shown to be at least as effective in treating depression as medication, even in severe cases.[217] Medication, the most common treatment for depression, has major drawbacks, including possible serious physical and psychological negative side effects. Moreover, cognitive therapy is a more cost-effective treatment than medication; for example, the use of Prozac can be 33% more expensive than individual cognitive therapy.[218]

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Cognitive therapy also may prevent the recurrence of depression to a greater degree than other treatments, including medication.[219] For instance, cognitive group therapy was used to prevent relapse/recurrence in a sample of high-risk patients who had had repeated episodes of depression but whose depression was currently in remission. Recurrence of depression was assessed over 2 years. For the 77 clients (41% of the total sample) with five or more previous episodes of depression, eight weekly 2-hour cognitive therapy sessions reduced recurrence from 72% to 46%.[220] It is possible that cognitive therapy (1) sensitizes clients to the types of cognitions associated with depression and (2) provides them with coping skills to neutralize potential depression-evoking events (such as substituting adaptive thoughts for automatic thoughts). Thus, with cognitive therapy, "People come away from treatment not only having their symptoms relieved, but learning something they can use the next time."[221] Process research has demonstrated that changes in clients' cognitions are associated with improvement in cognitive therapy.[222] Cognitive therapy might also prove useful in preventing relapse in other disorders for the same reasons. Another benefit of cognitive therapy related to depression is that it appears to decrease the risk of suicide.[223] (We will return to the prevention of relapse of depressive episodes in Chapter 15 when we examine mindfulness-based cognitive therapy.)

Cognitive therapy is a versatile treatment. Although typically implemented individually, cognitive therapy is effective in a group format,[224] which has been shown to be as effective as individual treatment.[225] Telephone-administered cognitive therapy is well suited to clients with physical illnesses and impairments as well as to elderly clients who cannot travel for therapy sessions. For example, cognitive therapy administered by telephone has been efficiently and effectively used to treat depression in patients with multiple sclerosis.[226]

Cognitive therapy integrates a variety of cognitive and overt behavioral interventions[227] and emphasizes a self-control approach.[228] Hypothesis-testing skills to examine one's beliefs and between-session practice of skills are two self-control components of cognitive therapy that are associated with its effectiveness.[229]

Not surprisingly, cognitive therapy is popular with clients and therapists for some of the same reasons that REBT is—namely, the therapy procedures and their rationale are easy to understand. In addition, some clients like cognitive therapy because participating in collaborative empiricism and Socratic dialogue allows them to discover the distortions in their thinking for themselves. Indeed, clients report feeling more control over their thoughts and feelings and having greater insight into their problems after completing cognitive therapy.[230]

ALL THINGS CONSIDERED: COGNITIVE RESTRUCTURING THERAPIES

The order in which the three cognitive restructuring therapies have been presented in this chapter—thought stopping, rational emotive behavior therapy, and cognitive therapy—parallels the increasing complexity of the procedures they employ. That order also parallels an increasing reliance on overt behavioral interventions. Thought stopping is exclusively a cognitive technique, REBT uses more cognitive than overt behavioral procedures, and cognitive therapy clearly employs both cognitive and overt behavioral interventions.

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Whereas the application of thought stopping is restricted to disturbing, intrusive thoughts, REBT and cognitive therapy treat a wide range of problems and overlap in some of their specific procedures. Although REBT and cognitive therapy share the goal of promoting adaptive thought processes, they take two different approaches to attaining it: rational disputation versus collaborative empiricism, respectively. Using rational disputation in REBT, the therapist makes the client aware of dysfunctional thoughts through verbal persuasion—a "tell-me" approach. The focus of collaborative empiricism in cognitive therapy is on the client's self-discovery of dysfunctional thinking through empirical hypothesis testing—a "show-me" approach. Individual clients differ in their preferences for one of these two distinctive strategies, which is one reason for having both therapies available to clients. REBT and cognitive therapy both require clients to reason using better logic or data, so they are likely to exclude clients who have limited intellectual and communication skills (such as clients with severe intellectual disability or serious brain damage).

Cognitive restructuring is a core procedure in thought stopping, REBT, and cognitive therapy, and it is a component of the cognitive-behavioral coping skills therapies that you will read about next in Chapter 14. Changing our interpretations of life events can have a powerful influence on what we do and how we feel and ultimately our overall life satisfaction and happiness.[231] In Theory 13-2 discusses the foundation of this effect.

IN THEORY 13-2

Constructivism: All in the Eye of the Beholder

The philosophical basis of cognitive restructuring is known as *constructivism*, which holds that people make (construct) their own realities (what is real and meaningful to them).[232] The interpretations we place on events—rather than the events themselves—determine the meaning of events. This idea applies both to external events (such as what other people do in relation to us) and internal events (such as how we are feeling physically).

To appreciate the usefulness of constructivism, consider how frequently the same event has different meanings for different people. On an unusually hot day in October, some people complain about the heat, while others rejoice about getting a few more days of summer weather. The frequently observed wide discrepancies among eyewitness accounts of accidents and crimes is another example.[233]

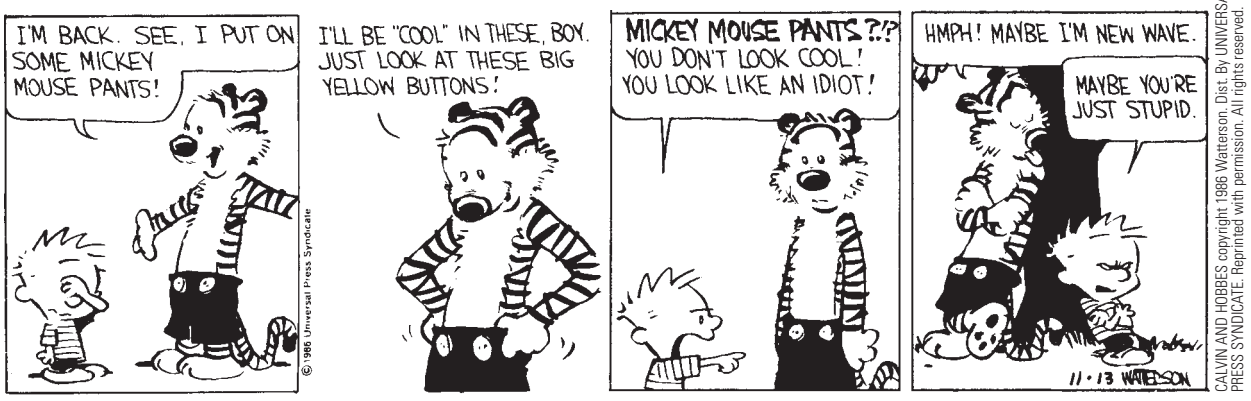
Clients construct the irrational thoughts that maintain their negative emotions and maladaptive behaviors. By the same token, they can reconstruct their thoughts—view situations differently—so that their cognitions lead to positive feelings and adaptive behaviors.

This process is illustrated by the case of M. H., a 44-year-old woman who had decided to leave her job at the end of the year, which was 4 months away.[234] She had been intensely unhappy at work because her supervisor, Wanda, seemed to be criticizing her constantly. Although M. H. felt good about her decision to leave, she increasingly found going to her office aversive. She dreaded the morning commute, felt "on edge" all day, and was relieved when she left work each day.

M. H.'s therapist suggested that she *reframe* (cognitively reconstrue) her interactions with Wanda in such a way that M. H. would come to view them positively. Specifically, the therapist suggested that she view Wanda's criticisms as validating her decision to leave her job. M. H. expanded on this general reframe on her own. Each time

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Wanda criticized her, M. H. told herself something like: "That was really nice of Wanda to show me, once again, how good my decision to leave was." Initially, such self-talk just made M. H. chuckle or smile. However, by the second week, M. H. was viewing Wanda as her ally rather than her enemy. On one occasion, she told herself, "How wonderful it is to have a friend like Wanda who repeatedly validates my decision to leave." Within 3 weeks, M. H. no longer dreaded going to work, remained relaxed while on the job, and left work feeling good. In essence, M. H.'s work situation had changed because she viewed it differently (reality is all in the eye of the beholder). As a result, she was able to finish out the year with relatively little stress in her reconstrued work situation.



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SUMMARY

1. Cognitive-behavioral therapy changes cognitions that are maintaining conditions of psychological disorders in two ways. Cognitions are modified directly, by cognitive restructuring, and indirectly, by changing overt behaviors.
2. Cognitive-behavioral therapy consists of two basic models. Cognitive restructuring therapy teaches clients to change distorted and erroneous cognitions that are maintaining their problem behaviors by substituting more adaptive cognitions. Cognitive-behavioral coping skills therapy teaches clients adaptive responses—both cognitive and overt behavioral—to deal effectively with difficult situations they encounter.
3. Cognitions are operationally defined as self-talk. Four basic methods are used to assess clients' cognitions: interview, self-recording, self-report inventory, and think-aloud procedures.
4. Thought stopping decreases the frequency and duration of persistent and intrusive disturbing thoughts by interrupting them and then substituting adaptive competing thoughts.
5. Rational emotive behavior therapy (REBT) employs cognitive restructuring to change irrational thoughts. Ellis' rational emotive theory holds that it is beliefs about events in our lives, rather than the events themselves, that maintain psychological problems.

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6. Maladaptive thoughts are illogical because they result from logical errors in thinking, including absolute thinking, overgeneralizing, and catastrophizing. Personal worthlessness and a sense of duty are two common themes found in irrational ideas that lead to psychological problems.
7. REBT identifies cognitions based on irrational beliefs, challenges the irrational beliefs, and substitutes thoughts based on rational beliefs. The therapist challenges the rationality of the client's thoughts, debunks the client's myths about how the world "should be," and persuades the client to recognize irrational thoughts and to think rationally.
8. REBT is used primarily with adults. Rational emotive education is an adaptation of REBT principles and procedures for children and adolescents.
9. Although REBT is widely used, its empirical evidence base is minimal due to the relatively poor quality of the studies conducted.
10. Cognitive therapy, which was originally developed to treat depression, is similar to REBT. Both therapies assume that psychological disorders are maintained by distorted cognitions, and both use cognitive restructuring. However, cognitive therapy emphasizes empirical hypothesis testing as a means of changing existing beliefs—rather than disputation and persuasion, as in REBT.
11. The goals of cognitive therapy are to correct faulty information processing, to modify dysfunctional beliefs, and to provide clients with skills and experiences that create adaptive thinking. Cognitive therapy involves a collaborative effort between the client and therapist. Clients are taught to view automatic thoughts (maladaptive cognitions) as hypotheses subject to empirical validation, rather than as established facts. Clients test out the hypotheses in homework assignments that involve making observations that can refute (or confirm) the hypotheses.
12. Cognitive therapy procedures that directly change clients' cognitions include analyzing faulty logic, obtaining accurate information, self-recording automatic thoughts, generating alternative interpretations of events, reattributing responsibility about negative outcomes, and decatastrophizing exaggerated thoughts.
13. Cognitive therapy procedures that indirectly change clients' cognitions and emotions by changing overt behaviors include activity schedules, mastery and pleasure ratings, and graded task assignments.
14. The efficacy and effectiveness of cognitive therapy has been well documented, especially for depression. Cognitive therapy has been adapted to treat disorders other than depression, most notably anxiety disorders.
15. Cognitive processing therapy is an adaptation of cognitive therapy for stress disorders and combines written exposure therapy with cognitive therapy.
16. Treating schizophrenic delusions and hallucinations with cognitive therapy involves the same basic procedures employed with other problems along with special considerations and procedures that are necessary due to the severity of the cognitive distortions and the fragility of the clients.
17. Some clients' problems are maintained less by discrete, maladaptive cognitions and more by maladaptive schemas, which are broad and

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pervasive cognitive themes about oneself, others, or the world. Schemas often stem from childhood experiences and are developed throughout one's lifetime. Schema-based cognitive therapy employs specialized assessment procedures and cognitive therapy treatment procedures to change schemas.

18. Cognitive restructuring is based on constructivism, the philosophical position that people make their own realities. The interpretations we place on events—rather than the events themselves—determine the meaning of events.

PARTICIPATION EXERCISE ANSWERS

PARTICIPATION EXERCISE 13-5

Turning Your Thinking Upside Down: Cognitive Restructuring

1. "If I work real hard, I may be able to get it all done for tomorrow."
   "This is going to be tough, but it is still possible to do it."
   "It would be a real challenge to finish this assignment for tomorrow."
   "If I don't get it finished, I'll just have to ask the teacher for an extension."
2. "What's done is done; I'll just have to make the best of it."
   "I'll just have to figure out a way that I can pay for this."
   "This is going to cost me, but thank goodness no one was injured."
   "Maybe my father will understand if I explain it to him calmly."
3. "I'm sure there are others who aren't great dancers either."
   "Hey, it's all for fun. So what if I don't dance well."
   "Nobody will be looking at me."
   "I'll just do what everyone else does."
4. "I'll just have to look harder for another job."
   "There will be rough times ahead, but I've dealt with rough times before."
   "Hey, maybe my next job will be a better deal altogether."
   "There are agencies that can probably help me get some kind of a job."
5. "I'll miss everyone, but it doesn't mean we can't stay in touch."
   "Just think of all the new people I'm going to meet."
   "I guess it will be kind of exciting moving to a new home."
   "Now I'll have two places to call home."
6. "Maybe I'll find he (she) is not so bad a person after all."
   "Just because we are roommates doesn't mean we have to be friends."
   "If it doesn't work out, maybe I can find a way to switch roommates."
   "Maybe if I act friendly toward him (her), he (she) will act better toward me."
   "Just because I don't get along with my roommate doesn't mean my whole year is going to be bad."
7. "I really thought our relationship would work, but it's not the end of the world."
   "Maybe we can try again in the future."
   "I'll just have to try to keep myself busy and not let it bother me."
   "It sure is hard to accept, but I'll just have to live with it."
   "If I met him (her), there is no reason why I won't meet someone else someday."

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CHAPTER 14



Cognitive-Behavioral Therapy:
Coping Skills

Self-Instructional Training

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BROAD STOKES 14-1 Couple-Based Cognitive-Behavioral Therapy

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All Things Considered: Cognitive-Behavioral Coping Skills Therapy

All Things Considered: Cognitive-Behavioral Therapy

SUMMARY

PARTICIPATION EXERCISE ANSWERS

REFERENCE NOTES

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Cognitive restructuring therapy, which you read about in the previous chapter, is appropriate for problems maintained by an *excess of maladaptive thoughts*. In contrast, cognitive-behavioral coping skills therapy—the other model of cognitive-behavioral therapy—is used to treat problems that are maintained by a *deficit of adaptive cognitions*. The focus is not so much on what clients are thinking as it is on what they are *not* thinking. As with cognitive restructuring therapy, cognitive-behavioral coping skills therapy changes both clients' cognitions and overt behaviors. We will examine three cognitive-behavioral coping skills therapies that are broadly applicable—self-instructional training, problem-solving therapy/training, and stress inoculation training—and one therapy with a specific target, cognitive-behavioral couple therapy.

SELF-INSTRUCTIONAL TRAINING

The odds of surviving ejection from a jet fighter at 47,000 feet—nearly 9 miles above the Earth where the temperature, not counting wind chill, is 70 degrees below zero—are not favorable, to say the least. As horrific as that experience was for William Rankin, it was nothing compared to the next 40 minutes of his free fall, in which he alternately fell and rose through a thunderstorm with turbulence that could have disintegrated his abandoned F8U Crusader. Rankin may well owe his survival to what he remembers telling himself: "*Hang on! You might make it yet. You're thinking. You're conscious. You know what's going on. Just ride out this free fall and you've got it made*."[1]

Every day, in much less dramatic circumstances, when we are confronted with difficult situations, we tell ourselves what to do, what to think, and how to feel. Here are some examples.

- Doing errands: "Go to the cleaners first because it may close early."
- During a test: "Concentrate. I studied hard for this test, and I know this material."
- Playing tennis: "Keep your eye on the ball, racket back, step in, follow through."
- After landing on the floor while doing gymnastics on the bed: "Note to self. Don't try that again."



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Donald Meichenbaum

Self-instructions are directed self-talk and serve six different functions: (1) preparing to use self-instructions, (2) focusing attention, (3) guiding behavior, (4) providing encouragement, (5) evaluating performance, and (6) reducing anxiety (see Table 14-1 for examples). The self-instructions are typically phrased in four ways using the imperative mood, first person, second person, or one's own name (see Table 14-2 for examples).

Donald Meichenbaum developed **self-instructional training** to teach people to direct themselves to cope effectively with difficult situations.[2] It has been used to treat a wide array of problems, ranging from deficits in academic skills of children[3] to the bizarre thoughts and speech of clients with schizophrenia.[4]

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TABLE 14-1
Six Functions of Self-Instructions

Function	Example (while taking an exam)
PREPARING TO USE SELF-INSTRUCTIONS	"Remember to use the self-instructions while you're working on the test."
FOCUSING ATTENTION	"Concentrate. Don't let your mind wander."
GUIDING BEHAVIOR	"All right. Now, check your answer one more time before going on."
PROVIDING ENCOURAGEMENT	"So far, so good. Keep on trying."
EVALUATING PERFORMANCE	"Good work. I got another one right."
REDUCING ANXIETY	"Stay calm. Just relax. I'm doing fine."

Self-instructional training was first used to treat children's impulsive behaviors.[5] Children who act impulsively do not think before acting, which has undesirable consequences for both them and other people. The general goal of self-instructional training for impulsive behaviors is to teach children to think and plan before acting—to "stop, look, and listen." Self-instructional training consists of five steps.

1. *Cognitive modeling*. An adult model performs a task while verbalizing aloud a deliberate strategy. As an example, while demonstrating a line copying task, the model said aloud,

   > OK, what is it I have to do? . . . copy the picture with the different lines . . . . go slowly and carefully. OK, draw the line down, down, good; then to the right, that's it; now down some more and to the left. Good, I'm doing fine so far.[6]

2. *Cognitive participant modeling*. The child performs the task as the model verbalizes the instructions aloud.
3. *Overt self-instructions*. The child performs the task while verbalizing the instructions aloud.

TABLE 14-2
Forms of Self-Instructions

Form	Example (for calming down)
IMPERATIVE	"Sit and relax for a moment."
FIRST PERSON	"I'd better sit and relax for a moment."
SECOND PERSON	"You need to sit and relax for a moment."
NAME	"Megan, sit and relax for a moment."

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FIGURE 14-1

Cue cards for prompting children to use self-instructions to solve problems

Source: Camp, B. W., & Bash, M. A. S. *Think Aloud: Increasing cognitive and social skills—A problem-solving program for children (Primary Level)*. Champaign, IL, Research Press, 1981. Reprinted by permission.

4. *Fading of overt self-instructions.* The child performs the task while whispering the instructions.
5. *Covert self-instructions.* Finally, the child performs the task while saying the instructions to herself or himself.

Following these steps, the therapist initially teaches the client to use self-instructions with brief, simple tasks (such as connecting a series of numbered dots) and then with lengthier, more complex tasks (such as completing multistep verbal math problems).[7] With young children, the training may be presented as a game, and pictorial prompts are presented to remind the child to use self-instructions (see Figure 14-1). Case 14-1 illustrates self-instructional training with a preschool boy.

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CASE 14-1

Improving a Preschooler's Academic Skills Through Self-Instructional Training[8]

Five-year-old Peter attended a preschool for children with conduct and learning problems. Although he was bright and capable of doing his schoolwork, Peter often did not complete his assignments. He spent considerable time looking around the classroom and daydreaming. As time was running out, he would rush to complete his work.

The therapist met with Peter three times a week for 20 to 30 minutes in a room adjacent to his classroom. The therapist taught Peter to use four specific self-instructions: (1) "What do I have to do first?" (problem definition); (2) "Circle all the words that begin with [a two letter sequence]" (attention focusing and response guidance); (3) "Did I find all the words on the line?" (self-evaluation and error correction); and (4) "Good job. I found all of them" (self-reinforcement). The therapist taught these self-instructions sequentially; only after Peter was using a self-instruction correctly was he taught the next one.

Two types of recordings of Peter's behaviors were made to assess the effectiveness of the training. First, videos of Peter during work periods provided a measure of the time he spent paying attention to his work. Second, a small microphone connected to a tape recorder was attached to Peter's work desk to record the self-instructions that Peter spoke aloud.

The average percentage of time Peter paid attention to his work increased from 31% before self-instructional training to 72% after training. The improved attention was reflected in an increase in the percentage of problems Peter correctly completed each day, from an average of 32% before training to an average of 79% after training. Thus, using self-instructions was associated with increased attention to and quality of schoolwork, and overt-self instructions resulted in more correctly completed problems.

There are advantages to clients' using both overt and covert self-instructions. Overt self-instructions can be monitored by others, as in Case 14-1. Further, overt self-instructions are likely to increase clients' attention to self-instructions because clients actually hear them aloud. Covert self-instructions do not disturb other people, and clients are not embarrassed because others do not hear the self-instructions.

ENHANCING THE EFFECTS OF SELF-INSTRUCTIONAL TRAINING

A number of factors appear to enhance the effectiveness of self-instructional training for academic problems. Children who are more actively involved in their training, as by helping to generate the self-instructions they use, show greater improvements than children who are passive recipients of training. Not surprisingly, a good therapist–client relationship is associated with better performance.[9] Involving natural change agents (such as parents and teachers) in the training[10] and increasing the number of training sessions[11] also result in greater improvements in children's academic and social behaviors.

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Various procedures are used to help clients transfer their self-instructional training from the therapy sessions to the classroom setting. These procedures include making training materials (such as work sheets) similar to those the children will use in the classroom[12] and arranging training situations to simulate normal classroom conditions, such as conducting self-instructional training in the presence of other children.[13]

Generalization to different tasks is influenced by the types of self-instructions children are taught. General conceptual instructions that children can apply to many tasks (for instance, "I must go slowly and be careful") result in greater generalization than task-specific instructions (such as "I have to circle the pictures that are the same").[14]

Before reading further, take a moment to do Participation Exercise 14-1.

PARTICIPATION EXERCISE 14-1

Being Your Own Boss: Using Self-Instructions

Using self-instructions can help you deal with many difficulties you encounter in your daily life. They can guide your behavior, reduce your anxiety, focus your attention, and encourage you—in other words, all four functions of self-instructions. For each of the following situations, write a self-instruction that you might find useful. When you have finished, compare your self-instructions with the examples in the Participation Exercise Answers at the end of the chapter; your self-instructions need not be the same as the examples, but they should serve the same functions.

1. It is Friday evening. You feel overwhelmed with all the studying and assignments you are supposed to complete by Monday.
2. You are tired during a long drive at night. You find that you are having trouble concentrating on driving. Several times you had to quickly steer the car back into your lane as the car wandered into an adjacent lane.
3. You are hurriedly packing for an overnight trip and don't want to forget your essential clothes.
4. You are on a diet, which involves not eating desserts. When you go out with friends after a movie and everyone is ordering pie or ice cream, your resolve is starting to weaken.
5. You are in the last mile of a 5-mile run. You are getting very tired and feel like quitting, but you want to complete the run.
6. You are driving in an unfamiliar area. You stop for directions. The person tells you, "Make a right at the next traffic light. Go about a mile to a stop sign and turn left. Then, in a half mile or so, the road ends. Go left there. The restaurant is down about a quarter of a mile on the right."
7. You are about to go into a job interview. You feel confident and relaxed. In fact, you realize you are too relaxed and not at all "psyched" for the interview.
8. You want to ask a classmate for a date. You have gone to the phone, but you are not sure what to say.

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SELF-INSTRUCTIONAL TRAINING IN PERSPECTIVE

Self-instructional training has been used for 40 years for a wide array of problems, including impulsive behaviors,[15] schizophrenic behaviors,[16] social withdrawal,[17] anxiety,[18] anger,[19] personality disorders,[20] obesity,[21] bulimia,[22] poor body image,[23] and pain,[24] as well as deficits in assertive behaviors,[25] problem solving,[26] memory,[27] leisure skills,[28] creativity,[29] and cognitive and motor performance due to brain injuries.[30]

Although self-instructional training is primarily used with children, it also is used with adolescents and adults. For example, adolescents who frequently acted aggressively and displayed angry outbursts were taught coping self-instructions to deal with conflicts.[31] They learned self-instructions to *prepare* to act (for instance, "I'm not going to take it personally"), to *guide* their behaviors during conflicts (such as "I've got to keep in control"), and to *evaluate* their actions afterward (for example, "I handled that pretty well").

Self-instructional training has been used to guide job-related tasks of adults with intellectual disability.[32] The training has resulted in significant improvements in work-related on-task behaviors,[33] accuracy of performance,[34] completion of tasks,[35] and punctuality.[36] These findings are impressive because they indicate that self-instructional training can be applied successfully to improve the quality of life of individuals with significant intellectual impairment.

PROBLEM-SOLVING THERAPY/TRAINING



Courtesy of Thomas D'Zurilla

Thomas D'Zurilla

Problems are a ubiquitous part of life, and problem solving is a broadly useful skill for coping with many of life's difficulties.[37] Moreover, inadequate problem solving is associated with a host of psychological problems.[38]

In the present context, *problem solving* refers to a systematic process by which a person (1) generates a variety of potentially effective solutions to a problem, (2) judiciously chooses the best of these solutions, and (3) implements and evaluates the chosen solution.[39] Like reinforcement, problem solving was not invented by behavior therapists. However, over the past 45 years, behavior therapists—spearheaded by the work of Thomas D'Zurilla[40]—have been refining problem-solving procedures and adapting them to treat and prevent psychological problems.

Problem-solving therapy (also called *social problem-solving therapy*) is the application of problem solving to difficulties for which a client has specifically sought treatment. With adults, it is used to treat a variety of problems, including stress,[41]depression,[42] insomnia,[43] agoraphobia,[44] eating disorders,[45] smoking,[46] problem gambling,[47] marital discord,[48] child abuse,[49] and deficits in living skills of clients with schizophrenia and depression.[50] Problem solving also has helped with the difficulties families face in caring for relatives with schizophrenia,[51] cancer,[52] and traumatic brain injury.[53] With children and adolescents, applications include anxiety,[54] migraine headaches,[55] obesity,[56] aggressive behaviors,[57] anger,[58] habitual gambling,[59] unassertive social behaviors,[60] classroom behaviors,[61] poor school adjustment,[62] and parent–adolescent conflicts.[63]

Because problem solving is a broadly applicable coping skill, problem-solving therapy often serves a dual purpose. First, it treats the immediate

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problems for which clients seek treatment. Second, it prepares clients to deal with future problems on their own, which may help prevent psychological disorders from developing.[64]

Problem-solving training, in contrast to *therapy*, serves only the second function. It teaches problem-solving skills as a general coping strategy for dealing with problems that may arise in the course of daily life.[65] The training often is provided for people who have been identified as being at risk for developing psychological disorders (such as adolescents who have difficulties controlling anger) or at risk for relapsing (such as adults with chronic schizophrenia).[66] Prevention-oriented problem-solving training sometimes is incorporated into regular classroom curricula so that all children learn problem-solving skills.[67] Although I will generally refer to problem-solving *therapy,* most of our discussion of the problem-solving method is applicable to both problem-solving therapy and problem-solving training.

BASIC PROCEDURES

Problem-solving therapy divides the problem-solving process into stages or steps.[68] The basic seven stages are (1) adopting a problem-solving orientation, (2) defining the problem, (3) setting goals, (4) generating alternative solutions, (5) choosing the best solution, (6) implementing the solution, and (7) evaluating its effects (see Figure 14-2). The successful completion of each stage depends on skills and information learned in previous stages. Accordingly, if clients encounter difficulty in later stages, they may have to return to previous stages.

Stage 1: Adopting a Problem-Solving Orientation

Adopting a problem-solving orientation is a crucial stage of problem solving and may determine the outcome of the subsequent stages.[69] Clearly, before an

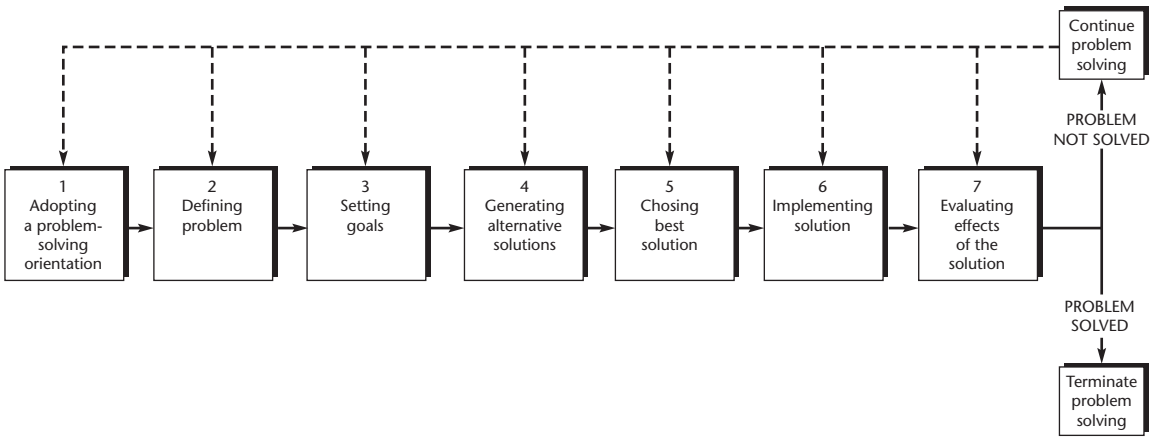


FIGURE 14-2

Schematic representation of seven stages of problem-solving therapy/training. Dashed lines indicate the possibility that difficulties at one stage may necessitate returning to prior stages.

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individual can attempt to solve a problem, it is necessary to recognize that one exists. For many dilemmas, identifying that one has a problem that requires a solution is a "no-brainer," as when one loses a job or discovers a flood in the basement. However, when people view dilemmas in their lives as unsolvable, they may not consider them problems because problems generally have solutions. Additionally, when individuals develop exaggerated or maladaptive reactions to difficult or unchangeable situations (such as the death of a loved one), they are less likely to recognize that a potentially solvable problem exists. In such cases, it is one's *reaction* to the situation that is the problem, not the situation itself—a distinction that will be expanded on in Stage 3.

Adopting a problem-solving orientation requires understanding that (1) it is necessary to identify problems when they occur so that appropriate action can be taken; (2) problems are a normal part of life, and people can learn to cope with them; and (3) effective problem solving involves carefully assessing alternative courses of action.

Stage 2: Defining the Problem

In the second stage, the therapist helps the client precisely define the problem so that specific solutions can be generated. It would be difficult, for example, to generate solutions for this vaguely defined problem: "My roommate and I can't get along." In contrast, "My roommate likes to go to sleep early and wake up early, and I prefer just the opposite schedule" does lend itself to concrete solutions (see Figure 14-3, [page 368] number 1).

Stage 3: Setting Goals

To set goals, the client must answer the question, "What must happen so that I no longer have the problem?" (see Figure 14-3, number 2). The goals can focus on the (1) problem situation, (2) reactions to the problem situation, or (3) both.[70] *Situation-focused goals* are aimed at changing the problem situation itself (such as getting out of debt). *Reaction-focused goals* are aimed at changing one's emotional, cognitive, and overt behavioral reactions to the problem situation (such as feeling worthless because one is in debt). The nature of the problem—that is, how it is conceptualized—determines the type of goal that is appropriate. For example, when the situation cannot be changed, only a reaction-focused goal is possible. The client's goals guide the generation of solutions in the fourth stage. Incidentally, people "naturally" use both situation- and reaction-focused coping strategies to deal with stress, such as medical students do during their initial clinical contact with cancer patients.[71]

Stage 4: Generating Alternative Solutions

In the fourth stage, the client is taught to generate solutions (courses of action) that might solve the problem. The objective is to come up with as many alternative solutions as possible to maximize the chances of finding one that will be successful (see Figure 14-3, number 3). Clients are encouraged to use *individual brainstorming*, a procedure in which any possible solution is entertained, no matter how impractical or outlandish it might appear. Although the "far-out" ideas may not be workable themselves, they may lead to usable solutions by steering

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Problem-Solving Work Sheet

1. *Define the problem, including important details*:

Background: My roommate likes to go to bed early and wake up early in the morning. I like to stay up late and sleep in. We are good friends but don't get a lot of time to talk or socialize because of our different schedules. Also, I have to limit myself to quiet activities in the evening because she has gone to bed. I would like to have other friends over in the evening, but this wouldn't be fair to my roommate. In the morning while I'm still sleeping, my roommate's getting up so early frequently wakes me up, and then I have trouble getting back to sleep.

Specific problem situation: Our different schedules are beginning to interfere with our friendship and cause inconveniences for both of us. I would like to be able to socialize with friends in the evening and sleep in without being awakened by my roommate.

2. *Set specific goals (What must happen so that I no longer have the problem?)*: I have to be able to socialize with friends in the evening because I really enjoy doing this and not be awakened in the morning while my roommate prepares to leave the house.

3. *Generate alternative solutions (brainstorm):*	4. *Chose best solution:* (+ + = *very good;* + = *good;* 0 = *neutral;* – = *poor;* – – = *very poor*)
a. Just put up with the situation for the rest of the semester.	a. – –
b. Make plans to go over to other friends' places during the evening.	b. +
c. Move out of the apartment completely.	c. –
d. Ask some friends what they think I should do.	d. –
e. Rearrange the house a bit so that we don't interfere with each other in the morning and evening.	e. + +
f. Start going to bed early and getting up early like my roommate.	f. – –
g. Take turns so that one day I follow her schedule and the next day she follows mine.	g. +

FIGURE 14-3
Sample problem-solving work sheet

the client in a new direction. Using our roommate problem example, "murdering your roommate" clearly is not a viable solution, but its intended effect—getting rid of the roommate—might lead to a more workable solution, such as your moving out. Brainstorming counters the narrow, rigid thinking that clients in therapy often exhibit and may reveal solutions that might otherwise be missed.

Brainstorming is a general strategy that is employed in different stages of problem solving.[72] For example, brainstorming can be used to generate alternative goals in the third stage and to identify different consequences of a particular solution in the fifth stage.

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Stage 5: Choosing the Best Solution

During the fifth stage, the client chooses the best solution from among the alternatives generated in the previous stage. This choice is made by examining the potential consequences of each course of action: what is likely to happen in the short and long run, for the client and for other people. Using a rating scale to evaluate the alternative solutions is helpful (as in the example in Figure 14-3, number 4).

Stage 6: Implementing the Solution

In the sixth stage, the client implements the solution chosen in the previous stage. In one sense, this is the most critical stage because the best solutions can solve problems only if they are implemented properly. This means that the client must have the requisite skills and opportunity to implement the solution and also be motivated to do so.

Stage 7: Evaluating the Effectiveness of the Chosen Solution

Finally, once the implemented solution has had time to take effect, the client evaluates how successful it has been. If the problem has been resolved, therapy is terminated. If the problem still exists, then the client repeats one or more of the previous stages. First, the client would choose another solution (Stage 5). If no acceptable alternatives remain, more solutions must be generated (Stage 4). Sometimes, the difficulty lies in the goals that were selected (Stage 3) or how the problem was defined (Stage 2), and it is necessary to repeat those processes.

TEACHING PROBLEM-SOLVING SKILLS TO CLIENTS

A variety of behavior therapy procedures are used to teach clients problem solving, including modeling, prompting, self-instructions, shaping, and reinforcement.[73] In the early stages, the therapist may employ *cognitive modeling* to demonstrate the problem-solving process. For example, the therapist might brainstorm aloud about possible solutions for a hypothetical problem to illustrate this uninhibited, open-ended procedure, as in the following cognitive-modeling scenario in which the therapist plays the role of a graduate student who is having difficulty completing her thesis.

> How am I going to get my thesis finished by the June deadline? I could put in more hours, which would mean giving up my daily jogging and TV . . . even sleeping. I can't go without sleep. No, don't evaluate; just come up with ideas. I could hire an assistant to do some of the literature search. Maybe I could get an English grad student to help with my writing. Of course, I could buy a thesis from one of those on-line companies that sells them . . . or I could bribe the dean.

During the fourth stage, the therapist *prompts* the client to use brainstorming and *reinforces* the client's ideas, both practical and outrageous. If the client has difficulty with brainstorming, the procedure may need to be *shaped*. The therapist also teaches and encourages the client to remind him- or herself to engage in appropriate problem-solving behaviors with *self-instructions* and to use *self-reinforcement* for doing so. Problem-solving therapy is typically administered individually or in small groups. Recently, on-line training programs have begun to be used.[74]

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TABLE 14-3
Hypothetical Problem Scenarios Used to Teach Problem-Solving Skills to Boys

1. You just get in from recess on a very hot day. You are standing in line to get a drink of water. A bunch of other kids are in line in front of you. After a 5-minute wait, you are finally next in line. Just as you are about to have your turn, another boy in your class cuts in front of you.
2. You notice that some kids in your neighborhood are playing basketball. You think one of them goes to the same school as you, but you are not sure who the others are. You would like to play with them, but you are not sure they will let you.
3. After school, you notice some of your classmates smoking cigarettes behind the school building. They call you over and ask you if you want a cigarette. You don't really want to smoke, but you don't want them to dislike you either.
4. When you arrive at school, another boy in your class begins to laugh at you and tease you about the haircut you just got. You tell him to stop it, but he continues anyway. Soon, several other kids also begin to tease you.

PROBLEM-SOLVING THERAPY/TRAINING FOR CHILDREN

Problem-solving therapy/training, with minor procedural differences, is the same for both adults and children.[75] For example, hypothetical problem scenarios, such as those in Table 14-3 for children, are used to teach problem-solving skills for interpersonal difficulties and aggressive behaviors.

Problem-solving therapy/training has been used with preschoolers,[76] preadolescents,[77] and adolescents,[78] both individually and in groups.[79] Problem-solving therapy is especially suitable for adolescents who resist unilateral adult decision and rule making.[80] For example, incorporating family problem-solving therapy into a traditional behavioral parent training program increased cooperation and compliance on the part of an adolescent boy who was defiant with adults.[81] Case 14-2 illustrates the use of problem-solving therapy with a preadolescent.

CASE 14-2

Using Problem-Solving Therapy to Reduce Aggressive and Disruptive Behaviors in a Preadolescent Boy[82]

Eleven-year-old Carl was referred for treatment by his teacher because of his aggressive and disruptive classroom behaviors and poor relationships with his classmates. Carl frequently drew attention to himself by engaging in a variety of inappropriate behaviors, such as burping loudly, humming, and leaving his seat. Carl wanted to have friends, but he was shunned by his peers, who found his behaviors rude and obnoxious. When faced with a conflict with his teacher or classmates, Carl often acted aggressively—threatening others, yelling obscenities, or storming out of the room. The therapist spoke with Carl's teacher about the specific types of situations that Carl handled ineffectively, and brief scenarios

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about each problem situation were constructed (similar to those in Table 14-3, page 370).

Carl and the therapist met for a total of 18 half-hour sessions over 12 weeks in a private room at Carl's school. The therapist explained the rationale and benefits of "stopping and thinking" before acting as well as how the therapy could help Carl get along better with his peers and teacher. Carl was taught to think of as many solutions to the problem scenarios as he could. Next, Carl learned to select the best solutions, those that were both realistic and most likely to result in positive, or at least neutral, consequences. If Carl evaluated a solution unrealistically (for example, "If I hit him, he won't bother me anymore"), the therapist pointed out what the consequences actually were likely to be. Finally, Carl and the therapist discussed how he would implement the chosen solutions and assess their effectiveness.

In later sessions, Carl and the therapist role-played situations that might occur when Carl implemented the solutions. For example, Carl decided that he would ask another boy in his class to play with him at recess; the therapist assumed the role of the boy, and Carl practiced what he would actually say and do. The therapist provided Carl with feedback about how he was presenting himself and modeled alternative approaches when Carl had difficulty.

Carl learned each of the problem-solving skills, as evidenced by his applying them to the problem scenarios. More important, he was able to use the skills to change his behaviors at school. After problem-solving therapy had begun, his disruptive classroom behaviors decreased significantly. Before problem-solving therapy, Carl engaged in disruptive behaviors an average of 30% of the time, whereas at the end of therapy, the time was cut in half.

PROBLEM-SOLVING THERAPY/TRAINING IN PERSPECTIVE

Problem solving has been applied to diverse problems and populations.[83] It has its strongest empirical support in the treatment of adult depression[84] and as a maintenance strategy following behavioral weight-control programs.[85] It is also useful with mild depression in children,[86] elderly clients,[87] and people with schizophrenia.[88] Problem-solving therapy can help clients solve immediate problems and provide clients with skills for solving future problems—which exemplifies the self-control approach in behavior therapy. It is especially beneficial for problems that involve conflict or require a decision, such as deciding whether to have a baby, to change jobs, or to drop out of school. Deficits in problem-solving skills have been linked to hopelessness and suicide risk, and problem-solving therapy has shown promise in decreasing suicide risk (perhaps by helping clients who are contemplating suicide consider alternatives to ending their lives).[89]

Problem-solving therapy is probably the most broadly applicable behavior therapy in that it is relevant to the treatment of most problems and disorders. Because the majority of South Africans with psychological disorders receive no treatment, the feasibility of using a brief problem-solving therapy in deprived communities near Cape Town has been tested.[90] The intervention used a booklet/workshop format (in English, Xhosa, and Afrikaans) and was administered

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individually or in groups over 5 weeks. This pilot study indicated that the intervention may be effective, feasible, and acceptable in this population. Problem-solving therapy has also been successively administered via the Internet in the treatment of depression.[91]

Although problem-solving therapy is a form of psychotherapy, it does not have the same negative connotations that *psychotherapy* has because it is viewed as *solving a problem* rather than psychological treatment. This may make it a more acceptable form of help to some people. For example, it may be more palatable to clients from cultures that stigmatize mental illness itself as well as to clients from cultures that stigmatize psychotherapy (for example, German and French Canadian).[92]

Some of the factors that appear to be important in effective problem-solving interventions are (1) a positive therapist–client relationship, (2) customizing procedures for the client, (3) the therapist's modeling problem-solving skills, (4) the client's doing homework assignments, and (5) the client's learning specific means of implementing solutions.[93]

The effectiveness of problem-solving therapy/training depends on three sequential outcomes: (1) learning problem-solving skills, (2) applying them to one's real-life problems, and (3) benefiting from their application—that is, actually solving problems. To evaluate the first outcome, clients' problem-solving skills are assessed before and after therapy/training, often using hypothetical problems. Clients' responses to the problems are recorded and later rated by the therapist. Table 14-4 contains abbreviated scoring guidelines for rating children's problem-solving skills based on their responses to problem scenarios (such as those in Table 14-3, page 370). Alternatively, problem-solving ability can be assessed by paper-and-pencil measures, such as the Social Problem-Solving Inventory,[94] which has Spanish,[95] German,[96] and Chinese[97] versions for adults. The evidence is clear that adults and children can learn problem-solving skills and often very quickly.[98]

That being said, the question remains as to whether clients apply and benefit from problem-solving therapy/training in their daily lives. Studies have not consistently found a relationship between children's acquisition of problem-solving skills and their behavioral adjustment.[99] Although children do learn problem-solving skills, changes in their problems at home and in school may not be clinically significant. Studies with adults have obtained similar findings.

What accounts for the disappointing general finding that clients do not consistently apply problem-solving skills they have learned to deal with actual problems in their lives? One possibility is that clients may not view difficulties in daily living as problems. This may be true particularly in cases in which reaction-focused goals are appropriate. One solution may be additional Stage 1 training in viewing life difficulties—including both problematic situations and reactions to situations—as problems that can be solved or dealt with. Interestingly, one study found that a negative problem orientation was a strong predictor of depression and anxiety in adults.[100] *Negative problem orientation* refers to the general tendency to (1) appraise a problem as a threat, (2) doubt one's own problem-solving ability, (3) expect negative problem-solving outcomes, and (4) show a low tolerance for frustration when confronted with a problem.

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TABLE 14-4
Abbreviated Guidelines for Rating Children's Problem-Solving Skills Used to Treat Aggressive Behaviors

1. *Number of Solutions*
   Solutions are considered separate only if they differ in a significant way. Telling the teacher, telling the principal, and telling the playground supervisor all would be considered one solution—that is, telling an authority.
2. *Effectiveness of Solutions*
   The characteristics of an effective solution are that it (1) is nonaggressive, (2) is likely to resolve the problem, and (3) does not result in adverse effects for the child or others. Ratings are as follows:

   1–2 Physical aggression
   3–4 Verbal aggression
   5 Nonaggressive but passive and unlikely to resolve problem
   6–7 Nonaggressive, prosocial, and active attempt to solve problem
3. *Sophistication of Planning*
   Ratings from 1 to 7 are based on the number of the following categories the child's problem-solving skills demonstrate.
   1. Sensitivity to possible consequences
   2. Anticipation of obstacles
   3. Reference to social rules
   4. Goal setting
   5. Amount of detail
   6. Realistic
   7. Sequential

Source: Adapted from Guevremont & Foster, 1992.

Another reason clients fail to apply problem-solving techniques consistently may be that they lack the specific skills required to implement solutions. For instance, clients may not have the requisite knowledge and proficiency to competently perform the behaviors specified by the solution. This would be the case for a client who decided to confront her boss about unfair treatment but who did not have the appropriate assertive skills to carry out this course of action. Or clients may simply lack the motivation necessary to implement the solution, perhaps because it seems like too much effort.

Traditionally, problem-solving therapy/training has emphasized helping clients generate alternative solutions and selecting the optimal one. However, to get clients to apply problem-solving skills in their daily lives, more attention may need to be paid to adopting a problem-solving orientation and implementing solutions (Stages 1 and 6), which may be the most crucial stages.

Solving problems can be fun if you view the process as an intriguing challenge, which you can do with Participation Exercise 14-2 either now before you continue reading or later.

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PARTICIPATION EXERCISE 14-2

Solutions, Solutions, and More Solutions: Practicing Problem Solving

In this exercise, you will practice two stages of problem solving: generating alternative solutions and choosing the best solution.

Begin by reading the description of Situation 1 and follow the directions for generating solutions and selecting the best solution.

Situation 1. Although the weather report predicts rain, you are skeptical and walk to the library without a raincoat or umbrella. When it is time to walk home, it is pouring. You live five blocks from the library and will get soaked walking home. *What could you do?*

Think of as many *different* solutions to the problem as you can; your goal is *quantity*, not quality. Brainstorm—that is, list any and all solutions, no matter how impractical or "far out" they appear, but don't omit practical or conventional solutions. Even if you find what seems to be the most obvious or optimal solution, don't stop thinking of additional solutions. Write down all the alternative solutions you think of.

When you have a sizable list of solutions, rate the overall potential consequences of each. Consider (1) how successful you expect the solution to be and (2) how favorable the consequences of the solution are for you and others. Using the following scale, write the appropriate rating next to each solution.

5 = *very good*
4 = *good*
3 = *neutral*
2 = *poor*
1 = *very poor*

Next, look at all the solutions you've rated *5* (very good), or *4* (good) if none is rated 5. (If you have rated none of your solutions *4* or *5*, generate some additional solutions.) From among your top-rated solutions, choose the best one—that is, the one you think would be most likely to succeed in solving the problem and also result in the most favorable consequences.

Now repeat the same steps for Situation 2.

Situation 2. You are treating a friend to dinner. When it comes time to pay the check, you discover that you left your wallet at home. *What could you do?*

Consider what you have learned by doing this exercise. Did brainstorming help you generate solutions? Were you surprised by the number of different solutions possible for each of the problems? Can you identify any "mental blocks," such as rigid thinking, that impeded your generating alternative solutions? How well do you think the process of selecting the best solution worked? Finally, you may find it interesting to compare your alternative solutions with another student who did the exercise.

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STRESS INOCULATION TRAINING

People experience many life events, both large and small, as stressful. We have little control over many potentially stress-evoking events *(stressors)*, ranging from earthquakes and serious illness to academic examinations and flat tires. However, we can control how we *view* and *cope* with such events. *Stress* manifests itself in an array of negative psychological reactions, including anxiety, anger, frustration, and depression, and a variety of physical ailments, including headaches, insomnia, fatigue, ulcers, and hypertension.[101]

In everyday usage, people use the term *stress* to refer both to events that precipitate adverse reactions and to the *reactions* themselves. This dualism is regrettable because it perpetuates the idea that events themselves cause adverse reactions. This idea is counter not only to cognitive-behavioral theorizing but also to the prevailing scientific conceptualization of stress.[102] Using correct terminology, *stressor* refers to an event, and *stress* refers to a negative reaction to the event.

BASIC PROCEDURES

In **stress inoculation training**, another therapy developed by Meichenbaum, clients develop ways of coping with stress-evoking events first by learning coping skills and then by practicing them while being exposed to stressors.[103] The therapy is divided into three phases: (1) conceptualization, (2) coping skills acquisition, and (3) application.

Phase 1: Conceptualization

The first phase of stress inoculation training is educational. The therapist explains to the client that events themselves do not cause negative emotional reactions, such as anxiety or anger; rather, the negative reactions arise from how we perceive these events. Clients are told that they can learn coping skills that will allow them to reconceptualize and deal with potentially stress-evoking events without becoming emotionally upset. Clients are encouraged to view coping as a simple, five-step process:

1. *Preparing* for the potentially stress-evoking event (stressor)
2. *Confronting and coping with* the stressor
3. *Dealing with temporary difficulties* in coping
4. *Assessing one's performance* in coping with the stressor
5. *Reinforcing oneself* for successful coping

Phase 2: Coping Skills Acquisition

In the second phase of stress inoculation training, the client learns and rehearses coping skills. Although the specific coping skills depend on the nature of the client's problem, four general coping skills are employed most often: progressive and differential relaxation, cognitive restructuring, problem-solving self-instructions, and self-reinforcement/self-efficacy self-instructions.

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TABLE 14-5
Examples of Task-Oriented Problem-Solving Self-Instructions Used in Stress Inoculation Training

Viewing the stressful situation as a problem
This is not the end of the world, just a problem to be solved.
It's okay to feel discouraged, but just remember that you can deal with this problem.
Orienting to the stressful situation as a problem
Just think about what I can do about it.
Focus on the information I need to gather.
Breaking the stressful situation into smaller units
What are the steps I need to do?
How can I break this thing down so that I can tackle one piece at a time?
Problem solving
Set up a plan of action. What is the first thing to do?
What's my goal? What would I like to happen?

Source: Based on Meichenbaum & Deffenbacher, 1988.

Clients whose problems are being maintained, in part, by not knowing how to approach and solve problems can benefit from *task-oriented problem-solving self-instructions*. As the examples in Table 14-5 illustrate, these self-instructions put the problem in perspective and focus the client's attention on concrete problem-solving steps.

Clients will continue to perform coping skills only if they are reinforced. Natural consequences, such as accomplishing goals, cannot be relied on to maintain coping skills, especially when the client is first beginning to apply coping skills and may not be successful. Thus, clients are taught individualized *self-reinforcement/self-efficacy self-instructions*, such as the examples in Table 14-6.

In addition to general coping skills that are applicable to diverse problems, clients also may be taught coping skills that are tailored to specific problems. For fear, that might be gathering accurate information about threatening events, and for chronic pain, it could be using self-distracting thoughts.

TABLE 14-6
Self-Reinforcement/Self-Efficacy Self-Instructions Used in Stress Inoculation Training

Keep it up. You're doing great.
Hang in there. You're coping well.
I'm getting better and better at this.
That wasn't as bad as I expected. Next time, it will be even easier.
I'm not doing as well as I would like, but I do feel good that I am continuing to try.

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Phase 3: Application

In the first two phases of stress inoculation training, clients develop adaptive ways of viewing potentially stress-evoking events and learn coping skills to deal with them. In the third phase, clients apply their new outlooks and coping behaviors. Initially, this is done in therapy sessions by visualizing and role-playing potentially stress-evoking scenes. For example, a client who experiences panic attacks might be asked to visualize having an attack and coping with it (a variation of coping desensitization; see Chapter 10). Imagining the panic attack can be made more realistic by inducing hyperventilation, a common symptom in panic attacks,[104] as is done in interoceptive exposure (see Chapter 10).

A single session of stress inoculation training was used to help African-American children (average age 12 years) cope with pain associated with sickle cell anemia (a disease that only occurs in African Americans).[105] The cognitive coping skills taught included abbreviated progressive relaxation, emotive imagery, and calming self-instructions. The therapist first described and modeled each skill for the clients. The clients then practiced each skill until they were proficient at it. Next, clients practiced the newly acquired coping skills while experiencing two trials of low-intensity laboratory-induced pain. The pain was created through the use of a pressure stimulator; a blunt plastic edge is applied at a continuous pressure to a finger to gradually produce a dull, aching pain. The clients were given homework assignments involving daily practice of the skills along with audiotaped instructions about how to perform the skills. The therapist also telephoned clients once during the week after treatment to prompt them to practice using their coping skills. In comparison to children in a standard care control group, those receiving stress inoculation training had lower levels of negative thinking and were less likely to report pain during the pain stimulation trials following treatment.

Anger management programs for children typically include stress inoculation training as a component.[106] First, the therapist teaches coping skills to the children in groups. Then the children in the program are asked to role-play taunting and teasing each other for 30-second periods, which gives each child an opportunity to practice implementing anger control. The children are given feedback on their performance and are reinforced for using appropriate coping skills.

In the preceding examples, the simulated stress-evoking events with which clients practiced coping closely resembled the events the clients were expected to encounter in their daily lives. However, the simulated stressors need not be the same as the actual events because clients usually are taught *general* coping skills applicable to a wide range of potential stressors (which parallels coping desensitization procedures; see Chapter 10).

When clients have become proficient in applying coping skills to simulated stressors during therapy sessions, the therapist gives them homework assignments that gradually expose them to increasingly more stress-evoking events in real life. The therapist also uses relapse prevention procedures that are described in the next section to train clients to deal with inevitable failures and setbacks that occur in coping with real-life stressors.

Case 14-3 illustrates an innovative application of stress inoculation training to a serious problem that 4 years of psychoanalytic therapy (three times a week) had not successfully treated.

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CASE 14-3

Eliminating Self-Mutilating Behavior Through Stress Inoculation Training[107]

Donna was a 32-year-old mother of two children who was hospitalized because of severe self-mutilating behavior consisting of "savagely scratching the left side of her face, resulting in an extensive, deep and frequently bleeding scar." Donna had a 15-year history of self-mutilation.

Stress inoculation training was the major component of the treatment package that was designed for the client. During the conceptualization phase, Donna kept a daily written log of (a) situations in which she felt the urge to scratch, (b) duration of the urges, (c) thoughts and feelings prior to and during scratching, and (d) thoughts and feelings after scratching. From this information, three situations that triggered her scratching emerged: looking at herself in the mirror; thinking about the scar on her face; and thinking about her estranged husband, who often had humiliated her because of the scratching. The increased tension she felt in these situations was relieved only by vigorous scratching, lasting a few minutes to several hours.

Donna was taught four coping skills: progressive relaxation, self-instructions, covert sensitization, and self-administered physically aversive consequences (slapping the hand she used to scratch herself). She rehearsed these skills as she looked at herself in a mirror and as she visualized herself with her husband.

After six sessions over a 2-week period, Donna's scratching had declined, and she went home for a visit. During the visit, she was unable to cope with a provocative encounter with her husband and reverted to scratching. After another six sessions of therapy, Donna again made a home visit. This time she was able to apply her coping skills to an anxiety-provoking incident involving her husband. This success experience was a turning point for Donna. Thereafter, she reported needing to rely on only two of the coping skills—progressive relaxation and self-instructions—and expressed confidence in her ability to cope.

After 18 sessions, Donna was no longer scratching herself. She was discharged from the hospital and continued to keep a daily log. One year after therapy, her scratching had not recurred, and she reported that she no longer had the urge to scratch and that her scar had healed. Further, she had held a full-time job for 6 months and had divorced her husband.

Case 14-3 illustrates how the successful treatment of one problem can have positive effects on other problems a client is experiencing, which is an advantage of treating just one or two target behaviors at a time. After Donna's scratching had been eliminated, she was able to work full time, which her self-mutilating behavior had previously precluded, and put her family life in order.

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IN THEORY 14-1

Stress Inoculation Training: Parallels With Biological Immunization

Stress inoculation training is a behavioral analogue to biological immunization, such as a flu vaccination. Biological immunization introduces disease-causing microorganisms into the body at doses too small to produce the physical symptoms of the disease; however, the person's immune system releases antibodies that fight off or neutralize the microorganisms. The antibodies remain in the system and are available to combat the microorganisms in the future, which strengthens the body's immune system.

Ernest Poser[108] first proposed the idea of psychologically immunizing people to stress-evoking events that result in maladaptive behaviors. *Behavioral immunology* involves exposing people to stress-evoking events in small doses and under safe conditions before they encounter the full-blown events in real life. Poser's theorizing assumed that individuals who are pre-exposed to minor stressors naturally develop (on their own) coping strategies that they can employ with future stress-evoking events.

Stress inoculation training does not rely on clients' devising their own coping skills. Instead, clients are taught a variety of coping skills that they rehearse while being exposed to controlled doses of stress-evoking events. Coping skills can be thought of as "psychological antibodies" that increase one's resistance to stressors. The goal is for clients to be able to activate these stress-fighting coping skills as they encounter real-life stressors.

RELAPSE PREVENTION: A VARIATION OF STRESS INOCULATION

Relapse prevention consists of specific procedures for handling the inevitable setbacks that occur in coping with real-life stressors.[109] It involves identifying high-risk situations in which relapse is most likely to occur and learning and rehearsing coping skills that can be used in these high-risk situations.



Courtesy of Alan Marlatt

Alan Marlatt

Alan Marlatt and his colleagues initially developed an approach for preventing the relapse of substance-related disorders *after* the disorder has been successfully treated.[110] The distinction between a lapse and a relapse is central to this approach. A *lapse* refers to a single, isolated violation of abstinence, which does not necessarily lead to a *relapse*, which is a full-blown return to the addictive behavior (that is, to pretreatment levels of substance abuse). Relapse prevention teaches clients to view a lapse as an error and as an opportunity for additional learning. The treatment provides clients with the cognitive-behavioral coping skills necessary to prevent lapses from escalating into relapses, and thus it is a prime example of the self-control approach that is inherent in many behavior therapies. Relapse prevention consists of four components: (1) identifying high-risk situations, (2) learning coping skills, (3) practicing coping skills, and (4) creating a lifestyle balance.

Identifying High-Risk Situations

Relapses are most likely to occur in high-risk situations. Almost three-fourths of all relapses of addictive behaviors are associated with (a) negative emotional states (35%), including frustration, anxiety, depression, anger, and loneliness; (b) social

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pressure (20%), such as being coaxed to go to a bar; and (c) interpersonal conflicts (16%), such as arguments with a spouse.[111] Clients must become aware of the specific situations that are most likely to trigger their relapse episodes so that they will be prepared to deal with them.

Learning Coping Skills

The ability to engage in effective coping responses when faced with high-risk situations decreases the probability of a relapse. Further, successful coping with one high-risk situation tends to increase one's self-efficacy about being able to cope with other high-risk situations.[112]

The cognitive-behavioral coping skills that clients are taught include (1) *assertive behaviors* to help clients deal with social pressures to engage in addictive behaviors, (2) *progressive relaxation* and *stress management* to reduce tension and discomfort associated with negative emotional states, (3) *social and communication skills* to manage interpersonal conflicts, (4) *problem-solving skills* to deal effectively with problems in daily living, and (5) *cognitive restructuring* to change maladaptive cognitions related to clients' addictive behaviors. Table 14-7 describes the four types of cognitions most often associated with addictive behaviors.[113]

Practicing Coping Skills

Once clients have learned coping skills, they practice them in simulated high-risk situations. For example, the therapist and client might role-play a scenario in which a friend asks the client to go out drinking, and the client responds with an appropriately assertive refusal. The two aims of this behavior rehearsal are for the client (1) to learn to recognize high-risk situations and then (2) to "automatically" engage in well-rehearsed coping skills rather than "automatically" reverting to habitual addictive behaviors.

TABLE 14-7
Four Types of Cognitions Most Often Associated With Addictive Behaviors

Cognition	Description	Example
ANTICIPATORY BELIEFS	Expectation of a positive result from engaging in an addictive behavior	"They'll think I'm pretty cool if I get high with them."
RELIEF-ORIENTED BELIEFS	Expectation of reduced discomfort from engaging in an addictive behavior	"I need a cigarette so that I can relax."
FACILITATING BELIEFS	Giving oneself permission to engage in an addictive behavior	"It's only pot. It's not like I'm doing drugs."
AUTOMATIC THOUGHTS	Brief, repetitive, spontaneous mental images related to an addictive behavior that result in urges or cravings	Imagining sipping a cold beer while socializing with friends

Source: Based on Liese, 1994.

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Creating a Lifestyle Balance

Clients' perceiving that there is an imbalance in their lives between their obligations (what they "should" do, such as go to work) and their desires (what they want to do, such as go to a ball game) is a common trigger of addictive behaviors.[114] The obvious solution is to increase clients' access to their desires. However, in the case of clients who are recovering from addictive habits, their most salient desires are likely to involve addictive behaviors. For instance, a client might think, "I deserve a drink for all the work I did today."

Accordingly, clients are encouraged to develop a *lifestyle balance between their obligations and desires*. First, they self-monitor their obligations and desires daily to identify the degree and nature of the imbalance. Then, where imbalances exist, clients use an activity schedule to increase activities that are both enjoyable and adaptive, which means that the desirable activities are not related to their addictive habits. The process can be viewed as relearning joy or "rejoyment."[115]

Relapse Prevention in Perspective

Relapse prevention has been used as part of the treatment of various substance-related disorders, including those involving alcohol,[116] nicotine,[117] cocaine,[118] marijuana,[119] and opiates.[120] Relapse prevention typically is part of a treatment package. For example, it has been combined with cognitive-behavioral couple therapy when alcohol abuse is an issue,[121] with pharmacological treatment,[122] and with the Alcoholics Anonymous Twelve-Step Recovery program.[123] Relapse prevention also is used for other types of problems, such as to prevent high-risk sexual activity[124] and to treat body dysmorphic disorder,[125] erectile dysfunction,[126] and child molestation.[127]

The evidence regarding the effectiveness of relapse prevention for addictive behaviors is mixed.[128] Some studies show relapse prevention to be more effective than alternative treatments and no-treatment control conditions. For example, clients receiving transdermal (through the skin) nicotine replacement patches plus relapse prevention training had higher rates of smoking cessation than clients who received only the pharmacological intervention.[129] Other studies indicate that relapse prevention is at least as effective as alternative therapy approaches.[130] The strongest evidence for the effectiveness of relapse prevention is in the treatment of the abuse of alcohol and multiple drugs,[131] and perhaps the weakest evidence is for nicotine abuse.[132] In addition to promoting long-term maintenance, relapse prevention may decrease the severity of relapses.[133]

Positive findings regarding the effectiveness of relapse prevention should be viewed with cautious optimism.[134] The caution is warranted because most studies evaluating relapse prevention involve treatment packages in which one of the components is relapse prevention,[135] which clouds the specific contribution of the relapse prevention component. Relapse prevention usually is not a stand-alone treatment but rather is a component of effective behavior therapies for addictive behaviors, including social skills training, cognitive-behavioral couple therapy, contingency contracts, and community reinforcement.[136] Another problem with systematically evaluating the efficacy and effectiveness of relapse prevention is that the term relapse prevention is a general term for any intervention that attempts to prevent relapses.[137] Overall, the evidence of meta-analyses[138] of

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response prevention, with the caveats just mentioned, does seem to indicate that relapse prevention (as developed by Marlatt and described earlier) is an efficacious intervention.

STRESS INOCULATION TRAINING IN PERSPECTIVE

Stress inoculation training has been used to treat and prevent a wide array of problems in adults. The three most common problems have been anxiety,[139] anger,[140] and pain.[141] Specific problems treated include fear of flying,[142] presurgical anxiety,[143] coping with dental examinations,[144] reducing stress in cancer patients,[145] trauma-related stress (such as from terrorist attacks),[146] and child abuse by adults.[147] Stress inoculation training also can be used to help people who work in inherently stress-evoking jobs reduce their emotional distress and impaired performance. Examples included first-year law students,[148] oncology nurses (for whom the stress inoculation training was enhanced with mobile phone support),[149] and employees with higher than average stress levels in the workplace.[150] Stress inoculation training can be applied with groups of clients as well as individually.[151]

Stress inoculation training has been used to treat posttraumatic stress disorder, especially with female victims of sexual and physical assault.[152] In one intensive treatment program consisting of nine biweekly individual sessions, therapists taught clients a variety of coping skills, including progressive and differential relaxation, thought stopping, cognitive restructuring, self-instructions, and covert modeling.[153] Clients practiced applying their coping skills to manage assault-related anxiety that arose during their daily activities. Stress inoculation training significantly reduced posttraumatic stress disorder symptoms and depression compared with clients in a wait-list control group, and clients maintained these gains at a 12-month follow-up. In some cases, stress inoculation training has been as effective as exposure therapy in treating PTSD. Moreover, women who have been sexually assaulted consider stress inoculation training a palatable treatment.[154]

Although stress inoculation training most often has been used with adults, it occasionally has been used with children and adolescents, such as for dealing with aggressive behaviors[155] and refusal to attend school.[156] Preliminary evidence also indicates that stress inoculation training is effective in treating posttraumatic stress disorder with 8- to 10-year-old girls and boys who were sexually abused.[157] At present, controlled research on stress inoculation training applications to the problems of children and adolescents is lacking.[158]

The stress inoculation model has potential for preparing people to deal with almost any stress-inducing event. For example, it may be useful for adolescents with gay, lesbian, and bisexual orientations who experience significant stress related to others' negative attitudes about homosexuality (homophobia); accepting one's sexual identity; disclosing one's sexual orientation to others; and developing relationships, both sexual and friendship-based.[159] Stress inoculation training also has shown potential in enhancing the psychological resiliency of military personnel to cope with the stressors in military service and preventing posttraumatic stress disorder.[160]

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Most controlled research studies evaluating stress inoculation training have indicated that it is an effective treatment.[161] Long-term maintenance of treatment effects has been found for anxiety, depression,[162] and dental phobia.[163] The essential treatment component in stress inoculation training appears to be *learning coping skills*.[164]

Stress inoculation training has not been as extensively evaluated as other cognitive-behavioral therapies.[165] One possible reason is that stress inoculation training is a treatment package consisting of components that have been evaluated independently, including relaxation training, cognitive restructuring, and self-instructions. It is tempting to assume that combining therapies that are known to be effective will produce a treatment that is more potent than any of its components. However, whether the whole is greater or even equal to its parts is an empirical question that research must answer.

COGNITIVE-BEHAVIORAL COUPLE THERAPY

Problems in couple relationships—in or out of marriage, between same-sex or opposite-sex partners—are among the most frequent reasons that adults seek psychological assistance. Because couple relationships are complex and multifaceted, therapy generally involves treatment packages that address different aspects of couple difficulties.

TRADITIONAL BEHAVIORAL COUPLE THERAPY

Traditional behavioral couple therapy originally consisted of two basic components: *training in communication and problem-solving skills* and *increasing positive behavior exchanges*. In later variations, *cognitive restructuring* was also included.

Training in Communication and Problem-Solving Skills

Communication is the basis for any interpersonal relationship, and poor communication is a common denominator among distressed couples.[166] The communication skills emphasized in traditional behavioral couple therapy include listening, restating what the other person has said, expressing feelings directly, making requests, giving feedback, and arranging regular times to talk. Dealing with the numerous small and large problems all couples face also is necessary for maintaining a healthy relationship, and distressed couples typically have deficits in problem-solving skills. Couples are taught both communication and problem-solving skills using standard skills training procedures (see Chapter 12).

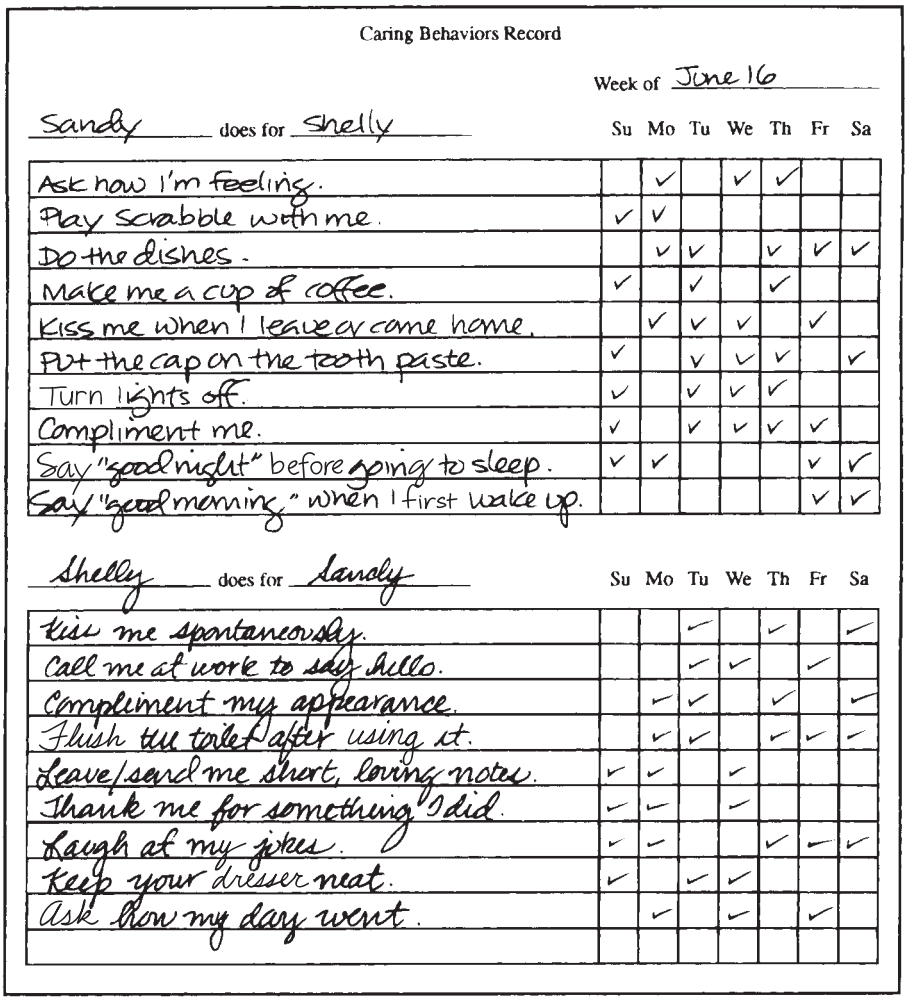
Increasing Positive Behavior Exchanges

Distressed partners often do not feel especially loving toward one another, and not surprisingly, this is reflected in the negative ways they act toward each other (for example, using sarcasm and doing things the other person dislikes). Accordingly, a general goal of traditional behavioral couple therapy is to increase partners' *positive behavior exchanges*.[167] One way to accomplish this goal is through the **caring-days technique**, developed by Richard Stuart, in which partners act *as if* they care for each other.[168] The therapist instructs partners to perform small, specific, positive

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behaviors for each other (consistent with Eliza Doolittle's request to Professor Henry Higgins in *My Fair Lady*, "If you're in love, show me!"). Each partner is asked to answer the question, "What could your partner do that would show you that he or she cares for you?" and compile a list of these *caring behaviors*. The therapist instructs each partner to perform a minimum number of caring behaviors from his or her partner's list, even if the partner has not done so. The partners keep records of the caring behaviors they perform, such as the example in Figure 14-4.

Another way to increase positive behavior exchanges is through the *Catch Your Partner Doing Something Nice* technique.[169] Each partner notices and acknowledges one pleasing behavior performed by the other each day. Contingency contracts also are employed to promote positive behavior exchanges and implement broader behavior changes in the relationship.[170]



Caring Behaviors Record

Week of June 16

Sandy does for Shelly

	Su	Mo	Tu	We	Th	Fr	Sa
Ask how I'm feeling.		✓		✓	✓		
Play Scrabble with me.	✓	✓					
Do the dishes.		✓	✓		✓	✓	✓
Make me a cup of coffee.	✓		✓		✓		
Kiss me when I leave or come home.		✓	✓	✓		✓	
Put the cap on the tooth paste.	✓		✓	✓	✓		✓
Turn lights off.	✓		✓	✓	✓		
Compliment me.	✓		✓	✓	✓	✓	
Say "good night" before going to sleep.	✓	✓				✓	✓
Say "good morning," when I first wake up.						✓	✓

Shelly does for Sandy

	Su	Mo	Tu	We	Th	Fr	Sa
Kiss me spontaneously.			✓		✓		✓
Call me at work to say hello.			✓	✓		✓	
Compliment my appearance.		✓	✓		✓		✓
Flush the toilet after using it.		✓	✓		✓	✓	✓
Leave/send me short, loving notes.	✓	✓		✓			
Thank me for something I did.	✓	✓		✓			
Laugh at my jokes.	✓	✓			✓	✓	✓
Keep your dresser neat.	✓		✓	✓			
Ask how my day went.		✓		✓		✓	

FIGURE 14-4
Record of each partner's caring behaviors and their being performed

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TABLE 14-8
Common Cognitive Discrepancies Held by Distressed Couples

Discrepancy	Description	Example
PERCEPTIONS	Partners "see" things differently	PAT: "We haven't talked in months." CHRIS: "We talked just last week."
ATTRIBUTIONS	One partner wrongly infers the cause of the other's behavior	PAT: "I've been waiting for a half hour. You just wanted to keep me waiting." CHRIS: "I'm late because I had a flat tire on the way here."
EXPECTATIONS	Partners anticipate different outcomes	PAT: "I was looking forward to making love tonight." CHRIS: "I was hoping to watch TV and just drift off to sleep."
ASSUMPTIONS	Partners hold different assumptions	PAT: "*You* are supposed to take care of the kids." CHRIS: "Taking care of *our* children is *our* responsibility."

Cognitive Restructuring

Discrepancies in partners' cognitions about aspects of their relationship often play a role in creating and maintaining couple problems. The discrepancies may be in (1) *perceptions* about what has occurred, (2) *attributions* about why a partner did something, (3) *expectations* about how things will be, and (4) *assumptions* about how things are or should be (see Table 14-8).[171] To deal with these discrepancies, couples use cognitive restructuring and other cognitive-behavioral therapy procedures. Couples are first taught to evaluate how valid or reasonable their cognitions are and then to modify biased or unrealistic thoughts by substituting more appropriate and adaptive ones.

Efficacy of Traditional Behavioral Couple Therapy

A number of well-controlled studies have demonstrated that traditional behavioral couple therapy can effectively reduce couples' distress.[172] Further, for married couples, it has been found to alleviate depression.[173] This is an important finding because almost half the clients who seek treatment for depression have marital difficulties.[174] Traditional behavioral couple therapy also has shown particular promise in treating substance abuse.[175]

Unfortunately, traditional behavioral couple therapy is successful for only about two-thirds of couples treated. Moreover, of these couples, only two-thirds maintain their improvement over a 1- to 2-year period.[176] The net result is that less than half the couples treated with traditional behavioral couple therapy maintain the benefits after therapy. This sobering statistic was the impetus for developing integrative behavioral couple therapy.[177]

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Courtesy of Virginia Rutter

Neil Jacobson



Courtesy of Andrew Christensen, UCLA

Andrew Christensen

INTEGRATIVE BEHAVIORAL COUPLE THERAPY

Traditional behavioral couple therapy focuses on changing partner behaviors that are most upsetting to the other partner.[178] In contrast, Neil Jacobson and Andrew Christensen's **integrative behavioral couple therapy** establishes an alternative goal for distressed couples—namely, *emotional/cognitive acceptance of one's partner's upsetting behaviors*.[179] This goal is based on the key role that lack of acceptance plays in relationship distress.[180] (Acceptance should not be confused with the *acceptability* of behavior therapy procedures to clients and therapists, one of the criteria of treatment effectiveness discussed in Chapter 5.)

In couple therapy, emotional/cognitive acceptance is sometimes the only realistic goal. In some cases, partners are not willing to change particular behaviors that upset their partner, such as giving up a job that requires working nights. In other cases, a partner may be willing to change, but achieving the desired change may be extremely difficult and take a long time, such as overcoming long-standing emotional inhibitions. And sometimes, partners have limitations that are unchangeable, such as when physical conditions preclude engaging in particular activities that the other partner enjoys, such as skiing. Finally, partners will always have differences, which implies that acceptance may be a fundamental requirement for long-term satisfaction in a couple relationship.[181] At the risk of stating the obvious, when domestic violence or another destructive behavior is one of the presenting problems in couple therapy, acceptance is not a viable goal.

Acceptance does not mean resignation to a troubled relationship as it is. Accepting a partner's limitations or "unacceptable characteristics" can be a vehicle for promoting greater closeness and intimacy, which does change the nature of the relationship. Moreover, when acceptance is the goal of couple therapy, there is an absence of pressure to change, and, paradoxically, the absence of pressure may create change.[182]

Acceptance as a goal in couple therapy is not a new idea. Until recently, however, concrete methods for promoting acceptance have not been available.[183] To promote acceptance, integrative behavioral couple therapy uses four strategies:

1. *Empathic joining* refers to the partners' learning to understand and appreciate each other's experience of emotional pain within the relationship. It requires careful listening to a partner's description of what he or she is experiencing, not judging the experience, and attempting to view the experience from the partner's perspective. The therapist helps the couple understand that the way they view and react to their differences—not the mere fact that they have differences (which is inevitable)—is primarily responsible for their interpersonal distress.[184] Lack of empathy is often a problem for distressed couples with one partner who suffers from chronic physical pain, and integrative behavioral couple therapy may be a particularly useful treatment for them.[185]
2. *Detachment* fosters acceptance by having the partners distance themselves from their conflicts. The partners are encouraged to talk and think about their difficulties as an "it"—something external to each of them rather than part of them.[186] The "it" becomes a painful, common enemy that they share and cope with together rather than a problem that one partner creates or something that one does to the other. Couples may feel less upset when talking about "it," even though the problem has not been resolved.

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3. *Tolerance building* involves learning ways to become less upset by a partner's behaviors. Through cognitive restructuring, partners come to view the other's so-called negative behaviors positively. For example, "moody" might be reconstrued as "thoughtful," "picky" as "careful," and "scatterbrained" as "free-wheeling." To effectively engage in such cognitive restructuring, the couple must understand that most behaviors are not inherently good or bad, positive or negative. Those terms are evaluations we place on behaviors. Moreover, often the very behaviors that partners view as disturbing when they are experiencing conflict in their relationship are the same behaviors they found attractive in the past, particularly during courtship.[187] For instance, when they were dating, a man may have found a woman's willingness to do things on the spur of the moment refreshing and exciting. Several years into their marriage, however, the husband may complain that his wife is unpredictable and is constantly changing her mind.
4. *Self-care* consists of each partner's developing ways to derive satisfaction and personal fulfillment independent of the relationship. This promotes less dependence on one another for some basic life needs. Couples are asked to facilitate each other's engaging in self-care activities.

At first glance, the idea of promoting acceptance in distressed couples may not seem particularly behavioral. On closer inspection, it turns out to be well grounded in behavior therapy principles and procedures.[188] In addition to using specific cognitive-behavioral procedures (such as cognitive restructuring) to foster acceptance, the general approach is action oriented. Partners engage in specific behaviors to develop acceptance. This active approach differs from traditional views of acceptance as passive resignation. You will learn more about the use of acceptance in behavior therapy in Chapter 15.

BEHAVIORAL COUPLE THERAPY IN PERSPECTIVE

In the largest efficacy study of couple therapy, Christensen and his colleagues randomly assigned 134 seriously and chronically distressed couples in Los Angeles and Seattle to either integrative or traditional behavioral couple therapy.[189] Seven experienced clinical psychologists practicing in the community implemented the therapy. They were trained in both forms of couple therapy and followed prescribed protocols to provide the form of therapy each client was assigned to. Ratings of the therapists' adherence to the protocols and proficiency in implementing each therapy indicated that they had competently administered the treatments.

Immediately after treatment, a majority of the couples in both conditions showed clinically significant improvement.[190] For example, on a measure of marital satisfaction—the standard measure used to assess the success of couple therapy—71% of the couples in integrative behavioral couple therapy and 59% of the couples in traditional behavioral couple therapy reliably improved or recovered. At a 2-year follow-up of 130 of the 134 original couples, 69% of the couples in the integrative treatment and 60% of the couples in the traditional treatment showed clinically significant improvement.[191]

Although the final outcomes of the two forms of behavioral couple therapy were comparable, there were some noteworthy differences in the course

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of the change. Compared to couples in traditional behavioral couple therapy, couples in integrative behavioral couple therapy tended to report improvements in marital satisfaction earlier, and couples who remained together had greater marital satisfaction and more stability throughout the follow-up period. The differences between the two approaches converged at the 5-year follow-up,[192] although it is possible that periodic booster sessions might have led to the continued moderate superiority of integrative over traditional behavior couple therapy. Another advantage to integrative behavioral couple therapy is that it results in longer maintenance of improved communication between partners.[193] Based on Christensen and his colleagues' longitudinal study and meta-analytic studies of both forms of behavioral couple therapy by other researchers,[194] it is clear that behavioral couple therapy is an empirically supported therapy. One of the future initiatives for behavioral couple therapy is treating infidelity, perhaps the most difficult couple problem to treat. There are some initial indications that integrative behavioral couple therapy is a promising intervention for dealing with infidelity both in opposite-sex[195] and same-sex couples.[196]

Drawing on what appear to be the common elements among different approaches to couple therapy,[197] including traditional and integrative behavioral couple therapy, Christensen is developing a unified protocol for couple therapy that is based on five principles: (1) providing a contextualized, objective conceptualization of the problems (for example, detachment); (2) changing emotion-driven dysfunctional, destructive interactions; (3) eliciting avoided emotion-based private behaviors (as through empathic joining); (4) fostering productive communication; and (5) emphasizing strengths and encouraging positive behaviors (as through the caring-days technique).[198] The utility of the unified protocol in elucidating the underlying mechanisms of change and their clinical applications awaits future research.

The utility of cognitive-behavioral couple therapy is wider than alleviating couple relationship problems, as Broad Strokes 14-1 describes.

Broad Stokes 14-1 *Couple-Based Cognitive-Behavioral Therapy*

Cognitive-behavioral couple therapy is primarily used to treat relationship problems. However, it can also help with individual psychological problems that one partner has, which is referred to as **couple-based cognitive-behavioral therapy**. Indirectly, this occurs when contributory relationship stressors exist. For example, for couples seeking and being treated for marital discord, traditional and integrative behavioral couple therapy results in a significant decrease in symptoms of depression.[199] Directly, individual problem behaviors often are partially maintained by relationship patterns. One partner may reinforce the other partner's problem behaviors inadvertently or in a deliberate, though misguided, attempt to be helpful. Examples would be assisting one's partner in performing compulsions that reduce anxiety (such as repeated hand washing) or bringing meals to a partner who is depressed and doesn't want to get out of bed. Couple-Based cognitive behavioral therapy also is beneficial when

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a partner assists in the other partner's treatment for an individual psychological problem, such as by monitoring problem behaviors, helping with homework assignments, and generally supporting the partner's therapy.

The use of couple-based interventions for individual psychological problems has its basis in three findings: (1) distress in relationships and individual psychological problems are associated; (2) individual therapy often is less effective when the person is in a distressed relationship; and (3) couple-based interventions can both alleviate individual psychological problems and improve relationships.[200] Examples of disorders for which couple-based interventions are being tested are depression,[201] obsessive-compulsive disorder,[202] anorexia,[203] and posttraumatic stress disorder.[204]

PREVENTING COUPLE RELATIONSHIP PROBLEMS

Couple relationship problems are difficult to treat because of their complex, multifaceted nature and because, over time, patterns of maladaptive interactions have been mutually reinforced. One way around these inevitable hurdles is to prevent such patterns from developing in the first place.[205] Toward this end, cognitive-behavioral approaches to prevention of couple dysfunction have been developed. Aimed at primary prevention, Howard Markman's Prevention and Relationship Enhancement Program (aptly known as PREP) parallels cognitive-behavioral couple therapy.[206] PREP teaches couples who are not in distress specific skills that are associated with successful relationships. The skills include communication, problem solving, negotiation of roles and responsibilities, and clarification of values and expectations related to sexuality and intimacy. PREP also emphasizes commitment, friendship and positive connection, and forgiveness.[207]

PREP is typically administered in multicouple groups, which has been shown to be superior to a self-help book version that also is beneficial.[208] In order to reach high-risk couples, a Web-based PREP program has been designed and has shown promise in a pilot study with foster and adoptive parents.[209] The relationship-enhancement skills training approach has led to improved relationship satisfaction and positive feelings about one's partner, lower levels of couple violence, and lower rates of separation.[210]

The Marriage Checkup is a secondary prevention strategy developed by James Córdova that provides couples with a periodic assessment of their relationship "health" and early intervention if difficulties are identified, just as with annual medical and dental checkups.[211] It consists of two 1–2 hour sessions; the first session is for assessment, and the second session, about 2 weeks later, provides the couple with feedback based on the assessment. Integrative cognitive-behavioral couple therapy is one of the two main components of the Marriage Checkup (the other being motivational interviewing). Recent research involving 215 couples suggests that the Marriage Checkup increases intimacy and acceptance, and decreases distress.[212]

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ALL THINGS CONSIDERED: COGNITIVE-BEHAVIORAL COPING SKILLS THERAPY

Cognitive-behavioral coping skills therapies are used to treat a wide array of problem behaviors. In contrast to cognitive restructuring therapies, which are primarily applicable to adults, most cognitive-behavioral coping skills therapies are also suitable for children and adolescents.

In general, the effectiveness of cognitive-behavioral coping skills therapy is well documented by research, especially for emotional disorders such as anxiety and depression. However, the complexity of cognitive-behavioral coping skills therapies poses problems for evaluating their effectiveness. The therapy often involves a treatment package, and usually the specific contributions of the various components are not assessed. Further, the specific components employed can vary from study to study, even though the same name is used to designate the therapy in each study. These variations may account, in part, for occasional discrepant findings of research evaluating cognitive-behavioral coping skills therapies.

The self-control nature of cognitive-behavioral coping skills therapies requires clients to accept major responsibility for the success of treatment, especially in the transfer of the coping skills to their everyday lives. Whereas the general findings are that clients can and do learn the coping skills, clients often fail to implement the coping skills on their own when the skills are needed.[213] This is true for employing self-instructions, problem-solving strategies, and coping skills learned and practiced in stress inoculation training. Training in and transfer of the implementation phase of cognitive-behavioral coping skills therapies are important challenges that need to be addressed.

Cognitive-behavioral coping skills therapies have been used with ethnic minority clients,[214] including those with gay, lesbian, and bisexual orientations.[215] The emphasis on self-control may be especially well suited for cultures that consider it shameful and embarrassing to seek help from others for personal problems.

Therapies that teach clients coping skills serve two functions. First, they enable clients to deal with the problems for which they have sought therapy. Second, clients may be able to apply the coping skills to future problems in their lives. For example, this is essential in treating *borderline personality disorder*, which is characterized by poor emotion-regulation, repeated unstable relationships, a negative self-image, and impulsive and often self-destructive behaviors. People with this debilitating disorder appear to have one crisis after another in their lives. *Dialectical behavior therapy* (which you'll read about in Chapter 15) was developed specifically to treat borderline personality disorder, and a major component of dialectical behavior therapy is teaching clients cognitive-behavioral coping skills, including problem solving, progressive relaxation, cognitive restructuring, and the use of assertive behaviors for dealing effectively with stressors.[216]

ALL THINGS CONSIDERED: COGNITIVE-BEHAVIORAL THERAPY

The coverage of cognitive-behavioral therapy, begun in Chapter 13, concludes with some general comments on its current status. In 1968, a group of prominent behavior therapists suggested that "current [behavior therapy] procedures

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should be modified and new procedures developed to capitalize upon the human organism's unique capacity for cognitive control."[217] Clearly, this recommendation was heeded. Over the next decade, cognitive-behavioral therapy developed, with only minor opposition from those who believed that behavior therapy should deal only with overt behaviors.[218] By 1980, cognitive-behavioral therapy constituted a subfield of behavior therapy, [219] and today, it is at the forefront of the field.[220] The cognitive-behavioral *Zeitgeist* (German for "spirit of the times") within behavior therapy parallels the "cognitive revolution" in psychology.[221] Bandura has argued that *all* behavior therapies are most usefully viewed as cognitive-behavioral.

> The field of psychological change is not well served by false dichotomies that there exist pure cognitive and pure [overt] behavioral treatments. One would be hard pressed to find a "behavioral" method that does not rely, at least in part, on cognitive conveyance [mediation], or a "cognitive" method that is devoid of any performance [overt behavioral] elements.[222]

To benefit from cognitive restructuring therapies, clients must possess the requisite cognitive skills, such as the ability to use language and to reason logically. These abilities are linked to cognitive development,[223] which is one reason that cognitive restructuring therapies are more suitable for adults than children and adolescents.

In contrast, cognitive-behavioral coping skills therapies have been effective with children and adolescents as well as clients with severe intellectual deficits. Because the treatment procedures are largely self-administered, successful treatment by cognitive-behavioral coping skills therapy requires clients to have relatively high motivation to change their behaviors. For instance, youngsters who are referred by adults for treatment of aggressive or impulsive behaviors generally have little motivation to change their behaviors. After all, it is the adults who want these children to behave differently. Thus, children may be capable of learning self-instructions and problem-solving skills, but they often cannot be relied on to apply them in their natural environments without additional interventions, such as prompting and reinforcement from adults.[224]

SUMMARY

1. Cognitive-behavioral coping skills therapy treats problems that are maintained by a deficit of adaptive cognitions by changing both cognitions and overt behaviors.
2. In self-instructional training, clients learn to direct themselves to cope effectively with difficult situations. Self-instructions can serve six functions: preparing clients to use self-instructions, focusing attention, guiding behavior, providing encouragement, evaluating performance, and reducing anxiety.
3. The five steps of self-instructional training are cognitive modeling, cognitive participant modeling, overt self-instructions, fading of overt self-instructions, and covert self-instructions.

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4. Problem-solving therapy/training teaches clients a systematic strategy for approaching problems. Problem-solving therapy serves the dual purpose of treating clients' immediate problems and preparing clients to deal with future problems on their own. Problem-solving training teaches problem-solving skills as a general coping strategy for dealing with problems that arise in the course of daily life.
5. The seven stages of problem solving are adopting a problem-solving orientation, defining the problem, selecting goals, generating alternative solutions, choosing the best solution, implementing the solution, and evaluating its effects. Problem-solving skills are taught to clients through cognitive modeling, prompting, self-instructions, and reinforcement.
6. Children and adults can learn problem-solving skills, often quickly. However, clients frequently do not apply the skills in their everyday lives.
7. Stress inoculation training helps clients cope with stress by teaching them coping skills and then having clients practice the skills while they are exposed to stress-evoking events. Stress inoculation training consists of three phases: conceptualization, coping skills acquisition, and application. Anxiety, anger, and pain are the most frequently treated problems. The essential component is learning coping skills.
8. Stress inoculation training is a behavioral analogue of biological immunization. The coping skills clients learn can be considered "psychological antibodies" that increase a person's resistance to potentially stress-evoking events.
9. Relapse prevention is a variant of stress inoculation that prepares clients who have completed treatment for addictive behaviors to deal with future relapses. Clients identify high-risk situations, develop coping skills, practice the coping skills before they are needed, and develop a lifestyle that balances obligations and desires.
10. The three basic components of traditional behavioral couple therapy are training in communication and problem-solving skills, increasing positive behavior exchanges, and training in cognitive restructuring. The usual goal of cognitive-behavioral couple therapy is for each partner to change behaviors that are problematic for the other partner.
11. Integrative behavioral couple therapy employs the alternative goal of accepting one's partner's troublesome behaviors. To promote acceptance, four strategies are used: empathic joining, detachment, tolerance building, and self-care.
12. The Prevention and Relationship Enhancement Program is a primary prevention approach to couple distress that teaches couples who are not experiencing relationship problems specific skills that are associated with successful relationships. The Marriage Checkup is a secondary prevention strategy that provides couples with a periodic assessment of their relationship "health" and early intervention if difficulties are identified.
13. Cognitive-behavioral coping skills therapies are used to treat a wide array of problems, and most are applicable to children and adolescents as well as adults. Although clients learn coping skills easily, the challenge is getting clients to implement them in their daily lives.

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PARTICIPATION EXERCISE ANSWERS

PARTICIPATION EXERCISE 14-1

Being Your Own Boss: Using Self-instructions

1. "Just relax and take one thing at a time."
   "Get yourself organized before starting anything."
   "Monday is still a ways away."
   "Keep your mind on one thing at a time."
2. "Keep your eyes on the road."
   "I've got to keep focusing on driving."
   "Not much longer to go."
3. "Slow it down. Don't forget to check the list."
   "Pants, shirts, ties, and shoes." (repeated)
   "What do I need for tomorrow? Think."
4. "A good cup of coffee will be fine."
   "Come on, you've come too far to turn back."
   "You can do it."
5. "One step at a time."
   "Almost there; got to keep pushing."
   "Don't give up; stay with it."
   "Keep you mind on your breathing."
6. "Right, left, left, right." (repeated)
   "Look for the traffic light and stop sign."
   "Okay, almost there. You're going to make it."
7. "This is my big chance."
   "Got to give it all I have."
   "Getting this job will be great."
8. "Calm down. Just act naturally."
   "Don't forget to talk slowly."
   "Remember, this is only a date I am asking for."

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CHAPTER 15



Acceptance/Mindfulness-Based Behavior Therapy

Core Themes of Acceptance/ Mindfulness-Based Behavior Therapies

Expanded View of Psychological Health
Broad View of Acceptable Outcomes in Therapy: Focusing on Second-Order Change
PARTICIPATION EXERCISE 15-1 "I Can't Touch the Wall": Applying Second-Order Change
Acceptance
Mindfulness
PARTICIPATION EXERCISE 15-2 Mindless Versus Mindful Behavior
PARTICIPATION EXERCISE 15-3 Mindful Breathing
BROAD STROKES 15-1 The Proliferation of Mindfulness-Based Therapies
Creating a Life Worth Living

Acceptance and Commitment Therapy (ACT)

IN THEORY 15-1 Relational Frame Theory: The Cornerstone of ACT
ACT Change Processes
CASE 15-1 Defusing Painful Thoughts Associated With Depression
CASE 15-2 Treatment of Anger by Experiential Acceptance
PARTICIPATION EXERCISE 15-4 I Try—Therefore I Fail
ACT as an Approach
CASE 15-3 Panic Attacks Treated by Interoceptive Exposure to Foster Acceptance
Acceptance and Commitment Therapy in Perspective

Dialectical Behavior Therapy (DBT)

DBT Biosocial Theory of Borderline Personality Disorder
DBT Core Treatment Strategies
DBT Treatment Modalities
Dialectical Persuasion
Dialectical Behavior Therapy in Perspective

Mindfulness-Based Cognitive Therapy (MBCT)

MBCT Approach and Intervention Strategies
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PARTICIPATION EXERCISE 15-5 Eating a Raisin Mindfully
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Mindfulness-Based Cognitive Therapy in Perspective
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All Things Considered: Third-Generation Behavior Therapies

SUMMARY
REFERENCE NOTES

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Some behavior therapists have conceptualized the development of behavior therapies in terms of three generations,[1] which are depicted in a behavior therapy family tree in Figure 15-1. *First-generation therapies* were initially developed during the 1950s and 1960s and include stimulus control, reinforcement, punishment, aversion therapy, exposure therapies, and modeling therapies (Chapters 7–12). These therapies emphasize treating clients' overt problem behaviors by changing the external environmental conditions that are influencing them.

Second-generation behavior therapies, which emerged in the mid-1960s, introduced cognitive factors as important determinants of problem behaviors. Cognitive-behavioral therapies (Chapters 13–14) modify clients' dysfunctional thoughts and beliefs using specific cognitive change procedures as well as first-generation therapy techniques.

The primary goal of first- and second-generation behavior therapies is to *eliminate* or *reduce* clients' problems. In contrast, the goal in so-called third-generation therapies,[a] which were developed in the 1990s, is for clients to actively *accept* various forms of *psychological discomfort and pain* (*problems* in first- and second-generation terms) as inevitable parts of their lives—instead of viewing them as obstacles to fulfilling their life goals. Third-generation behavior therapies teach clients to live with *inevitable* forms of psychological pain and discomfort while doing the things that are important to them—in essence, "getting on with their lives." An intriguing perspective, wouldn't you say? This alternative goal is achieved through an integration of first- and second-generation change strategies with acceptance/mindfulness-based interventions that help people live their lives according to their personal values.

All three generations are represented in the current practice of behavior therapy, and they are cumulative and overlapping to some degree, with second-generation therapies using principles and procedures from first-generation therapies, and third-generation therapies using principles and procedures from the first and second generations. Each generation is a member of the behavior therapy family by virtue of its sharing the defining themes of behavior therapy (described in Chapter 1), especially a commitment to alleviating a wide range of human suffering through a scientific approach.[2]

Even from the very brief description of third-generation therapies you have just read, you are likely to have glimpsed some of the radical differences between them and first- and second-generation therapies.

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[a]The term *third wave* has been used to characterize third-generation behavior therapies (Hayes, 2004b), although whether it is truly a "new wave or old hat" as critics (Hofmann & Asmundson, 2008) have asked is still an open question and one that is hotly contested (for example, Gaudiano, 2011; Herbert & Forman, 2013). The term *third generation* is preferable because it emphasizes tradition and continuity with the previous generations of behavior therapy, while leaving room for growth (Fresco, 2013). Waves, by contrast, come and go, and the first and second generations haven't gone anywhere, and it remains to been seen whether the latest generation is here to stay. However, be mindful that the terms *third generation* and *third wave* tend to be used interchangeably in the behavior therapy literature.

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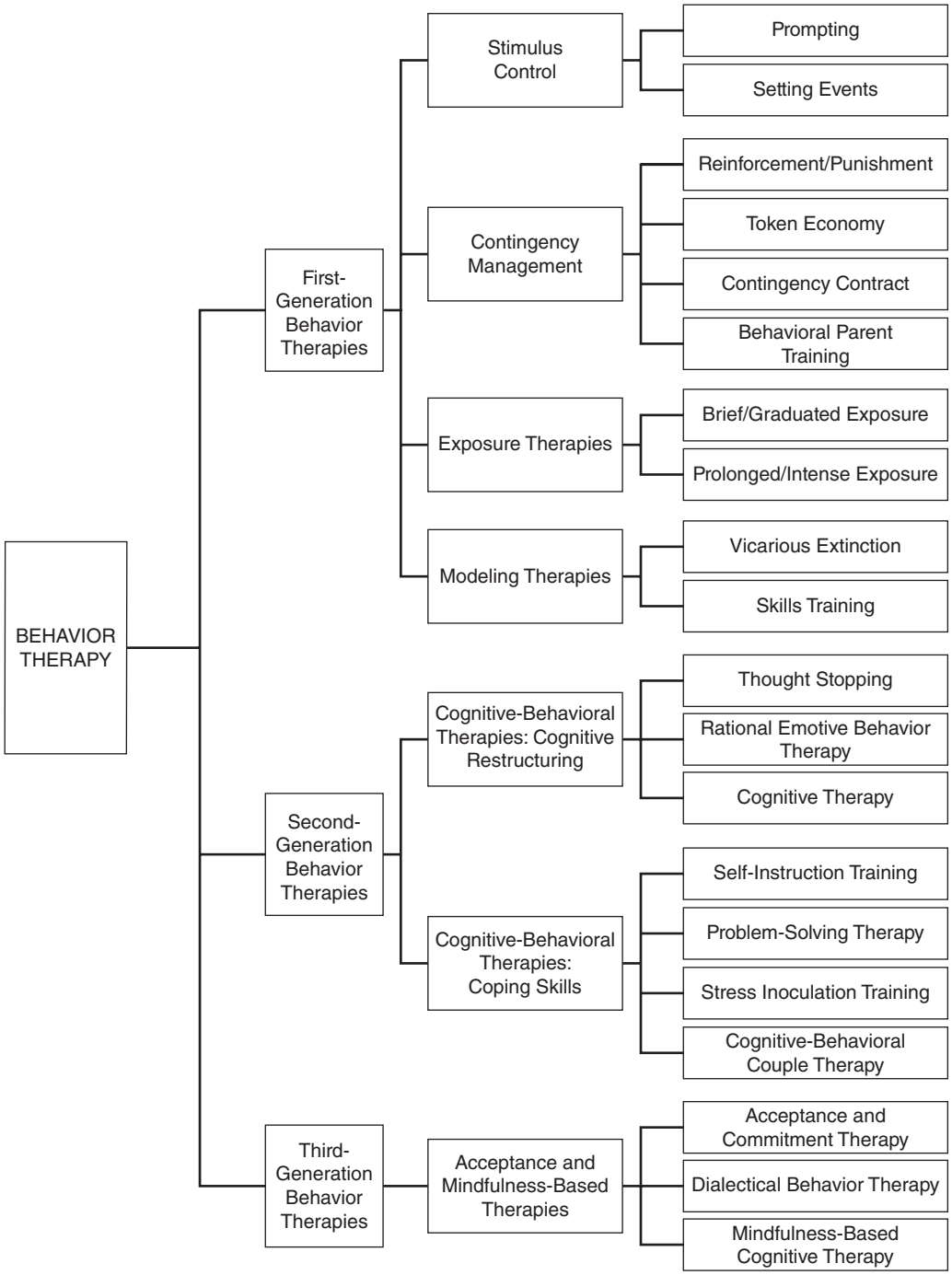


FIGURE 15-1

Behavior therapy family tree with its three generations

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Third-generation behavior therapies are, in fact, controversial[3] (as were second-generation behavior therapies when they were originally proposed). This is not surprising considering some of the issues that are addressed by third-generation behavior therapies, such as mindfulness, acceptance, values, and the meaning and purpose of one's life. Indeed, learning about the third-generation approach may challenge not only your assumptions about the nature of behavior therapy but also your long-held assumptions about the nature of human suffering. So, to fully benefit from what you are about to read, keep an open mind.

CORE THEMES OF ACCEPTANCE/MINDFULNESS-BASED BEHAVIOR THERAPIES

Third-generation behavior therapies share five interrelated core themes: an expanded view of psychological health, a broad view of acceptable outcomes in therapy, acceptance, mindfulness, and the goal of a life worth living.[4]

EXPANDED VIEW OF PSYCHOLOGICAL HEALTH

The primary goal of behavior therapy is to help people with psychological problems. The approach that first- and second-generation behavior therapies (and most other psychotherapies) take is to diminish clients' psychological distress. Certainly this makes sense; for one thing, it is what clients expect. The implicit assumption of first- and second-generation therapies is that psychological distress is bad and therefore should be eliminated or at least lessened.

The approach of third-generation behavior therapies is based on a radically different assumption: *Psychological pain and distress are assumed to be an inevitable, ubiquitous part of life, which means that they cannot be completely avoided or eliminated*. Not accepting this premise and fighting it may actually contribute to a person's distress and suffering. In the short term, efforts to control, minimize, or avoid discomfort can result in temporary relief, and those efforts are negatively reinforced. (For example, Joe, who is anxious in social situations, reduces his anxiety by avoiding activities that involve groups of people.) Yet, in the long term, such efforts may be detrimental because they demand enormous effort and time and can amplify the suffering people experience. (For instance, Joe is constantly making up excuses, which is stressful, and the result is that he loses the respect of his friends and colleagues.) A growing body of research indicates that such efforts may be linked to diminished physical health, psychological distress, and above all, diminished quality of life.[5]

Third-generation behavior therapies build on this research and aim to change how people *respond* to painful aspects of their thoughts, memories, feelings, and physical sensations. Rather than avoid the pain, clients are encouraged *to experience it in a less engaging way and still do what they care about*. This approach leads to an expanded view of treatment targets and acceptable outcomes in therapy.

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BROAD VIEW OF ACCEPTABLE OUTCOMES IN THERAPY: FOCUSING ON SECOND-ORDER CHANGE

Clients enter therapy with problem behaviors that are interfering with the quality of their lives, such as test anxiety, difficulty focusing, and depression. First- and second-generation behavior therapies work to directly alleviate these problem behaviors so that people can accomplish what is important to them, such as getting good grades, accomplishing work tasks, or even getting out of bed. This is known as **first-order change**.

Third-generation behavior therapies take a different stance. They focus on **second-order change** by employing interventions that change the *function* of the problem behavior, without necessarily changing its *form*.[6] For example, a person could experience a thought such as "I am a loser and nobody will like me," and, over the course of therapy, learn to see this as just a thought, even a painful thought. The person could still interact with people instead of attempting to change or eliminate the thought itself (that is, the *form* of the behavior).

What defines first- and second-order change is not the therapy procedures themselves but the goal of the therapy. For example, from a first-order change perspective, the goal of traditional exposure therapy (Chapters 10–11) is to teach clients to *think and feel better* (in the sense of being less fearful or distressed). In the context of second-order change, the same exposure procedures can also be used to teach clients to *be better at thinking and feeling*—in the sense of connecting with thoughts and feelings as they are—in the service of living well. Rather than viewing "problems" as interfering with achieving life goals, clients develop ways of achieving their goals *despite* experiencing discomfort. This means, for example, that one can do well on tests even though one is anxious while studying for and taking exams. To experience how second-order change might work, take 2 minutes to do Participation Exercise 15-1 before you continue reading.

PARTICIPATION EXERCISE 15-1

"I Can't Touch the Wall": Applying Second-Order Change

To complete this exercise, you simply need to be in a room with a chair. Read the following two directions and then carry them out.

1. While sitting in the chair, repeat aloud the following thought: "I can't get up and touch the wall." Do this for at least 15 seconds.
2. While continuing to repeat "I can't get up and touch the wall," stand up and move toward a wall, reach out, and touch it.

If you succeeded in touching the wall while still saying "I can't get up and touch the wall," congratulations! You have just applied a second-order change strategy to alter your thought "I can't get up and touch the wall." Notice that you didn't have to change the *form* of the thought, which you would have done if you had said, "I *can* get up and touch the wall." You didn't make the thought occur less often or go away.

(*continued*)

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PARTICIPATION EXERCISE 15-1 (*continued*)

You did, however, change the *function* of the thought from being a potential barrier to what you "wanted to do" (get up and touch the wall) to allowing the behavior to occur despite your thought.

This exercise demonstrates that you can move with your thoughts and do what you choose to do, even when your thoughts say otherwise—as often occurs in our lives when we have such thoughts as "I can't . . . " and "It's too big or scary or hard."

ACCEPTANCE

Acceptance literally means to "take what is offered." **Acceptance** involves fully embracing one's experience at the moment just as it is, without judging it. Acceptance is central to Buddhism. There is a Zen story about a man who comes home from work and finds that his house has burned down. He looks at the charred remains of his dwelling and simply says, "Is that so." The man is recognizing *what is* and experiencing it fully without evaluating it. Acceptance does not involve passive resignation and giving up. "Is that so" is an acknowledgement of the experience as it is, without judgment. Acceptance involves only moment-to-moment experiencing of what is and does not imply that one cannot do something to change the situation in the future (such as building a new house). Sometimes, change is not possible (at least change that one can create), and acceptance is the only healthy alternative—as might be the case with patients who are suffering from a terminal disease or incurable chronic pain; in such instances, acceptance-based interventions would be particularly useful in dealing with the psychological aspects of these conditions.[7]

Acceptance of pleasant experiences is easy, while acceptance of painful experiences often is very hard. Not resisting, not fighting off, not defending oneself against psychological pain is counterintuitive and goes against habitual human responses (like pulling your hand away from a hot surface). However, letting go of attempts to struggle with and control one's pain (acceptance) can be the most adaptive response because it gives the person space to maneuver. This process can be likened to the experience of extricating one's fingers from a Chinese finger trap.[8]

A Chinese finger trap (see Photo 15-1) is a tube of woven straw, about 5 inches long and ½ inch in diameter. You may have played with one as a child. You slide your index fingers into each end of the tube and push them in snuggly. Then you attempt to get your fingers out. To do that, most people will pull their index fingers apart. But when you do, the tube tightens uncomfortably around your index fingers. And the harder you pull, the more stuck you become. Pulling out of the tube seems like the best (and most natural) solution. Yet, it doesn't work.

The same outcome often occurs when people struggle to get out of their "problematic" thoughts and feelings. Freeing your fingers from the Chinese finger trap requires you to *push your fingers in* rather than pull them out, which gives you more wriggle room. And, similarly, ceasing to struggle with and resist your problems—in a sense, pushing yourself into or staying with your problems—may provide the psychological space to get "unstuck."

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PHOTO 15-1
Attempting to get out of a Chinese finger trap provides clients with an experiential analogy of the negative consequences of struggling with personal problems.

MINDFULNESS

Mindfulness involves purposely paying attention without judgment to whatever is happening at the moment.[9] The concept of mindfulness, like acceptance, has been around a long time and is a core principle of Buddhism. The Sanskrit word *buddha* refers to awakening in the sense of being totally present in the moment and just experiencing what is there. Sound easy? Actually, it is very difficult because we live a good portion of our lives in our heads—interpreting, evaluating, and judging ourselves, our thoughts and feelings, the past and future, other people, and the world. Rather than being mindful, most of the time we are mind*less*. For example, you've no doubt had the experience while reading of getting to the bottom of a page and realizing that you have no idea of what you have just read. I hope you are reading this mindfully.

Before you continue reading, take a 2-minute break to do Participation Exercise 15-2, which will elucidate the meaning of mindfulness.

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PARTICIPATION EXERCISE 15-2

Mindless Versus Mindful Behavior[10]

You'll need four sheets of 8½" × 11" paper and a pen or pencil to do this simple exercise. Follow these steps in order.

1. Draw a circle on each of three sheets of paper.
2. Then ask yourself the following questions in order.
   a. Are the three circles about the same size?
   b. Are the circles drawn in about the same location on each sheet of paper?
   c. Did I begin to draw each of the circles in approximately the same position, such as at 12 o'clock, 3 o'clock, etcetera?
   d. Did I move the pen or pencil in the same direction each time that I drew the circle?

Most likely, you answered "yes" to at least one and maybe all four of those questions.

3. Next, ask yourself, "Who drew those three circles?" Your answer is likely to be, "*I* drew the circles." But consider an alternative answer that may, in fact, more accurately describe how those circles were drawn. *The circles were drawn by habit or your autopilot.* This makes sense, given that you gave little or no thought to drawing the three circles. You drew them automatically.
4. Now do something different. Draw a circle on the fourth sheet of paper, but this time, draw it differently from the way you drew the other three circles, such as changing its size, location on the paper, or starting point.
5. Again ask yourself, "Who drew the circle?" You did, this time, because you were aware of what you were doing—in other words, you were being *mindful.* In contrast, you *mindlessly* drew the first three circles.

The concepts of mindfulness and acceptance go hand in hand.[11] Acceptance requires mindfulness, or being fully present without judgment or evaluation, and the gentle observing of mindfulness is acceptance. Together, mindfulness and acceptance can be applied in therapy to undermine clients' struggle and resistance while freeing up their energy to create the kind of life they wish to live. Mindful-acceptance is a skill that is cultivated in third-generation behavior therapies through a variety of exercises.[12] Participation Exercise 15-3 is an example of one of them and a good foundational exercise as you learn to be a more mindful observer in your daily life. You should read the Participation Exercise now, but you'll probably want to complete it later.

PARTICIPATION EXERCISE 15-3

Mindful Breathing

There is no behavior that we engage in more often than breathing, yet we usually are unaware of it, except when we are breathing hard. Becoming mindful of your breathing might seem easy, but it is not, as you will discover when you do this simple exercise. Mindful breathing is a skill that must be cultivated with practice. Here's what you have to do.

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You will need a space where you can sit comfortably and undisturbed for 5 minutes (or longer if you like, but 5 minutes is a good starting point). Set a kitchen timer or a watch with a countdown timer for 5 minutes.

Sit upright with your hands gently resting on your lap. Close your eyes lightly. Gently guide your attention to the natural rhythm of your breathing and the sensations you experience, wherever they are for you—in your chest, in your belly, in your nose or mouth. Simply notice your breath as you breathe in . . . and out . . . in . . . and out. There's no need to regulate your breathing by making the breath faster or slower, deeper or shallower. Just allow your breathing to occur as it does naturally.

When your mind wanders to anything other than your breath, notice that you are thinking about something else and gently return to focusing on your breath. You may have to refocus on your breath many times, and that is just fine (it happens to everyone).

Continue to just be aware of your breath until your timer sounds. (This exercise can be relaxing, so you may choose to continue longer.) When you're ready, gradually widen your attention and gently open your eyes with the intention of bringing this focused observing (mindfulness) to your experiences throughout the day (which you'll do later in Participation Exercise 15-6). Practice this exercise daily for at least a week.

In addition to mindfulness being a core component of third-generation behavior therapies, it also is the foundation of a number of other psychological interventions, as you will read about in Broad Strokes 15-1.

Broad Strokes 15-1 *The Proliferation of Mindfulness-Based Therapies*

Over the past 3 decades, various psychological interventions employing mindfulness have emerged. *Mindfulness-based stress reduction* was the first such therapeutic intervention and was developed more than 30 years ago by Jon Kabat-Zinn and his colleagues at the University of Massachusetts Medical Center to help patients manage stress-related medical conditions (such as HIV) and chronic pain (such as from cancer).[13] More than 18,000 people at the University of Massachusetts and tens of thousands at other centers around the world have participated in this stress reduction program. Over the course of 8 weeks, people in large groups are taught to be mindful of their daily experiences and are given instruction in a number of meditative practices that they engage in for 45 minutes a day at home; this homework is key to the success of the program. Besides reducing stress in patients suffering from medical conditions, the program also has been beneficial to people who work or live in high-stress-related conditions, such as medical students, K–12 teachers, inner-city residents, and prison inmates.[14] All mindfulness-based behavior therapies have some roots in mindfulness-based stress reduction.

(*continued*)

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Broad Strokes 15-1 (*continued*)

Mindfulness-based cognitive therapy for children was adapted from both mindfulness-based stress reduction and mindfulness-based cognitive therapy (which you'll read about later in the chapter) to help children (ages 9–13) deal with anxiety.[15] Developed by Randye Semple and Jennifer Lee, the program involves 12 sessions, each lasting 90 minutes for group administration and 60 minutes for individual administration. Parents are recruited as co-therapists to support their child's home practice, which is an essential aspect of the program. Mindfulness-based cognitive therapy for children shows promise as an effective intervention for childhood anxiety,[16] and it is likely that it will be adapted to treat childhood depression in the future.[17]

Mindfulness-based relapse prevention is another new addition to the family of mindfulness-based treatments.[18] It combines mindfulness practices with cognitive-behavioral relapse prevention (discussed in Chapter 14) for people recovering from addictions. At present, there is little evidence for the effectiveness of mindfulness-based relapse prevention. However, one study indicates that mindfulness is responsible for a reduction in self-reported levels of craving immediately following treatment.[19] In a comparison with standard relapse prevention, mindfulness-based relapse prevention was more effective with racial and ethnic minority women.[20]

One more illustration of the proliferation of mindfulness-based interventions is *Mindful Sport Performance Enhancement,* which addresses physical and psychological aspects of sport. In a 1-year follow-up of one program, archers, golfers, and long-distance runners who had participated in a workshop reported increases in acting with awareness and decreases in thoughts that interfere with athletic performance.[21] Additionally, the runners improved their mile times, and these improvements were correlated with general mindfulness.

CREATING A LIFE WORTH LIVING

The final theme of third-generation behavior therapies is that the overall goal of therapy is to help clients live in ways that are consistent with their values—what is meaningful to them and makes them happy.[22] Consider a woman for whom spending time with her family is paramount. If a fear of flying keeps her from visiting her children who live in a distant state, the goal of therapy might be for her to get on a plane and fly to see her children. It would be better if she got on the plane with little or no fear, but it is more important that she gets on the plane so that she can be with her family. The theme of helping clients create *a life worth living* plays out in all third-generation behavior therapies.

With the core themes of third-generation behavior therapies in mind, let's see how they guide the specific therapies. We'll examine three prime examples of the third-generation approach: Acceptance and Commitment Therapy, dialectical behavior therapy, and mindfulness-based cognitive therapy. (A number of other

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behavior therapies are related to third-generation therapies, including three that you have read about in earlier chapters: behavioral activation [Chapter 7], functional analytic psychotherapy [Chapter 7], and integrative behavioral couple therapy [Chapter 14].)

ACCEPTANCE AND COMMITMENT THERAPY (ACT)



Courtesy of Steven Hayes

Steven Hayes

Acceptance and Commitment Therapy (**ACT**; pronounced as the word *act*) has two major goals: (1) acceptance of unwanted thoughts and feelings whose occurrence or disappearance clients cannot control and (2) commitment and action in the service of a life consistent with clients' personal values.[23] Steven Hayes originally conceived of ACT, which he based on relational frame theory (see In Theory 15-1). ACT involves both acceptance and change. The change component is primarily second-order change where the function of the problem behavior—not its form or frequency—is modified.

IN THEORY 15-1

Relational Frame Theory: The Cornerstone of ACT

The theoretical foundation of ACT is a new behavioral account of human language and cognition known as *relational frame theory.* The theory focuses on the capacity humans have for relating events in many different ways. The ways we relate events are called *relational frames;* examples include comparative and evaluative frames (such as "smarter than" and "funnier than"), coordination frames (such as "same" and "different"), and temporal and causal frames (such as "if-then" and "cause of"). Initially, we learn the capacity to relate events to one another through modeling and shaping. Subsequently, this relational capacity can be applied in novel and arbitrary ways that are not explicitly taught. This is possible because not only do we learn specific relationships (such as "Richard is taller than Mike") but we also learn, through generalization, relational frames (such as "taller than") that can be applied to other people and also to trees, buildings, and so on.

In addition to our ability to use relational frames ubiquitously, humans can *derive* new relationships from relationships that have become part of their cognitive and linguistic repertory. Suppose I tell you that Rick is my brother and Lillian is my mother; you are likely to derive four other relationships that you were not explicitly told (taught): (1) I am Rick's brother, (2) I am Lillian's son, (3) Rick is Lillian's son, and (4) Lillian is Rick's mother. While the first two relationships must be valid, the last two are likely valid but may not be. In this case, they are not valid because Rick and I have different mothers. Assuming incorrectly that Lillian and Rick are mother and son might result in an awkward social moment, but the negative consequences would be minimal. In other cases, tenuous relationships that people derive can have serious negative consequences. The problem is not that our minds create derived relations but that we may make poor choices regarding which of them to "listen to" (believe) based on the context.

Consider a more serious example. If we know that pain, such as touching a hot stove, is bad, then we might treat the pain that we experience from the loss of a loved one as also bad. Functionally, it might be better to treat these two types of "pain" differently. However, the set of relations seems logical and veridical, and therefore we consider the derived relation (the pain experienced from the loss is bad) a fact—that is, a reflection of the way things are, rather than just a belief or thought. The significance of *considering beliefs to be reality* for the practice of ACT will be revealed shortly.

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ACT CHANGE PROCESSES

ACT is considered a transdiagnostic treatment because it purports to be applicable to treating a wide array of disorders that have a common maintaining condition: **psychological inflexibility**, a narrowing of options for behaving, which leaves a person feeling "stuck." ACT focuses on fostering **psychological flexibility**[24]—that is, having options for behaving available—which occurs when people mindfully accept their distressing thoughts and feelings and engage in behaviors that are consistent with their values. This is accomplished in ACT through a variety of experiential and metaphorical second-order change methods.

Psychological inflexibility is created and maintained by six interrelated core processes: cognitive fusion, attachment to the conceptualized self, experiential avoidance, disconnection from the present moment, unclear values, and inaction with respect to values. These core processes, which are the targets of ACT, are listed in Table 15-1 in the left column, and the parallel core processes that foster psychological flexibility—the desired outcome of ACT—are listed in the right column. In the following six sections, we will explore each of the sources of psychological inflexibility and the ACT strategies that are used to increase psychological flexibility. The title of each section names the source of inflexibility and the corresponding outcome that would result in flexibility.

Cognitive Fusion Versus Cognitive Defusion

Cognitive fusion is the tendency for humans to take their thoughts literally and to believe that they are accurately describing how things are rather than seeing them as they actually are—that is, *just thoughts*. For instance, if someone said the word *lemon*, it is likely that you could see it in your mind's eye and envision its color and shape and perhaps experience some of its tartness. Yet, thinking *lemon* does not make you a lemon, right? *You are not your thought.*

This point is often lost on people suffering from psychological pain. The thought *inadequate* is not just a thought like *lemon* for someone who is severely depressed. It is an unacceptable thought that is linked with the self—that is, "*I* am inadequate."

TABLE 15-1
Processes Thought to Be Responsible for Psychological Inflexibility (before ACT) and for Psychological Flexibility (desired outcome of ACT)

Psychological Inflexibility (before ACT)	Psychological Flexibility (desired outcome of ACT)
Cognitive fusion	Cognitive defusion
Attachment to the conceptualized self	Detachment from the conceptualized self
Experiential avoidance	Experiential acceptance
Disconnection from the present moment	Mindful contact with the present moment
Unclear values	Clear values
Inaction with respect to values	Value-guided action

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TABLE 15-2
Examples of the Difference Between Self-as-Content (cognitive fusion) and Self-as-Process (cognitive defusion)

Self-as-Content (cognitive fusion)	Self-as-Process (cognitive defusion)
"I am a stupid."	"I am having the thought that I am stupid."
"I am depressed."	"I am experiencing the feeling of depression."
"Nobody loves me."	"I am believing that nobody loves me."
"My life sucks."	"I am making the judgment that my life sucks."
"Nothing will change."	"I am assuming that nothing will change."

The antidote for cognitive fusion is **cognitive defusion**, which involves letting go of the idea that one's thoughts are valid descriptions and explanations of one's experiences so that they can be seen as only thoughts.[25] Another way to conceptualize this is in terms of the distinction between *self-as-content* (I am my thoughts) and *self-as-process* (I am processing—or doing something with—my thoughts). Self-as-content is an example of cognitive fusion, whereas self-as-process is an example of cognitive defusion.[26] Table 15-2 provides examples of the difference between these two ways of dealing with thoughts.

Another ACT strategy for creating cognitive defusion is illustrated in Case 15-1.

CASE 15-1

Defusing Painful Thoughts Associated With Depression

Martha, a 47-year-old mother of three young children, complained of being barraged by negative thoughts about herself and her life, lethargy, and a depressed mood. She was concerned that her depression was interfering with being a "good mother" and worried that her children would pick up on her gloominess and develop depression too. Martha acted and felt as if her self-depreciating thoughts were accurate descriptions of her, which exacerbated her feeling depressed and "stuck." To counter this cognitive fusion, the therapist asked Martha to engage in a defusion exercise.

Therapist: You've been describing lots of negative thoughts about yourself and your life, your role as a mother, and more. There is a stickiness in there too, like being caught in a spider web. I'd like to see if we can get you some space from those unpleasant thoughts. Are you willing to do an exercise with me?

Client: Sure. I'm game.

Therapist: Let's pick a thought that is upsetting you or that makes you feel sad or blue and write it on an index card. What might one be?

Client: Well, how about, "I'm a bad mother"?

(*continued*)

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CASE 15-1 (*continued*)

Therapist: Neat. [The therapist's response "neat" may appear odd, but it is purposeful. It is aimed at weakening the typical social responses people receive when they express negative thoughts or emotions, such as "I'm sorry to hear that" or "You really aren't a bad mother." Such responses invalidate the person's painful experiences and thus do not foster acceptance of them.] I'm going to write that thought on an index card. [The therapist does this and then holds it up for the client to look at.] What do you see?

Client: Well, I see "I'm a bad mother."

Therapist: Okay. What is that made up of? I mean, what is there on the card if you were to describe it to someone else?

Client: Well . . . I see a bunch of letters and words.

Therapist: Yes, I see that too. Okay, how about another sticky thought you have?

Client: Hmm. . . "Why can't I just be normal?"

Therapist: Cool. [The therapist writes that thought on another index card and holds it up for the client to see.] Look at this card; what do you see?

Client: A bunch of words again.

Therapist: Let's do one more thought.

Client: Okay. "Will I ever be happy?"

Therapist: Good. [The therapist writes that thought on a card.] So far, we have three index cards with thoughts you just had. And I'm pretty sure we could keep going for quite a while. But I'd like you to see if you can sense something here. What are the thoughts like when you were thinking them? What do the thoughts feel like when they show up in your head?

Client: Awful. I can't stand it.

Therapist: How about when we look at them? [The therapist puts all three cards out so that the client can see them.] Again, what do you see on the cards?

Client: A whole lot of words.

Therapist: That's it! You can notice your thoughts as just words. In fact, you can also hold them without getting caught up in them. Go ahead and hold out your hand, palm facing up. [The therapist places one of the cards in the client's open hand.] Now, notice the thought you are holding. What is it like to just hold that thought, just look at it?

Client: It feels odd . . . different. Part of me wants to throw it out or burn it. I've never done this before. This isn't like me.

Therapist: That may be true. Notice what it is like to just hold and observe your thoughts and see that they are just words. Notice something else—you are not your thoughts. A moment ago they were packed in your head, and now they are out and revealed. You can choose to notice them as you are doing now. Heck, you can hold them as you are doing right now, struggle with them, carry them with you, or let them go. That's up to you.

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Client: I can see that. The card feels really light, different from what it feels like most of the time.

Therapist: That lightness is what happens when we learn to observe our thoughts. Between now and our next session, would you be willing to commit to doing this exercise with good, bad, and ugly thoughts? I'll give you some cards. When a thought shows up, take out a card and write it down. Then take a few moments to hold the card gently, as you would a young child, and notice the words on the card and see that *you* are not the thoughts. In fact, you can carry your thought cards with you throughout the day. And any time you wish, you can choose to pull out the cards and simply notice what's on them. This is something you *can* do.

Client: I'll give it a go.

As is typical in ACT, the therapist in Case 15-1 had the client engage in an experiential exercise to see firsthand the value of the therapy strategy (cognitive defusion) instead of just explaining it to her.

Attachment to the Conceptualized Self Versus Detachment From the Conceptualized Self

Attachment to the conceptualized self is an extreme form of cognitive fusion because it is fusion with one's entire self-concept. People become invested in how they perceive (conceptualize) themselves, which is manifested in the stories they tell themselves and others about who they are and how they got that way. Thus, the person becomes the conceptualized self. The truth of the stories is irrelevant because the individual considers them to be true. Attachment to the conceptualized self results in rigid behaviors aimed at validating or defending one's stories, which contributes to psychological inflexibility.

Consider Andrea's story. She came to therapy with a long history of generalized anxiety that she viewed as the cause of her leading a restricted and unfulfilling life. She spoke of her anxiety as "a chronic illness" that she attributed to her "neurochemistry running amok." Her story line was essentially this: "I am broken and defective, and I will never get rid of my illness."

The antidote for attachment to the conceptualized self is *detachment from the conceptualized self* that involves cognitive defusion; this process parallels implementing cognitive defusion from specific thoughts to gain psychological flexibility. Clients are encouraged to separate from and become observers of their conceptualized self and recognize that their conceptualized self is *not who they are*—it is just a story. For Andrea, this meant learning to notice that her story was one of several possible stories that could be told about her life, and more important, that her current attachment to the defective/disease story was not serving her well.

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Experiential Avoidance Versus Experiential Acceptance

Experiential avoidance involves efforts to escape from or avoid unpleasant private events—thoughts, emotions, and bodily sensations—and the circumstances that might occasion them.[27] It also involves attempts to change the form or frequency of these events to make them less painful, which is first-order change.[28] Such attempts often require considerable effort, and they may not work in the long term. To experience this for yourself, do the following. Take 60 seconds to "*not* think of a pink elephant." After you've done this, continue reading.[29]

Were you able to not think of a pink elephant? Most people have a hard time because *not thinking* about something is, in fact, a thought of it. You may have distracted yourself by thinking about something that is clearly not a pink elephant. The problem with distraction is that to know that the distracter is not a pink elephant, you must compare the distracter with a pink elephant, and so you are back to thinking about it. Similar processes are at work when people attempt to avoid aversive thoughts and emotions.

Experiential acceptance is the opposite of experiential avoidance. It involves (1) remaining in contact with painful experiences (2) without attempting to alter their form or frequency and (3) persisting in actions that are consistent with one's personal values. Experiential acceptance fosters new and more flexible ways of relating to painful or uncomfortable psychological experiences. The effectiveness of acceptance strategies has been demonstrated[30] in the treatment of such diverse problems as chronic pain,[31] anxiety disorders,[32] self-injurious behaviors,[33] and smoking.[34]

Case 15-2 provides an example of how the function—but not the form or frequency—of painful experiences can be changed through experiential acceptance.

CASE 15-2

Treatment of Anger by Experiential Acceptance

Larry, a 35-year-old truck driver, came to therapy because he was afraid that his uncontrollable anger would cause his wife to leave him and his children to no longer want to have anything to do with him. He noted that little things just set him off, especially when he was tired. Asked about the little things, Larry talked about his wife and kids not doing what they should be doing, dinner being late, and the kids playing too loudly. When Larry got angry, he screamed at his wife and children and at times threw objects, punched the wall, and hit his wife. When he felt tension building, he usually drank, which made him even more aggressive. He believed that "things only got done" when he became angry ("The wife gets off my back and stops being a slacker, and the kids stay out of my hair"). However, shortly before coming to therapy, he had realized that becoming angry worked only in the short term and that the long-term consequences might include losing his family.

The therapist identified a number of behaviors that were examples of Larry's experiential avoidance—that is, escaping from or evading painful aspects of his

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life. They included his unwillingness to acknowledge his anger and hurt, verbal and physical aggression to avoid demands and obligations, drinking alcohol to calm down and blunt his unpleasant emotions, and blaming his wife and children for not "doing what they were supposed to do."

The therapist asked Larry to reflect on a recent anger episode. Initially, Larry did not want to bring up painful thoughts and feelings, but eventually he agreed. The therapist instructed Larry to watch the anger episode playing out in his imagination, to really get into the experience as if it were happening. As Larry did this, the therapist told him to notice his thoughts, feelings, and urges. The therapist gently encouraged him to go more deeply into the experience with a sense of curiosity and asked him, "What is there besides the anger? What do you notice? What is it like to feel what you are feeling and think what you are thinking?"

Larry began to tear up as he described feeling inadequate, vulnerable, lonely, and like a loser in the eyes of so many people. The therapist encouraged Larry to just notice the experience without judging it. This was difficult for Larry, as he clearly did not like how he was feeling. After acknowledging the difficulty of what he was asking Larry to do, the therapist encouraged Larry to stay with the experience and see if he could just be there with it (mindfulness), without having to resolve it or push it away.

Following these instructions was a new experience for Larry. He had never allowed himself to explore and touch the hurt underneath his anger without acting on it in some way (his typical experiential avoidance behaviors). To help Larry understand experiential acceptance, the therapist used an analogy of what you should do when you fall into quicksand: you should remain still and make maximum contact with the surface. If you struggle (as in experiential avoidance), you will sink. In the same way, staying with anger and not acting on it is difficult but adaptive. The therapist pointed out that this was something Larry could choose to do. The therapist asked Larry to practice, outside of therapy, experiencing his hurt and anger with a sense of curiosity and acceptance rather than acting on his emotional pain with avoidance behaviors, especially becoming angry and acting aggressively.

Disconnection From the Present Moment Versus Mindful Contact With the Present Moment

If clients are fused with their private events, they are "living in their heads" and not in contact with what is going on in their life in the present, moment to moment. Not only is their focus on their inner world but it is also located in the past or future, remembering and anticipating painful events. The antidote to such *disconnection from the present moment* is *mindful contact with the present moment*. Mindful breathing is just one of many strategies used to train mindfulness; other strategies will be described when we look at mindfulness-based cognitive therapy later in the chapter.

Unclear Values Versus Clear Values

Because clients entering therapy are focused on their psychological pain, they often are not in touch with their values—what is really important to them—and their values become fuzzy. Our values provide direction for our actions. Thus, clients who

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have *unclear values* have difficulty acting. They feel "stuck," and their behaviors become habitual and automatic, which is a form of psychological inflexibility. One of the goals of ACT is to help clients focus on their values and clarify them. Only with *clear values* can clients direct their behavior toward actions that foster what matters in their lives.

Inaction With Respect to Values Versus Value-Guided Action

Inaction with respect to values is a clear indication of psychological inflexibility. Inaction comes from different sources, including having unclear values. It also is a by-product of experiential avoidance because clients are so consumed with defending themselves from painful experiences that they cannot act. Or if they do act, their actions are likely to be ineffective or maladaptive and exacerbate their problem. A major goal of ACT is to get clients to act, but their actions must be in the service of their values—in other words, *value-guided action*.

Additionally, clients must make a *commitment* to act, which is different from clients' saying that they will *try* to do a value-guided behavior. The commitment requires that clients do something fully, not part way. It is either doing something or not doing something, which does not include *trying* to do something. You can see for yourself the merits of this approach by taking just a minute to complete Participation Exercise 15-4 before continuing reading.

PARTICIPATION EXERCISE 15-4

I Try—Therefore I Fail

Read and follow each of the following steps in order, proceeding to the next step only after you have completed the previous one.

1. Place a pen (or other small object) on a table or desk in front of you.
2. *Try to pick up the pen*. Try as hard as you can to pick it up.
3. If you did *not* pick up the pen, go directly to step 6. If you picked up the pen, put it down; then again *try* to pick up the pen.
4. If you picked up the pen again, put it down and once more *try* to pick it up.
5. If you picked up the pen once again, read step 6.
6. If you did *not* pick up the pen, you did what you were asked to do—namely, *try* to pick up the pen. You were not asked to *pick up* the pen, only to *try* to pick up the pen.

What would "trying to pick up a pen" look like? You can't describe it because there is no way to *try* to pick up the pen—or to *try* to do anything. You can only pick it up or not pick it up. Trying is not an option. Trying is not an overt behavior.

You might want to do (not try) this exercise with one or more of your friends. They are likely to fail, as you may have, but they also will benefit from this trying lesson.

Trying is a form of *inaction,* which is why, in ACT, clients are discouraged from trying anything. Instead, they are encouraged to commit to doing something and then to do it, even if they fail. In the grander scheme, there is no trying to live your life—you need to live it, preferably in terms of your values.

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ACT AS AN APPROACH

The previous sections described a variety of specific strategies and techniques that are used in ACT to undermine the processes that feed psychological inflexibility (the first column of Table 15-1, page 408) and create psychological flexibility (the second column of Table 15-1). However, ACT is more than a set of intervention strategies and techniques. ACT is an *approach* to therapy[35] that stresses accepting painful thoughts and feelings, committing to engaging in behaviors that are consistent with one's values, and promoting psychological flexibility.[36] ACT incorporates both acceptance and change. Although ACT usually promotes second-order change, such change can indirectly bring about first-order change, as you will see in Case 15-3. The case also provides an example of how a first-generation therapy can be used to foster third-generation goals.

CASE 15-3

Panic Attacks Treated by Interoceptive Exposure to Foster Acceptance[37]

Mark, a 25-year-old shop clerk, had been struggling with panic attacks for 4 years. He reported that his panic attacks had resulted in his dropping out of college and taking a low-paying job. He also said that the attacks had kept him from traveling beyond the confines of his small town in the Midwest. This latter limitation had greatly restricted his life and led him to seek therapy.

As part of Mark's treatment, the therapist suggested using interoceptive exposure (see Chapter 10) to develop acceptance and mindfulness of his dreaded panic attacks so that he could do the things he cared about, such as traveling.

To evoke the symptoms Mark experienced during panic attacks, he was asked to breathe through a straw for 30 seconds at a time while holding his nostrils closed. (This technique induces intense physical sensations similar to naturally occurring panic, such as shortness of breath, choking, suffocation, pounding or racing heart, and dizziness.[38]) During the exposure, the therapist continually reminded Mark of the reason he was being exposed to his panic symptoms: so that he could practice attending closely to the unpleasant sensations he was having (mindfulness) and experience them without judging them as painful (acceptance). Mark was also reminded that this practice was in the service of his being able to create a life worth living.

Following each session of interoceptive exposure, Mark and his therapist discussed the experience. The therapist pointed out that while Mark could not control his panic symptoms, he did have control over his willingness to experience panic. Mark learned to recognize his rapid heart beat and breathing for what they truly were—physical sensations—rather than the terrible things he had been thinking about them (such as "I'm going crazy" and "I'm having a heart attack"). Through other mindfulness and acceptance exercises, Mark learned to accept his intense discomfort during panic attacks and just observe what was going on. Mark developed a new way of relating to his bodily sensations and judgmental mind by accepting the moments of terror and dread he had. Interestingly, this acceptance had the unintended effect of lowering the frequency and intensity of Mark's panic attacks.

(*continued*)

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CASE 15-3 (*continued*)

In a 6-month follow-up, Mark reported that he still experienced panic symptoms at times but that he no longer avoided his discomfort. In his words, "I've reclaimed what was always mine: a full life—not free of worry or anxiety—but one where worry and anxiety are in a safe place that feels okay." Mark returned to college and travels when he wishes to.

Interoceptive exposure is a first-generation behavior therapy that is typically used to reduce anxiety. In Mark's case, it was adapted for a third-generation agenda: acceptance of his panic symptoms so that he could "get on with his life"—that is, pursue what was important to him (returning to college and traveling). As this second-order change occurred, Mark also experienced a reduction in the frequency and intensity of his physical and emotional discomfort, which is first-order change and was not the aim of the ACT intervention. However, it came about because as Mark began to do what was important to him, he felt better in general. Additionally, intended or not, exposure to distressing and maladaptive feelings does extinguish them, which is first-order change.

ACCEPTANCE AND COMMITMENT THERAPY IN PERSPECTIVE

There has been no shortage of studies evaluating the efficacy of ACT. In fact, hundreds of studies evaluating ACT have been published in the past 15 years, which probably makes ACT the most researched behavior therapy in this period. Unfortunately, much of the research has been plagued with serious methodological problems.[39] A majority of studies have been pilot and feasibility studies.[40] Such studies essentially ask the research question, "Does ACT have the potential to be effective in treating disorder *D* with population *P*," and they are considered preliminary to large-scale efficacy studies with appropriate controls and longer follow-ups.

Two particular methodological issues make it difficult to draw definitive conclusions about the effectiveness of ACT.[41] One is that ACT has typically been compared with treatment-as-usual control groups that are not matched with the ACT intervention for therapist–client contact time, and the competency of the treatment as usual has not been monitored. Even when ACT is more effective than a control condition, the lack of credibility of the control condition leaves open the possibility that nonspecific factors, such as therapist's attention, might have caused the effect. The other methodological issue is that few comparisons with other treatments with demonstrated efficacy have been made. Thus, even if ACT were shown to be effective, we would not know how that degree of effectiveness compares with other therapies.

In keeping with its transdiagnostic aim, ACT has been applied to many forms of human suffering, including generalized anxiety disorder,[42] obsessive-compulsive disorder,[43] comorbid anxiety and depressive disorders,[44] worksite stress,[45] depression,[46] adult sexual assault,[47] eating disorders,[48] stuttering,[49] psychotic disorders,[50] and borderline personality disorder.[51] ACT has been used in genetic counseling[52] and health psychology to treat medical issues such as chronic pain, substance-related disorders, epilepsy, diabetes, obesity, and cancer management.[53] On one hand, that ACT may be applicable to seemingly the

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gamut of disorders and problems is an asset. On the other hand, for few problems has a substantial body of methodologically sound research been conducted. One noteworthy exception is chronic pain, for which ACT has a strong evidence base.[54] The use of ACT for obsessive-compulsive disorder,[55] anxiety disorders (with well-educated clients),[56] and depression has been evaluated in some methodologically rigorous research and found to be moderately efficacious.[57]

Although outcome research on its interventions is part of the ACT research agenda, ACT therapists place a premium on basic process research that examines the ACT theory of the causes of human psychological suffering (notably psychological inflexibility) and the core processes of ACT interventions.[58] For example, such studies, which are typically laboratory analog research (not actual therapy), have examined the benefits of acceptance[59] and defusion[60] and the toxic role of experiential avoidance in potentiating emotional distress and limiting adaptive functioning.[61] This basic process research is critical because ACT is very much a theory-driven therapy, meaning that its interventions are based on relational frame theory and ACT's theory of emotional distress that posits psychological inflexibility as the key contributing factor.[62]

Besides ACT's heavy emphasis on process research, the ACT and mainstream approach to evaluation of interventions is different in another significant way. Whereas traditionally, the dependent variables in outcome studies have been symptom reduction (such as lowered depression or pain), ACT therapists are much more interested in assessing such dependent measures as valued action and life functioning.[63] Clearly these are two very different goals, which is one obstacle to doing outcome studies that compare ACT with first- and second-generation behavior therapies.

If you have noticed that ACT is demonstrably different from other behavior therapies, you are spot on. It is not just that ACT is a third-generation behavior therapy with somewhat different treatment goals than first- and second-generation behavior therapies (that is, acceptance versus change) or that the intervention strategies are novel, which is what you probably have noticed. Lurking in the background are basic philosophical issues,[64] including ACT's being a theory-driven approach that uses a different paradigm for evaluating the effectiveness of its interventions than mainstream behavior therapies do. The philosophical differences between ACT and most other behavior therapies cannot be resolved empirically; they are grist for the philosophy of science mill. But difference is not bad and can advance a field by enlarging perspectives on shared concerns. And one thing remains clear: All behavior therapies, including ACT, share the overarching goal of reducing human psychological suffering, but they differ in how they go about achieving it.

DIALECTICAL BEHAVIOR THERAPY (DBT)



Courtesy of Marsha Linehan

Marsha Linehan

Dialectical behavior therapy (DBT; pronounced using the individual letters) was initially developed by Marsha Linehan as an adaptation of first- and second-generation behavior therapies to treat suicidal behaviors.[65] People contemplating suicide lack the skills to construct a life worth living. Thus, in its initial formulation, DBT involved skills training along with exposure therapy and contingency management. However, people who attempt suicide tend to be hypersensitive to criticism and have difficulty regulating their emotions. In her early work, Linehan found that the emphasis on first-order change often resulted in her clients' becoming overaroused and engaging in a variety of therapy-resistant behaviors, such as getting angry at her, storming out of a therapy session, or shutting

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down emotionally. When she changed the emphasis to acceptance (rather than change), her clients felt that their problems were being ignored, which resulted in extreme hopelessness or even rage. Linehan realized that neither extreme—change or acceptance—was successful, but a synthesis of the two appeared to work, which led to the development of DBT as it is practiced today.[66]

The key word in DBT's name is *dialectical*, which refers to the concept that every argument has an assertion (the thesis) and an opposing position (the antithesis). Often, the best resolution incorporates important features of each position in a meaningful way—in other words, a *synthesis*. In DBT, the primary dialectic, or polarity, involves change on one hand and acceptance on the other. DBT involves integrating, or synthesizing, the need for clients to *accept who they are* with the need to *change the way they are living.*

DBT has primarily been used to treat clients with borderline personality disorder (BPD), which is characterized by poor regulation of emotions, including impulsivity; chronic suicidal behaviors; other self-destructive behaviors, such as self-mutilation and reckless driving; low self-image; and unstable interpersonal relations. Individuals with BPD typically suffer from multiple psychological disorders and have a pattern of never-ending crises. They make excessive use of psychological services and have repeated treatment failures.[67] Not surprisingly, borderline personality disorder is very difficult to treat, and DBT has provided a viable treatment. DBT primarily is used to treat borderline personality disorder in outpatient therapy. When DBT is used in an inpatient setting or to treat other disorders, modifications of these procedures may be necessary.[68] The overarching goal of DBT is to move beyond symptom reduction and help clients create a life worth living.

DBT BIOSOCIAL THEORY OF BORDERLINE PERSONALITY DISORDER

Linehan believes that the crux of BPD is a pervasive problem of emotion regulation that develops and is maintained by the interaction of biological and environmental factors.[69] In her *biosocial theory*, genetics, prenatal conditions, and early life traumas are all hypothesized to lead to changes in the central nervous system that cause people to be more vulnerable to problems of emotion regulation. People with BPD respond in an exaggerated manner to environmental stressors and take longer to return to baseline levels of functioning.[70] The nervous system component becomes particularly problematic when individuals are exposed to invalidating environments.

In an *invalidating environment*, people's painful experiences and emotional responses are disconfirmed, demeaned, minimized, or punished by primary caregivers or other important individuals in their lives.[71] For example, they may be given verbal and nonverbal messages such as "Things aren't that bad," "You don't really want to kill yourself," "Everyone has problems," and "Just stop complaining." Additionally, invalidating environments stress the importance of self-control and self-reliance, which implies that emotion-regulation difficulties are simply due to a lack of willpower, low motivation, and other "character defects."[72] It is easy to see how people exposed to an invalidating environment would come

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to view themselves as flawed. Taken together, the pervasive emotion-regulation problems associated with BPD that result from the interaction of biological and environmental factors not only interfere with problem-solving abilities but also create problems with interpersonal relationships and the ability to engage in goal-directed behaviors—all in a vicious, self-perpetuating cycle.

DBT CORE TREATMENT STRATEGIES

Two core treatment strategies are used in DBT: validation/acceptance strategies and problem-solving/change strategies. The success of treatment hinges on a flexible application of both strategies at the point that each is warranted for the particular client.

Validation/Acceptance Strategies

Validation/acceptance strategies communicate empathic understanding of the client's emotions, thoughts, and actions and authenticate them. These interventions are important in any therapeutic context to establish rapport. In DBT, they also are needed to counteract the externally imposed invalidation and self-invalidating behaviors that are common in individuals with pervasive emotion-regulation problems.[73]

In attempting to understand a client's problem behavior, identifying the *function* that the behavior serves is paramount. Consider a woman who frequently cuts her arms in response to emotional stress, a frequent self-injurious behavior of clients suffering from BPD.[74] It is all too easy to label the cutting as maladaptive or problematic and therefore invalid or flawed. However, if the cutting provides relief from the client's unbearable emotions (which it typically does), the cutting is valid in the sense that it *functions* to regulate her emotions. By accepting and validating the client's emotional turmoil and her reason for cutting, the therapist creates space to use problem-solving strategies to help the client find more skillful ways of regulating her emotions. In essence, the therapist communicates to the client: "Your emotions can be very distressing, and it makes sense that you would want to alleviate that distress, which you do by cutting yourself. Perhaps you can learn other, less destructive ways to achieve the same goal." Here, we see the interplay of both acceptance and change strategies. Unless clients believe that the therapist understands what they are experiencing and why they are behaving as they are, they will not be amenable to the therapist's suggestions of alternative problem-solving/change strategies.[75]

Problem-Solving/Change Strategies

DBT utilizes a range of first- and second-generation therapies, including skills training, exposure therapies, contingency management, and cognitive restructuring to affect behavior change. Which change techniques are appropriate depends on the maintaining conditions of the client's problem behaviors. If a problem is maintained by a skill deficit, skills training is called for. If the client can perform the skills necessary for alternative, adaptive behaviors but is not engaging in them because emotions, cognitions, or contingencies are interfering, then exposure therapy, cognitive restructuring, or contingency management would be appropriate, respectively.

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The application of these standard behavior therapy procedures often must be modified due to issues that are specific to clients with BPD. For example, clients who have problems with emotion regulation also have difficulties with information processing, which means that the therapist may have to take a more directive role than is typical in guiding the client through the procedures.[76] Another challenge in working with clients suffering from BPD is that the focus of therapy often must shift from session to session because clients are continually having crises in their lives that require immediate attention. For instance, if the agenda for a therapy session is exposure therapy begun in the previous session to deal with chronic anxiety, the agenda may have to shift to dealing with such events as the client's losing a job, having a spouse leave, going back to drinking, or being evicted by a landlord. Thus, the course of DBT is rarely a linear progression, and DBT therapists must be able to deal with the client's "crisis of the week" to keep the client in therapy and eventually return to the primary goals and target behaviors established at the outset. At the same time, DBT therapists help their clients gain insight into their patterns of crises and maladaptive behaviors and identify alternative, more adaptive, ways of behaving in response to life crises that arise.

DBT TREATMENT MODALITIES

DBT is delivered in two primary coordinated treatment modalities: individual outpatient therapy and group skills training.[77] Additionally, therapists may provide telephone consultations with clients between sessions to help them apply the skills they have learned in therapy in their everyday lives and to deal with crises.

Individual Therapy

In DBT, individual therapy consists of four overlapping stages.[78] The stage where a client begins treatment depends on the client's current level of functioning. Although the stages are ordered in terms of decreasing severity of the clients' problems, progress through the stages is not necessarily linear, with clients often revisiting issues and therapy procedures from previous stages.[79]

Before the therapist can determine at which stage a client should begin treatment, a thorough behavioral assessment is conducted to determine the nature of the client's problems and his or her probable maintaining conditions. Then the therapist and client agree on the goals, target behaviors, and methods of treatment. Finally, in the spirit of behavior therapy's being a collaborative effort, both the client and the therapist commit to engaging in particular behaviors.[80] For example, the client may commit to a specific number of individual therapy sessions and group skills training sessions, and the therapist may commit to receiving regular consultation from another therapist about the client's treatment. It is customary for psychotherapists to receive periodic supervision from other therapists about their cases, but usually, clients are unaware of this arrangement. In contrast, DBT therapists specifically tell their clients that they will be receiving such supervision, which demonstrates one way in which therapists contribute to the therapist–client collaboration.

Once these pretreatment tasks have been completed, the therapist determines the initial stage of treatment that is most appropriate for the client based on the client's current level of functioning.

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Stage 1 Stage 1 of DBT treats clients who are at the lowest level of functioning. In this stage, there is a set hierarchy of behavioral targets that involve keeping the client alive, safe, and connected to treatment.[81] They are, in order of importance:

1. Suicidal and other life-threatening behaviors
2. Behaviors that interfere with therapy
3. Behaviors that degrade the client's quality of life (for example, anxiety or mood disorders, substance abuse, and everyday problems with relationships, employment, and housing)
4. Skill deficits that impede clients from making adaptive life changes

Because of the high risk of self-destructive behaviors among clients with borderline personality disorder, ensuring that they are safe is the first priority. Keeping clients in therapy is the second priority because BPD is associated with multiple treatment failures and a high dropout rate.[82] The third priority involves treating the host of comorbid disorders that are associated with BPD (such as depression and substance abuse). The last priority involves skills training to equip clients with behaviors necessary to create a life worth living. The overall goal of stage 1 is to help clients get their lives under some control.

Stage 2 Once this goal is achieved, it is possible to deal with clients' painful emotions (such as those due to past traumas) that are interfering with their ability to live meaningfully in their relationships, jobs, and daily activities. The goals of stage 2 are for clients to learn to experience emotions with decreased disturbance and to increase their connection to the environment. Stage 2 is difficult for clients because it is at this point that exposure therapy is employed to desensitize traumatic or other painful experiences that interfere with their lives. If the exposure is not handled judiciously, the client may revert to previous, self-destructive ways of coping with pain and distress, which would require additional stage 1 interventions.

Stages 3 and 4 In stage 3, clients consolidate what they have learned in stages 1 and 2. They work on increasing their self-respect, self-efficacy, competence, connections with their environment, and general quality of life. Finally, stage 4 goes beyond the boundaries of traditional behavior therapy and helps clients develop a sense of freedom, joy of living, or spiritual fulfillment.[83]

Group Skills Training

The weekly individual DBT sessions focus on clients' behavioral and emotional problems, with special emphasis on life-threatening and therapy-interfering behaviors. In addition, due to the range and severity of problems seen in many individuals with borderline personality disorder, clients in DBT typically receive 2½ hours of group skills training each week.[84]

The group skills training sessions are directed by a skills trainer who is someone other than the client's individual therapist. The training typically runs for an entire year and follows a manual consisting of detailed session-by-session instructions and treatment rationales along with handouts for skills training exercises.[85] The skills are taught using the standard skills training procedures described in Chapter 12.

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The skills training component of DBT is useful only if clients use the skills they learn in their daily lives, and such transfer of training is a major challenge in DBT. A mobile phone application called DBT Coach has been developed to facilitate transfer to clients' natural environments.[86] In a pilot study, clients with co-diagnoses of BPD and substance-related disorder who were enrolled in a DBT treatment program used DBT Coach when they encountered situations in which they were tempted to use a substance. The DBT Coach asked clients questions (initially to rate their emotional intensity) that led to clients' being given suggestions to use the coping skills they had learned to deal with the situation. Clients in the study used DBT Coach an average of almost 15 times during a 10–14 day period. Both emotional intensity and urges to use substances declined significantly with the coaching. The clients also reported less depression and general distress during the study period.

The group skills training focuses on four types of skills: core mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance.

Core Mindfulness Skills Core mindfulness skills are based on Zen Buddhist techniques and include skills to focus attention, assume a nonjudgmental stance, and focus awareness on the present moment. These skills are central to DBT (hence the word *core*) and are covered over the entire year of skills training.

Core mindfulness is based on a model consisting of three states of mind: reasonable mind, emotional mind, and wise mind. *Reasonable mind* involves thinking rationally, with reference to empirical facts—a "cool" approach to problem solving. In contrast, *emotional mind* refers to thinking irrationally without reference to facts and results in exaggerated or distorted thinking that is determined by one's momentary mood—a "hot" approach to problem solving. *Wise mind* is the synthesis of these two polarities (see Figure 15-2), incorporating rationality and emotionality as well as intuition. Mindfulness skills are used to achieve the balance of wise mind.

Interpersonal Effectiveness Skills Learning assertive behaviors and problem-solving skills helps clients obtain what they want, keeps them from being taken advantage of, and helps them deal with interpersonal conflicts. The goal is for clients to get what they want and solve problems in ways that allow them to maintain relationships (rather than alienating others) and retain their self-respect.

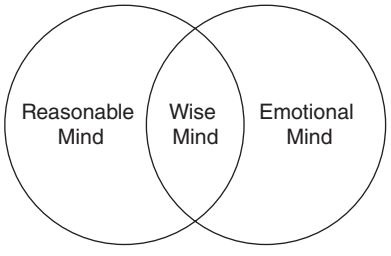


FIGURE 15-2
Wise mind as a synthesis of reasonable mind and emotional mind

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TABLE 15-3
Common Myths About Emotions That Are Debunked in DBT Skills Training

There is always a right way to feel in every situation.
Negative feelings are bad and destructive.
If I am emotional, then I am out of control.
All emotions are the result of a bad attitude.
Other people can judge how I am feeling better than I can.
Painful emotions should be avoided.

Source: Adapted from Linehan, 1993b.

Clients are also taught to balance the desires-to-obligations ratio in their lives so that they do not become frustrated with all that they "have to" do and thus not do enough of the things they want to do (the same idea as a balanced lifestyle in relapse prevention described in Chapter 14).

Emotion-regulation Skills Learning skills to regulate emotions is critical for people with borderline personality disorder. However, this is often difficult for them because their intense and labile emotions have frequently been invalidated by others (for example, "Just calm down and get control of yourself"). Thus, emotion-regulation skills must be taught in a context of emotional self-evaluation.[87]

Emotion regulation requires mindfulness, and emotion-regulation skills consist of observing one's emotions nonjudgmentally and describing, without interpretation, one's current emotional responses. The training involves teaching clients about the nature of emotions and the role emotions play in people's lives as well as debunking common myths about emotions, such as those listed in Table 15-3.

Distress Tolerance Skills Given that DBT and other third-generation behavior therapies view discomfort and pain as an unavoidable part of life, learning specific ways to *tolerate* discomfort is important. Clients are taught four sets of skills to help them deal with crises and accept life as it is in the moment: (1) distracting (to modulate emotional responses), (2) self-soothing, (3) improving the moment (as through cognitive restructuring), and (4) thinking of the pros and cons of tolerating distress.[88]

DIALECTICAL PERSUASION

The dialectical perspective or philosophy—finding a synthesis between polar extremes—is the guiding principle in DBT. On a broad level, it is seen in the delicate balancing of acceptance and change throughout treatment. The two case examples of *dialectical persuasion* that you will read in a moment will give you the flavor of the dialectical interchange that is typical of the therapist–client dialogue in DBT individual therapy sessions.

To modify clients' maladaptive views, DBT may sometimes employ rational disputation, as in rational emotive behavior therapy (see Chapter 13). However,

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DBT therapists are more likely to use **dialectical persuasion**, which subtly highlights the inconsistencies among a client's actions, beliefs, and values. The aim is to help the client develop a balanced perspective that is congruent with her or his values (for example, wise mind rather than reasonable or emotional mind).

Consider the case of a woman who habitually burned her arms with a lit cigarette because doing so immediately relieved her intense emotional pain.[89] Not surprisingly, she was reticent to give up this behavior because it served to reduce her emotional pain. In exploring the events that precipitated a recent incident of burning herself, the woman casually remarked, "The burn really wasn't that bad this time." The therapist followed up on this statement using dialectical persuasion.

Therapist: So what you're saying is that if you saw a person in a lot of emotional pain, say your little niece, and she was feeling as badly as you were the night you burned your arm, that you'd burn her arm with a cigarette to help her feel better.

Client: No, I wouldn't.

Therapist: Why not?

Client: I just wouldn't.

Therapist: I believe you wouldn't, but why not?

Client: I'd comfort her or do something else to help her feel better.

Therapist: But what if she was inconsolable and nothing you did made her feel better? Besides, you wouldn't burn her that badly.

Client: I just wouldn't do it. It's not right. I'd do something else, but not that.

Therapist: That's interesting, don't you think?

As this therapist–client dialogue shows, dialectical persuasion subtly highlighted inconsistencies in the client's thought processes in an effort to show her that there are alternative ways of dealing with intense emotional distress.

Another example of dialectical persuasion is the *devil's advocate technique*,[90] in which the therapist (1) presents an extreme proposition that could be valid, (2) asks the client if he or she believes the proposition is valid, and then (3) counters the client's attempts to disprove the extreme proposition. The objective is to *dialectically* persuade the client to adopt a point of view that is more moderate than the view the client currently holds. For this technique to be effective, the therapist must be aware of the client's dysfunctional cognitions, engage the client with a seemingly naïve style of speaking, and balance seriousness with a sense of levity.[91] The following therapist–client dialogue illustrates the devil's advocate technique.

Therapist: Why don't you start by telling me about the argument you had with your boyfriend last night.

Client: Well, he came home from work really late last night and missed the nice dinner I had made for us, even though we had been planning the date night for over a week now.

Therapist: That must have really hurt your feelings to plan something nice and have it fall through.

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Client: No, it pissed me off! I mean, he's always doing this—breaking plans with me [said with an upset tone]. It's like he doesn't love me. I think he does this just to hurt me.

Therapist: I'm sure it's just that he doesn't care about your relationship [said without expressing any emotion].

Client: What do you mean [confused]?

Therapist: Well, since he obviously knew about your romantic night and blew it off like it was no big deal, it *must* mean he doesn't care about you.

Client: I don't know. But still, if he loved me . . . [said in a hesitant tone].

Therapist: What did he say when he got home?

Client: He made up some excuse about having to finish up a report for his boss or something and said he'd make it up to me next week.

Therapist: So there's no way that he wanted to make it home for dinner and that work interfered.

Client: Well, we've been trying to save money for a vacation, and he has been trying to impress his boss in order to get a promotion.

Therapist: So he missed dinner *and* stayed late to finish a report for his boss, something that might help him get a raise.

Client: I guess so.

Notice how the angry client initially attributed her boyfriend's behavior to his lack of concern and love for her. By playing the devil's advocate, the therapist attempted to "jolt" the client into seeing a different perspective by presenting an extreme version of her dysfunctional beliefs and then continuing to support the extreme version—but just to the point where the client seemed to soften a bit. The therapist's stance was intended to help the client gain a more balanced perspective (wise mind), allowing her to feel hurt by her boyfriend's missing dinner and, at the same time, appreciate the fact that he missed dinner in the service of doing something nice for her.

DIALECTICAL BEHAVIOR THERAPY IN PERSPECTIVE

Over the past 20 years, an impressive body of research has demonstrated that DBT is an evidence-based treatment for borderline personality disorder. The evidence includes a number of randomized controlled trials conducted by four independent research teams.[92] However, a meta-analysis has indicated that DBT's efficacy (a moderate effect size) is higher when it is compared to treatment as usual than when it is compared to other treatments that specifically target BPD (small effect size).[93] Thus, although DBT can legitimately be called an evidence-based therapy for BPD, it could be made more effective, and its comparability to other BPD-specific treatments needs to be investigated.

In contrast to most behavior therapies, DBT for borderline personality disorder is anything but brief, involving both individual and group treatment and typically involving more than a year of treatment—which may not make it cost effective. The length of DBT is primarily due to the severity, complexity, and long-standing and pervasive nature of borderline personality disorder, which makes it highly resistant to treatment of any kind.

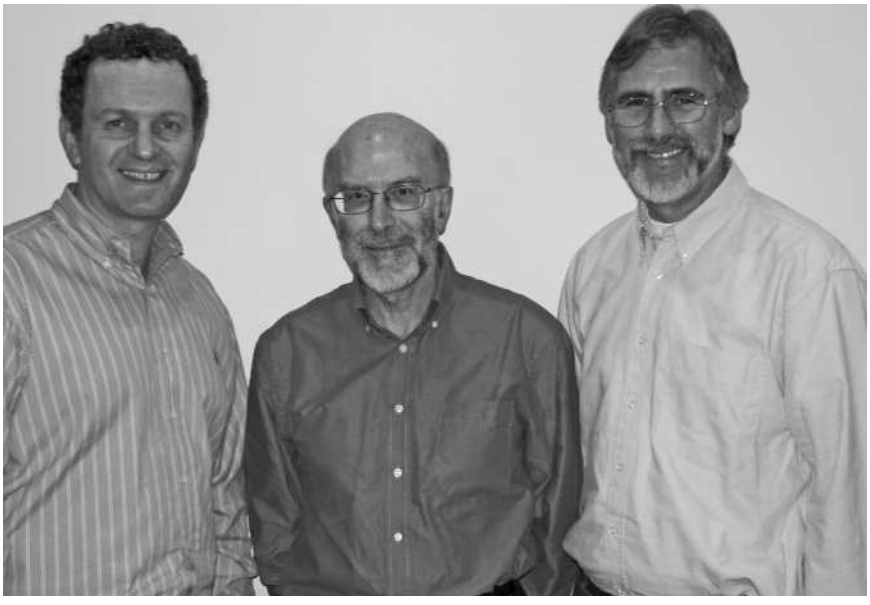
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Now that DBT has been established as an evidence-based treatment for borderline personality disorder, the emphasis in DBT research has shifted to identifying its active treatment components and to validating DBT for other problem behaviors.[94] So far, there is modest empirical support for DBT as a treatment for several other psychological problems, including mood disorders,[95] posttraumatic stress disorder,[96] eating disorders,[97] intimate partner violence,[98] and BPD with comorbid substance abuse.[99] Additionally, researchers are investigating the application of DBT to diverse populations, such as adults with intellectual and developmental disabilities[100] and college students.[101]

DBT has primarily been used to treat adults and less often adolescents.[102] Recently, preliminary steps have been taken to adapt DBT for children.[103] Materials have been made child-friendly, and activities have been designed to engage and hold attention and to motivate skill learning. One component involves increasing positive emotions to help children regulate their negative emotions. The children are taught LAUGH skills: *L*et go of worries, *A*pply yourself, *U*se coping skills, set *G*oals, and *H*ave fun.

MINDFULNESS-BASED COGNITIVE THERAPY (MBCT)

Mindfulness-based cognitive therapy (MBCT; pronounced using the individual letters), like dialectical behavior therapy, was designed to treat a specific problem: relapse of depression in clients who have recovered from major depressive disorder.[104] A collaborative effort of Zindel Segal, John Teasdale, and Mark Williams, MBCT employs mindfulness exercises to teach clients to become more aware of and—at the same time—less engaged with their negative thoughts.



Courtesy of Zindel Segal, John Teasdale, and Mark Williams

Zindel Segal, John Teasdale, and Mark Williams (from left to right)

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The theory of the recurrence of major depressive episodes that underlies MBCT evolved from Beck's cognitive model,[105] which suggested that vulnerability to recurrent episodes of depression is related to dysfunctional negative cognitions (see Chapter 13). It assumes that people who have had an episode of major depression continue to have a high level of negative cognitions even after they have recovered from a previous episode. However, there is evidence to suggest that this is not the case.[106] Rather, it appears that familiar patterns of negative cognitions are *reactivated* by future sad moods.[107] The connection between sad moods and negative cognitions is strengthened with each successive depressive episode, and subsequent episodes are likely to be more intense.

In the treatment of depression, cognitive therapy emphasizes changing the *content* of maladaptive cognitions by using cognitive restructuring to replace unrealistic and unsubstantiated negative thoughts with more realistic positive thoughts (see Chapter 13). But cognitive therapy may also implicitly change clients' *awareness of* and *relation to* their negative thoughts.

> Specifically, as a result of repeatedly identifying negative thoughts as they arise and standing back from them to evaluate the accuracy or adaptiveness of their content, patients often make a general shift in their *perspective* on negative thoughts and feelings. Instead of viewing thoughts as absolutely true or as descriptive of important self-attributes, patients are able to see negative thoughts and feelings as passing events in the mind that are not necessarily valid reflections of reality or central aspects of [themselves] . . . .[108]

Thus, cognitive therapy may prevent relapse of depression by teaching people to initiate this process when they experience stressors in the future.[109] However, the emphasis in cognitive therapy is to change the content or meaning of negative cognitions.

In contrast, mindfulness-based cognitive therapy is a third-generation behavior therapy, so it focuses on changing clients' attention to their negative cognitions (as well as feelings and bodily sensations) and how they deal with them. MBCT integrates elements of cognitive therapy and the widely used Mindfulness-Based Stress Reduction program developed by Jon Kabat-Zinn and his colleagues (described in Broad Stokes 15-1, page 405).[110]

MBCT APPROACH AND INTERVENTION STRATEGIES

The aim of MBCT is to foster a more decentered perspective of painful negative thoughts and feelings. *Decentering* involves seeing your thoughts as just thoughts and becoming aware that they are not you and not reality;[111] decentering is equivalent to the ACT strategy of cognitive defusion. This is what occurred when, earlier in the chapter, you said to yourself, "I am a lemon"; you knew you were not a lemon, even though you were telling yourself that you were.

In contrast, people who are suffering from depression often do not make the distinction between their negative self-evaluations and themselves. For example, they believe that their thoughts—such as, "I am worthless," "I am incompetent," and "I am a bad person"—are accurate self-descriptions. They need to create psychological

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space between their thoughts and who they are, which can be achieved through mindfulness practice. With mindfulness practice, clients learn both how to be *less engaged* with negative thoughts and feelings and, at the same time, how to be *more aware* of the negative thoughts and feelings that may signal an impending relapse of depression. Developing increased awareness of negative thoughts and feelings is critical because depression is painful, so the person may avoid or deny early warning signs of a relapse. Such avoidance increases the likelihood that the person will actually experience a relapse because nothing was done to prevent it, which also means that the new depressive episode will likely be more serious.[112]

MBCT GROUP TRAINING PROGRAM

MBCT follows a standard protocol and is delivered over eight weekly, 2-hour sessions in groups of up to 12 clients who are all in a recovery stage of repeated episodes of depression. As with other third-generation behavior therapies, explicit attention is paid to balancing acceptance and change. Interestingly, relinquishing attempts to control unwanted thoughts, feelings, and bodily sensations and accepting them is, in itself, a change.

Sessions 1 through 4 focus on learning the fundamental concepts and skills of mindfulness practice, the essence of which is paying attention to present internal and external experiences without evaluating them. Sessions 5 through 8 focus on approaching mood shifts in a more mindful way. Clients learn to notice thoughts and their impact on physical and emotional experiences and accept these thoughts and experiences for what they are (just thoughts and experiences) rather than as valid descriptions of who the clients are.

The key ingredient in creating these mindfulness skills is mindfulness meditation practice.[113] One of the unique features of the MBCT protocol is that clinicians administering the treatment are expected to maintain their own mindfulness meditation practice so that they can optimally train clients in mindfulness. This expectation is not explicitly made for ACT and DBT, which also employ mindfulness therapeutically.[114]

Because 16 hours of treatment is hardly sufficient for clients to learn and become proficient in mindfulness meditation and mindfulness skills, homework practice is essential to the success of MBCT. Homework exercises not only provide more practice in mindfulness but also promote transfer of mindfulness into clients' daily activities. One study showed that greater number of days in which clients practiced mindfulness meditation at home during treatment was correlated with lower depression 12 months after treatment.[115]

In addition to learning mindfulness skills, MBCT includes providing clients with relapse-prevention strategies, such as involving family members in detecting early warning signs of relapse, and exercises that can help interrupt relapse. The program also incorporates monthly follow-up meetings for the first 4 months.

Mindfulness, the core of MBCT, is difficult for anyone to learn because most people are not accustomed to being mindful. Consider the fact that we are often multitasking. We drive, talk on our cell phone, and drink coffee at the same time. We go for a run listening to music. In addition, we are constantly thinking about countless things other than what we are doing at the moment. Sound familiar? In each of the examples, we are not being mindful.

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The mindfulness skills that clients develop in MBCT foster a new way of relating to everything in their lives as well as to their depressive thoughts and feelings. Participation Exercise 15-5 is an example of one of the many mindfulness exercises used in MBCT. You may want to do it later, but you should read it now as a concrete example of a mindfulness exercise.

PARTICIPATION EXERCISE 15-5

Eating a Raisin Mindfully

For this exercise, you'll need about 5 minutes and one raisin. A raisin is best, but you can substitute a grape, small piece of orange, or gummi bear. There is one essential general instruction: *Whenever you find your mind wandering from the task at hand, just gently return your attention to the raisin and your experience of it.* Read over the specific instructions that follow and then begin with the first instruction.

1. Begin by placing the raisin in the palm of your hand. Spend a few moments just looking at it. Really look at it with a sense of curiosity and awe, as if this were the first time you had looked at a raisin. (In fact, it is likely that this is the first time you are intently looking at a raisin.)
2. Gently pick up the raisin with your thumb and index finger and roll it between them. What does the raisin feel like? What are its textures? For this part of the exercise and the remaining parts, it is best to close your eyes because you will no longer be attending to visual sensations.
3. Rub the raisin across your lips and notice what that feels like.
4. Gently place the raisin on your tongue. Just let it sit on your tongue for a few moments. Don't chew it. Just leave it on your tongue and notice how the raisin feels.
5. When you're ready, begin chewing. Bite the raisin *very slowly* and *gently*, extending the time it takes to bite through it as long as possible. What is that like? What does the raisin feel like between your teeth? What sensations, textures, tastes, and smells do you notice? If you feel the urge to swallow the raisin right away, just notice that urge and slowly chew the raisin for a minute or so, without swallowing.
6. Finally, go ahead and give in to the urge to swallow it.

Not only does mindfully eating a raisin foster the general skill of mindfulness, it also is likely to increase one's enjoyment of food.[116] Once clients have experienced what it means to be mindful through this and other exercises, they practice being mindful in their everyday lives. Mindfulness can be applied to any activity one is engaging in, from the mundane, boring tasks we do every day to those that are important or monumental. Being mindful of daily activities allows us to fully experience them and be truly alive in the moment. For clients who are learning mindfulness to help prevent recurrence of major depression, the payoff is particularly high.

You will have to complete Participation Exercise 15-6 later. However, you should read it now because it provides examples of routine behaviors you can experience in a new way—mindfully.

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PARTICIPATION EXERCISE 15-6

Approaching Daily Tasks Mindfully

Below is a list of some mundane tasks that most people do automatically—that is, *mindlessly*. The next time you find yourself doing one of them, deliberately focus on and pay attention to what you are doing and experiencing at the moment. Approach the task with a sense of curiosity and an openness to whatever you experience. Notice all that is happening outside and inside yourself. And *whenever you find your mind wandering from the task at hand, just gently return your attention to it*.

1. *Mindful showering*. This everyday activity is a good one to start with because many people find showering a pleasant, even sensual experience. Next time you shower, notice how the water feels on different parts of your body. Notice the temperature of the water but don't judge whether it is too hot or too cold or even just right—the water is just the temperature that it is. Notice how it feels when the water sprays on different parts of your body but don't evaluate whether the spray is too strong or too light. What do you feel as you rub your body with soap and shampoo your hair? Notice what the soap and shampoo smell like. And as your mind drifts away from showering, gently refocus on showering.
2. *Mindful teeth brushing*. Yes, you can even brush your teeth mindfully. Notice what the bristles feel like while you're brushing the front, top, and back of your teeth and how it feels to brush your gums and your tongue. Notice the taste of the toothpaste. Just focus on the simple task of brushing your teeth (although you may discover that brushing your teeth creates complex sensations).
3. *Mindful eating*. Put down the newspaper, book, or magazine—even this textbook. Turn off your mobile devices, computer, and TV. Then, as in Participation Exercise 15-5, in which you mindfully ate a raisin, use all of your senses to fully experience your eating. When the food is in your mouth, close your eyes; eat slowly; hear the sounds of chewing the food; savor the textures, the tastes, the smell—immerse yourself in the whole experience.
4. *Mindful dishwashing*. Start your mindful dishwashing when you have just a few dishes to wash. From the time you turn on the water until you shut it off, focus all of your attention on washing the dishes. Notice how it feels, what it looks like, and what it sounds like to scrape dishes and then to wash them with a sponge or dishrag. As you rinse each dish, watch the water run down the dish and over the side into the sink. Listen to the sound of the water hitting the dish. Although it is easy to do this routine chore while thinking about other things, for once, just wash the dishes and be totally into doing it.
5. *Mindful bed making*. Some people make their bed quickly and carelessly, some people do it meticulously, and some people do not make their bed. Few people make their bed mindfully. Pay attention to each component of making the bed, from smoothing the sheets to the last minor adjustments of pillows, blankets, and covers. Watch what you are doing and notice how the picture of the bed is changing. Be aware of the different textures of the bedding. Feel the kinesthetic sensations of pulling up the covers and tucking in the sheets. Immerse yourself in the whole experience of making your bed.

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6. *Mindful exercising*. Next time you exercise, whatever the activity might be, do so mindfully by focusing totally on the exercising. This means no headphones and music, no watching TV, no talking to other people, no thinking about anything but the exercising you are doing. Pay attention to the movements involved, how your muscles feel, and your breathing. Do not evaluate any of these sensations, such as by saying to yourself, "This hurts," "This is hard," or even "This feels good." If you can exercise mindfully, you will have had the full experience of exercising rather than just part of it (as you do when you distract yourself from pain or labored breathing).

These are but a few examples of routine behaviors that you can experience fully by doing them mindfully. Pick one or more from this list or generalize the instructions to any other routine tasks in your life. The more you do things mindfully, the more truly in touch you will be with your life. In fact, tasks you find boring may actually become less boring because you will be experiencing all the nuances that even simple tasks include and thus be engaged with them.

MINDFULNESS-BASED COGNITIVE THERAPY IN PERSPECTIVE

MBCT is the youngest of the three third-generation behavior therapies we have examined, which means that there has been less time to evaluate its effectiveness. Still, empirical support for MBCT's ability to prevent relapse of recurrent major depressive episodes has accumulated.[117] An early randomized controlled trial compared treatment as usual (TAU), such as medication, with MBCT plus TAU to see if the addition of MBCT would reduce the rate of relapse of depressive episodes.[118] The results showed that relapse rates for patients with more extensive histories of recurring depressive episodes were significantly lower with MBCT plus TAU (37%) than with TAU alone (66%). These basic findings also occurred in another early randomized controlled trial that showed that MBCT reduced the relapse rate of clients with three or more prior episodes of major depression by more than half compared to clients who received TAU (36% versus 78%).[119]

More recent research has added support for the efficacy of MBCT. A meta-analysis of six randomized controlled trials involving 593 clients revealed that MBCT, compared to placebo or treatment-as-usual control groups, reduced the rate of relapse for clients with major depressive disorder by 35% (and 43% for clients with three or more previous episodes).[120] Indirect support comes from another meta-analytic review of 39 studies involving 1,140 clients, which showed that mindfulness-based therapy, including MBCT and similar treatments, had a strong effect size in reducing depression and anxiety, which was maintained at follow-up.[121]

Due to the empirical support of MBCT, it has been endorsed as an effective treatment for preventing relapse and recurrence of major depressive disorder by the United Kingdom's National Institute for Health and Clinical Excellence.[122] Nonetheless, MBCT is still underutilized in the United Kingdom's National Health Service,[123] which is just one example of the general problem of the failure of health practitioners to adopt evidence-based treatments, an important topic that will be discussed in Chapter 18.

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In general, research has shown that MBCT is more effective for clients who have had three or more recurrent episodes of depression. One possible explanation for this finding is that clients with three or more episodes differ in a significant way from those who have had two or fewer episodes. Specifically, people with more recurrent episodes may be relapsing because they are reverting to automatic previous patterns of dysfunctional thinking (similar to Beck's automatic thoughts; Chapter 13), while those with fewer episodes may be relapsing because of precipitating serious life events. MBCT may be more suitable for disrupting patterns of dysfunctional thinking.[124]

That being said, the general assumption and finding that MBCT is more suited to preventing relapse in people with three or more previous episodes of depression does not always hold. Recent research has found that the effectiveness of MBCT in reducing residual symptoms of depression was independent of the number of previous episodes of major depression[125] and that MBCT was equally effective for clients who were currently depressed and for those who were in remission.[126] MBCT also has been shown to be effective with people with subclinical depression (that is, exhibiting symptoms of depression that do not meet the diagnostic criteria for major depressive disorder).[127]

MBCT was originally developed to prevent recurrent episodes of major depressive disorder with a focus on adults (ages 18–65). However, there are indications that MBCT may be suitable for depression in old age,[128] depression in children (with some modifications to the standard MBCT protocol),[129] chronic depression,[130] and bipolar disorder.[131] Additionally, various comparisons of MBCT with antidepressant medication indicate that they are equally effective.[132] This is important because of the large number of people who are unwilling or unable to tolerate long-term use of antidepressant medication.

The feasibility of applying MBCT for psychological disorders and problems other than recurrent major depression is being tested, including suicidal behaviors,[133] borderline personality disorder,[134] a variety of anxiety disorders,[135] hypochondrias,[136] posttraumatic stress disorder,[137] obsessive-compulsive disorder,[138] insomnia,[139] somatization disorder,[140] gambling,[141] and binge eating.[142] The applicability to a variety of physical disorders—such as fibromyalgia,[143] chronic fatigue,[144] and tinnitus[145]—is also being evaluated. Because MBCT has been shown to increase positive and decrease negative emotions,[146] it may reduce stress that is a contributing factor in most physical disorders.

The advantages of MBCT include its brevity and group format, which make it an efficient and cost-effective intervention.[147] MBCT principles and exercises are now available in a self-help workbook, which, if demonstrated to be effective, would make the treatment even more efficient and cost effective.[148] Given the nature of MBCT, it is not surprising that clients consider it to be an acceptable treatment.[149]

In addition to the outcome research on MBCT just discussed, process research to identify the underlying mechanisms of change has begun to emerge, as In Theory 15-2 describes.

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IN THEORY 15-2

What Makes Mindfulness-Based Cognitive Therapy Effective?

The efficacy of MBCT has been well documented, but what makes it effective? The essential ingredient in MBCT seems to be mindfulness[150]—becoming *more aware* of negative thoughts and feelings on a moment-to-moment basis and *less engaged and invested* in those thoughts and feelings. In the case of depression, this requires that clients notice feelings of sadness, lack of motivation, despair, and other depressive symptoms and, at the same time, decenter—acknowledging that they are just thoughts and feelings and thus separate from themselves. This aim is achieved in MBCT by teaching clients mindfulness meditation that is expected to generalize to being mindful in their everyday activities (that is, not while mediating).

Recently, research has turned to finding the underlying physiological mechanisms that make MBCT effective. For example, in an fMRI (functional magnetic resonance imaging) study of clients with bipolar disorder, improvements in mindfulness and emotion regulation and anxiety that result from MBCT were correlated with increased activation in the medial prefrontal cortex.[151] This area of the brain is associated with cognitive flexibility. In a wait-list control study, a specific brain potential related to attention was measured before and after MBCT.[152] The brain potential increased only after MBCT, which indicates that clients improved in their ability to shift their attention to momentary experience and away from rumination (compulsively focusing attention on the symptoms of their distress). This is significant because rumination is a known risk factor for recurrence of depression.

ALL THINGS CONSIDERED: THIRD-GENERATION BEHAVIOR THERAPIES

At the beginning of the chapter, I said that third-generation behavior therapies were somewhat controversial.[153] Now that you have learned about them, you should be aware of an obvious source of controversy—namely, third-generation therapies appear to be very different from first- and second-generation behavior therapies. This can be seen in the themes that run through third-generation therapies: an expanded view of psychological health, a broad view of acceptable therapy outcomes, an emphasis on acceptance/mindfulness-based strategies, and fostering a life worth living. So, on one hand, they do not seem to fit with the first- and second-generation behavior therapies—with tradition, if you will. On the other hand, the defining themes of behavior therapy (scientific, active, present focus, and learning focus; see Chapter 1) also characterize third-generation therapies.

Another issue that makes third-generation behavior therapies controversial is the way in which ACT—the most prominent of the third-generation therapies—has been introduced and propagated in the field, which might be summed up as "taking the field by storm." In some cases, ACT proponents implicitly declared that with the advent of third-generation therapies, the messiah had arrived (or was well on her way). Some critics have described the new generation as a cult.[154] While these descriptions involve hyperbole, they hold some truth. Certainly third-generation behavior therapies are the current rage in behavior therapy in part because of their fresh and innovative approach and

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because of their potential to make significant contributions. However, some behavior therapists, even those who are developing third-generation approaches, take a more modest view and consider them to be in their infancy.[155]

To their credit, ACT, DBT, and MBCT (the most prominent approaches) have elaborate theories—grounded in basic behavioral science—to guide the development of their approach and interventions. In the case of ACT, many more studies have been conducted evaluating the underlying theory than the therapy procedures that are derived from the theories.[156] While this research is contributing to our basic understanding of psychological pain and distress, its findings cannot legitimately be used to directly support the therapy procedures that are derived from the theory, as some advocates of ACT have done.

Controversy typically accompanies new ideas in science, and both proponents and opponents of the new ideas tend to get caught up in the controversy and become less objective and open-minded than they would otherwise be. When the dust settles, the merits and contributions of third-generation behavior therapies can be fairly evaluated. Until then, several things seem clear.

The impetus for the development of third-generation behavior therapies was a failure of the first and second generations to adequately address some important clinical challenges. DBT has fostered new hope for clients with borderline personality disorder, just as MBCT has provided an approach for preventing relapse of recurrent episodes of major depression. These are very serious disorders, and previously existing behavior therapies had not made an impact in dealing with the problems they presented. ACT, which targets a wide array of disorders, provides an alternative to traditional first-order change interventions, especially for clients for whom first-order change has not been effective. In such cases, second-order change based on acceptance and mindfulness may provide the help clients need to deal with their suffering and live according to their values.

As you have seen in Chapters 7–15, there often are a variety of behavior therapy techniques that can treat the same problem. This allows a particular client and his or her specific problem to be matched to the most suitable treatment. So, in addition to being useful when first-order change interventions are not working, ACT and other third-generation behavior therapies may be more applicable to particular clients and problems. As one example, in Western cultures people tend to think analytically and logically. In contrast, people from Eastern cultures tend to think more holistically and have a greater tolerance for contradiction. Thus, third-generation behavior therapies may be more appropriate for people from Eastern cultures because those therapies involve simultaneously dealing with change and acceptance.[157]

SUMMARY

1. First-generation behavior therapies (Chapters 7–12) and second-generation behavior therapies (Chapters 13–14) focus on changing clients' problem behaviors. Third-generation behavior therapies, which emerged in the 1990s, focus on helping clients accept psychological pain and discomfort (psychological problems)—rather than attempting to change them—while they pursue what is important in their lives.

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2. Third-generation behavior therapies share the defining themes of all behavior therapies and also share five interrelated core themes: (1) an expanded view of psychological health, in which accepting inevitable psychological pain and discomfort is seen as adaptive; (2) a broad view of acceptable therapy outcomes, which includes second-order change that alters the function of problem behaviors rather than first-order change that alters their form or frequency; (3) acceptance (fully embracing one's experience) and (4) mindfulness (purposely and nonjudgmentally paying attention to momentary experiences) as general therapeutic strategies; and (5) creating quality of life (a life worth living).
3. Acceptance and Commitment Therapy (ACT) posits that psychological inflexibility—a narrowing of options for behaving—is at the core of psychological suffering and is maintained by six interrelated processes: (1) cognitive fusion (taking thoughts literally rather than seeing them as just thoughts), (2) attachment to the conceptualized self (how we view ourselves), (3) experiential avoidance (escape from or avoidance of unpleasant thoughts and feelings), (4) disconnection from the present moment, (5) unclear personal values, and (6) inaction with respect to values (failure to act in accord with what is personally important). These six sources of psychological inflexibility are treated in ACT to foster psychological flexibility.
4. There is strong evidence for the efficacy of ACT with chronic pain and some support for its use with obsessive-compulsive disorder, depression, and anxiety. ACT has been applied to many forms of human suffering and is the most broadly applicable third-generation therapy.
5. Dialectical behavior therapy (DBT) was developed specifically to treat borderline personality disorder. DBT involves synthesizing the need for acceptance and change, using both validation/acceptance and problem-solving/change strategies.
6. DBT is administered in two primary modes. Weekly individual DBT sessions focus on clients' behavioral and emotional problems, with special emphasis on life-threatening and therapy-interfering behaviors. Additionally, in weekly group skills training sessions, clients learn core skills in mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance. The training typically runs for a year and follows a manual with detailed session-by-session lessons.
7. The dialectical perspective strives for a synthesis between polar extremes. Using dialectical persuasion, DBT therapists subtly highlight the inconsistencies in clients' actions, beliefs, and values to help them develop a balanced perspective.
8. DBT has been established as an evidence-based treatment for borderline personality disorder, and its applicability to other disorders is being explored.
9. Mindfulness-based cognitive therapy (MBCT) was designed to treat recurrent episodes of major depression. It integrates elements of cognitive therapy and mindfulness-based stress reduction procedures. Rather than directly changing the content of negative thoughts, as in cognitive therapy, MBCT focuses on changing clients' awareness of and relation to their negative thoughts.

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10. MBCT is administered in groups following a set protocol involving eight weekly, 2-hour sessions and homework assignments. Clients are trained to be mindful (intimately aware) of their thoughts, emotions, and bodily sensations through daily mindful meditation practice and a variety of mindfulness exercises.
11. Initial research evaluating the efficacy of MBCT in preventing recurrent episodes of major depression is promising, and MBCT's brevity and group format make it efficient and cost effective.
12. Although third-generation behavior therapies are new and controversial, they are making an impact on behavior therapy, especially by providing treatment for difficult clinical problems (borderline personality disorder and relapse of major depression) and offering alternative intervention strategies to first- and second-generation behavior therapies.

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PART THREE



APPLICATIONS TO SOMATIC PROBLEMS AND CONTEMPORARY BEHAVIOR THERAPY IN PERSPECTIVE

16 Applications of Behavior Therapy to Medical Disorders

17 Applications of Behavior Therapy to Psychological Disorders With Primary Physical Characteristics

18 Contemporary Behavior Therapy in Perspective: Its Strengths, Challenges, and Future

Now that you have digested the appetizers (basic principles) and the main course (behavior therapies), it's time for dessert. Dessert is supposed to be a treat—something different—and I hope that what I have prepared will fit that bill. Whereas Chapters 7–15 were organized by behavior therapies (used to treat various disorders), Chapters 16 and 17 are organized by disorders (treated by various behavior therapies). Chapter 16 covers medical disorders, and Chapter 17 deals with psychological disorders whose primary features are physical problems. You will be familiar with most of the behavior therapy procedures described, but their applications will be new. These applications illustrate the versatility and breadth of behavior therapy principles and procedures and serve as a review of many of the therapies you read about earlier.

After you've finished dessert, it will be time to sit back and reflect on your elaborate dinner. In place of coffee or tea, in the final chapter, I am offering the chef's selection of the hearty strengths of and tempting challenges to behavior therapy, and, before you leave, I'll whet your appetite for future behavior therapy offerings.

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CHAPTER 16



Applications of Behavior Therapy to Medical Disorders

Treatment of Medical Disorders

Chronic Pain
Medically Unexplained Symptoms

Adherence to Medical Regimens

Taking Medication
Engaging in Health-Related Behaviors
Keeping Medical Appointments

Coping With Medical/Dental Procedures and Illness

CASE 16-1 Teaching an Adolescent With Autism Spectrum Disorder and Intellectual Disability to Tolerate Routine Medical Examinations

CASE 16-2 Physical Symptoms Related to Cancer Treatment Alleviated by Extinction and Differential Reinforcement

Prevention of Physical Illness

HIV/AIDS Prevention

All Things Considered: Behavioral Medicine Applications

SUMMARY

REFERENCE NOTES

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The application of behavior therapy principles and procedures to physical health and illness burgeoned in the last two decades of the 20th century and is a flourishing endeavor in the new millennium. Much of this work is subsumed under the interdisciplinary field known as *behavioral medicine*.[1] One aspect of behavioral medicine applies behavioral science, including behavior therapy, to the assessment, treatment, management, rehabilitation, and prevention of physical disease and related behavioral reactions to physical dysfunction.[2]

Behavior therapy serves four functions in dealing with medical disorders: (1) treating medical disorders; (2) increasing adherence to medical treatments, such as taking medication; (3) helping patients cope with treatments and illness; and (4) preventing medical disorders. Table 16-1 describes and gives examples of these four functions. This chapter will illustrate each function with representative examples of the medical disorders to which behavior therapies have been applied.

TREATMENT OF MEDICAL DISORDERS

Behavior therapy can contribute to existing medical treatments in three ways. First, behavior therapy can be combined with medical treatments (for example, both relaxation training and medication can be used to control high blood pressure). Second, behavior therapy may be more desirable than medical treatments that are associated with risk (such as surgery) or with undesirable side effects (such as medication). Third, behavior therapy can play an especially important role in cases for which no viable medical treatments exist (as for some types of chronic pain). To illustrate the use of behavior therapy to treat medical disorders, we'll look at its application to chronic pain and medically unexplained symptoms.

TABLE 16-1
Functions of Behavior Therapy in Dealing With Medical Disorders

Function	Description	Example
TREATMENT	Correct or alleviate a medical condition and the pain and suffering associated with it	Relaxation training to lower blood pressure in patients with essential hypertension
ADHERENCE	Increase patients' following prescribed medical treatments (such as medication, diet, and exercise)	Taking medication at the same time each day so that it will be maintained by stimulus control
COPING	Reduce anxiety, discomfort, and distress associated with medical procedures	Self-instructional training to decrease the anxiety associated with dental work
PREVENTION	Reduce the risk of developing disease, including motivating people to engage in healthful behaviors	Assertion training to promote safer sexual practices (such as refusing to engage in unprotected sex)

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CHRONIC PAIN

Pain is the most common problem that patients present to physicians as well as the most frequent cause of physical disability. A distinction usually is made between acute and chronic pain. *Acute pain* is the result of bodily trauma and disappears when the injury heals. Acute pain generally is adaptive in that it signals bodily damage (as when the pain from a pulled muscle alerts you to stop exercising). *Chronic pain* occurs after an injury has fully healed or when no trauma exists. Pain is considered chronic if it lasts for at least 6 months.[3] Approximately 30% of the US population suffers from chronic pain.[4]

Medication is by far the most common treatment for pain, but it has a number of limitations, especially for chronic pain. First, medication may not fully alleviate patients' pain. Second, many drugs lose their effectiveness over time. Third, long-term use of pain medication may lower people's tolerance for mild forms of pain. Fourth, drugs frequently have undesirable side effects (such as drowsiness). Fifth, more potent pain medications may result in physical and psychological dependence.[5] Thus, alternatives to medication are important in the treatment of chronic pain.

Behavioral treatment of chronic pain has two goals: (1) to reduce the patient's subjective discomfort (for example, decreasing the intensity or frequency of headaches) or, when this is not possible, (2) to increase the patient's tolerance for pain through various coping strategies.

Pain as Behavior

How pain is viewed makes a difference. We usually think of pain in terms of the subjective experience of intense physical discomfort. Behavior therapists have found it more useful to view pain as a *behavior* because behaviors can be readily assessed and changed.[6] **Pain behaviors** are overt behaviors that generally indicate a person is experiencing strong physical discomfort—for example, grimacing and saying, "Ouch!" In contrast, **well behaviors** are overt behaviors that typically indicate that a person is not experiencing pain, such as smiling and saying, "I feel good today." Well behaviors compete with pain behaviors. Table 16-2 lists common examples of both pain behaviors and well behaviors.

Pain behaviors, like any other behaviors, are maintained by their antecedents and consequences. A simple example illustrates this conceptualization:

> Eleven-year-old Vinny is playing a rough game of football with his friends, and his body is becoming badly bruised. However, he does not complain. He continues to play as if nothing hurt. If he did complain, his friends might call him a weakling.
>
> The minute Vinny gets home, the story changes. He slumps into a chair, "unable" to move. He tells his mother that he hurts all over, and she offers to help him upstairs and bring him his dinner in bed.

Clearly, the antecedents and consequences in the two situations are different, and it is easy to see how they influenced Vinny's pain behaviors. The behavioral

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TABLE 16-2
Examples of Pain Behaviors and Well Behaviors

Pain Behaviors	Well Behaviors
Moaning, screaming	Laughing, singing
Grimacing, wincing	Smiling
Talking about uncomfortable or unbearable sensations	Talking about feeling good
Moving in a guarded, unnatural manner indicating discomfort (for example, limping)	Moving freely, in an unrestricted manner
Reclining or sitting in order to ease pain	Standing or walking
Restricting activities that might result in pain	Engaging in activities that might result in pain
Requesting or taking pain medication	Not requesting or taking pain medication
Requesting help getting out of a car	Getting out of a car by oneself
Using crutches, cane, walker, or wheelchair	Walking without an assistive device

conceptualization of pain does not ignore the physical sensation of discomfort caused by the stimulation of pain receptors. The physical sensations of pain are one of the maintaining antecedents of pain behaviors, but they are not antecedents that can be directly changed through behavior therapy. In contrast, situational factors (as in Vinny's case) and a person's ability to cope with discomfort can be changed by behavior therapy procedures.

Changing the Consequences of Pain Behaviors

The consequences of exhibiting pain behaviors often are maintaining conditions of pain behaviors.[7] Significant consequences include (1) social reinforcers, notably attention and sympathy; (2) avoidance of responsibilities (for example, missing work); (3) financial compensation (for instance, disability payments); and (4) receipt of pain medication. The relationship of pain behaviors and social attention is illustrated in the case of a 47-year-old man with chronic lower back pain. If you look at Figure 16-1 (page 444), you can see that the number of pain behaviors the man exhibited clearly varied with the presence or absence of attention from the hospital staff.

One behavioral approach to the treatment of pain is to change the consequences maintaining patients' pain behaviors. The prototype for this approach was developed by Wilbert Fordyce and his colleagues at the University of Washington Pain Clinic.[8] I'll describe the program in some detail because it is a good illustration of how basic behavior therapy principles are applied to a complex problem.


Courtesy of Wilbert Fordyce

Wilbert Fordyce

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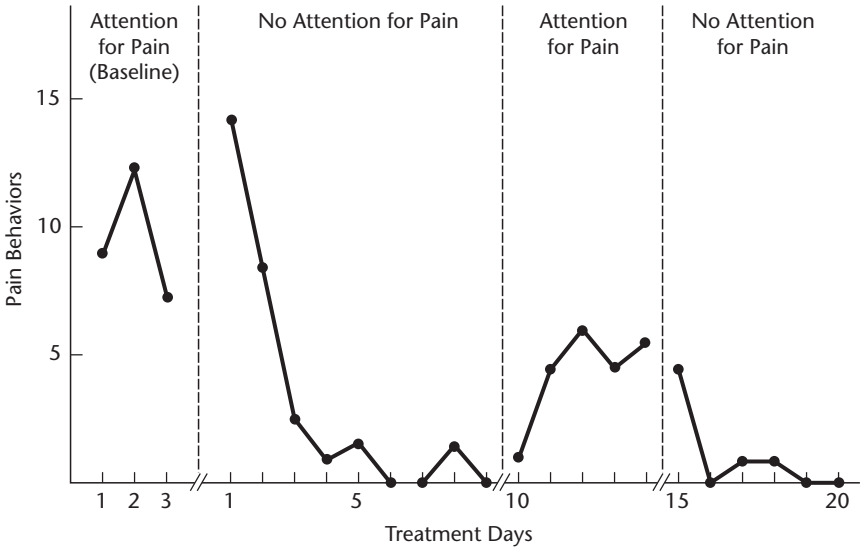
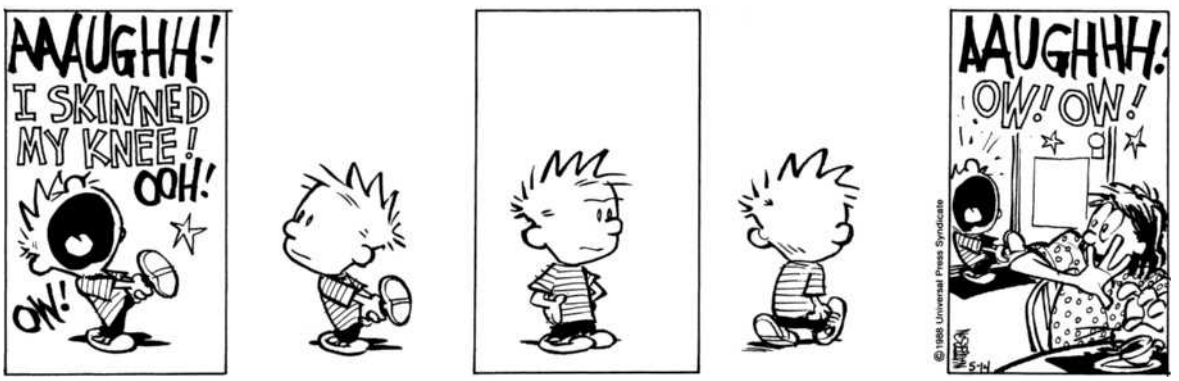


FIGURE 16-1
Effects of professional staff attention on the pain behaviors of a 47-year-old man with chronic lower back pain
Source: Adapted from Fordyce, 1976, p. 89.

The program begins in the hospital and later is extended to the patient's home environment. Assessing the maintaining conditions of the patient's pain behaviors comes first. Often, patients are being reinforced for pain behaviors but not for well behaviors.[9] When this is the case, treatment involves reversing the contingencies: Reinforcers are administered for well behaviors and withheld for pain behaviors.

The most common reinforcer for pain behaviors is attention from others. Thus, a major focus of the treatment program involves encouraging *everyone*



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who comes in contact with the patient to ignore or respond matter-of-factly to the patient's pain behaviors in order to extinguish them. At the same time, people are asked to reinforce—as with praise and attention—the patient's well behaviors.

Because rest is another reinforcing consequence of pain, rest is made a consequence of activity (well behaviors) rather than a consequence of pain behaviors. First, the amount of activity the patient can tolerate without experiencing pain, known as the *pain threshold*, is assessed. Then the initial amount of activity that the patient is required to do is set just below the patient's pain threshold. When the initial amount of activity is reached, the patient is allowed to rest before going on to the next activity. The hospital staff gives the patient attention and praise for completing the activity criterion. As the patient's pain threshold rises, the amount of activity required for rest is gradually increased.

Receiving medication also results in a variety of reinforcing consequences. Positive reinforcers include the pleasant side effects of pain medication (such as feeling "high" or relaxed) and attention from the person administering the medication. Negative reinforcers include relief from physical discomfort and avoiding unpleasant responsibilities (such as household chores).

Pain medication typically is administered on an as-needed basis. In contrast, during the pain treatment program, access to medication is made *time contingent* rather than pain contingent. Patients are given medication at fixed time intervals, whether or not they request it. Over the course of treatment, the medication dosage is gradually reduced (and eventually eliminated in many cases).

After a course of hospital treatment, the patient's therapy continues at home. Systematic procedures are established to ensure that the decrease in pain behaviors transfers from the hospital to the patient's home environment and is maintained over time. The patient's family and close friends are asked to participate in the treatment and are trained in the procedures. For example, they learn to withhold reinforcers for the patient's pain behaviors and to administer reinforcers for the patient's well behaviors.

Although the assistance of family and friends may be reinforced by their observing the patient's progress, that may not be sufficient to maintain their efforts over an extended period. Accordingly, procedures are established to ensure that the help of family and friends is adequately reinforced. For example, patients are instructed to explicitly thank them for their help.

Part of the program also deals with re-establishing previously reinforcing activities in patients' lives. These activities, which often are natural reinforcers, are made contingent on well behaviors. As an example, suppose a woman's walking, bending, and lifting increased in the hospital. If the patient had enjoyed shopping, she would be allowed to go shopping only if she walked to the store. If having friends visit had been a favorite activity, the patient would be permitted to invite them to her house only if she did some of the preparatory housework.

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Treatment Packages for Chronic Pain

Because pain is a multifaceted behavior, treatment packages generally are more effective than single treatments. In one study, for example, clients' using coping skills along with changing the consequences of pain behaviors resulted in greater pain management than changing consequences alone.[10] The components of treatment packages for pain include changing the maintaining consequences of pain behaviors, cognitive-behavioral coping skills therapy, relaxation training, and biofeedback (as well as nonbehavioral treatments such as medication, physical therapy, and exercise).[11]

Biofeedback provides information (feedback) about a physiological function, such as muscle tension associated with headaches, to help the person modify that function. The individual is "hooked up" to electromechanical equipment, similar to a polygraph, that provides the individual with the moment-to-moment status of the physiological function (see Photo 16-1). For example, a tone or visual display indicates the level of muscle tension. Patients are instructed to keep their muscle tension within an acceptable range (although how they achieve this is left up to them). Patients learn to achieve the same outcome without the biofeedback equipment in their home environments by identifying their sensations associated with an optimal physiological level during biofeedback and then using these sensations as cues to modulate their level (employing the same strategies that they used during biofeedback training).

Biofeedback and relaxation training are often used to treat and prevent chronic headaches.[12] For tension headaches, relaxation training and



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PHOTO 16-1

In biofeedback training, electrodes attached to the client transmit information about a physiological function, such as muscle tension, to electromechanical equipment that provides the client with feedback about a physiological state.

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electromyographic (muscle tension) biofeedback appear to be equally effective.[13] For migraine headaches in adults, the combination of relaxation training and thermal (skin temperature) biofeedback results in larger reductions in migraine activity than either treatment alone.[14] Thermal biofeedback may be the treatment of choice for children's migraine headaches.[15] Biofeedback equipment that resembles a computer game has been developed for children and adolescents, and it may increase patients' motivation to undergo and remain in the treatment.[16] A meta-analysis has clearly demonstrated the efficacy of biofeedback for tension headaches and its effects were maintained over an average of 15 months.[17] Although biofeedback is superior to relaxation, the combination of the two treatments is most effective, especially for children and adolescents.

Adding behavioral parent training to biofeedback for the treatment of migraine headaches has reduced headache frequency in children significantly more than biofeedback alone.[18] When their child is experiencing a headache, the parents are instructed to (1) praise the child for using coping skills, (2) encourage the child to continue normal activities (for example, attending school and performing daily chores), (3) remove attention for pain-related behaviors (for instance, not asking how much the headache hurts), (4) administer pain medication only as prescribed and not on request, (5) treat headaches that require reduction of normal activity as an illness (for example, the child must remain in bed), and (6) recruit others (such as teachers) to follow the same guidelines.

Studies of relaxation training and biofeedback for both migraine and tension headaches have demonstrated an average of 50% reduction in headaches compared with 5% improvement for clients in wait-list control groups and 15% improvement for clients receiving a placebo medication.[19] Biofeedback and relaxation training also can be effective when self-administered with minimal therapist contact.[20]

For reducing both headaches and medication usage, biofeedback-assisted relaxation may be superior to self-relaxation that involves 10 to 15 minutes of relaxing each day while thinking peaceful thoughts.[21] Cognitive therapy and other cognitive-behavioral therapies for migraine headaches do not appear to enhance the effectiveness of biofeedback-assisted relaxation training.[22] As for the mechanisms that are operative with biofeedback-assisted relaxation, it seems to change important physiological functions associated with headaches, such as cerebral blood flow velocity.[23]

In contrast to the poor long-term maintenance typically found with medication for headaches, follow-up studies indicate that behavioral treatments maintain their effectiveness for at least as long as 3 years.[24] Moreover, behavioral treatments for headaches are associated with positive side effects, such as reduction in anxiety and depression, which do not occur with pain medication.[25]

Cognitive-behavioral coping skills treatment packages that include relaxation and cognitive restructuring are effective treatments for managing pain associated with rheumatic diseases.[26] Juvenile rheumatoid arthritis, a chronic and recurrent pain condition, has been treated successfully with relaxation training, breathing exercises, and emotive imagery.[27] Treatment packages incorporating cognitive

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restructuring, relaxation training, and emotive imagery have been effective in reducing pain from fibromyalgia (a chronic multisite pain condition).[28]

Some cognitive-behavioral coping skills treatment packages have been very brief, such as the single-session stress inoculation training program used to help African-American children cope with pain associated with sickle cell anemia, which you read about in Chapter 14 (page 377).[29] In another program involving three 45-minute therapy sessions, African-American adults with sickle cell anemia learned calming self-instructions through modeling and behavior rehearsal to cope with pain.[30] The treatment package also included relaxation training and self-distraction techniques. Sixty-seven patients were assigned either to the cognitive-behavioral coping skills training group or to a control group that received disease education. At a 3-month follow-up, patients who had participated in the coping skills treatment reported significantly less pain and more attempts to cope with pain than patients in the control group. Moreover, on days when they experienced pain, patients receiving the cognitive-behavioral treatment required fewer contacts with health care professionals than patients in the control group.

Engaging in differential relaxation allows patients to employ muscle relaxation to cope with pain during the course of their daily activities.[31] Often, there are identifiable antecedents to pain that people can use as cues to begin differential relaxation. For example, stress-evoking situations and anxiety often precipitate and exacerbate pain associated with existing medical conditions, such as the uncomfortable itching associated with eczema (skin inflammation) or the physical discomfort associated with menopause, both of which have been successfully treated with relaxation training.[32] To identify situations in which patients are particularly vulnerable to headaches, patients learn to monitor their headaches; they record in a *pain diary* such information as the circumstances in which the pain occurs, what they are doing and thinking at the time, and the consequences of the pain.[33]

In many cases, learning to *tolerate* chronic pain, rather than reducing it, is the most realistic goal of therapy. Cognitive-behavioral coping skills therapy can help patients achieve this goal. An example is Dennis Turk's stress inoculation training for pain that combines relaxation training, breathing exercises, attention diversion, and emotive imagery.[34] These procedures are similar to the Lamaze method of natural childbirth.[35] In one study of the treatment of chronic pain and whiplash-associated conditions, participants receiving Acceptance and Commitment Therapy showed significant differences in pain disability, life satisfaction, fear of movement, depression, and psychological inflexibility compared with participants in a wait-list control group—although pain intensity did not decrease in either group.[36]

Behavioral Treatment of Chronic Pain in Perspective

Although behavior therapy procedures have been used to treat a variety of pain conditions, most research has focused on lower back pain and headaches. Generally, behavioral treatment of chronic pain has been successful.[37] In the majority of cases, however, patients experience a *reduction* in pain, rather than a complete elimination of pain.[38] The improvement often is substantial enough that patients can resume normal activities despite their still experiencing some physical discomfort. In the case of headaches, treatment gains have been

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maintained for 1 to 4 years without any specific maintenance procedures.[39] An indirect measure of the effectiveness of behavioral treatments for pain is that most pain clinics employ behavior therapy procedures as part of the treatment packages offered to patients.

Turning to specific treatments, changing maintaining consequences of pain behaviors has been shown to be effective in a number of studies.[40] However, its application has been narrow. It has been applied exclusively to pain associated with physical activity (primarily chronic lower back pain), and it has focused on increasing exercise and activity and decreasing medication usage while ignoring emotional and cognitive aspects of pain.[41] Another potential limitation of the consequential approach concerns transfer to and long-term maintenance in clients' natural environments.[42] The ultimate success of the treatment may depend on instituting specific procedures to foster transfer and maintenance (such as family members' continuing appropriate contingencies), which has not always been done.

Both biofeedback and relaxation training can be effective in treating headaches,[43] and cognitive-behavioral coping skills approaches have been successful in treating a variety of types of pain.[44] Distraction is one possible coping skill that is helpful for dealing with pain, and creating distraction with virtual reality scenes and sensations is a recent innovation.[45] Treatment outcomes with patients suffering from chronic pain appear to be enhanced when they are given detailed information about when and how to use coping skills[46] and when coping skills are individualized.[47]

To summarize, four major behavioral interventions have been used to treat chronic pain: changing maintaining consequences, biofeedback, relaxation training, and cognitive-behavioral coping skills therapies. At present, none of the four treatments has been shown to be consistently superior to the others.[48] This state of affairs is not necessarily bad because individual patients differ widely in their responses to the treatments, which means that there is a need for a variety of effective procedures.[49] Moreover, treatment packages consisting of a combination of the four therapies generally are effective.[50]

MEDICALLY UNEXPLAINED SYMPTOMS

Medically unexplained symptoms refer to physical complaints for which a physical cause cannot be found and that do not fit the criteria for a known psychological disorder (for example, heart palpitations related to panic disorder). The symptoms are chronic and result in decreased activity, social behavior, and work performance.

Medically unexplained symptoms are very common. According to some studies, physical complaints such as fatigue, backache, headache, dizziness, chest pain, and abdominal pain have no identifiable organic cause in more than 75% of cases.[51] Because the symptoms persist and are unexplained, patients often engage in a continual and costly search for the "correct" diagnosis, which results in multiple diagnostic tests and hospitalizations. Also, such patients often have comorbid psychological disorders, notably anxiety and depression,[52] and there is a need to treat them as well as the somatic symptoms.[53]

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Cognitive-behavioral therapies can serve three functions in treating medically unexplained symptoms: (1) supplementing ongoing medical interventions, (2) replacing medical treatments that involve invasive procedures or negative side effects, and (3) offering alternative treatments where no effective medical interventions exist. The cognitive-behavioral therapies include relaxation training, biofeedback, cognitive restructuring, problem-solving training, assertion training, and collaborative empiricism exercises (derived from cognitive therapy).[54] Chronic fatigue syndrome, noncardiac chest pain, and fibromyalgia syndrome are three examples of common medically unexplained symptoms that have been treated with cognitive-behavioral therapies.

Chronic fatigue syndrome is characterized by disabling fatigue lasting more than 6 months and resulting in at least 50% reduction in daily activity. Cognitive-behavioral interventions have resulted in reduced emotional distress, increased activity level, and increased functional abilities (such as daily self-care behaviors),[55] and these interventions seem to be more beneficial than medical treatments alone.[56] The treatment effects appear to be due to an increase in the patient's sense of control over fatigue, perceived activity, and self-reported physical functioning and a decrease in the patient's focusing on symptoms.[57] Whereas most studies have examined cognitive-behavioral interventions for adults, the interventions appear to be applicable to adolescents,[58] including using an Internet-based treatment in the Netherlands.[59]

Noncardiac chest pain is persistent chest pain without any identifiable cardiac etiology. The benefits of cognitive-behavioral treatments for this condition include decreased or cessation of chest pain, increased activity, reduced emotional distress, and decreased use of medications.[60] One study showed that the effects of a three-session manual-based cognitive-behavioral treatment were largely due to a reduction of catastrophic interpretations of bodily symptoms.[61] Brief cognitive-behavioral therapy is more cost effective than medication that is often used to treat patients in general hospital emergency departments for noncardiac chest pain associated with panic attacks.[62]

Fibromyalgia syndrome is a musculoskeletal condition involving diffuse pain of at least 3 months' duration. There is increased pain sensitivity in multiple tender points throughout the body and often stiffness in muscles and connective tissue. Certain forms of fibromyalgia have no identifiable physiological cause. The effects of cognitive-behavioral interventions for fibromyalgia have included reduced pain and emotional distress as well as improved self-efficacy beliefs and quality of life.[63] Impressive results from a study conducted in Spain indicated that not only was stress inoculation training a highly effective treatment for fibromyalgia but it also was superior to medication.[64] A phone-delivered cognitive-behavioral intervention was also found be superior to medication.[65] Other behavior therapies that have successfully treated fibromyalgia include Acceptance and Commitment Therapy[66] and a virtual reality cognitive-behavioral intervention designed to develop relaxation and mindfulness skills.[67] The treatment of medically unexplained symptoms is an exciting new application of cognitive-behavioral therapies. At present, the research findings appear to support the conclusion that the interventions are promising, but further research is required to demonstrate clear-cut effectiveness.[68]

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ADHERENCE TO MEDICAL REGIMENS

Patients' failure to follow medical advice—for example, to take medication or do physical rehabilitation exercises—is a major problem for the medical profession and has been described as a global public health concern.[69] In fact, nonadherence may occur as frequently as 70% of the time for patients in general[70] and 87% of the time for pediatric patients.[71] Clearly, the most effective treatment is worthless if patients do not avail themselves of it, and, in some cases, adherence can mean the difference between life and death. For instance, nearly perfect adherence to a stringent medication regimen is imperative for appropriate HIV disease management.[72]

Early research on increasing adherence to medical regimens attempted to identify patient characteristics associated with nonadherence, such as level of education and personality traits. However, it appears that there is little or no relationship between patient characteristics and nonadherence.[73] It is more useful to view adherence as a *behavior*, rather than a trait,[74] and to develop procedures for accelerating specific adherence behaviors, such as administering frequent, immediate, and meaningful positive reinforcement to enhance parental adherence to their children's health care needs.[75]

With many medical regimens, the immediate consequences of "following doctor's orders" at best are minimally positive because the benefits are usually delayed. At worst, complying with medical regimens may be distinctly aversive, such as taking antibiotics that result in stomach-upset and engaging in painful and exhausting physical rehabilitation exercises.[76] In contrast, patients readily adhere to medical regimens that have immediate benefits, such as taking pain medication.

Adherence can occur only *if the patient first remembers and then is sufficiently motivated* to follow the prescribed treatment. Prompting is used to help patients remember to perform treatment-related behaviors, and reinforcement is employed to provide the motivation.[77]

Taking medication, engaging in health-related behaviors (such as following a prescribed diet), and keeping medical appointments are three crucial aspects of medical treatment with low rates of compliance. Behavioral interventions have had some success in dealing with these problems.

TAKING MEDICATION

Low rates of compliance with prescribed medication regimens are typical in patient populations.[78] Physicians frequently prescribe regular doses of medication for an extended time, ranging from a week to years (as for essential hypertension, epilepsy, and diabetes). Environmental prompts to remind patients to take medication may be as simple as special labels on medicine bottles, such as a picture of a clock on which the hours the medication needs to be taken are circled,[79] or pill boxes with separate compartments for each day of the week, as shown in Photo 16-2 (page 452). A more sophisticated prompting device is a portable timer and pill dispenser that sounds a tone when a pill should be taken.[80] The tone continues until a knob is turned that releases a pill into the patient's hand. The advent of mobile communication devices (such as smartphones) could facilitate elaborate prompting of medical regimens that could include explicit step-by-step directions for carrying out the procedures.[81]

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PHOTO 16-2
Patient using a daily pill box, a simple stimulus control device that prompts taking daily medication.

Naturalistic stimulus control can be used to tailor a medication schedule to the patient's daily routine so that regularly occurring activities serve as cues for taking medication. This might involve taking medications at the same time each day,[82] such as with meals or right before leaving the house in the morning.[83]

Merely remembering to take medication often is not sufficient to ensure adherence. Accordingly, stimulus control procedures generally are supplemented with reinforcement. In one study, the combination of telephone reminders and lottery tickets as reinforcers increased patients' taking anticonvulsive medication an average of 43%.[84] Another example involved a token system for two children (ages 8 and 10) to increase using an inhaler for asthma three times a day.[85]

Although prompting and reinforcement can be effective in obtaining adherence to taking medication, when these procedures are discontinued the adherence may not persist.[86] Adherence is more likely to be maintained if self-control skills are added to stimulus control and reinforcement procedures. One program taught patients with high blood pressure to use stimulus control procedures (for example, to associate pill taking with breakfast) and self-monitoring (of the medication taken and blood pressure).[87] Additionally, every 2 weeks, the patients' blood pressure was checked. When their blood pressure was below a set criterion, patients were given a $4 credit toward the purchase of blood pressure recording equipment. Six months after the intervention, patients' medication adherence (assessed by random urine samples) was 80%, compared with 39% for comparable patients who were not in the program.

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Punishment procedures have also been used to increase adherence to taking medication. For example, response cost for failure to take doses of disulfiram (Antabuse)—a drug used in the treatment of alcohol dependence—has proven effective.[88] In one study, patients who had chronic drinking problems left "security deposits" (the amount was individually negotiated with each patient) at the clinic where they received the disulfiram. They forfeited either $5 or $10 (which was given to a charity) for each missed dose during a 3-month treatment contract. The patients missed only 8% of the scheduled clinic visits for medication and were abstinent on 95% of their visits.

ENGAGING IN HEALTH-RELATED BEHAVIORS

Besides prescribing medication, physicians instruct patients to perform various health-related behaviors, such as maintaining a specific diet, engaging in regular exercise, and monitoring indicators of bodily functions (such as blood glucose level). However, physicians' instructions alone are not likely to change patients' health-related behaviors.[89] Getting children and adolescents to consistently carry out necessary medical procedures is especially difficult, particularly when multiple behaviors are required.[90] For instance, people with diabetes may have to engage in a variety of health care routines, including maintaining dietary restrictions, self-injecting insulin, testing their urine, and keeping their feet clean (because of the increased vulnerability to infection from poor circulation in the extremities). Prompting in the form of visual cues generally has a minimal effect on adherence;[91] however, written prompts have been shown to increase self-monitoring of blood glucose levels.[92]

Self-monitoring may be an effective intervention for increasing adherence to simple regimens, such as engaging in a single exercise.[93] However, self-monitoring is likely to be ineffective for complex regimens, such as those required for diabetes;[94] elaborate prompting may be required, such as a 56-step checklist for glucose monitoring that was successful with a woman who had serious memory impairment.[95] The patient was verbally prompted to read each instruction, follow it, and check it off before going to the next step. She was praised for correctly performing each step and given corrective feedback for errors. After 90% accuracy was achieved, the prompts and feedback were faded. Whereas before the intervention the patient's accuracy in performing the behaviors was as low as 40%, after the intervention her accuracy was consistently at or above 90%.

Reinforcement results in the most consistent adherence to health-related behaviors.[96] Token economy programs have been used to increase compliance with prescribed medical regimens for children with diabetes[97] and children on hemodialysis (a blood purification procedure).[98] The successful use of a token economy with an 82-year-old man to get him to follow a prescribed diet, do his exercises, and take his medication after a heart attack was described in Case 9-1 (page 205). Contingency contracts have proved useful with children and adolescents as well as with adults. For example, in a program for children and adolescents with hemophilia (a blood clotting disorder), the use of contingency contracts with token reinforcers resulted in 81% to 90% adherence to exercise and diet over 6 months.[99] Other procedures that enhance adherence to

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prescribed dietary and exercise regimens are self-monitoring, stimulus control, and relapse prevention procedures.[100]

When low adherence is maintained by a skill deficit in the prescribed medical procedure, modeling can increase adherence.[101] For example, parents of children with hemophilia were taught to administer factor replacement therapy, a complex emergency treatment for bleeding.[102] A nurse practitioner demonstrated the procedure and then gave parents feedback as they rehearsed it. The parents' skill level increased from 15% before the intervention to 92% during the intervention and 97% at follow-up. Modeling also has been helpful in teaching social and coping skills to overcome social barriers to adherence that children and adolescents experience (such as being called "sicky" when not participating in sports in school).[103] Behavioral parent training is another strategy for enhancing children's adherence to medical regimens, such as prescribed diets for children with cystic fibrosis.[104]

Dialectical behavior therapy to promote adherence in difficult-to-treat youth with chronic illnesses might be a potential intervention. Targeting behaviors that interfere with treatment, DBT has resulted in improvements in adherence (and depression) in a small sample of adolescents with chronic kidney disease.[105]

KEEPING MEDICAL APPOINTMENTS

Showing up for scheduled medical appointments is crucial for obtaining medical care and treatment. Telephone calls[106] and mailed reminders[107] are simple, relatively low-cost prompts, but they are not always successful.[108] As with the other targets of adherence, reinforcement generally is the most effective strategy to get people to keep medical appointments. For example, in a treatment program for heroin dependence, clients were given the privilege of taking their methadone (a drug used to treat heroin dependence) at home over the weekend if they made weekly clinic visits. This intervention increased the percentage of appointments kept from 45% to 89%.[109] In a pediatric clinic, the number of appointments that were kept was increased by including parking passes with mailed reminders;[110] the passes allowed parents to park adjacent to the clinic, which saved them time. Similarly, whereas keeping follow-up appointments at a family practice center was unaffected by reminder cards, offering free or reduced-rate appointments significantly increased appointments kept.[111]

COPING WITH MEDICAL/DENTAL PROCEDURES AND ILLNESS

Medical procedures, hospitalization, and even routine visits to the doctor or dentist produce significant stress and anxiety in many individuals. People fear pain, unfamiliar instrumentation and surroundings, separation from loved ones, and receiving a serious diagnosis. Children are particularly vulnerable to these fears.

As you saw in Chapter 12, modeling therapy is used to prepare children and adults for medical treatments. Another strategy is to teach patients coping skills to actively reduce their anxiety and discomfort as they prepare for and undergo treatments. Using coping skills also can facilitate medical procedures (such as lying still during a lumbar puncture) and aid in the recovery process. For surgery, coping skills can (1) improve patients' cooperation before, during, and after

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surgery; (2) reduce the amount of postoperative analgesic medications required; (3) speed recovery and reduce time spent in the hospital; and (4) reduce the amount of time and support patients require from others during recovery.[112]

To cope with painful medical procedures, children have been taught cognitive-behavioral coping skills, such as progressive relaxation, breathing exercises, emotive/distracting imagery, and the use of positive self-statements.[113] A variant of in vivo desensitization, in which children's preferred activities (such as playing a video game) are paired with stimuli associated with invasive medical procedures, has lowered the distress of children who must repeatedly undergo painful procedures.[114] Treatment packages usually are employed to teach patients to cope with medical procedures and tend to be more effective than single therapies.[115]

Medical procedures need not be painful to cause distress. For example, magnetic resonance imaging (MRI) used for diagnostic purposes may cause claustrophobia (fear of enclosed spaces) because patients are placed in a narrow tube and must remain motionless for extended periods. One approach to reducing such anxiety is to administer a pleasant fragrance during the MRI procedure, which may serve to distract or relax the patient.[116] Another approach used with children is to dispense token reinforcers for lying still during the MRI procedure.[117] Afterward, the children exchange the tokens for backup reinforcers.

Many children with intellectual and developmental disabilities and autism spectrum disorder have fears of medical procedures, which result in avoidance behaviors that preclude their getting needed medical attention. Treatment packages primarily consisting of graduated exposure therapy, modeling, and differential reinforcement have proved successful in reducing such fears and allowing children to receive medical attention.[118] Case 16-1 provides an example of an intervention used to get an adolescent to tolerate routine medical examinations.

CASE 16-1

Teaching an Adolescent With Autism Spectrum Disorder and Intellectual Disability to Tolerate Routine Medical Examinations[119]

Alice was a 16-year-old who was diagnosed with autism spectrum disorder and severe intellectual disability. Although she had some serious physical health problems, she resisted medical treatment; she had not seen a physician in almost 2 years.

Treatment was conducted in the nursing suite of the school for children and adolescents with intellectual disabilities that Alice attended. The suite's reception area, central office, and examination rooms were similar to typical pediatric care offices. Baseline measurements were taken of Alice's compliance with 12 steps in a hierarchy of procedures involved in a medical examination (beginning with "sitting in the waiting room" and ending with "complying with an ear exam" that Alice found most aversive).

Before each of the 57 treatment sessions that spanned 4 months, Alice's teacher read her a story that described the step in the examination that would

(*continued*)

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CASE 16-1 (*continued*)

be targeted that day. Then, in the nursing suite, an adult model demonstrated each compliance behavior. Alice was then asked to perform the behavior and was given social reinforcement and candy for successful compliance. She also received prompts and verbal encouragement throughout the treatment sessions. Compliance with each step during three consecutive sessions was required before moving on to the next step in the hierarchy.

During baseline, Alice had not complied with even the first step in the examination hierarchy for three consecutive sessions. In contrast, the treatment resulted in Alice's gradually complying with the hierarchy steps so that at the end of treatment she was able to tolerate the full medical examination.

In a related application, a stimulus control procedure called *behavioral momentum compliance training* (along with differential reinforcement and extinction) was used to keep 22-month-old Aaron still while he was undergoing a medical procedure.[120] **Behavioral momentum compliance training** is employed to get a client to comply with a low-probability request (one with which the client is not likely to comply) by preceding it with a series of high-probability requests (those with which the client is likely to comply). Aaron's mother first made a series of high-probability requests of Aaron (such as "Touch your head," "Say, 'Mom,'" and "Blow Mom a kiss") and praised him for compliance with each request. Immediately after the series of high-probability requests, Aaron's mother told him, "Hold still," which was a low-probability request. The treatment package resulted in a significant increase in Aaron's remaining still during medical procedures, from 44% to 78% of the time.

Parents' participation in interventions aimed at reducing their children's stress related to medical procedures is beneficial. For example, pediatric cancer patients who had their veins punctured to draw blood or administer chemotherapy cried significantly less when their parents prompted and reinforced (with praise and token reinforcers) their children's engaging in a breathing distraction technique.[121] Parents' participation not only is helpful to their children but also can vicariously reduce parents' anxiety (such as in Case 12-3 [page 283] in which a mother's fear of dental procedures was indirectly reduced after she participated in the vicarious extinction of her daughter's fear of dental procedures).[122] Parents whose children are seriously ill and undergoing medical procedures often experience high levels of stress, which may cause or exacerbate their children's anxiety and stress. In contrast, parents who are calm and effectively deal with their own stress are better able to help their children, including serving as coping models for them.

Various programs have been developed to directly treat parents' anxiety about their children's illnesses. For instance, parents whose children underwent painful bone marrow aspirations or lumbar punctures for leukemia were given stress inoculation training to deal with their own anxiety.[123] The training involved three 15-minute training sequences consisting of (1) exposure to a modeling film that provided information and examples of coping behaviors, (2) instruction in using coping self-statements to counter catastrophic self-statements, and (3) relaxation training (including home practice). Other parents

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received no direct intervention for their own anxiety but participated in their children's cognitive-behavioral treatment. The parents who received stress inoculation training reported lower anxiety and used more positive self-statements than parents who only participated in their children's treatment. As another example, a problem-solving training program has been developed specifically for parents whose children are diagnosed with cancer and who are at increased risk for significant emotional distress.[124]

A variety of treatments have been found to be effective in helping children and adults cope with stress associated with dental visits.[125] For instance, low-income preschool children who had no previous dental treatment benefited from learning to employ relaxation exercises, breathing exercises, and coping words (such as "calm" and "nice").[126] The children also were given descriptive information regarding the dental procedures and the sights, sounds, and physical sensations they would experience. These interventions reduced the children's anxiety and discomfort, physiological arousal, and disruptive behaviors, and they also increased children's cooperation with dental procedures.

Adults with a true dental phobia are so anxious about dental procedures that they will not see a dentist even though they may need treatment. Systematic desensitization can be helpful in such cases.[127] In one study, a single session treatment package consisting of systematic desensitization and stress inoculation training was compared with antianxiety medication (benzodiazepine) and a no-treatment control condition. Both active treatments reduced clients' anxiety during dental procedures significantly more than the control condition. However, at a 2-month follow-up, the clients treated with medication showed a return to pretreatment levels of anxiety, whereas the clients who received the behavioral intervention maintained their treatment gains. Most important, 70% of the clients receiving the behavioral treatment continued to obtain dental care, compared with 20% of those receiving medication—clearly a clinically significant outcome.[128]

When people have a medical crisis, such as learning that they require invasive surgery, they may experience symptoms of anxiety and depression because of unrealistic beliefs, cognitive distortions, and poor coping strategies. Cognitive-behavioral therapies, including stress inoculation training, problem-solving training, and cognitive restructuring, are particularly well suited for treating the distress surrounding medical crises.[129]

People living with HIV often experience anxiety, depression, anger, and stress; these states are not only psychologically debilitating but also are associated with more rapid progression of AIDS. A recent meta-analytic study of cognitive-behavioral interventions demonstrated their efficacy in reducing these emotional states.[130] As an example, a group cognitive-behavioral treatment package consisting of relaxation training, cognitive restructuring, assertion training, and anger management was used to assist gay men cope with HIV. Clients receiving the 10-week intervention, in comparison with clients in a wait-list control group, showed significant decreases in depressed mood and anxiety; they also had fewer cases of herpes virus, which is common in people infected with HIV and may contribute to the onset of AIDS.[131]

In addition to helping people cope with the distressing psychological ramifications of illness and medical treatments, behavior therapies have been used to reduce the negative physical side effects of medical treatments. For example,

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nausea and vomiting often occur with chemotherapy for cancer. These extremely noxious side effects generally begin 1 to 2 hours after the injection of the chemical and can persist as long as 24 hours.[132] Relaxation training has been successful in reducing the frequency and severity of nausea and vomiting.[133] Some patients also experience anticipatory nausea and vomiting,[134] which can be treated by systematic desensitization.[135]

As if the physical side effects of cancer treatment and the pain and fatigue caused by the disease itself were not horrible enough, cancer patients often are demoralized by the hospital social environment, which can result in psychological disorders, including anxiety and depression.[136] Cancer patients may be deprived of social reinforcers,[137] especially patients in isolation (which may be required because chemotherapy compromises the immune system). These patients' social reinforcers are limited to brief contact with the medical personnel who care for their needs. Accordingly, one of the few ways patients can control their social contacts is to develop symptoms that require close attention.[138] Case 16-2 describes the treatment of physical symptoms that were maintained by nurses' attention.

CASE 16-2

Physical Symptoms Related to Cancer Treatment Alleviated by Extinction and Differential Reinforcement[139]

Two patients with acute leukemia developed symptoms for which no physical cause could be found. Patient 1, a 24-year-old man, had a deep, raspy cough that did not respond to medication. Patient 2, a 63-year-old woman, regurgitated saliva excessively. Both patients were described as outgoing, friendly, and well adjusted to their illnesses. Their symptoms developed when they were placed in restrictive isolation.

It appeared that the patients' symptoms worsened in the presence of a nurse, which functioned as a setting event. This was confirmed by a clever systematic naturalistic observation procedure. The sounds of the symptoms were recorded for 16 hours over the course of 2 days in the patients' rooms. Three-minute segments were analyzed for (1) the presence of the symptom (for example, loud, repeated exhalation of air or sounds of spitting), (2) a nurse entering the room (for instance, sounds of the door opening and footsteps), and (3) talking. The symptoms were more likely to occur when a nurse was with the patients (the probabilities were .75 and .82 for Patients 1 and 2, respectively) than when the patients were alone (.25 and .18, respectively).

Treatment involved extinction and differential reinforcement of other behaviors. The nurses did not discuss the patients' symptoms with them at any time. If the symptoms continued during standard nursing procedures, the nurse finished the procedures and immediately left the room (extinction). However, if the symptom ceased or did not occur, the nurse remained in the room and talked with the patient for a minimum of 10 minutes after the medical procedures had been completed (differential reinforcement of other behaviors). Within 2 weeks, both patients' symptoms were eliminated.

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PREVENTION OF PHYSICAL ILLNESS

Indirectly, behavior therapy makes a contribution to preventing medical disorders by reducing anxiety, depression, and stress that contribute to the development and exacerbation of many disorders. Additionally, behavior therapies can reduce the use of substances that cause physical illness, such as the deleterious effects of alcohol. However, of the four roles that behavioral interventions play in dealing with medical disorders, *direct* prevention has received the least attention and has been the least effective. This is not surprising, given the obstacles that confront prevention initiatives, which will be discussed later in this chapter as well as in Chapter 18 (page 499).

Behavioral interventions designed to directly prevent medical disorders[140] have three major aims: (1) to *educate* people about the controllable factors that cause and exacerbate illnesses and about specific behaviors that can reduce the risk of developing illnesses, (2) to *impart skills* that result in preventive behaviors, and (3) to *motivate* people to engage in preventive behaviors. Behavioral prevention programs for HIV/AIDS include all three aims.

HIV/AIDS PREVENTION

Since it was first identified in 1981, acquired immunodeficiency syndrome (AIDS) has become a major epidemic in the United States,[141] and the highest infection rates occur with men who have sex with men (MSM) of all races and ethnicities.[142] As its name implies, AIDS involves a breakdown in the immune system, rendering the individual vulnerable to a host of diseases. It is caused by the human immunodeficiency virus (HIV), which is transmitted primarily through sexual contact (in semen and vaginal secretions) and direct infusion of contaminated blood (through shared hypodermic needles, blood transfusions, and childbirth).[143]

Because HIV infection has no known cure, it is a prime candidate for prevention. Fortunately, unlike many other life-threatening diseases with no known cures, the transmission of HIV is often linked to specific, identifiable, and potentially changeable patterns of behavior.[144] Preventive efforts have focused on reducing high-risk behaviors (see Table 16-3, page 460), especially with MSM, who between 2007 and 2010 accounted for 78% of new HIV infections among males and 63% of all new infections in the United States.[145]

The primary thrust of behavioral AIDS prevention programs has been to change complex, high-risk sexual behavior patterns by using treatment packages based on the model developed by Jeffrey Kelly and Janet St. Lawrence.[146] Their cognitive-behavioral coping skills model begins with extensive individual assessment, including tests of knowledge of risk behaviors, self-report measures of sexual activity in the recent past, self-monitoring of current risk behaviors, and role-played tests of sexual assertiveness (for instance, refusing a proposition to engage in unsafe sex). The program is conducted in small groups and consists of four basic components:

1. *HIV risk education* involves direct instruction concerning risk factors and ways to reduce them.
2. *Cognitive-behavioral self-management* begins with participants' identifying the maintaining antecedents of their high-risk behaviors (such as setting,

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TABLE 16-3
Behaviors That Place People at High Risk for HIV/AIDS and Alternative Low-Risk Behaviors

High-Risk Behaviors	Low-Risk Alternatives
Sexual activities that allow bloodstream exposure to seminal secretions or blood products (such as unprotected anal intercourse)	Nonpenetrative sexual acts (such as massage and masturbation) and use of condoms
Sexual contact with multiple partners	Establishment of stable relationships
Frequenting settings where casual or anonymous sexual contacts occur (such as bathhouses and pornographic movie theaters)	Avoidance of high-risk settings and the development of social supports conducive to a nonpromiscuous lifestyle
Excessive use of chemical substances that promote behavioral/sexual disinhibition or impaired judgment	Curtailed use of chemical substances that produce disinhibition and impair judgment

Source: Adapted from Kelly & St. Lawrence, 1987, p. 9.

mood, and intoxicant use). Then strategies for changing personal and environmental antecedents to lessen risks are taught. Participants generate and practice self-statements emphasizing that safer practices are possible, will reduce anxiety, and are worthwhile (for example, "I can change my sex practices"; "I'll feel better if I engage in safer sexual behaviors"; and "I did well avoiding that high-risk situation").

3. *Assertion training* teaches participants to refuse high-risk sexual propositions and to insist on engaging in safer sexual activities.
4. *Social skills training* teaches participants how to develop stable relationships involving a mutual commitment to healthful sexual behaviors.

In the final group session, participants identify risk reduction changes that they have made during the program. This session exposes participants to multiple coping models, gives them additional ideas about how they can modify their own behaviors, and strengthens their self-efficacy for reducing high-risk behaviors in their lives.[147]

The possibility of incorporating features of the face-to-face program in a multimedia text messaging intervention is being explored.[148] The messages, with URL links for accessing Websites, include role-playing communication skills, ways to apply a condom, and strategies for negotiating safer sex practices. If the intervention proves successful, it potentially will allow much greater access to prevention measures than face-to-face interventions can.

Cultural adaptation of HIV prevention programs is also a new initiative, such as the development of a culturally sensitive intervention for Botswanian adolescents.[149] To combat the high rate of HIV/AIDS in Nigerian female military personnel, a video-based cognitive-behavioral skills intervention to promote HIV risk reduction has been developed.[150] Using video for training has the

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advantage of not requiring skilled professional trainers, who are in short supply in Nigeria and other African nations. The skills video-based training, which includes HIV education, was compared to a video-based HIV education only control group. With a large sample of 346 women, the skills training significantly improved condom use, number of sexual partners, and use of alcohol before sex. Cognitive-behavioral coping skills therapies to prevent HIV infection have been used with high-risk adolescents such as those with other sexually transmitted diseases or substance abuse problems[151] and those who lack the social behaviors necessary for initiating, maintaining, and terminating social and sexual relationships with persons of the opposite sex.[152] Other targeted groups include teenagers who have run away from home[153] and those living in HIV epicenters;[154] inner-city, low-income men[155] and women;[156] gay and bisexual men;[157] college students;[158] adults with chronic psychiatric disorders such as schizophrenia and depression;[159] and people with intellectual disability.[160] Overall, such interventions moderately reduce high-risk sexual behaviors in a variety of age groups and populations, when compared with information-oriented treatments and no treatment.[161] The most common outcome measures used in these studies are (1) number of sexual partners; (2) number of protected and unprotected occasions of oral, anal, and vaginal intercourse; (3) percentage of time condoms are used; and (4) number of sexual encounters with a high-risk partner.[162] Unfortunately, each of these measures is based on self-reports that are easily fabricated. Ideally, these self-report measures should be corroborated by other types of measures, but this is rarely feasible with sexual activity.

The long-term maintenance of reductions in high-risk sexual behaviors brought about through cognitive-behavioral coping skills therapies has not yet been evaluated thoroughly. Initial studies indicated that the effects diminish over time.[163] For example, a 16-month follow-up assessment of 68 gay and bisexual men who had completed a cognitive-behavioral treatment program showed that 40% of the men had returned to unsafe sexual practices. Relapse was more common in men who were younger and who used alcohol or other drugs in conjunction with their high-risk sexual behaviors.[164]

ALL THINGS CONSIDERED: BEHAVIORAL MEDICINE APPLICATIONS

As you have seen, behavior therapy principles and procedures can make important contributions to comprehensive health care. They are especially valuable with regard to helping patients cope with medical treatments and increasing their adherence to medical procedures. Behavior therapy also can play a role in providing alternative treatments for some medical disorders and in preventing disease.

Medicine has traditionally focused on treatment—that is, on getting the patient well. Concern for the psychological well-being of patients in treatment has, all too often, been an afterthought. For example, the practice of waking sleeping patients in the hospital to give them sleeping medication is more than a well-worn joke. Many people may endure inconveniences and discomfort associated with medical treatments because they subscribe to the "no pain, no gain" philosophy. More serious psychological consequences are associated with the intense discomfort and pain brought about by cancer treatment, the dread of

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undergoing surgery, and the hopelessness and despair caused by chronic illness and its care. Behavior therapy has contributed to alleviating such problems.

Physicians have long recognized that patients' failure to follow prescribed treatment is a major impediment to providing adequate health care. However, neither physicians' skills nor medical technology is suited to changing the prevailing high rate of nonadherence. In contrast, behavior therapists have a large armamentarium of effective procedures for increasing patients' adherence behaviors.

Prevention of physical illness by promoting healthful behaviors and lifestyles also is an area in which behavior therapy procedures can make a difference. For instance, behavior therapy can influence proper diet, regular exercise, and the elimination of harmful drug habits (such as smoking and heavy drinking), all factors that directly enhance physical health. The major obstacle to implementing behavioral prevention programs is one faced by all prevention interventions—namely, the prevailing attitude "If it ain't broke, don't fix it." The benefits of preventive interventions may not become evident until years after the interventions are implemented. Further, because the goal of prevention is always the *absence* of disease, people may not recognize and appreciate the results of preventive interventions. Consider the fact that as you read these words, you are most likely unaware that you are breathing normally and that you are seeing the words clearly. In contrast, you would be aware of labored breathing if you had emphysema and of blurred vision if you had cataracts.

Another contribution made by behavior therapy to medicine is in providing alternative forms of treatment. For some medical conditions, such as certain types of chronic pain, existing medical treatments are inadequate. In other cases, existing medical treatments may be associated with potentially serious negative side effects, as with many drugs. Sometimes, the treatments themselves may be potentially life threatening, such as major invasive surgical procedures. In such instances, behavioral treatments may be preferable, especially if they safely provide comparable results. Finally, even putting aside the negative side effects of medication, one advantage that cognitive-behavioral interventions have over medication is that patients learn coping skills. Using coping skills may be associated with greater long-term maintenance of treatment gains,[165] and the skills may generalize to dealing with other problems people encounter in their lives.

SUMMARY

1. The application of behavior therapy to the assessment, treatment, management, rehabilitation, and prevention of physical disease falls under the rubric of behavioral medicine.
2. Behavior therapy serves four functions in dealing with medical disorders: treating medical disorders, increasing adherence to medical treatments, helping patients cope with treatments and illness, and preventing medical disorders.
3. Pain behaviors—overt behaviors indicating that a person is experiencing sensations of pain—are accessible to assessment and treatment. Well behaviors are overt behaviors that typically indicate that a person is not experiencing pain sensations.

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4. One approach to treating pain involves changing the consequences that are maintaining pain behaviors. Social attention, rest, and medication are common reinforcers for pain. Treatment involves extinction of pain behaviors and reinforcement of well behaviors. Attention and rest are made contingent on well behaviors rather than pain behaviors. Pain medication is made time contingent rather than pain contingent.
5. Cognitive-behavioral coping skills treatment packages that include biofeedback and relaxation training also are used to treat pain.
6. Behavioral treatments for pain typically reduce, rather than eliminate, pain. The reduction can be substantial enough for patients to resume their normal activities.
7. Cognitive-behavioral therapies have been used to treat medically unexplained symptoms, such as in chronic fatigue syndrome, noncardiac chest pain, and fibromyalgia syndrome.
8. Following medical advice and engaging in health-related behaviors have been increased by stimulus control, reinforcement, teaching patients self-control skills, and making the consequences of nonadherence unpleasant. Reinforcement generally is the most effective technique for increasing adherence. When low adherence is maintained by skill deficits, modeling is useful.
9. A variety of strategies have been used to help patients and their families deal with the stress, anxiety, discomfort, and pain associated with medical and dental procedures, hospitalization, and illness. They include teaching patients cognitive-behavioral coping skills and employing reinforcement and extinction procedures. Similar procedures also have been used to reduce the negative physical and psychological side effects of medical treatments.
10. Behavioral interventions have been used to help prevent physical illness by educating people about disease and motivating them to engage in healthful, preventive behaviors.
11. Prevention programs for decreasing high-risk behaviors for HIV infection have employed education, cognitive-behavioral coping skills therapies, assertion training, and social skills training.

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CHAPTER 17



Applications of Behavior Therapy to Psychological Disorders With Primary Physical Characteristics

Enuresis

Urine Alarm
Dry-Bed Training
Dry-Pants Method

Tic Disorders and Nervous Habits

Habit Reversal for Tics
Habit Reversal for Nervous Habits
Other Applications of Habit Reversal

Insomnia and Sleep Problems

Infant and Childhood Sleep Problems
Adult Insomnia

PARTICIPATION EXERCISE 17-1 Modifying Setting Events to Enhance Studying

Bulimia Nervosa

All Things Considered: Applications of Behavior Therapy to Psychological Disorders With Primary Physical Characteristics

SUMMARY
PARTICIPATION EXERCISE ANSWERS
REFERENCE NOTES

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In addition to its contribution to behavioral medicine described in the previous chapter, behavior therapy plays an important role in the treatment of a variety of psychological disorders whose primary feature is a physical problem. To illustrate this application, we'll look at how behavior therapy is used to treat enuresis, tics and nervous habits, insomnia, and bulimia nervosa.

The distinction between these psychological disorders and the medical problems discussed in Chapter 16 is based on the way they are classified by health professionals.[1] For example, whereas pain and medically unexplained symptoms are considered medical disorders, enuresis and insomnia are viewed as psychological disorders. This distinction is, admittedly, somewhat arbitrary and artificial. Both psychological disorders with primary physical characteristics and medical disorders increasingly are being viewed in terms of an interplay of physical and psychological factors.[2]

ENURESIS

Enuresis is the inability of people beyond the age of 5 to voluntarily control urination, when no known physical cause is involved. Enuresis most frequently occurs during sleep, so treatment efforts have focused on *nocturnal enuresis,* or bedwetting. It is a common problem among children, occurring in as many as 10% of 5-year-olds, 5% of 10-year-olds, and 1% of 15-year-olds.[3] Nocturnal enuresis is more prevalent in boys than in girls.[4]

Urination is the natural response to tension in the bladder as it fills up. Normally, bladder tension wakes us when we are sleeping, and we get out of bed and go to the bathroom. The problem in enuresis is that bladder tension does not wake the person. Traditional verbal psychotherapy generally has been unsuccessful in treating enuresis.[5] In contrast, two behavior therapy procedures—the urine alarm and dry-bed training—have proved to be highly effective.

URINE ALARM

A **urine alarm** is a device that sounds an alarm to wake the child when the child begins to urinate. The original urine alarm was the *bell-and-pad method;* urine that contacts a special pad under the bedsheet completes an electrical circuit that sounds an alarm.[6] Through repeated associations between the alarm and bladder tension, bladder tension alone becomes the stimulus that awakens the child before urination starts. In classical conditioning terms, the alarm is an unconditioned stimulus that wakes the child (unconditioned response), and bladder tension is a conditioned stimulus that comes to awaken the child (conditioned response).

Although the bell-and-pad apparatus still is available, a more convenient device generally is used today. It consists of a moisture-sensitive switching system; the sensor end goes inside the client's underpants and is connected to a small alarm that unobtrusively is attached to the client's outer clothing, such as pajamas. This device, which can be purchased over the counter in pharmacies, also is applicable to diurnal (daytime) enuresis, which affects approximately 1% of children over the age of 5.[7]

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The urine alarm is very easy to use. It has been employed for more than 75 years[8] (making it the second oldest behavior therapy; progressive relaxation is the oldest), and it is effective 70% to 80% of the time.[9] It has been shown to be superior to medication (imipramine)[10] and traditional psychotherapy.[11] The relapse rate after 6 months has been about 33%, and the predominant reason for relapse has been poor compliance with the procedures.[12] The urine alarm has been employed alone and as part of treatment packages.[13] Interestingly, the urine alarm tends to be as effective alone as when it is combined with other behavioral treatments.[14] Although the urine alarm is most often used with children, adolescents with autism spectrum disorder and other developmental disabilities[15] and older adults with Alzheimer's disease and other dementias have been treated with the urine alarm.[16]

DRY-BED TRAINING

Dry-bed training, developed by Nathan Azrin and his colleagues,[17] is a comprehensive treatment package that employs shaping and overcorrection to teach children the behaviors required to keep their bed dry throughout the night. Table 17-1 outlines the steps involved in dry-bed training.

TABLE 17-1
Protocol for Dry-Bed Training With Parents as Trainers for a 6-Year-Old Boy

I. *Training day*
  A. Afternoon
    1. Child encouraged to drink favorite beverage to increase urination
    2. Child requested to attempt urination every half hour
      a. If child feels urge to urinate, he is asked to wait for increasingly longer periods of time
      b. If child *has* to urinate, he is asked to lie in bed as if asleep, then jump up and go to the bathroom (role-playing what he should do at night); his behavior is then reinforced with a favorite beverage and praise
    3. Child motivated to work at dry bed
      a. Parents and child review inconveniences caused by bedwettting
      b. Parents contract with child for reinforcers to be given after first dry night and after a specified series of dry nights
      c. Child specifies whom he'd like to tell that he is keeping dry
      d. Child is given a chart to mark his progress
  B. One hour before bedtime with parents' watching
    1. Child informed of all phases of procedures
    2. Child role-plays cleanliness training (to be used if bedwettting occurs)
      a. Child required to put on own pajamas
      b. Child required to remove sheets and put them back on
    3. Child role-plays positive practice in toileting (to be used if bedwettting occurs)
      a. Child lies down in bed as if asleep (lights out)
      b. Child counts to 50
      c. Child arises and hurries to bathroom, where he tries to urinate
      d. Child returns to bed
      e. Steps a–d repeated 20 times with parents counting
  C. At bedtime
    1. Child tells parents instructions for accident correction and nighttime awakenings
    2. Child continues to drink fluids
    3. Parents remind child about reinforcers and express confidence in child
    4. Parents comment on dryness of sheets
    5. Child retires for the night

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D. Hourly awakenings by parents until 1 a.m.
   1. If child is dry
      a. Minimal prompt (light touching) used to awaken (stronger prompt used if child doesn't wake up easily)
      b. Child asked if he needs to urinate
         i. If he can wait another hour
            (a) Parents praise his urinary control
            (b) Child returns to bed
         ii. If he must urinate
            (a) Child goes to bathroom
            (b) Parents praise him for correct toileting
            (c) Child returns to bed
      c. Child feels sheets and comments on their dryness
      d. Parents praise child for having dry bed
      e. Child given fluids (discontinued after 11 p.m.)
      f. Child returns to sleep
   2. When an accident has occurred
      a. Parent awakens child and reprimands him for wetting
      b. Parent directs child to bathroom to finish urinating
      c. Child given cleanliness training
         i. Child changes pajamas
         ii. Child removes wet sheets and places them in laundry basket
         iii. Child obtains clean sheets and remakes bed
      d. Positive practice in correct toileting (20 times) performed immediately after cleanliness training
      e. Child reminded that positive practice is necessary before going to bed the next evening
   E. Parents check child half hour earlier than normal waking the next morning
      1. If bed is wet, steps under IIB (below) implemented

II. *Posttraining (after training day)*
   A. If bed was dry in the morning
      1. Parents point out to child half hour before his usual bedtime that he does not have to practice (because bed was dry that morning) and so he can do what he wants in the half hour before going to bed
      2. Parents point out child's chart that shows his progress toward reinforcers
      3. Parents tell visitors to the home how child is keeping his bed dry
      4. Parents remark on child's success at least three times a day
   B. If bed was wet in the morning
      1. Parents wake child half hour earlier, prompt him to check his sheets, and ask him to say what he should do
      2. Child required to change bed and pajamas
      3. Child engages in positive practice in correct toileting (20 times)
      4. Child engages in positive practice (20 times) half hour before bed that night
      5. Child marks chart and is told "We will try again tomorrow"
      6. Parents tell visitors to the home that the child is learning to keep his bed dry

Source: Based on Azrin & Thienes, 1978.

These procedures illustrate the detail and precision inherent in many behavior therapy procedures.

Treatment begins with a night of intensive training. The child is awakened every hour to urinate if necessary and to be praised for having a dry bed. When an accident occurs, the child goes through a two-phase overcorrection procedure. First comes *cleanliness training*, a form of restitution in which the client changes the wet nightclothes and sheets. Second, there is repeated *positive practice*, which consists of (1) the child's lying in bed for a count of 50, then (2) hurrying to the bathroom and attempting to urinate, and finally (3) returning to

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bed. In addition, during the day, the child practices retaining urine in the bladder by using **retention control training**.[18] This procedure involves shaping the retention of increasingly greater amounts of urine for increasingly longer periods (created by frequently drinking favorite beverages).

Dry-bed training usually is implemented by the child's parents after they have been trained in the procedures by the therapist, which takes about 1½ hours.[19] However, the child is made largely responsible for carrying out the dry-bed training procedures. For example, the therapist first teaches the procedures to the child, who then explains them to the parents and requests their help in carrying them out.[20] The emphasis in dry-bed training is on the child's developing self-control skills and being reinforced for accomplishments. When accidents occur, the child assumes responsibility for correcting them by cleaning up and then by practicing the behaviors required to prevent accidents in the future (see Photo 17-1).

Dry-bed training eliminates enuresis more quickly and results in longer-lasting effects than the urine alarm.[21] The results of one study with 44 children between the ages of 3 and 15 (with an average age of 7) illustrate the rapidity and long-lasting effectiveness of dry-bed training.[22] Before dry-bed training, the children were wetting their beds an average of 92% of nights. On the first day after the intensive training, bedwetting was reduced to 18%, and it gradually decreased from there. At a 5-month follow-up, bedwetting was occurring on only 4% of the nights, a level that was maintained 1 year later.



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PHOTO 17-1
As part of dry-bed training, the child is responsible for changing bedding after accidents.

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The major limitation of dry-bed training is that it is labor intensive and complex and therefore less likely to be used than much simpler therapies, such as the urine alarm.[23] Modified, shortened versions of dry-bed training have been developed[24] and have been shown to be effective and still superior to the urine alarm alone.[25] Dry-bed training occasionally is used for adults, and one study revealed that eight of nine clients who had had enuresis most of their lives remained continent at a 6-year follow-up.[26]

DRY-PANTS METHOD

The principles of dry-bed training have been extended to normal daytime toilet training with impressive results.[27] Most children learn to use the toilet over a period of several months, and parental attempts to hasten the process generally have little effect.[28] Several methods of intensive reinforcement training have been moderately successful in reducing training time to approximately 1 month.[29] In contrast, using the **dry-pants method** (the daytime version of dry-bed training), children ranging in age from 20 to 36 months have been toilet trained in an average of 4 hours, and the average is 2 hours for children older than 26 months.[30]

A simplified variation of the dry-pants method was used to toilet train John, a 21-year-old man with profound intellectual disability who lived in a residential facility.[31] Over the years, many previous attempts to toilet train John had failed. Throughout the day, John was given large amounts of liquid and was taken to the bathroom every 30 minutes. An alarm system was attached to the inside of the toilet bowl and was activated by a small amount of urine. When the alarm sounded, a staff member praised John and reinforced him with food. John also wore a dry-pants alarm that signaled toileting accidents. When an accident occurred, a staff member took John to a private area, mildly reprimanded him (for example, "No, don't wet your pants"), and then withdrew social attention as John's clothing was changed and for an additional 10 minutes thereafter. The intervention resulted in a significant increase in John's urinating appropriately and a reduction in his toileting accidents. At a 3-month follow-up, John was completely continent.

TIC DISORDERS AND NERVOUS HABITS

A *tic* is a recurring, sudden, rapid movement or vocalization. Examples of *motor tics* are repetitive neck jerking, shoulder twitching, facial grimacing, and slapping oneself. Examples of *vocal tics* are repetitive throat clearing, snorting, and grunting. Although tics are largely involuntary, people can suppress them for varying lengths of time. Tics usually begin in childhood, are three times more common in males, and are exacerbated by stress. Children and adolescents who exhibit tics are viewed negatively by their peers,[32] and adults' social and occupational functioning may be impaired because of social ostracism and anxiety about exhibiting tics in the presence of others. In severe cases, tics may directly interfere with a person's daily functioning, as when eye blinking makes reading

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difficult. *Tourette's disorder* is the most serious tic disorder, involving multiple motor and vocal tics (which sometimes include *coprolalia,* involuntarily and inappropriately uttering obscenities).[33]

Medication is the most common treatment for tics, but its use is problematic. In the case of Tourette's disorder, for example, the frequency of tics is only reduced by about 50%,[34] and unwanted side effects have been noted in about 80% of clients taking medication.[35] Further, only about 20% to 30% of clients continue taking medication on a long-term basis.[36] Clearly, alternative treatments are needed. Five behavioral treatments have been used to treat tics: massed negative practice, changing maintaining consequences, progressive relaxation, self-monitoring, and habit reversal.

Massed negative practice, the most frequently used behavioral treatment for tics, has the client purposefully perform the tic as rapidly as possible. This is done for a set time (for example, 30 minutes), with short rest periods (for instance, 1 minute of rest for each 4 minutes of performing the tic).[37] Massed negative practice has been moderately successful in reducing the frequency of tics for some people,[38] with an average reduction of about 60%.[39]

Changing the maintaining consequences of tics is the second most frequently employed behavior therapy. Differential reinforcement[40] is effective in reducing tics in children, as the sole treatment[41] and when combined with other therapies.[42] Punishment can reduce tic frequency, and examples include contingent electric shock,[43] time-out from positive reinforcement,[44] and response cost.[45] However, the treatment effects with punishment may not transfer from the therapy setting to the client's natural environment and may be only temporary;[46] moreover, punishment procedures are less preferable than reinforcement procedures.

Using progressive relaxation is consistently effective in decreasing tics *while* the clients are relaxing.[47] However, the tics tend to return shortly after relaxation sessions have ended.[48]

Self-monitoring can be an effective treatment for tics.[49] Although self-monitoring typically is an assessment procedure (see Chapter 6), it is sometimes specifically used to modify a target behavior. Self-monitoring makes clients more aware of their tics, which is an essential component of effective treatment.

Massed negative practice, changing maintaining consequences, progressive relaxation, and self-monitoring all are moderately effective treatments for tics. To increase their effectiveness, various combinations of these treatments generally are used. However, by far the most effective treatment package for tics is habit reversal.

HABIT REVERSAL FOR TICS

Habit reversal is another potent therapy developed by Azrin and his colleagues.[50] It incorporates four components: (1) awareness training, (2) competing response training, (3) relaxation training, and (4) reinforcement. Awareness training and competing response training seem to be the most important components.[51]

Awareness training, which includes self-monitoring, involves extensive self-assessment to ensure that the client is aware of the frequency and severity of the

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tics, their environmental antecedents, and the individual responses that make up the tics. Clients and family members keep a record of when, how often, where, and with whom tics occur. Because knowing the specific component responses involved is necessary to control tics, clients are asked to observe their tics by looking in a mirror or videotaping themselves. They learn to detect the first signs of tics so that they will be able to stop the tics early in their sequence.

In *competing response training*, clients practice performing a response that (1) competes with the tic, (2) can be sustained for several minutes, (3) is compatible with everyday activities, and (4) is inconspicuous to others.[52] Table 17-2 provides examples of competing responses for various kinds of tics.[53] If you follow the instructions for the competing response for each type of tic, you'll experience how they make it difficult to engage in the tic movement.

Clients are taught progressive relaxation and are instructed to practice it daily. Additionally, they are taught to use differential relaxation in their daily lives whenever they feel anxious or emit a tic.

Reinforcement comes from a variety of sources. Family members are asked to praise the client when they observe that the client is tic free or shows a significant reduction in tics. Clients compile a list of the negative consequences of emitting tics (such as embarrassment and being restricted in their activities) and the positive consequences of eliminating tics (such as feeling confident and being able to engage in desired activities). They write the list on a card that they carry with them, and they periodically refer to it to remind themselves of the benefits of engaging in habit reversal procedures. Children are also given specific reinforcers

TABLE 17-2
Examples of Competing Responses Used in Habit Reversal for Tics

Tic	Competing Response
HEAD JERK	Isometric contraction of neck flexor muscles: pull chin down and in, head in, eyes forward
SHOULDER SHRUG	Isometric contraction of shoulder depressor muscles: push elbow toward hip
HEAD SHAKE	Slow isometric contraction of neck muscles with eyes forward until head can be held perfectly still
ARM JERK	Push hand down on thigh or stomach and push elbow in toward hip
LEG JERK	If sitting, place feet on floor and push down; if standing, lock knees
EYE BLINK	Systematic, soft blinking at rate of one blink every 3–5 seconds; frequent downward glance every 5–10 seconds
ORAL VOCAL TICS	Continuous slow, rhythmic breathing through nose with mouth closed
NASAL VOCAL TICS	Continuous slow, rhythmic breathing through mouth

Source: Based on Azrin & Peterson, 1988b.

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for completing therapy assignments and reducing tics below a predetermined goal level.

Habit reversal consistently has been shown to be highly effective in treating both motor and vocal tics in children, adolescents, and adults,[54] reducing them by about 90%, compared with roughly 50% with medication.[55] A variety of shortened, less complicated versions of habit reversal have been developed over the past few decades, and they appear to be as effective as the original formulation.[56] In addition to treating tics, habit reversal is used to treat various nervous habits.[57]

HABIT REVERSAL FOR NERVOUS HABITS

Nervous habits treated by habit reversal include thumb sucking,[58] fingernail biting,[59] bruxism (teeth grinding),[60] rumination (regurgitating food),[61] skin picking,[62] and motor stereotypies (excess, repetitive movements).[63] To illustrate the use of habit reversal for nervous habits, we'll look at its application to trichotillomania[64] and stuttering.[65]

Trichotillomania is an impulse-control disorder in which people repeatedly pluck hair from different parts of their body. Habit reversal is an effective treatment for trichotillomania for children and adults.[66] As an example of its use with chronic trichotillomania, consider the treatment employed with three 12-year-olds (two girls and one boy).[67] During awareness training, the clients learned to detect their hair pulling, first by describing what hair felt like between their fingers and then by actually feeling their hair between their fingers without actually pulling out their hair. In competing response training, the clients identified several behaviors that were incompatible with hair pulling (such as crossing their arms and sitting on their hands). The therapist instructed the clients to use their competing responses every time they were aware that they were pulling their hair or having an urge to do so. The clients simulated hair pulling and engaged in the competing response for 1 minute and then repeated the process 12 to 15 times. The therapist taught the clients' parents first to prompt their child to engage in a competing response when they observed their child's pulling out hair and then to praise the child for performing the competing response. Habit reversal resulted in significant reductions in hair pulling with all three clients.

Stuttering affects nearly 1% of adults and 5% to 10% of children,[68] and it is the most prevalent maladaptive habit in individuals with intellectual disability, occurring in up to 32% of that population.[69] The most common competing response employed in habit reversal for stuttering is *regulated breathing exercises* that consist of relaxing, slowly inhaling deeply through the nose, and slowly exhaling through the mouth. Habit reversal not only decreases stuttering but it also can increase the naturalness of speech, including the rate of speech (which often is slow and labored in people who stutter).[70]

One limitation of habit reversal is that it generally requires considerable time—from the therapist, the client, and family members (when they participate in the treatment). However, this is not always the case. In one study, five boys between the ages of 5 and 11 received a single session of habit reversal training in their homes for stuttering.[71] During awareness training, each child and his

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parents together practiced identifying the occurrences of stuttering from videotaped speech samples of the child, which were made ahead of time. Both the child and his parents learned and practiced regulated breathing exercises as the competing response. The child was taught to stop speaking when he began to stutter and begin regulated breathing. Parents provided social support and praise when their son applied the habit reversal procedures. Habit reversal resulted in significant reductions in stuttering in four of the five boys, and three of them maintained these gains for up to 9 months. The parents, who were an integral part of the therapy, found habit reversal to be an acceptable treatment.

Habit reversal often is a sufficient treatment for decreasing clients' maladaptive habits. However, it sometimes needs to be augmented with additional procedures to achieve the desired outcome. For example, when habit reversal only minimally reduced a 6-year-old girl's trichotillomania and thumb sucking, differential reinforcement and response cost were added, which resulted in near zero levels of both deceleration target behaviors.[72] Similarly, adding response cost to habit reversal resulted in further reductions in a 14-year-old boy's disruptive outbursts during athletic events.[73] Brief booster training sessions also can enhance long-term maintenance of treatment gains following habit reversal.[74]

OTHER APPLICATIONS OF HABIT REVERSAL

Although habit reversal is primarily used to treat tics and nervous habits, it also has been applied to a variety of other problems, including overeating,[75] eczema (skin inflammation),[76] and temporomandibular disorders (TMD or TMJ; pain in the jaw and surrounding structures).[77] For example, the effectiveness of habit reversal in treating TMD was compared to a standard dental intervention in which patients wore an appliance (splint) in the mouth for up to 20 hours a day.[78] Patients in the habit reversal group carried electronic pagers and were paged once every 2 hours during the day to prompt the prescribed therapy procedures: first, becoming aware of the position of their teeth and tension in their masticatory (chewing) muscles and then opening their mouth (thereby unclenching their teeth) and relaxing the masticatory muscles. Both treatments were effective and were maintained at a 1-year follow-up. Although habit reversal was not superior to the standard treatment, it has the advantage of being less intrusive and less costly.

INSOMNIA AND SLEEP PROBLEMS

Insomnia refers to difficulties in falling or staying asleep that result in personal distress; affect one's daytime performance, mood, and general psychological well-being; and are not directly caused by a medical condition or the effects of drugs.[79] It is estimated that 15% to 20% of adults suffer from chronic insomnia and that 30% to 40% experience occasional or transient insomnia.[80] Sedatives or other sleep-inducing medications are the most common treatment for adult insomnia. Sedating drugs—usually antihistamines—also are widely prescribed for infant and childhood sleep difficulties.[81] A number of potential problems are associated with using sleep medications, including deterioration in daytime

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functioning, rebound insomnia (greater difficulty sleeping after discontinuing sleep medication), psychological and physiological dependence on the drug, and financial expense.[82] Given the high prevalence of sleep problems among both children and adults and the disadvantages of using medication, psychological treatments play an important role in the treatment of chronic sleep problems. Behavior therapies are among the most effective psychological treatments.[83]

INFANT AND CHILDHOOD SLEEP PROBLEMS

Sleep problems in infants and children up to age 6 usually involve refusal to go to bed, difficulty in settling down and falling asleep, and nighttime awakening and crying. Such sleep disturbances are chronic problems for 15% to 35% of children under the age of 5.[84] Not surprisingly, parents typically respond to their child's sleep problems with some form of attention, which can reinforce the sleep disturbance. When parental attention is the primary maintaining condition of infant and toddler sleep disturbances, extinction is the treatment of choice.[85]

In the standard application of extinction for infant sleep problems, parents refrain from attending to their child after placing the child in bed (as in Case 8-1, page 164). Attention is withheld if the child refuses to get into bed or to go to sleep and if the child wakes up and cries during the night. This simple procedure is highly effective in decreasing children's refusal to go to bed or sleep and the frequency and duration of awakenings during the night; it also improves children's general sleep quality. The improvements have been shown to last at least 2 years after the treatment ends.[86] A major advantage of extinction is that it is simple for parents to learn and implement. In addition, extinction, along with changing setting events (which you'll read about shortly), has been effective in preventing infant sleep problems.[87]

Despite the demonstrated effectiveness of extinction for infant sleep problems, some parents are unwilling to use it because, understandably, they are upset by their child's crying and sleep problems and they feel compelled to provide comfort. Another factor that makes extinction unacceptable as a treatment to some parents is the occasional occurrence of *extinction bursts*—the temporary, initial increase in the deceleration target behavior that is common with extinction (such as increased crying when the child is put to bed).[88] Moreover, some critics have argued that extinction is unethical because it damages the parent–child relationship, such as by decreasing the infant's security.[89] In fact, the empirical evidence suggests just the opposite. Studies reveal that infants treated by extinction appear to be more secure and exhibit fewer negative emotional responses (such as crying) than do untreated infants with sleep problems.[90]

To deal with parental objections to using extinction to treat their child's sleep problems, modified extinction procedures to render them more palatable for parents have been developed. The simplest modification allows parents to make a specified number of brief, time-limited checks on their child if the child cries after having been put to bed (for instance, looking in on the child for 15 seconds or less, not more often than once every 20 minutes).[91]

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Graduated extinction is a more complex modification that involves either gradually increasing the time the parent ignores the child's bedtime crying[92] or gradually decreasing the time the parent spends attending to the child when the child awakens during the night.[93] The increments are individualized for each family. Parents tend to find modified extinction procedures more acceptable,[94] but they generally are less effective than standard extinction procedures.[95]

Sleep terrors involve a child's waking up screaming with diffuse fear and agitation. The child has no recollection of dreaming and does not remember the incident in the morning. Comforting a child who has had a sleep terror is difficult. It is estimated that between 1% and 6% of children experience sleep terrors,[96] and the exact causes are unknown. Sleep terrors in children are not believed to be triggered or maintained by parental attention, but they possibly are maintained by a disruption in the sleep cycle.

Scheduled awakenings are an effective behavioral intervention for sleep terrors. For a particular child, sleep terrors occur at about the same time each night (usually in the first third of the child's sleep period). Parents are instructed to awaken the child approximately 30 minutes before the anticipated sleep terror episode. The parent lightly touches or moves the child until his or her eyes open, and then the child is allowed to fall back asleep. Scheduled awakenings are carried out until the child achieves a specified number of nights without experiencing a sleep terror episode. The procedure has resulted in significant reductions in children's sleep terrors.[97]

According to preliminary research,[98] childhood insomnia may also be treated with cognitive-behavioral treatment packages that are used for adults, which you'll read about shortly.

ADULT INSOMNIA

Adult insomnia is maintained primarily by three antecedent conditions: inappropriate setting events for sleeping, excessive muscle tension, and excessive worry. Three behavior therapies are used to change these maintaining conditions: changing setting events, progressive relaxation training, and cognitive restructuring, respectively.

Changing Setting Events



Courtesy of Richard Bootzin

Richard Bootzin

Some people have difficulty falling asleep because, for them, being in bed has strong associations with a host of activities other than sleeping, including reading, watching TV, snacking, talking on the phone, and worrying about not being able to fall asleep. Modifying setting events is effective when insomnia is maintained by such non-sleep-related setting events.

Procedures for adjusting setting events to treat insomnia, developed by Richard Bootzin,[99] establish a client's bed as a clear-cut cue for sleeping and *only* for sleeping. Clients are instructed to follow three basic rules.[100]

1. Get into bed *only* when you are sleepy.
2. Use your bed *only* for sleeping. (The one exception is for sexual behavior, but only if you feel relaxed or sleepy afterward. If sex leaves you wide awake, engage in it somewhere other than the bed in which you sleep.)

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3. If you cannot fall asleep within 15 minutes, get out of bed and go into another room. Return to your bed only when you are sleepy. If you still cannot fall asleep, repeat this step. (It does not seem to matter what you do when you get out of bed, as long as the activity is not stimulating, which includes looking at an illuminated screen such as when watching TV or working on a computer.)

In addition to these rules that establish appropriate setting events, clients also are asked to follow two other rules that promote good sleep habits.

4. Get up at the same time every morning, regardless of what time you go to bed. (This routine allows you to establish a regular sleep rhythm.)
5. Do not take naps. (Napping can disrupt the regular sleep rhythm and makes it harder to fall asleep at night.)

These procedures are highly effective for treating sleep-onset insomnia.[101] They consistently have been shown to be superior to no treatment and placebo control conditions in decreasing sleep-onset latency, the time it takes to fall asleep.

Modifying setting events has been an effective treatment for older adults who often experience sleep-onset problems and frequent nighttime awakenings.[102] In one study with adults ages 47–76, changing setting events was combined with *sleep education*, which provides clients with information about behaviors that facilitate sleep (such as daily exercise) and behaviors that interfere with sleep (such as consuming alcohol before retiring).[103] This treatment package was compared with sleep education alone, sleep education plus relaxation training, and a no-treatment control group.

Interestingly, immediately after treatment all the clients, including those in the control group, showed improvement in self-report measures, including the number of nighttime awakenings, feeling depressed, and feeling refreshed upon awakening. Because clients in the control group also reported these improvements, it was not possible to conclude that any of the treatments were responsible for the positive changes. However, at a 2-year follow-up, clients who had been taught to change setting events reported shorter sleep-onset latencies and had the highest ratings of sleep quality. It is noteworthy that these clients were still using the setting events intervention. Two factors may have accounted for the long-lasting effects: changing setting events was easy to implement, and the new, appropriate setting events became a natural part of the clients' lives.

These factors also may explain why, in general, modifying setting events is the single most effective treatment for adult insomnia.[104] When insomnia is secondary to other problems, such as with chronic pain and bipolar disorder, establishing setting events conducive to sleep is used as part of a treatment package.[105]

Many everyday behaviors besides falling asleep are maintained by setting events, which means that they can be influenced by modifying them. Studying is a common example, and you might benefit from doing Participation Exercise 17-1, now or at a later time.

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PARTICIPATION EXERCISE 17-1

Modifying Setting Events to Enhance Studying

Studying is maintained by a host of setting events, including the time of day, the physical setting, and the presence of other students. If your study habits are being maintained by inappropriate setting events, modifying these events may increase the efficiency and effectiveness of your studying.

Using the previously mentioned rules for treating insomnia as a model, make a list of rules to establish setting events that will prompt you to study and will make studying more productive, including increasing concentration and decreasing distractions. Consider the following situational factors and how differences in them affect your studying.

1. *When* you study. This includes the days of the week, the time of day, and the length of study sessions and breaks. What time parameters are optimal for you?
2. *Where* you study. This includes the general location (for instance, in your room or at the library) and the specific physical setup (for example, at a desk or on your bed). What factors facilitate your studying (such as ample lighting and optimal temperature) and inhibit your studying (such as noise and interruptions)?
3. *With whom* you study. Do you study more efficiently by collaborating with one or more other students or by yourself? If you study by yourself, is your studying facilitated by others' studying around you (such as in a study lounge) or by being alone?

After you have compiled your rules, look at the examples of possible rules in the Participation Exercise Answers at the end of the chapter; your rules don't have to match the examples, but they should serve the same functions. Then follow your rules (which you may modify after having seen the examples) and see if they affect your studying. If some of your inefficient or ineffective study habits are maintained by setting events, appropriately modifying those events will make a difference.

Relaxation Training

People who have problems sleeping often report being "all keyed up" and "tense" before going to bed. When insomnia is maintained by muscle tension, training in progressive relaxation is the treatment of choice. Once clients have learned progressive relaxation, they use the relaxation skills when they get into bed to go to sleep. Clients using progressive relaxation in systematic desensitization sometimes get so relaxed that they fall asleep while visualizing scenes. Although this interferes with systematic desensitization, it is precisely the desired outcome for clients who have difficulty falling asleep.

For decreasing sleep-onset latency, progressive relaxation consistently has been found to be superior to no treatment[106] but only inconsistently superior to placebo conditions.[107] Clients who receive relaxation training may not routinely show improvements in their daytime functioning (for example, alertness

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during the day).[108] However, relaxation training may serve as a daytime coping skill for dealing with daily stressors,[109] which is beneficial because many clients with chronic insomnia report high levels of daytime anxiety. Finally, relaxation training can facilitate clients' attempts to stop using sleep medications.[110]

The effectiveness of relaxation training for insomnia can be enhanced by (1) more individualization of the treatment, (2) a greater number of treatment sessions,[111] and (3) increased practice in relaxation exercises between therapy sessions.[112] Standard progressive relaxation training appears to be as effective as electromyographic (muscle tone) biofeedback-assisted relaxation training, particularly for clients with sleep-onset problems. Thus, the additional cost of using biofeedback appears to be unwarranted.[113]

Cognitive Restructuring

Worry is a common maintaining antecedent of sleep problems. The worry can be about anything, including interpersonal problems, work, or health. And people often worry about their sleep difficulties—as the classic quip puts it: Insomnia wouldn't be bad if I didn't lie awake worrying about it. We'll focus on this last problem to illustrate the use of cognitive restructuring to deal with worry that interferes with sleep.

When excessive worry about not sleeping and about the possible negative consequences of sleep loss is a maintaining antecedent of sleep problems, cognitive restructuring is the treatment of choice. Typically, the worry is the result of faulty or distorted beliefs about sleeping that involve one of the following themes:

- Exaggerated ideas about the negative consequences of sleep loss (for instance, "If I don't get a good night's sleep, I'll flunk my exam tomorrow")
- Unrealistic expectations about what constitutes acceptable sleep requirements (such as "I can't function on fewer than 9 hours of sleep")
- Beliefs about not having control over one's sleeping (for example, "If I'm 'wired' when I get into bed, there's nothing I can do to fall asleep")

A client's specific sleep-related cognitions can be assessed initially with a direct self-report inventory. For instance, the Personal Beliefs and Attitudes About Sleep inventory contains common thoughts about sleep problems (see Table 17-3) that clients rate on a scale ranging from *strongly agree* to *strongly disagree*.[114]

TABLE 17-3

Examples of Items From the Personal Beliefs and Attitudes About Sleep Inventory That Clients Rate on a Scale Ranging From *Strongly Agree* to *Strongly Disagree*

I am worried that if I go for one or two nights without sleep, I may have a "nervous breakdown."
After a poor night's sleep, I know that I will have difficulty engaging in my daily activities the next day.
I feel that insomnia is basically the result of aging, and there isn't much that can be done about this problem.
My sleep is getting worse all the time, and I don't believe anyone can help.
When I sleep poorly one night, I know that it will disturb my sleep schedule for the whole week.

Source: Adapted from Sloan et al., 1993.

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Cognitive restructuring for insomnia involves three steps: (1) identifying unrealistic, maladaptive sleep-related cognitions; (2) challenging the validity of these cognitions; and (3) replacing unrealistic, maladaptive cognitions with realistic, adaptive ones. For example, "If I don't fall asleep soon, I won't get anything done tomorrow" might be more realistically and adaptively restructured as, "If I don't fall asleep soon, I may be tired tomorrow, but I'll still be able to function." Note that the adaptive thoughts realistically acknowledge that sleep loss may have some negative consequences but not the unrealistic consequences predicted by the maladaptive thoughts. With a more realistic outlook, worry about loss of sleep will diminish, which, in turn, will make it more likely that the person will be able to fall asleep.

Cognitive restructuring for insomnia has been shown to be effective compared with no-treatment control conditions.[115] Although cognitive restructuring can be used as the sole treatment for insomnia,[116] it generally is part of a treatment package.[117]

Cognitive-Behavioral Treatment Packages for Adult Insomnia

Cognitive-behavioral treatment packages for adult insomnia include a number of established insomnia interventions, as illustrated in the following study with adults who had suffered from insomnia for an average of more than 11 years.[118] Therapy was conducted individually and typically required 8 to 10 therapy sessions. The components of the treatment package were cognitive restructuring, changing setting events, sleep education, and sleep restriction. *Sleep restriction* involves limiting the time spent in bed to the actual time a client usually sleeps. For example, if a client typically spends 10 hours in bed but sleeps only 5 hours, the client would be instructed to stay in bed for only 5 hours, no matter how much of that time the client is asleep. Clients also kept a *sleep diary* that included such information as bedtime, arising time, number of daytime naps, frequency of night awakenings, sleep quality (rated on a 5-point scale), and medication intake (see Figure 17-1 [page 482] for an excerpt from a sleep diary). Finally, therapists offered clients who were using sleep medication a withdrawal plan to decrease or eliminate its use.

The treatment package significantly reduced clients' sleep-onset latency, awakenings during the night, and early morning awakenings. Significant reductions in clients' use of sleep medication also occurred; the number of clients who had habitually used sleep medication decreased by 54% by the end of therapy. Similar results have been obtained using short-term cognitive-behavioral therapy for older adults (with an average age of 67) suffering from insomnia.[119]

Cognitive-behavioral treatment packages for insomnia have been administered in small groups (five to seven clients).[120] One such group treatment package for clients whose insomnia was related to chronic pain combined sleep education (which included specific information about pain-related sleep problems), changing setting events, relaxation training, and cognitive restructuring.[121] The treatment was administered in seven 2-hour weekly sessions. Compared with a wait-list control condition, the treatment package improved clients' self-reports of sleep-onset latency, the number of awakenings after falling asleep, and sleep quality; it also reduced sleep-interfering movement during sleep (as measured by

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Day/date:	Monday, 2/14
Naps	11:15 a.m.–12:05 p.m. (50 min.) 3:30–4:00 p.m. (30 min.)
Medication Intake	None
Bedtime	10:30 p.m.
Nighttime Awakenings	12:50 a.m. 3:35 a.m.
Sleep Quality (5-point rating)	2
Arising Time	7:10 a.m.
Day/date:	**Tuesday, 2/15**
Naps	11:30 a.m.–12:15 p.m. (45 min.)
Medication Intake	Sominex—2 pills at 10:30 p.m.
Bedtime	11:20 p.m.
Nighttime Awakenings	1:20 a.m. 4:10 a.m.
Sleep Quality (5-point rating)	2
Arising Time	7:45 a.m.

FIGURE 17-1
Excerpt from a sleep diary

a wrist monitor that continuously recorded movement). Although group administration is more efficient, it may not be as effective as individual treatment.[122]

Besides using group formats, the efficiency and availability of cognitive-behavioral treatment packages for insomnia has been implemented through brief telephone consultations,[123] using a self-help book with brief therapist telephone support,[124] and in an individually tailored Internet program.[125] An abbreviated, two-session cognitive-behavioral intervention has shown promise with psychiatric outpatients.[126]

The frequency and severity of chronic insomnia is pronounced in older adults (occurring in an estimated 20% to 30% of that population).[127] Meta-analyses of cognitive-behavioral treatment packages for later-life insomnia has indicated that they are effective.[128] Moreover, some studies have demonstrated that cognitive-behavioral interventions are more effective than sleep medication.[129] In delivering treatment for older adults, modifications in standard treatments may be necessary to accommodate for medical problems, lifestyle, social factors, and patient preferences.[130] To provide greater access to treatment for older adults,[131] self-help interventions (such as book or multimedia presentation) and treatment via Skype have shown promise.[132]

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Insomnia also appears to be common in people with high levels of paranoia, both those suffering from psychosis and in the general population.[133] A recent pilot study found that a four-session cognitive-behavioral treatment package for insomnia not only reduced insomnia but also reduced persecutory delusions.[134]

Although insomnia is a very common problem, relatively few people seek treatment for it, and access to cognitive-behavioral therapy for insomnia is not readily available.[135] To deal with this problem, a variety of alternative means for providing this effective treatment have been tried, including community workshops,[136] didactic Internet programs,[137] and online sessions delivered by an animated therapist with automated Web and email support.[138]

Although the efficacy of a variety of cognitive-behavioral interventions for treating insomnia have been well documented in controlled studies conducted in research settings,[139] it is important to know if these interventions are effective when they are delivered in sleep clinics, which is where most clients receive help. This question was addressed by examining the results of 47 case studies of clients who were treated for insomnia in a sleep clinic.[140] (This investigation is an example of using a series of case studies to provide evidence of the effectiveness of an intervention.) The treatments included sleep restriction, modification of setting events, relaxation training, cognitive therapy, and sleep education. On average, clients undergoing the clinic-based treatment showed a 65% reduction in sleep-onset latency, a 46% decrease in nightly awakenings, a 48% reduction in time awake after sleep onset, and a 13% increase in total sleep time. These data are comparable to results obtained in controlled research settings. Total sleep time was the outcome measure least affected by the treatment, improving only 13%. This is not surprising because sleep restriction and modification of setting events (such as getting out of bed if one does not fall asleep in 15 minutes) may initially decrease sleep time. Fortunately, there is evidence that total sleep time eventually increases.

In another study of the effectiveness of cognitive-behavioral treatment packages, a large sample of patients with primary insomnia (insomnia not due to other psychological or physical disorders) was recruited from general practitioners in Hamberg, Germany.[141] The patients received either sleep medication that was gradually reduced over the 4-week treatment period or the same pharmacotherapy regimen and a written cognitive-behavioral self-help program. The self-help program included instructions for progressive relaxation, cognitive relaxation, stimulus control, thought stopping, and cognitive restructuring. All patients in both conditions showed reductions in sleep-onset latency and time awake after falling asleep, increased total sleep time, and improved mood. However, the patients in the cognitive-behavioral self-help program showed significantly greater improvements in sleep quality and negative sleep-related cognitions, such as ruminating about sleep.

Treatment packages for insomnia may be more effective than single therapies, especially when a client's sleeping problems result from more than one category of maintaining conditions. For example, changing setting events and relaxation training have been shown to be more effective than changing setting events alone.[142] To decrease dependence on sleep medication, treatment packages that combine medication-tapering schedules and cognitive-behavioral

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procedures have proved successful.[143] Although treatment packages for insomnia are effective, research has not yet indicated which specific combinations of therapies are optimal and which clients are likely to benefit most from treatment packages rather than single therapies.[144]

BULIMIA NERVOSA

Bulimia nervosa (or *bulimia*, for short) is a serious eating disorder characterized by binge eating and then purging what has been eaten.[145] *Binge eating* involves an individual's consuming large quantities of high-caloric food (often junk food) in a brief period. The person then *purges* the food, most often by self-induced vomiting and also through the abuse of laxatives and diuretics. People with bulimia nervosa typically are preoccupied with their body image and weight, and purging prevents the person from gaining weight following binge eating episodes. Bulimia affects 1% to 3% of women (it is rare in men), primarily in industrialized countries, and typically begins in late adolescence or early adulthood. Recurrent purging after binge eating can result in serious medical problems, including loss of bodily fluids and electrolytes as well as damage to the esophagus and teeth caused by stomach acid that is regurgitated.[146]

Treatment of bulimia generally consists of a multifaceted cognitive-behavioral treatment package that can be implemented in as few as 20 sessions, individually or in groups.[147] The treatment is a prime example of the rich integration of overt behavioral and cognitive components that characterizes much of the practice of contemporary behavior therapy.

After providing the client with information about bulimia, nutrition, and weight regulation,[148] a combination of the following eight procedures is used.

1. *Self-monitoring*. Self-monitoring of binge eating and purging episodes and the circumstances surrounding them is the first task and continues throughout the treatment. Clients also record their daily food and liquid intake and sometimes the type of food and the time and place of eating. The self-monitoring records help identify maintaining conditions of binging and purging episodes and provide a continuous measure of change.

2. *Changing setting events*. The therapist teaches the client to adjust setting events related to eating, such as eating at specified times, eating in a particular location, and buying only foods that the client is unlikely to binge on. The aim of these procedures is for the client to develop habits of eating three regular meals a day plus planned snacks.

3. *Scheduling competing activities*. The client learns to schedule pleasurable between-meal activities that reduce the likelihood of binge eating. Such competing behaviors include engaging in moderate exercise and work that holds the client's attention.

4. *Cognitive restructuring*. Clients are trained to identify and alter their dysfunctional thoughts and attitudes about eating, food, and body image. People suffering from bulimia typically have rigid and perfectionist attitudes regarding their body shape and weight, eating, and dieting (for example, "I'll never be happy until I'm thin").[149]

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5. *Collaborative empiricism*. Clients engage in empirical hypothesis testing designed to challenge their dysfunctional beliefs and thoughts (as is done in cognitive therapy). For example, a client who erroneously believed that she weighed well above normal for her height could check a current table of normal weight ranges.

6. *Problem solving*. Clients learn problem-solving skills to help them cope with stress-evoking events that have been associated with binge eating. Clients are encouraged to anticipate these stressors so that they can solve problems before binge eating is imminent.[150]

7. *Flooding with response prevention*. Binge eating and the threat of gaining weight typically evoke a great deal of anxiety in clients with bulimia. Purging reduces the anxiety, which negatively reinforces purging. Flooding is used to break this vicious cycle.[151] In the presence of a therapist, clients are encouraged to eat the foods on which they typically binge (often sweet and soft-textured foods that can be rapidly swallowed), but not to excess. After this exposure, clients are instructed not to vomit (response prevention). The flooding session is terminated only when the strong urge to purge dissipates. Although flooding can be effective, it does not appear to be a necessary treatment component.[152] In some cases, flooding may make the treatment package less effective[153] because clients are reluctant to participate in the unpleasant flooding procedures.[154]

8. *Relapse prevention*. Bulimia tends to occur in cycles[155] and is characterized by relapses.[156] Thus, preparing clients for the possibility that the bulimic behaviors will return in the future is important.[157] Accordingly, clients identify high-risk situations for binge eating and rehearse coping strategies that can be used if the situations occur, including their recruiting and using social support from family and friends.

The comprehensive cognitive-behavioral treatment package just described is generally considered the treatment of choice for bulimia.[158] Well-controlled studies support its efficacy, showing an average reduction in clients' binge eating ranging from 93% to 73% and an average reduction in purging ranging from 94% to 77%.[159] For clients who do not experience significant changes in their binge eating habits after a standard number of sessions, additional therapy sessions can be beneficial.[160]

The cognitive-behavioral treatment package for bulimia consistently is superior to traditional verbal/interpersonal psychotherapies[161] and antidepressant medication (which has been used to treat depression related to bulimia).[162] Compared with medication, the treatment package is more effective in reducing the frequency of binging and purging episodes as well as feelings of depression.[163] The treatment package often results in more rapid changes in clients' binging and purging behaviors than alternative treatments.[164] Additionally, the treatment package consistently improves clients' beliefs and attitudes about their body and weight,[165] and most studies show significant improvements in self-esteem and social functioning.[166] Moreover, cognitive-behavioral interventions for bulimia can be administered successfully through cost-effective self-help formats.[167]

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Long-term maintenance of treatment gains from the cognitive-behavioral treatment package have been found in some,[168] but not all,[169] studies. Cognitive interventions that target clients' maladaptive cognitions that maintain binge eating and purging may be especially important in fostering long-term maintenance of treatment gains.[170]

ALL THINGS CONSIDERED: APPLICATIONS OF BEHAVIOR THERAPY TO PSYCHOLOGICAL DISORDERS WITH PRIMARY PHYSICAL CHARACTERISTICS

Behavior therapy for psychological disorders with primary physical characteristics provides alternatives to traditional medical interventions that are more intrusive and have serious negative side effects. The predominant use of sedatives or other sleep-inducing drugs to treat insomnia is a prime example. Prolonged use of sleep medication may actually interfere with sleeping, can lead to diminished daytime functioning, and may result in psychological and physical dependence on the drugs.

Although the problems discussed in this chapter are classified as psychological rather than medical, their physical aspects can have serious medical implications. Thus, physical factors that may cause, exacerbate, or result from the psychological disorders must be assessed because they may need to be treated directly. For example, enuresis can be caused by medication the client is currently taking (such as diuretics) and general medical conditions (such as diabetes); sleep difficulties can result from drug use (for instance, use of amphetamines) and medical conditions (for instance, hyperthyroidism); and bulimia nervosa often results in dental problems, damage to the esophagus, and low levels of electrolytes due to repeated regurgitation.

Because clients with enuresis, tic disorders, and bulimia nervosa are likely to experience guilt, embarrassment, and shame, treating clients with these disorders requires an especially good therapist–client relationship. For instance, the client must trust the therapist sufficiently to reveal embarrassing behaviors and feelings, and the therapist must trust the client to be honest and straightforward in reporting about these personally sensitive problems.

Many of the behavior therapy interventions used to treat psychological disorders with primary physical characteristics involve self-control techniques. For instance, habit reversal for tic disorders teaches clients to "catch" their maladaptive behaviors early in their sequence and counter them with competing responses. Gaining self-control over so-called involuntary physical disabilities (such as tics) is likely to increase clients' perceived self-efficacy about their ability to modify them, and enhanced self-efficacy may be one of the factors responsible for the success of habit reversal for tics (see the In Theory 12-2 discussion of perceived self-efficacy on page 287).

The use of treatment packages is another common element in the behavior therapy treatment of psychological disorders with primary physical

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characteristics. Dry-bed training for enuresis, habit reversal for tics, and cognitive-behavioral treatment packages for insomnia and bulimia nervosa all involve multifaceted interventions.

SUMMARY

1. Behavior therapy is used to treat a variety of psychological disorders whose primary feature is a physical problem.
2. The urine alarm is an efficient and effective treatment for nocturnal enuresis. An alarm is activated when urine contacts a special pad under the child's bedsheet or in the child's underpants. Through repeated pairings of the alarm and bladder tension, bladder tension alone comes to awaken the child before urination begins.
3. For nocturnal enuresis, dry-bed training is a highly effective treatment package that uses shaping and overcorrection to teach children the behaviors required to keep their beds dry throughout the night. The dry-pants method is an extension of dry-bed training that is used for normal daytime toilet training.
4. Behavioral treatments for tics include massed negative practice, changing maintaining consequences, progressive relaxation, and self-monitoring. Habit reversal, the most effective treatment, incorporates four components: awareness training, relaxation training, competing response training, and reinforcement. Awareness training and competing response training are the critical components. Habit reversal also is used to treat nervous habits such as compulsive hair pulling and stuttering.
5. When sleep problems in infants and children are maintained by parental attention, extinction that involves withholding attention for nighttime crying is a simple and effective treatment. Modified forms of extinction may be more acceptable to parents but are somewhat less effective. Sleep terrors, which are not maintained by attention, can be treated by scheduled awakenings before the onset of a sleep terror episode.
6. For adult insomnia, changing setting events establishes a client's being in bed as a clear-cut cue for sleeping only. Relaxation training helps clients reduce muscle tension associated with insomnia before going to bed. Cognitive restructuring reduces worry, such as about sleeping, by identifying, challenging, and replacing maladaptive beliefs with adaptive cognitions.
7. Treatment packages for insomnia that involve changing setting events, relaxation training, cognitive restructuring, sleep restriction, and sleep education are appropriate when a client's sleeping problems are the result of multiple maintaining conditions.
8. The treatment of choice for bulimia nervosa is a comprehensive cognitive-behavioral treatment package that includes self-monitoring, changing setting events, competing activities, cognitive restructuring, collaborative empiricism, problem solving, flooding with response prevention, and relapse prevention.

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PARTICIPATION EXERCISE ANSWERS

PARTICIPATION EXERCISE 17-1

Modifying Setting Events to Enhance Studying

Examples of possible rules to modify setting events influencing studying.

1. Study at set times each day.
2. Tell others what your study times are and ask them not to disturb you during those times.
3. Study in the same place (such as at the desk in your room).
4. Use your study location *only* to study.
5. Keep all necessary study materials (such as pads, pens, and highlighters) in the same location and do not remove them from that location.
6. Make the study location free of distractions.
7. Before studying, make a list of what you will attempt to accomplish during the study period and prioritize the tasks.
8. When you are studying, do nothing else (for example, do not listen to background music, answer the telephone, or eat).
9. Study with other people only if (a) you are actually collaborating on study tasks (for example, preparing a group project or quizzing one another) or (b) the other people will not distract you.
10. If you begin to daydream while you are studying, leave the designated study area.

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CHAPTER 18



Contemporary Behavior Therapy in Perspective: Its Strengths, Challenges, and Future

Major Strengths of Behavior Therapy

Precision in Specifying Goals, Target Behaviors, and Therapy Procedures
Efficacy and Effectiveness
Efficiency
Breadth and Complexity of Applications
Ethical Practices in Behavior Therapy

Challenges

Enhancing Durability of Change
Preventing Psychological Disorders and Problems
Behavior Therapy With Diverse Populations
Using Precise and Correct Terminology
Dissemination and Implementation of Evidence-Based Behavior Therapies

Looking Into the Crystal Ball: Future Directions of Behavior Therapy

Unified Protocols for Transdiagnostic Treatment
Behavioral Intervention Technology

All Things Considered: Behavior Therapy

PARTICIPATION EXERCISE 18-1 Demythifying Myths About Contemporary Behavior Therapy
SUMMARY
PARTICIPATION EXERCISE ANSWERS
REFERENCE NOTES

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Having come this far in the book, you know what behavior therapy is and have seen the wide range of assessment and therapy procedures it employs; you've also become aware of the broad spectrum of problems it treats. What, then, is left for this last chapter? First, I think it is important to review the major strengths of contemporary behavior therapy. Not to just rest on the laurels of the field, I also will discuss some critical challenges that I believe behavior therapists must deal with. Finally, I'll speculate on what is likely to be "hot" in behavior therapy in the near future.

MAJOR STRENGTHS OF BEHAVIOR THERAPY

What do you consider the major strengths of behavior therapy? Before reading further, take a moment to answer that question.

Among the strengths of behavior therapy, five seem to be most prominent: (1) precision in specifying goals, target behaviors, and procedures; (2) efficacy and effectiveness; (3) efficiency; (4) breadth and complexity of applications; and (5) ethical practices.

PRECISION IN SPECIFYING GOALS, TARGET BEHAVIORS, AND THERAPY PROCEDURES

Because goals are very specific and target behaviors are defined in unambiguous, measurable terms in behavior therapy, explicit criteria for evaluating the success of treatment can be established. This allows the client and therapist to objectively determine progress in therapy and when it can be terminated. In contrast, many types of psychotherapy employ goals that are implicit and vaguely defined (for example, "gaining insight" about one's problems or "feeling better") and consider selecting specific targets of treatment unnecessary. In such cases, progress and success are "measured" by the therapist's and the client's subjective opinions.

The therapy procedures used in behavior therapy also are precisely specified. (See the procedures for dry-bed training in Table 17-1 [page 468] for a prime example.) This practice has four benefits. First, therapists can use the specific therapy procedures that have been found to be effective. Second, therapists can explain to clients exactly what the therapy will entail, which enables clients to truly provide informed consent. Third, detailed descriptions of therapy procedures are invaluable in training behavior therapists. Finally, independent researchers can test the efficacy and effectiveness of behavioral interventions because the procedures are clearly specified. Detailed specification of therapy procedures has been enhanced by the widespread use of treatment protocols in research and treatment manuals in clinical practice.

EFFICACY AND EFFECTIVENESS

The bottom line for any psychotherapy is its success, which is measured in terms of *change*. In first- and second-generation behavior therapies (Chapters 7–14), the change is in behavior; in third-generation behavior therapies, the change is primarily in acceptance (Chapter 15). The question is: How much has the client

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changed with respect to the goals of therapy? Because the goals in behavior therapy are specific, clear-cut, and measurable, the success of treatment is easy to determine for an *individual* client.[a] In contrast, making statements about the *general* efficacy and effectiveness of a behavior therapy is complex. It requires asking a series of qualifying questions, including: For what problem or disorder? For which client population? In what context?

Even when carefully qualified questions are asked, a host of practical, methodological, and ethical problems may hinder research efforts.[1] For one thing, researchers use multiple criteria to assess the effectiveness of therapy: meaningfulness of change, transfer and generalization of change, maintenance of change over time, and acceptability of the therapy. To their credit, behavior therapists generally examine the usefulness of therapies in terms of each of these criteria.[2]

Behavior therapy has the broadest and strongest empirical base among psychotherapies.[3] Two prime examples are exposure therapies for anxiety disorders and cognitive therapy for depression. Today, managed care organizations dictate the treatments that are acceptable for particular disorders and therefore the treatments for which therapists can be reimbursed. Because of their strong empirical support, many behavior therapies are among the most frequently "approved" treatments.[4]

It is noteworthy that behavior therapy fares well in comparison to medication, which is the treatment most frequently employed for psychological disorders.[5] Despite the effectiveness of many drug treatments, behavior therapies are often a more desirable form of treatment because they may work as well as medications for many disorders, avoid the negative side effects of most psychotropic medications, and may reduce relapse rates better than medication.

The existence of a strong empirical base for the efficacy and effectiveness of behavior therapy procedures stems from the commitment behavior therapists have to evaluating the treatment procedures scientifically. Moreover, not only have behavior therapists accepted the difficult challenge of conducting psychotherapy outcome studies, but they also have been loud and stringent critics of their own research.[6] Incidentally, the research ethic in behavior therapy has had an impact beyond behavior therapy in that it has encouraged outcome research for other psychotherapies.[7]

EFFICIENCY

The efficiency of a therapy is another important factor in assessing its value. Efficient therapies are those that (1) achieve the goals of therapy quickly and (2) are cost effective for both therapists and clients, in terms of time and money.

Behavior therapy often brings about change relatively quickly, especially compared with traditional verbal psychotherapies. This is attributable to two

[a] Strictly speaking, the fact that an individual client's goals have been met does not necessarily mean that the therapy caused the change. It always is possible that some other factors occurring at the same time as the therapy (such as changes in relationships or work) were responsible. Controlled research, such as a reversal or multiple baseline study, is necessary to draw more definitive conclusions about the effectiveness of therapy procedures for an individual client.

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factors. First, many behavior therapy techniques act quickly because they directly change the present maintaining conditions of the target behavior. Occasionally, the target behavior is altered almost immediately (as when potent reinforcers are completely eliminated for a maladaptive behavior and provided exclusively for alternative, adaptive behaviors).

A second factor responsible for change in a relatively short time is that behavior therapy does not take place only during therapy sessions. Clients often do much of their therapeutic work outside the therapy sessions. For example, for every hour in a therapy session, a client might do 3 hours of homework. If the therapy involved 20 weekly, hour-long sessions, then the total amount of therapy would be 80 hours (not 20).[8] In contrast, a client would spend more than 18 months in weekly sessions of traditional verbal psychotherapy to receive the equivalent number of hours of treatment. Moreover, the client in behavior therapy would have completed treatment more than a year earlier! Homework assignments not only shorten the duration of therapy, but they also are cost effective because the therapist's time is not required. Similarly, therapists' time is saved when nonprofessional change agents—such as parents, teachers, friends, and spouses—are trained to implement therapy procedures in clients' natural environments. Using technology, such as the Internet or smartphones, to implement therapy procedures is another means of making treatment more cost effective.

In addition to valuing effective therapies, managed health care providers are interested in clients' receiving brief, cost-effective treatment (for obvious financial reasons).[9] Most behavior therapies are short term.[10] Nonetheless, the health care industry's demand for briefer treatments—along with the personal, practical, and economic advantages for clients—has increasingly led behavior therapists to develop abbreviated treatments by reducing them to their essential components.[11]

BREADTH AND COMPLEXITY OF APPLICATIONS

Behavior therapy is broadly applied, serving clients of all ages and with various cultural backgrounds who exhibit the gamut of psychological disorders.[12] It is appropriate for meeting the needs of certain groups of clients for whom traditional verbal psychotherapies have been ineffective, including infants, young children, elderly individuals,[13] people with intellectual deficits, and people who do not speak.[14] Clients who cannot afford expensive, long-term therapy have benefited from relatively efficient and therefore less costly behavior therapy interventions. Behavior therapy has made inroads in the treatment of disorders that are relatively unresponsive to other forms of psychological treatment, such as schizophrenia, attention deficit hyperactivity disorder, borderline personality disorder, and a number of disorders characterized by physical problems, such as chronic pain, enuresis, and tic disorders. Finally, behavior therapy is implemented in settings where traditional psychotherapy is not typically employed, including in clients' homes, schools, and workplaces.

An early criticism of behavior therapy was that it dealt only with simple problems. From your reading about behavior therapy, it should be clear that

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contemporary behavior therapy is used to treat many complex problems. Behavioral treatment of posttraumatic stress disorder, depression, eating disorders, and couple relationship problems are but a few examples.

ETHICAL PRACTICES IN BEHAVIOR THERAPY

Ethical issues in the practice of behavior therapy have been raised throughout the book and have focused on the two concerns critics have most frequently voiced: depriving clients of their rights and harming clients. One strength of behavior therapy is that its practices serve to *protect* clients' rights and provide treatment that is beneficial. Behavior therapists have developed specific, rather stringent guidelines to ensure ethical conduct (see Table 1-1, page 12).

The scientific approach that is a hallmark of behavior therapy contributes to ethical practices in a number of ways. The detailed specification of goals and target behaviors makes the process of evaluating the success of therapy clear to all parties involved. This standard also minimizes the chances that therapy will continue longer than is necessary. Psychotherapy sometimes is prolonged because clients become overly dependent on their therapists. Although this dependence may be inappropriate, it is not unethical. In contrast, it is unethical for therapists to prolong therapy because of *their* dependence on clients. Therapists are vulnerable to this pitfall because their clients provide them with potent reinforcers, including the satisfaction of helping others and, of course, remuneration. Continually evaluating clients' progress in behavior therapy provides a partial safeguard against therapists' inappropriately prolonging treatment. Additionally, because treatment with behavior therapies is relatively brief compared with many other psychotherapies, clients' problems are alleviated as quickly as possible, which is clearly an ethical practice.

Behavior therapies are empirically tested to ensure that clients receive effective treatment. Moreover, when therapy procedures could *conceivably* be harmful, such as by temporarily inducing anxiety with prolonged/intense exposure therapy, behavior therapists have empirically verified that such harm does not occur. In the rare instances that physically aversive stimuli, such as shock, are used, a cost-benefit analysis is always made, the client's informed consent to undergo the treatment is obtained, and specific procedures are instituted to ensure that the therapy is used ethically (see Chapter 8, page 186).

Collaboration between therapist and client—an essential element of behavior therapy—also serves to protect clients' rights. Clients decide on the treatment goals, with their therapist's counsel. Therapists provide clients with detailed information about the specific therapy procedures that are appropriate for their particular problems, and clients are involved in choosing the specific therapy procedures that will be employed.[15] Clients are active participants in the therapy process, including being responsible for carrying out aspects of the treatment on their own. Such involvement decreases the chances that clients will become victims of ethical violations.

In its formative years, behavior therapy received heightened scrutiny with regard to ethical issues (see Chapter 2). This "special attention" may have been a blessing in disguise. By alerting behavior therapists to potential

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ethical violations, the early scrutiny may have contributed to the sensitivity to clients' welfare that has become an essential element in the practice of behavior therapy.

CHALLENGES

The strengths of behavior therapy notwithstanding, behavior therapy currently faces a number of challenges. Again, before you continue reading, you might find it instructive to think of significant challenges that you believe behavior therapy faces.

Five important challenges will be highlighted here: (1) enhancing the durability of changes achieved in therapy, (2) preventing psychological disorders and problems, (3) providing behavior therapy for the ever-increasing diversity of clients, (4) using precise and correct terminology, and (5) disseminating and implementing evidence-based behavior therapies.

ENHANCING DURABILITY OF CHANGE

Ideally, changes that occur in a client's problems as a result of behavior therapy will endure after treatment has ended. However, this goal, which behavior therapy shares with all psychotherapies, is not easily attained.[16] A major reason is that treatment focuses on initiating change in clients' behaviors, and the process of *initiating* change and the process of *maintaining* change often are different. In many cases, changes brought about through therapy do endure; however, often it is necessary to introduce specific strategies to promote long-term maintenance of change. This can be done during therapy or after it has ended.

Within-Therapy Interventions to Enhance Durability of Change

Two broad strategies are employed during behavior therapy to foster durability of treatment gains: (1) providing clients with self-control coping skills and (2) structuring clients' natural environments where the treatment gains need to be maintained.

Teaching clients self-control coping skills is the easier and more frequently used strategy. The goal is for clients to use the coping skills to handle any recurrences of the problem in the future. Problem solving, self-instructions, cognitive restructuring, and muscle relaxation are examples of self-control coping skills that might be appropriate. Central to the success of this approach is that clients understand that behavior therapy is an educational enterprise designed to help them cope more adaptively with their problems rather than to "cure" them of their ills.[17] Continued use of coping skills learned in therapy increases maintenance of treatment gains after therapy has ended.[18]

The second strategy for promoting durability of treatment gains during therapy is to ensure that the client's natural environments will provide the necessary antecedents (stimulus control) and consequences (most often reinforcement) to maintain the new adaptive behaviors developed in therapy. This strategy is more complicated and requires more time than teaching clients coping skills. First, prompts and setting events to support the changes achieved during therapy need

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to be instituted in the client's natural environments. Second, significant people in the client's life may need to be trained to continue treatment procedures begun in therapy. For instance, therapists may teach parents to apply the same reinforcement contingencies that were used in therapy so that their child's adaptive behaviors will persist.

Even with such deliberate strategies to promote long-term maintenance, durability of treatment gains is not guaranteed. It is impossible to anticipate all the future life events that may interfere with clients' dealing effectively with problems treated in therapy. Further, the less similar a client's future problems are to the problems that treatment specifically focused on, the less likely it is that the treatment gains will endure. Finally, if old problems recur or new problems arise long after the termination of therapy, it is likely that the client will either have lost proficiency in the coping skills learned in therapy or will not remember to apply them; it also is likely that the maintaining conditions will have changed.

Despite these obstacles, behavior therapies seem to promote long-term maintenance as well as or better than most other therapies. (It is not possible to say this definitively because long-term maintenance data are unavailable for many other types of therapies.) With some disorders, both immediate and long-term effectiveness of behavioral interventions are very impressive. For example, outcome studies of cognitive-behavioral therapy for panic disorder indicate not only that panic attacks are eliminated in more than 80% of clients immediately after treatment (which is as good or better than existing drug therapies) but also that clients remain free of panic attacks for at least 2 years.[19]

Nonetheless, in many cases, long-term maintenance of treatment gains in behavior therapy is far from optimal in an absolute sense.[20] In other words, even if behavior therapy is as successful as or better than other treatments, the extent of long-term maintenance may be less than desirable. For example, only about half the couples treated by traditional cognitive-behavioral couple therapy retain the benefits after 2 years.[21]

Posttherapy Interventions to Enhance Durability of Change

Behavior therapists increasingly are relying on posttherapy interventions to enhance long-term maintenance of treatment gains, and relapse prevention is the most comprehensive posttherapy approach (see Chapter 14).

A second approach is to offer clients *booster sessions* after therapy has ended. In essence, therapists give clients one or a few brief refresher sessions. For example, booster sessions commonly are employed after aversion therapy because the treatment effects tend to deteriorate over time but can be renewed with periodic booster sessions (see Chapter 8).[22] This may be because substance-related disorders and paraphilias, the problems most commonly treated by aversion therapy, are highly resistant to change. Other problems that are difficult to treat, such as obsessive-compulsive disorder[23] and Tourette's disorder,[24] also may require booster sessions.

A third *potential* approach for fostering lasting change would be to provide *maintenance treatment* for extended periods after therapy has terminated—in some cases, for the remainder of a client's life. This is a radical idea for behavior therapists because behavior therapy has a tradition of providing relatively

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brief treatment, and a maintenance treatment approach, at first glance, seems to resemble traditional long-term psychotherapy. However, behavioral maintenance treatment would be different from long-term psychotherapy, in which the therapy *itself*—that is, the process of initiating change—requires years to complete.

Maintenance treatment would be less intense and less frequent than the initial treatment. It would be made available to clients either on a regular basis (for example, once every 6 months) or on an as-needed basis, often over many years. Maintenance treatment has been suggested for such divergent populations and problems as couples experiencing difficulties in their relationship[25] and adolescents engaging in delinquent behaviors.[26] The need for maintenance treatment in many cases stems from the sobering fact that

> no matter how potent the technology, after treatment ends other salient life events gradually become more important in influencing . . . [clients'] functioning . . . . The solution cannot simply be more and better therapy technology during the active therapy phase. Rather, maintenance may be facilitated to a greater extent by creating a context for the therapist to remain a continuing presence in . . . [clients'] lives . . . .[27]

Maintenance treatment is an intriguing idea, albeit one that has yet to be tested.

Although behavior therapy is among the most effective forms of intervention for many disorders, treatment effects often deteriorate over time.[28] Thus, promoting the long-term maintenance of therapeutic change has been and remains a challenge for behavior therapy (as well as other psychotherapies).[29]

PREVENTING PSYCHOLOGICAL DISORDERS AND PROBLEMS

The primary objective of behavior therapy is to alleviate the human suffering that results from psychological disorders and problems. Clearly, behavior therapy has made major advances toward achieving this goal. Behavioral principles and procedures could make an even greater contribution if they were employed more extensively to *prevent* the occurrence of psychological disorders. Relapse prevention and mindfulness-based cognitive therapy are two interventions that are specifically designed for prevention. Behavior therapies that teach clients coping skills (such as problem-solving therapy and stress inoculation training) can foster prevention of future problems—but only if clients generalize the skills learned in therapy to other life problems. Other behavior therapies must be adapted for prevention because there are fundamental differences between treatment and prevention[30] (just as there are differences between initiating and maintaining change[31]).

Prevention might be especially germane to problems for which behavior therapy has been least effective. For instance, substance-related disorders are notoriously resistant to change, largely because of the powerful immediate reinforcement from many drugs. Although behavior therapy is among the most effective psychotherapies in treating addictive behaviors,[32] the success rate is far below that achieved with many other problems treated by behavior therapy.

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In some cases, continued efforts to improve interventions have made little difference.[33] And given the immense economic cost of treatment for and consequences of addictive behaviors, prevention is likely to be more cost effective.[34] Thus, it may be a better strategy to *prevent* substance-related disorders from developing in the first place.

Prevention programs for substance abuse that target school-age children and adolescents do exist. Often, however, they merely provide information, advice, or warnings. The popular "Just Say No" campaign, for instance, is not likely to be very effective because it does not teach youngsters the assertive behaviors they require to successfully refuse drugs. In contrast, there are cognitive-behavioral programs for preventing depression that teach children and adolescents coping skills to deal with stress-evoking events that are likely to trigger the disorder.[35] These programs usually are offered to groups identified as being at risk for developing depression, such as children from households containing significant parental conflict[36] and adolescents whose parents have mood disorders.[37] Similar coping skills interventions might be effective in preventing anxiety disorders[38] and even substance-related disorders in at-risk adolescents.

The idea of behavioral prevention is not new.[39] You have read about behavioral programs developed to prevent couple relationship problems (Chapter 14), depression (Chapter 15), and medical disorders (Chapter 16). Recently, behavior therapists have begun to explore interventions for preventing posttraumatic stress disorder in trauma victims.[40] However, the number of preventive efforts is very small relative to treatment efforts.[41] Also, behavioral preventive interventions for the most part have been narrow in scope, focusing on children and adolescents[42] and on medical disorders and associated psychological disorders (such as postsurgery depression).

The potential for using behavioral interventions to prevent psychological disorders is great, and it is an important challenge for the future. There are four major obstacles facing preventive efforts.[43] First, people are generally not strongly motivated to participate in prevention programs because they are not presently experiencing the need for help, so participation rates may be as low as 20% to 30%.[44] Second, long-term maintenance of preventive behaviors is difficult to obtain because their benefits are not likely to occur for many years (in effect, the preventive behaviors established by the intervention are extinguished because they are not reinforced).[45] Third, many prevention programs are begun as research efforts, and often they are not continued after the research is completed.[46] Finally, because prevention efforts target the future development of disorders, they require long-term evaluation of their effects, which conflicts with social and political pressures for instant success. For instance, legislators who authorize funding for prevention programs expect to see the benefits quickly, which is not possible.

BEHAVIOR THERAPY WITH DIVERSE POPULATIONS

The United States is becoming increasingly ethnically diverse, with ethnic minorities comprising an estimated 36.3% of the population,[47] and by mid-century it will be 53%.[48] (This trend also applies to other Western cultures.) Clearly, behavior

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therapists must seriously consider the special needs of this sizeable minority now and majority in 35 years. Additionally, there is a need for more behavior therapists who are members of ethnic minority groups; whereas the US population is becoming more diverse, the demographics of students being trained in behavior therapy and of faculty at behavior therapy training institutions has remained stable.[49] Further, more than ever before, behavior therapies are being used worldwide, which may require adaptations for non-US and non-Western societies.

The diversity of clients includes more than cultural or ethnic identities. The term *diversity,* in the present context, refers to all factors that differentiate groups of individuals in modern-day society: culture, ethnicity, race, gender, age, sexual orientation, socioeconomic status, educational level, religious and spiritual persuasion, and physical and cognitive ability.[50]

By virtue of its basic principles, there are ways in which behavior therapy is inherently suited to treating diverse clients. An emphasis on the role of the environment, including the client's sociocultural background and unique life circumstances, is a key element in assessing the maintaining conditions of each client's problems. A number of behavioral assessment procedures—especially systematic naturalistic observation, self-monitoring, and physiological measures—are likely to be unbiased with respect to diversity. Treatments are designed based on the unique maintaining conditions of the client's target behavior. These assets that the behavioral approach brings to the treatment of problems of diverse clients notwithstanding, behavior therapy must do even more before it is able to competently serve clients from diverse populations.

Assessment methods must be sensitive to diversity issues. For example, many Native Americans value action over words and believe that asking questions is rude.[51]Accordingly, a Native-American client might have more confidence in systematic naturalistic observation than in an interview as a means of assessment. Self-report inventories need to be worded so that they do not exclude various groups, such as assuming that respondents have a heterosexual orientation.[52] Culturally sensitive assessment also requires that behavior therapists be aware of cultural differences in the primary symptoms that clients with a particular disorder exhibit. For instance, Chinese and Southeast Asian refugees in the United States who suffer from depression frequently exhibit somatic complaints (such as headaches and chest pain) more than a sad mood.[53] Currently, there is relatively little research that informs therapists about cultural and racial differences in various disorders.[54]

Preference for and response to different therapies are likely to vary depending on one's cultural background.[55] Consider cultural differences in cognition. People from Western cultures think more logically and analytically, whereas those from Eastern cultures think more holistically and show more tolerance for contradiction.[56] This might indicate that clients from Eastern cultures would find acceptance/mindfulness-based therapies more acceptable and effective because their cognitive style allows for the co-existence of acceptance *and* change. Here again, there is a paucity of research about the impact cultural differences have on suitability and effectiveness of different therapy procedures.

Behavior therapists have primarily addressed the issue of how best to serve our increasingly diverse client population in two ways: (1) generating

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recommendations for dealing with clients from diverse populations and (2) seeing if extant behavior therapy procedures work for diverse clients.

Although there has been no shortage of recommendations for dealing with clients from diverse populations, these recommendations have serious flaws. First, in many cases, the recommended practices for different ethnic minority groups are very similar. For example, a problem-centered, present-oriented approach has been suggested as optimal for Latino,[57] Japanese-American,[58] and African-American clients.[59] Second, many of the guidelines proposed for clients with a specific ethnic background stem from cultural stereotypes,[60] and it is difficult to distinguish between useful generalizations and misleading stereotypes.[61] Third, and most important, the guidelines that have been proposed thus far rest on speculation gleaned from cultural norms.[62] It will be important in the future to develop *empirically based* recommendations in order to optimally serve diverse clients.[63]

The other way behavior therapists have begun to deal with diverse clients is to apply standard treatments—which were developed for and validated with White, heterosexual, middle-class clients from Western cultures—to see if they are effective with diverse clients. Most of the examples of behavior therapies being used with minority clients that you have read about in previous chapters illustrate this approach.

Recently, some data- and theory-driven adaptations of existing evidence-based behavior therapy procedures have been made to meet the unique needs of clients from diverse populations with particular problems. The adaptations are substantial, yet they retain the foundations of the evidence-based therapies from which they are derived. A prime example of this strategy has been the development of *culturally adapted cognitive behavioral therapy (CA-CBT)* for posttraumatic stress disorder.[64] Spearheaded by Devon Hinton, this approach has been shown to be effective with traumatized refugees from Vietnam and Cambodia as well as Latino women with treatment-resistant PTSD.[65] As an example of these adaptations, consider how CA-CBT exposure therapy and emotion regulation is dealt with. Exposure therapy is arguably the optimal treatment for PTSD, but its standard use is contraindicated for ethnic minorities and refugees because they are often highly distressed and thus not likely to tolerate the exposure.[66] Accordingly, before exposure is administered, clients are taught emotion regulation techniques that fit with the client's cultural group; examples are repetitively reciting Allah's name for Muslim clients or saying the rosary for Catholic clients to elicit a peaceful state of mind.[67] The result of engaging in such emotion regulation is that clients are able to tolerate exposure therapy.

USING PRECISE AND CORRECT TERMINOLOGY

Precision is inherent in the scientific ethic of behavior therapy, and precision in specifying goals, target behaviors, and treatment procedures is a strength of behavior therapy. Yet behavior therapists frequently use imprecise or misleading terminology in at least three ways: (1) inaccurate terminology, (2) inconsistent terminology, and (3) labeling clients in terms of their disorders.

First, some standard terms in the field are inaccurate and potentially misleading. A prime example is *time-out from positive reinforcement*. For this term

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to be accurate, what the client is temporarily deprived of must be reinforcing for the client. However, in practice, what the client is temporarily deprived of (such as being in the classroom with other children) has not been identified as a *reinforcer* for the client—in other words, it is not known if it would increase the future occurrence of a behavior. Instead, the typical time-out environment (a bare room or facing a blank wall) removes *potential* reinforcers for the client, things that typically serve as reinforcers for similar clients—that is, generalized reinforcers. Thus, the correct term for the technique should be *time-out from generalized reinforcers*. An additional problem exists with the abbreviated term *time-out,* which has the unfortunate negative connotation of isolation, such as penal solitary confinement that lasts for days on end. In contrast, the time-out period in time-out from positive reinforcement is only a few minutes.

Another example of inaccurate terminology is the indiscriminate use of the term *reward* as a synonym for *reinforcer*. A reward specifically refers to a pleasant consequence of engaging in a behavior but not necessarily one that increases the likelihood that the person will perform the behavior again, which is what defines a reinforcer.

Occasionally, behavior therapists use a term with a standard, well understood meaning to designate something entirely different. For instance, a laboratory study involving alternative reinforcers to cocaine referred to "the number of responses participants had to make to earn a reinforcer" as *response cost*—in other words, the amount of work required to obtain the reinforcer.[68] However, *response cost*, according to its standard definition, refers to removing a client's access to valued items or previleges.

A second problem with imprecise terminology is that behavior therapists frequently label therapy procedures inconsistently when they communicate about them. The result is that it is unclear which therapy procedure is being referred to. This issue was discussed in In Theory 11-2 (page 269) with regard to exposure therapies. It is even more problematic with cognitive-behavioral therapies, where many published studies indicate that clients were treated by "cognitive-behavioral therapy," without stating the specific variant of cognitive-behavioral therapy that was used.

Among the causes of this problem are the tenuous assumption that behavior therapists will know what is meant by a particular therapy term and the fact that often there are no agreed-upon definitions. A prototypical example is the use of the generic term *cognitive behavior* (or *cognitive-behavioral*) *therapy*—which includes many different therapies, as you saw in Chapters 13 and 14—to refer to *cognitive therapy,* the specific therapy originally developed by Beck and vice versa.[69] To add to the confusion, some people use the term *cognitive therapy* as a generic label for all therapies that change clients' cognitions or views of the world, including interventions that are not behavior therapy, such as fixed-role therapy and other constructivist psychotherapies.

A related definitional problem arises when a term is not operationally defined and could have multiple meanings. *Treatment as usual*, a common control group used in outcome studies, is one example. As the term implies, a therapy is being compared to the treatment that the clients are currently receiving or typically would receive (such as medication, occupational therapy, or

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custodial care). The problem is that research reports more often than not fail to specify what that *usual treatment* is in the particular study.

The result of the lack of agreed-upon and adhered-to labels for behavior therapies is that interpreting research results can be ambiguous and misleading.[70] This is especially problematic when a study reports the use of a treatment package and does not specify its components. To help deal with this issue, an international group of psychotherapists, led by veteran behavior therapist Isaac Marks in England, has been developing a lexicon of common language for all psychotherapies, which, *if followed,* might mitigate the problem of the absence of standard definitions for therapy procedures.[71] By the spring of 2014, ninety-nine therapy procedures had been defined (each illustrated with a brief case).[72] They represent diverse psychotherapy orientations and were submitted by therapists from 14 countries; about a third are behavior therapy procedures.

A third way in which behavior therapists use terminology carelessly concerns how they refer to clients. Behavior therapy directly deals with behaviors—what people *do*—rather than psychological disorders, which are arbitrary theoretical designations that exist only as long as they are considered useful (by the American Psychiatric Association!). This means that behavior therapists should view their clients as human beings who *exhibit* maladaptive behaviors (that may be indicative of a psychological disorder) or who *suffer from* a psychological disorder. Clients are not their disorders and should not be equated with their disorders (no more than people with diabetes or asthma should be viewed entirely in terms of their physical illnesses). Thus, labeling clients in terms of their disorders should be verboten for behavior therapists (as was discussed in In Theory 6-1, page 88), but unfortunately it is common practice.

Admittedly, it is easier to refer to a client as *a schizophrenic* or as *an obsessive-compulsive* than to say that the client *has schizophrenia* or *suffers from obsessive-compulsive disorder.* However, this careless use of language all too often results in viewing clients solely in terms of their problems, rather than as *people with problems*. This distinction is meaningful, and the failure to make it has serious negative consequences, including the deleterious effects of labeling people and stigmatizing them. Granted, labeling clients is a widespread practice among mental health workers of all theoretical persuasions and professions. However, behavior therapists are particularly guilty when they label people because doing so is counter to their theoretical perspective. As testament to the feasibility of communicating about clients without labeling them, I have written this entire book without once describing clients as their disorders; I believe it was worth the effort.

The challenge with regard to precision and correctness in terminology is straightforward. Behavior therapists must practice what they preach and remain consistent with their scientific approach to therapy, which includes being precise in how they communicate with their colleagues and clients.

DISSEMINATION AND IMPLEMENTATION OF EVIDENCE-BASED BEHAVIOR THERAPIES

For a large array of problems and client populations, a majority of the psychotherapies that have been deemed *evidence based* are behavior therapies.[73] Nonetheless, mental health practitioners in general have not widely adopted

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evidence-based behavior therapies (as well as nonbehavioral interventions that are evidence based).[74] The problem is a failure of *dissemination* (informing clinicians about evidence-based behavior therapies) and *implementation* (getting clinicians to use them).

Consider a few examples of the underutilization of evidence-based behavior therapies. Although prolonged exposure therapy has strong empirical support for treating posttraumatic stress disorder, many clients with PTSD do not receive this treatment.[75] Although cognitive-behavioral approaches are among the evidence-based treatments of choice for bulimia nervosa[76] and insomnia,[77] they have not been widely implemented for either disorder. And, despite evidence that 70% of children with enuresis are successfully treated by urine alarm systems, less than 5% of primary care physicians recommend it.[78] The list of underutilized evidence-based behavior therapies easily could be extended, and increasing their use clearly is important. After all, the most effective treatments are effective only if they are used.

Here is a snapshot of the challenges to dissemination and implementation of evidenced-based treatments and some possible ways to overcome them.

Failure to Get the Word Out

If clinicians do not know about evidence-based therapies, they cannot use them. Mental health professionals may not have been exposed to them in their initial or continuing professional training. Graduate training has a major influence on mental health practitioners' practices,[79] yet many graduate programs in psychology and social work do not provide training in evidence-based treatments.[80] Further, many therapists start their careers with a bias against evidence-based interventions (for reasons that will be discussed in a moment), and this attitude is perpetuated in their clinical practices.[81] The Association for Behavioral and Cognitive Therapies has begun an initiative to change graduate training curricula to deal with this issue.[82]

Opposition to Evidence-Based Interventions in General

Some clinicians believe that evidence-based treatments are flawed in several respects. They argue that because they are manual based with specific prescriptions as to how the treatment is to be conducted, the interventions lack flexibility that is important in customizing treatment for individual clients. This criticism and its counterarguments were discussed in Broad Strokes 5-1 (page 80).

Critics also dispute that randomized controlled studies, which are the benchmark of evidence-based interventions, should be the standard for evaluating treatments. And critics point out that support for evidence-based interventions comes largely from carefully controlled efficacy studies carried out in research settings rather than effectiveness studies implemented in much less controlled clinical settings; the implication is that evidence-based treatments may not be applicable to real-world practice. While this general argument may have some merit, research has shown that evidence-based therapies can be effective in clinical settings.[83]

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Opposition to Evidence-Based Behavior Therapies Due to Theoretical Orientation

Besides general opposition to evidence-based interventions, clinicians with orientations other than behavior therapy are likely to resist adopting evidence-based behavior therapies because they are antithetical to their approach to therapy. For example, psychodynamic and humanistic therapists place a premium on the therapist–client alliance and broad therapeutic goals of better life adjustment and personal growth. In contrast, behavior therapists rely on the potency of their interventions and narrower goals of alleviating specific problems. Thus, the theoretical orientation of some therapists may dissuade them from adopting evidence-based behavior therapies.

Resistance to Evidence-Based Behavior Therapies Due to Misinformation

Negative and erroneous beliefs about therapies are common among therapists, including those who use them, and pose a barrier to their dissemination and implementation. Such negative beliefs are likely due to ignorance about how the therapy is performed, its effectiveness, client characteristics that predict outcome, and possible negative side effects.

Reservations about using exposure therapies are a good example. The findings from a recent large and diverse sample of therapists *who use exposure therapies* revealed that the most prevalent reasons for excluding clients from exposure therapy are a client's comorbid psychotic disorder, emotional instability, and reluctance to undergo the treatment.[84] As it turns out, none of these client characteristics is associated with negative outcomes in exposure therapy. The good news is that negative beliefs about exposure therapy can change markedly after therapists have received accurate information about the process.[85]

Possible Solutions to the Challenges of Dissemination and Implementation

Almost all evidence-based behavior therapies are manual based, and despite some clinicians' resistance to manual-based treatments, they can play an important role in both dissemination and implementation. Mental health professionals can learn how to administer evidence-based behavior therapies by studying manuals and then use them to implement the therapies.

The use of transdiagnostic treatments may be one solution to dealing with the resistance to manual-based treatments.[86] Because transdiagnostic therapies are designed to treat a number of disorders that share common vulnerabilities and symptoms (such as eating disorders), they are inherently more adaptable to individual cases.

Technology can be harnessed to disseminate evidence-based behavior therapies. Clinicians can learn about the treatments from on-line tutorials,[87] which may make the training more attractive since it can be done on a clinician's own schedule and there is no need to travel for training. Treatment also can be implemented via the Internet, telephone, and mobile devices, which is especially important for servicing clients who have limited access to face-to-face therapy, such as clients living in remote areas and those who are homebound.

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Most dissemination and implementation initiatives for evidence-based behavior therapies have targeted mental health practitioners and agencies, the providers of evidence-based behavior therapies. Recently, direct-to-consumer strategies have been emerging—that is, targeting clients or potential clients who might benefit from evidence-based behavior therapies.[88] Given the amount of money spent by the pharmaceutical industry on direct-to-consumer marketing ("Ask your doctor if 'Placebocillin' is right for you"), the strategy must be working. Not surprisingly, the Association for Behavioral and Cognitive Therapies does not have the financial resources of Big Pharma. However, creative and less expensive avenues for making consumers aware of the benefits of evidence-based treatments for psychological disorders are possible, including through Websites, social media, video hosting services such as YouTube, and guest appearances by behavior therapists on radio and TV talk shows.

Dissemination and Implementation: An Imperative

A number of dissemination and implementation initiatives for evidence-based behavior therapies have been successful,[89] and while this is encouraging, only the tip of the iceberg has been melted.

It is worth noting that behavior therapy is not alone in having to confront the challenges of dissemination and implementation. Effective medical treatments often are poorly disseminated and implemented. A 1601 experiment provided strong evidence for preventing scurvy with daily doses of lemon juice, but it was not until almost 200 years later in 1795 that this simple, inexpensive treatment was implemented by the British Navy.[90] As a contemporary example, a study revealed that only 5% of stroke victims receive a medication called tissue plasminogen activator (tPA), which significantly reduces the chances of permanent brain damage and loss of functioning if administered within 4½ hours of the onset of a stroke. Although 81% of the US population lives within an hour's drive of a hospital where the drug was available, less than 40% of hospitals administered any tPA in 2011.[91]

It would be wise for behavior therapists to learn from the successes and failures of dissemination and implementation initiatives in other fields. The recent proliferation of commentary and research on dissemination and implementation of evidence-based behavior therapies indicates that the challenge is high on behavior therapy's agenda for pressing problems in the field.[92] However, behavior therapists cannot promote wide-scale dissemination of effective behavior therapies on their own. Behavior therapists will need to enlist the aid of governmental organizations, such as federal and state mental health agencies, that have the resources and perceived authority to promote broad dissemination initiatives targeting large populations.[93]

LOOKING INTO THE CRYSTAL BALL: FUTURE DIRECTIONS OF BEHAVIOR THERAPY

Where is behavior therapy headed in the future? Answering this question involves going out on a limb, but there are two directions that seem to have strong limbs in the recent past. So, relying on a behavioral rule of thumb, I'll use the recent past to predict the future.

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UNIFIED PROTOCOLS FOR TRANSDIAGNOSTIC TREATMENT

Many behavior therapies are developed for and applied to specific disorders—for example, systematic desensitization for phobias, exposure and response prevention for obsessive-compulsive disorder, cognitive therapy for depression, and dialectical behavior therapy for borderline personality disorder. Once the effectiveness of a therapy in treating the specific disorder for which it was designed has been demonstrated, behavior therapists often seek to broaden the scope of the disorders that the therapy can treat. For instance, besides depression, cognitive therapy is now used to treat a variety of problems, including anxiety disorders, marital distress, personality disorders, and delusions and hallucinations.

The common practice of applying therapies originally developed for a specific disorder to a potpourri of other disorders seems to have been driven by behavior therapists' asking the question: "If therapy A works well for problem Y, what other problems might it work for?" In contrast, the development of *transdiagnostic treatments*—treatments specifically designed to treat multiple disorders (or diagnoses)—arose for several reasons. First, there is the fact that standard diagnostic categories are not discrete—that is, they do not clearly differentiate the symptoms of one disorder from another. Second, comorbidity (a person's simultaneously having more than one disorder) is common; for example, posttraumatic stress disorder and substance abuse problems as well as depressive disorders and anxiety disorders often occur together. Third, evidence has been accumulating to indicate that some disorders share common maintaining conditions. Since behavior therapies treat the maintaining conditions of problems, it might be possible to design single treatment protocols for related disorders, thus treating the maintaining conditions the disorders have in common—in other words, *unified transdiagnostic protocols.*

At present, the two best-developed examples of unified protocols for transdiagnostic treatment are for eating disorders and emotional disorders, and others are in the early stages of development (such as Christensen's unified protocol for couple therapy [see Chapter 14]). The components of existing unified protocols are not unique, but their combination in treatment packages is unique.[94]

Anorexia nervosa and bulimia nervosa, the two major eating disorders, have been considered separate disorders for a long time. However, it has become clear in recent years that there is considerable overlap between the two eating disorders and that people with eating disorders may switch from one diagnosis to the other over time. Accordingly, Christopher Fairburn and his colleagues have proposed a transdiagnostic unified theory and treatment protocol that is applicable to all eating disorders.[95] Interestingly, the focus of the theory and treatment is our culturally reinforced attitudes and beliefs about weight and body shape, rather than the restrictive food intake, binge eating, and purging that have been the foci of traditional behavior therapies for eating disorders.

Although anxiety and mood disorders—the two primary emotional disorders—also have traditionally been viewed as two separate disorders, it is becoming clear that it is more fruitful to emphasize their commonalities rather than their differences. In fact, the two disorders have overlapping symptoms and often are comorbid. Moreover, treatment of one of these emotional disorders frequently generalizes to the other. There also appear to be common vulnerabilities to developing both disorders.

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These findings provided David Barlow and his colleagues at the Boston University Center for Anxiety and Related Disorders the rationale for developing a unified, transdiagnostic treatment protocol for emotional disorders.[96] With its roots in traditional cognitive-behavioral theory and therapy, the unified protocol for emotional disorders emphasizes the ways in which people experience and respond to their emotions. A basic assumption is that "individuals with emotional disorders use maladaptive emotion regulation strategies—namely, attempts to avoid or dampen the intensity of uncomfortable emotions—which ultimately backfire and contribute to the maintenance of their symptoms."[97] The unified protocol gets clients to confront and experience their unpleasant emotions and to respond to them adaptively.

The unified protocol is administered in 12–18 sessions (that are each 50–60 minutes long) and consists of eight modules: (1) motivational enhancement for treatment engagement, (2) psychoeducation and tracking of emotional experiences, (3) emotional awareness training, (4) cognitive appraisal and reappraisal, (5) attention to emotion avoidance and emotion-driven behaviors, (6) awareness and tolerance of physical sensations, (7) interoceptive and situation-based exposure, and (8) relapse prevention. Preliminary research indicates that the unified protocol is efficacious and provides support for a transdiagnostic approach to the treatment of emotional disorders.[98]

Unified transdiagnostic protocols show a great deal of promise, and I predict that they will play a prominent role in behavior therapy in the future.

BEHAVIORAL INTERVENTION TECHNOLOGY

Behavior therapy has always used simple technology, such as mechanical devices for recording behaviors (see Chapter 6), a battery-operated apparatus for individually administering response cost to students in a classroom (see Chapter 8), and the use of video modeling (see Chapter 12). Occasionally, more sophisticated and costly technology has been used, such as biofeedback for chronic pain (see Chapter 16) and virtual reality for exposure therapy (see Chapter 10).

Until recently, however, behavior therapy has not made extensive use of technology. In one way, this is a virtue. Technology can complicate procedures, whereas simplicity has distinct advantages in therapy. All things being equal, the simpler the therapy procedures, the more likely they are to work, especially when clients self-administer them. The other drawback to elaborate technology in the past has been its high cost.

The emergence of the Internet and mobile communication devices and apps in the new millennium has resulted in burgeoning use of technology in behavior therapy. Today, a majority of people are thoroughly immersed in our on-line and mobile communication culture that makes the use of technology possible, acceptable, and accessible to clients. You have read about numerous examples of the recent use of technology in behavior therapy in previous chapters, and this section will discuss the advantages and challenges of *behavioral intervention technology (BIT)*, which includes all technology used in the service of behavior therapy.

First, let's look at some of the advantages of employing BIT as the sole or principle provider of treatment or to supplement in-person face-to-face therapy, the dominant model of delivering therapy.

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- Many applications of BIT are relatively low cost.
- BIT is one solution to the problem of disseminating evidence-based behavior therapies (as discussed earlier in the chapter on page 505).
- BIT is a solution for the overwhelming need for psychological services that is not presently being met though in-person face-to-face therapy, with the result that only a small proportion of individuals in need receive treatment.[99] One example is in the use of *stepped-care delivery models* that provide several levels of treatment delivery.[100] Clients who need lower intensity therapy may benefit from a Web-based program,[101] while those who require higher intensity care may require face-to-face therapy. Clients whose needs fall in between can receive a combination of intervention levels, such as a Web-based program with periodic face-to-face Skype sessions.
- BIT increases the accessibility of treatment for clients for whom in-person face-to-face therapy is not possible because of being homebound, restrictive family or work schedules, or living in a geographic location with a limited number of or no behavior therapists within a reasonable distance.[102] In such cases, treatment can be provided through Internet-based programs, or clients can have individual videoconferencing sessions with a therapist, who may be thousands of miles away.
- Web-based interventions can be translated into many languages to make them accessible to non-English-speaking clients.
- Web-based treatments are self-directed, which is consistent with the self-control approach of behavior therapy. This helps clients assume responsibility for their changes, which is empowering and may result in long-term maintenance of treatment gains.
- BIT allows clients to control the time and pace of their treatment, which may increase the likelihood that they will engage in the treatment. Clients can access the treatment more often than in typical once or twice a week face-to-face sessions. Further, more frequent, shorter therapy sessions allow for distributed learning of skills, which generally enhances learning.[103]
- BIT may reduce the stigma of being in psychotherapy (a problem in some cultural groups), which increases the acceptability of therapy.
- Accessing therapy through BIT is likely to be significantly less expensive for clients than in-person face-to-face therapy sessions, which is especially advantageous for clients with low incomes.

As attractive as these advantages of behavioral intervention technology are, there also are many challenges, some of which are the flipside of its selling points.

- With Internet and mobile technology, the privacy of client information is at risk, especially in the current era of increased commercial and government surveillance.[104]
- The necessity to apply the same ethical and professional standards followed with in-person psychological services requires special procedures (as in obtaining informed consent).[105]
- The absence of an in-person, face-to-face therapist–client relationship can, in some cases, be detrimental to the treatment. Generally, the more serious clients' problems are, the more important is in-person face-to-face therapist contact.[106]

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- The cost of initial development and periodic updates of BIT can be very high. (At the same time, BIT interventions can be cost effective in the long run.[107])
- The frequent need to update existing technology poses challenges for evaluating BIT. By the time research that is testing the effectiveness of a particular technology is completed, the technology is likely to be outdated.[108]
- For treatment that is administered remotely, as through videoconferencing, crisis management (such as to prevent suicide attempts) poses challenges when the therapist resides in a distant location.[109]
- A host of legal and regulatory issues concerning offering services across state lines is another problem for remotely administered therapy.[110]
- Therapists must be competent in using BIT (which may require training) and be willing to use it (which may mean overcoming resistance to this nontraditional delivery approach).[111]
- A number of BIT interventions utilize generic programs, such as Internet therapy programs, and thus are not individualized for each client. (However, it is possible to customize Internet-based therapies; in some cases, customized programs have been shown to be more effective than standardized interventions.[112])

Harnessing technology to augment and implement behavior therapies is intriguing. However, this work is still in its infancy, and the efficacy, effectiveness, and long-term maintenance of technological-based interventions must be clearly established. But one thing seems clear: behavioral intervention technology is going to play a prominent role in the future of behavior therapy.

ALL THINGS CONSIDERED: BEHAVIOR THERAPY

Once upon a time—actually only 60 years ago—behavior therapists were a new family of kids that moved into a psychotherapy neighborhood that was inhabited almost exclusively by one dominant family, psychoanalysts. Accordingly, behavior therapy initially had a hard time gaining acceptance. When verbal taunts (such as behavior therapy treats only the simplest problems) did not scare behavior therapists away, the old-timers placed seemingly impossible barriers in their path. Behavior therapists were allowed to treat only the most difficult cases, those for whom established therapies had been ineffective. Believing they were omnipotent, as youngsters often do, the new kids enthusiastically accepted the challenge. The result was some remarkable successes with so-called hopeless cases. So it came to pass that the established family had no choice but to allow the new and now much larger family to take up legitimate residence in the neighborhood.

At this point, the kids had grown into teenagers, and they began to fight among themselves (which was predictable now that their common external adversaries were leaving them alone). Some of the teenagers began to *think*—a process that most of their peers did not trust because they could not see it. The result of this infighting was an *informal* division into a behavioral side of the family and a cognitive-behavioral side. Those on the cognitive-behavioral

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side eventually came to outnumber those on the behavioral side.[113] Sibling rivalry still arises occasionally, but for the most part, harmony exists because the siblings recognize that they are part of the same family—behavior therapy.

Recently, a new tension has arisen in the family with the advent of a third generation of behavior therapies. While most members of the third generation acknowledge that they are related to previous generations, a few especially vocal members are prone to asserting their independence and an assumption of superiority that is no doubt due to the exuberance and hubris of youth, which may diminish with maturity.

The behavior therapy family has grown considerably over the past 60 years in both number and stature. Today, it is the predominant family in the psychotherapy neighborhood. The stature of behavior therapy in the current practice of psychotherapy is largely due to its effectiveness that is substantiated by a strong body of empirical evidence. Although all behavior therapies do not have equally high levels of empirical support, behavior therapists are committed to subjecting their interventions to empirical validation. Although this enterprise is expensive in terms of time and money, behavior therapy's scientific ethic—perhaps its most unifying tenet—demands it.

Despite the strengths of behavior therapy, it is not a panacea. The effectiveness of behavior therapy in general varies with different disorders and client populations. Further, not all clients favor behavior therapy's approach, with its emphasis on direct, concrete solutions to psychological problems.

Looking ahead, the advent of managed health care has raised many issues regarding the future of the treatment of psychological disorders. Although it is too early to know all the implications of a predominant managed health care system, three imperatives are clear. First, accountability is essential. Therapists must specify (a) the problems being treated, (b) the specific treatment procedures being employed,[114] and (c) clear-cut goals and criteria for determining whether the goals have been met. Accountability should be an easy requirement for behavior therapists to meet because precision and measurement are essential elements of their approach. Second, the treatments used must be empirically supported for the psychological disorder being treated.[115] Fortunately, behavior therapies provide evidence-based treatments for many disorders.[116] Third, managed health care emphasizes short-term and cost-effective treatment. Generally, behavior therapies are relatively brief, involving fewer therapy sessions and less overall professional time than many other types of therapy.[117] Further, the emphasis on providing clients with self-control coping skills is cost effective over time because acquiring them may reduce recurrences that would require additional treatment. What all this means is that behavior therapy should fare well in the era of managed health care.[118]

The commitment to empirical accountability in behavior therapy has resulted in continual change in the field. Behavior therapists have remained relatively open to new ideas, relying on empirical evidence to determine their merit. For instance, the current acceptance of cognitive factors in behavior therapy, which initially had focused exclusively on overt behaviors, came about because research demonstrated the effectiveness of cognitive-behavioral therapies.

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Behavior therapists tend to be outspoken critics of their field and have increasingly recognized and accepted the limitations of behavior therapy as challenges to be addressed.[119] One example is recognizing that procedures instituted during therapy do not ensure the durability of treatment effects. Thus, posttherapy procedures, such as relapse prevention, may be necessary with some problems and client populations. Another example is acknowledging that traditional behavior therapy change strategies used in behavior therapy may not always be optimal. In some cases, acceptance/mindfulness-based strategies used in third-generation behavior therapies may be more effective in helping clients cope with their problems and make their lives personally meaningful.

Finally, on a personal note, what originally drew me to behavior therapy 45 years ago was, quite simply, that it worked—it relieved the personal suffering that comes with psychological disorders, and it did so efficiently, which minimized the suffering. Accordingly, when I wrote the first edition of this book,[120] I considered titling it *Behavior Therapy: A Most Human Endeavor.* I am happy to report that I still feel the same way and am proud to be a behavior therapist. After learning about behavior therapy, I hope you share my enthusiasm.

PARTICIPATION EXERCISE 18-1

Demythifying Myths About Contemporary Behavior Therapy

You began your introduction to behavior therapy by judging whether 14 statements about behavior therapy were predominantly true or false (in Participation Exercise 1-1, page 3). You learned that all the statements were predominantly false; they all were commonly held myths or misconceptions about behavior therapy. At this point, you should know *why* each of the statements is predominantly false. As a final check of your understanding of contemporary behavior therapy, read each of the statements again and write specific reasons why each is false. When you have finished, compare your reasons with those in the Participation Exercise Answers at the end of the chapter.

1. Behavior therapy is the application of well-established laws of learning.
2. Behavior therapy directly changes symptoms of a disorder.
3. A trusting relationship between client and therapist is not necessary for behavior therapy to be effective.
4. Behavior therapy does not deal with problems of feelings, such as depression and anger.
5. Generally, little verbal interchange takes place between the therapist and client in behavior therapy.
6. The client's cooperation is not necessary for behavior therapy to be successful.
7. Most clients in behavior therapy are treated in fewer than five sessions.
8. Behavior therapy is not applicable to changing mental processes such as thoughts and beliefs.
9. Positive reinforcement works better with children than with adults.
10. Many behavior therapy procedures use painful or aversive treatments.

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11. Behavior therapy primarily deals with relatively simple problems, such as phobias (for example, fear of snakes) or undesirable habits (for instance, fingernail biting).
12. Goals for therapy are established by the therapist.
13. The therapist primarily is responsible for the success of therapy.
14. Because behavior therapy treats the symptoms of a disorder and not its underlying cause, once the symptoms are removed, others will develop because the cause of the symptoms has not been treated.

SUMMARY

1. Five major strengths of behavior therapy are its precision in specifying goals, target behaviors, and procedures; its efficacy and effectiveness; its efficiency; its breadth and complexity of applications; and its ethical practices.
2. One major challenge for behavior therapy is designing procedures that increase the durability of change when treatment ends. The two major strategies used to enhance durability during behavior therapy are teaching clients self-control coping skills and ensuring that clients' natural environments provide the necessary antecedents and consequences to maintain treatment gains. Three posttherapy strategies to promote durability of treatment gains are: relapse prevention, booster sessions, and maintenance treatment.
3. A second major challenge for behavior therapy is to develop prevention programs using behavioral principles and techniques. Prevention is especially germane to problems for which behavioral interventions have been least effective or for which there is no available treatment.
4. Providing assessment and therapy procedures that are sensitive to diverse clients is a third challenge. Behavior therapy practices are, in general, sensitive to diversity because assessment and therapy procedures are tailored to the unique needs of each client. However, behavior therapies need to be empirically validated with diverse populations. Many suggestions have been made for providing behavior therapy for clients from specific cultural backgrounds, but there is little empirical support for them.
5. Using precise terminology is a fourth challenge. Some standard terms in the field are inaccurate and potentially misleading, there are frequent inconsistencies in the labeling of behavior therapy procedures, and behavior therapists often label their clients in terms of their disorders rather than as clients with disorders.
6. A fifth challenge for behavior therapy is the promotion of widespread dissemination and implementation of evidence-based behavior therapies. Despite their effectiveness, many behavior therapies are underutilized. Reasons include clinicians' not being aware of them, opposition to evidence-based interventions in general, opposition to evidence-based behavior therapies because of theoretical differences, and misinformation about the therapies.

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7. Two current trends in behavior therapy are likely to play prominent roles in the future: transdiagnostic treatments and the use of sophisticated technology to enhance behavior therapies. Transdiagnostic treatments target the common, overlapping symptoms and maintaining conditions of multiple related disorders, such as emotional disorders (anxiety and mood disorders) and eating disorders (anorexia and bulimia). The proliferation of the Internet and mobile communication devices and apps is being harnessed to make behavior therapies more efficient, accessible, and effective.
8. The field of behavior therapy has evolved over the past 60 years, beginning as the new family in the psychotherapy neighborhood and growing into the predominant family in the neighborhood. Because behavior therapy emphasizes accountability, has demonstrated effectiveness, and is relatively brief, the field should fare well in this era of managed health care. Behavior therapists' willingness to scrutinize their practices and openness to new approaches in the field also bode well for the future of behavior therapy.

PARTICIPATION EXERCISE ANSWERS

PARTICIPATION EXERCISE 18-1

Demythifying Myths About Contemporary Behavior Therapy

Note: The following explanations are overviews only; see the appropriate parts of the book for full explanations.

1. *Behavior therapy is the application of well-established laws of learning.* To begin with, there are no "well-established laws of learning." Instead, a number of *theories* of learning exist. Some, but not all, behavior therapy procedures do use various *principles* of learning, such as reinforcement, modeling, and extinction. Although learning theories frequently are used to explain how behavioral interventions work, behavior therapy is not accurately defined in terms of the explanatory theories, which are often post hoc explanations.
2. *Behavior therapy directly changes symptoms of a disorder.* Behavior therapy directly changes the *maintaining conditions* of problem behaviors (symptoms), thereby indirectly changing the problem behaviors.
3. *A trusting relationship between client and therapist is not necessary for behavior therapy to be effective.* A trusting relationship is crucial in behavior therapy for a variety of reasons, including for the client to be candid with the therapist and follow the therapist's directives as well as for the therapist to have confidence that the client is providing accurate information. In behavior therapy, a trusting relationship *facilitates* the treatment procedures. In contrast, in other forms of therapy, such as insight-oriented therapies (for example, psychoanalysis and person-centered therapy), the trusting relationship itself is the primary treatment procedure.
4. *Behavior therapy does not deal with problems of feelings, such as depression and anger.* Feelings (emotions) are covert behaviors that constitute one of the most frequently treated types of behaviors. Feelings may be treated directly (as in exposure

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therapy for anxiety) and indirectly (such as shaping increasingly more active behaviors for depression).

5. *Generally, little verbal interchange takes place between the therapist and client in behavior therapy.* Verbal interchange is usually the major means by which the client and the behavior therapist communicate. However, behavior therapy is an action-oriented therapy that involves much more than just talking about the client's problems.
6. *The client's cooperation is not necessary for behavior therapy to be successful.* Psychotherapy, of any variety, is unlikely to be effective without the client's cooperation. Further, behavior therapy generally involves the active participation of clients in their therapy, so their cooperation is crucial.
7. *Most clients in behavior therapy are treated in fewer than five sessions.* Behavior therapy usually brings about changes in problem behaviors in considerably fewer therapy sessions than many other forms of psychotherapy (especially verbal, insight-oriented therapies) but generally not in as few as five sessions. One general estimate is typically between 8 and 20 sessions.
8. *Behavior therapy is not applicable to changing mental processes such as thoughts and beliefs.* Cognitive-behavioral therapy procedures deal directly with clients' mental processes or cognitions that are either maintaining overt problem behaviors or are themselves covert problem behaviors.
9. *Positive reinforcement works better with children than with adults.* Reinforcement procedures are as effective with adults as with children, although many of the specific, generalized reinforcers are different for children and adults.
10. *Many behavior therapy procedures use painful or aversive treatments.* Very few behavior therapy procedures involve painful or aversive treatments. Further, aversive procedures are used in a very small minority of cases, usually after nonaversive procedures have been tried and failed. Moreover, because aversive procedures are deceleration therapies, when they are used, they usually are supplemented with acceleration therapies, which comprise the vast majority of behavior therapy procedures.
11. *Behavior therapy primarily deals with relatively simple problems, such as phobias (for example, fear of snakes) or undesirable habits (for instance, fingernail biting).* Behavior therapy treats a wide array of complex human problems. However, the focus of behavior therapy is on target behaviors, which are relatively simple aspects of (complex) problem behaviors.
12. *Goals for therapy are established by the therapist.* In behavior therapy, clients decide on their goals for therapy. However, because clients often do not have well-defined goals, behavior therapists may have to help clients generate realistic and clearly delineated goals for therapy.
13. *The therapist primarily is responsible for the success of therapy.* Clients in behavior therapy are actively involved in their treatment, especially in terms of carrying out vital homework assignments. Additionally, many behavior therapies involve a self-control approach. Clearly, then, clients share responsibility with their behavior therapists for the success of treatment.
14. *Because behavior therapy treats the symptoms of a disorder and not its underlying cause, once the symptoms are removed, others will develop because the cause of the symptoms has not been treated.* This myth is the basis for the notion of symptom

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substitution and is based on faulty premises. Behavior therapy does not directly treat the symptoms (maladaptive behaviors) of a disorder; rather it directly treats the *maintaining conditions* of the symptoms. Because the maintaining conditions *are* the cause of the symptoms, there is no reason to believe that additional symptoms will develop.

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Appendix
Guidelines for Choosing a Behavior Therapist[a]

After the decision to seek therapy has been made, an individual may feel unsure about how to choose a therapist. Persons seeking therapy often find that they have no standards to use in evaluating potential therapists. There are many competent therapists of varying theoretical persuasions. The purpose of this guide is to provide you with information that might be useful in selecting a behavior therapist. No guideline can provide strict rules for selecting the best therapist for a particular individual. We can, however, suggest questions you might ask and areas of information you might want to cover with a potential behavior therapist before you make a final decision.

WHAT IS BEHAVIOR THERAPY?

There is no single definition of behavior therapy. Although some common points of view are shared by most behavior therapists, there is a wide diversity among those persons who call themselves behavior therapists. The definition that follows is meant to give you a general idea of what behavior therapy is. It is not, however, an absolute definition. The particular behavior therapist you select may agree with some parts of it and disagree with other parts. The following definition is adapted from "Behavior Modification: Perspective on a Current Issue," published by the National Institute of Mental Health:

> Behavior therapy is a particular kind of therapy that involves the application of findings from behavioral science research to help individuals change in ways they would like to change. There is an emphasis in behavior therapy on checking up on how effective the therapy is by monitoring and evaluating the individual's progress. Most behaviorally oriented therapists believe that the current environment is most important in affecting the person's present behavior. Early life experiences, long-time intrapsychic conflicts, or the individual's personality structure are considered to be of less importance than what is happening in the person's life at the present time. The procedures used in behavior therapy are generally intended to improve the individual's self-control by expanding the person's skills, abilities, and independence.

[a]These guidelines were adapted slightly from those written by Marsha Linehan, Ph.D. (University of Washington, Seattle) during her tenure as membership chairperson of the Association for Advancement of Behavior Therapy, with a committee consisting of Richard Bootzin, Ph.D.; Joseph Cautela, Ph.D.; Perry London, Ph.D.; Morris Perloff, Ph.D.; Richard Stuart, D.S.W.; and Todd Risley, Ph.D. I have updated the contact information for referral sources.

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QUALIFICATIONS AND TRAINING NECESSARY FOR PARTICULAR MENTAL HEALTH PROFESSIONALS

Behavior therapy can be done by a number of different mental health professionals. Competent behavior therapists are trained in many different disciplines, and the distinction between different types of mental health professions can sometimes be confusing. Therefore, we have listed below a brief description of the training received by different types of professionals who may offer behavior therapy.

PSYCHIATRIC SOCIAL WORKERS

A psychiatric social worker must have a college degree, plus at least 2 years of graduate training in a program accredited by the Council on Social Work Education. A psychiatric social worker who is certified by the Academy of Certified Social Workers (ACSW) must have a master's or doctoral degree in social work (MSW, DSW, or Ph.D.) from a program approved by the Council on Social Work Education, 2 years of post-degree experience in the practice of social work, and membership in the National Association of Social Workers. In addition, the certified psychiatric social worker must pass a written exam and submit several professional references. Licensing procedures vary from state to state.

PSYCHOLOGISTS

Psychologists usually have doctoral degrees (Ph.D., Ed.D., or Psy.D.) from graduate programs approved by the American Psychological Association. The *National Register of Health Service Providers in Psychology* lists psychologists who have a doctoral degree from a regionally accredited university; have at least 2 years of supervised experience in health services, 1 of which is postdoctoral; and are licensed or certified by the state for the independent practice of psychology. After 5 years of postdoctoral experience, a psychologist may apply for credentials from the American Board of Professional Psychology. This involves a review by the Board of the applicant's experience and an examination that the applicant must pass. Licensing or certification procedures vary from state to state.

PSYCHIATRISTS

A psychiatrist must have a medical degree. Although technically an individual can practice psychiatry having had 4 years of medical school and a 1-year medical internship, most psychiatrists continue their training in a 3-year residency program in psychiatry. Psychiatrists who have Board certification have had 2 years of post-residency experience in practicing psychiatry and must have passed an examination given by the American Board of Psychiatry and Neurology.

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PRACTICAL INFORMATION ABOUT THERAPISTS

You have the right to obtain the following information about any potential therapist. This information may be obtained from the referral person, over the phone with the therapist, or at your first visit with the therapist. Although you may not feel that all this information is relevant, you will need a substantial amount of it in order to evaluate whether a particular therapist would be good for you.

Your first session with a therapist should always be a consultation. This session does not commit you to working with the therapist. The goals in the first session should be to find out whether therapy would be useful for you and whether this particular therapist is likely to be helpful to you. During this session, you may want to discuss with your therapist any values that are particularly important to you. If your therapist's views are very different from yours, you may want to find a therapist with whom you are more compatible. An important aspect of therapy for you will be the relationship between you and the therapist. This first session is a time for you to determine whether you will feel comfortable and confident working with this particular therapist.

The following are things you need to know about a prospective therapist.

TRAINING AND QUALIFICATIONS

An earlier section of this guide gives a description of the qualifications and amount of training necessary for an individual to obtain a particular mental health-related degree. You should find out whether the individual therapist is licensed or certified by your state. If the person is not licensed or certified by your state, you may want to ask whether the person is being supervised by another mental health professional.

Because behavior therapists vary in types of training, there are no set rules on which professional qualifications would be best for any given client. It is common, though, for clients to want to know about the training, experience, and other professional qualifications of a potential therapist. Good therapists will not mind being asked questions about their qualifications and will freely give you any professional information that you request. If a therapist does not answer your questions, you should consult another therapist.

FEES

Many people feel uncomfortable asking about fees. However, it is important information that a good therapist will be quite willing to give a potential client. The following are financial questions you may want to cover with a potential therapist, which may be asked over the phone or during your first visit.

1. How much does the therapist charge per session?
2. Does the therapist charge according to income (sliding scale)?
3. Does the therapist charge for the initial session? (Since many therapists *do* charge for the initial session, you should get this information before your first visit.)

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4. Is there a policy concerning vacations and missed or cancelled sessions? Is there a charge?
5. Will your health insurance cover you if you see this therapist? And will the therapist submit claims for you?
6. Will the therapist want you to pay after each session, or will you be billed periodically?

OTHER QUESTIONS

The following are additional questions you may want to cover with a potential therapist.

1. How many times a week will the therapist want to see you?
2. How long will each session last?
3. How long does the therapist expect treatment to last? (Some therapists do only time-limited therapy, whereas others set no such limits.)
4. What are some of the treatment approaches likely to be used?
5. Does the therapist accept phone calls at the office or at home?
6. When your therapist is out of town or otherwise unavailable, is there someone else you can call if an emergency arises?
7. Are there any limitations on confidentiality?

QUESTIONS TO ASK WHEN DECIDING ON A THERAPIST

A behavior therapist will devote the first few sessions to assessing the extent and causes of the concerns that you have. Generally, your therapist will be asking quite specific questions about the concerns or problems causing you distress and about when and where these occur. As the assessment progresses, you can expect that you and your therapist will arrive at mutually agreeable goals for how you want to change. If you cannot agree on the goals of therapy, you should consider finding another therapist.

Once the initial goals are decided upon, you can expect the therapist to discuss with you one or more approaches for helping you reach your goals. As you continue therapy, you can expect your therapist to continually evaluate with you your progress toward these goals. If you are not progressing, or if progress is too slow, your therapist will most likely suggest modifying or changing the treatment approach. At each of these points, you may want to have answers to the following questions.

1. Do you understand what the therapist has asked you to do?
2. Do the therapist's instructions seem relevant to your objectives?
3. Do you believe that following these instructions is likely to help you make significant progress?
4. Has the therapist given you a choice of alternative therapy approaches?
5. Has the therapist explained possible side effects of the therapy?
6. Do you know what the therapist's own values are, to the extent that they are relevant to your problem?

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WHAT TO DO IF YOU ARE DISSATISFIED WITH YOUR THERAPIST

TALK WITH YOUR THERAPIST

People feel angry or frustrated at times about their therapy. If you do, you should discuss how you are feeling as well as any concerns, dissatisfactions, and questions with the therapist. A good therapist will be open to hearing them and discussing your dissatisfactions with you.

GET A SECOND OPINION

If you feel that the issues and problems you have raised with your therapist are not being resolved, you may want to consider asking for a consultation with another professional. Usually the therapist you are seeing can suggest someone you can consult. If your therapist objects to your consulting another professional, you should change to another therapist who will not object.

CONSIDER CHANGING THERAPISTS

Many people feel that it is never acceptable to change therapists once therapy has begun. This is simply not true. Good therapists realize that they might not be appropriate for every person.

The most important thing you need to ask yourself when deciding to continue with a particular therapist is "Am I changing in the direction I want to change?" If you do not feel that you are improving, and if, after discussing this with your therapist, it does not appear likely to you that you will improve with this therapist, you should consult another therapist.

HOW TO GET THE NAMES OF BEHAVIOR THERAPISTS

If you don't already have the name of a therapist, you might try some of the following suggestions:

1. Ask for recommendations from your family physician, friends, and relatives.
2. Look through the Association for Behavioral and Cognitive Therapies Membership Directory. ABCT is not a certifying organization, and not all members listed offer behavior therapy. However, you might call people listed in the directory to ask for a referral. Members are listed by city and state, as well as alphabetically. You can visit <www.abct.org>.
3. Call your state psychological association or district psychiatric association and ask for a referral. You can locate your state psychological association by visiting <www.apa.org>. Only certified or licensed professionals will be referred by these organizations. District psychiatric associations can be found by visiting <www.psych.org>.
4. Call the university psychology, social work, or medical school psychiatry departments in your area and ask for a referral. Ask to speak with someone in clinical or counseling psychology, the chairperson of the social work department, or the chairperson of the department of psychiatry.

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5. Call your local community mental health clinic. The clinic may have a behavior therapist on staff or be able to give you a referral.
6. Look in the directories of the American Psychological Association and the American Psychiatric Association. Copies of these directories should be in your public library. Members in these organizations will often be able to give you a referral.
7. Look in the *National Register of Health Service Providers in Psychology*, published by the Council of National Health Service Providers in Psychology: <www.nationalregister.org>. People listed might be able to give you a referral.
8. Look in the National Association of Social Workers' *Register of Clinical Social Workers*, published by the National Association of Social Workers: <www.socialworkers.org>. People listed might be able to give you a referral.

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Glossary of Behavior Therapy Terms

The chapter number in parentheses indicates where the most complete information about the behavior therapy term can be found.

ABA study (5) Single-subject reversal study consisting of three phases: baseline (A), treatment (B), and reversal (to baseline) (A).

ABAB study (5) Single-subject reversal study consisting of four phases: baseline (A), treatment (B), reversal (to baseline) (A), and reinstatement of treatment (B).

ABC model (3) Temporal sequence of antecedents, behavior, and consequences.

acceleration target behavior (4) Adaptive behavior that is increased in therapy.

acceptability (5) Measure of how palatable therapy procedures are to clients, therapists, and other change agents.

acceptance (15) Fully embracing one's experience in the moment, just as it is, and without judging it.

Acceptance and Commitment Therapy (ACT) (15) Acceptance/mindfulness-based behavior therapy that fosters acceptance of unwanted thoughts and feelings and a commitment to acting in accord with one's values.

activity schedule (13) List of the day's activities used in cognitive therapy and behavioral activation to provide structure in clients' lives and motivate them to remain active.

adaptation period (6) Initial period in systematic naturalistic observation in which observations are made, but the data are not used; allows the client to become accustomed to the observer's presence in order to reduce reactivity.

antecedents (3) Events that occur or that are present before a behavior is performed.

anxiety hierarchy (10) List of events that elicit anxiety, ranked in order of increasing anxiety.

anxiety-induction therapy (11) Exposure therapy in which the client's level of anxiety is heightened initially to reduce it eventually.

assertion training (12) Specific skills training procedures used to teach assertive behaviors.

assertive behaviors (12) Actions that secure and maintain what one is entitled to without infringing on the rights of others.

automatic thoughts (13) Maladaptive thoughts that appear to arise reflexively, without prior deliberation or reasoning, and that are cognitively reconstrued in cognitive therapy.

aversion therapy (8) Treatment that directly decelerates a maladaptive behavior by associating it with an unpleasant stimulus.

backup reinforcer (9) Reinforcer that can be purchased with tokens in a token economy.

baseline (4) Measurement of the natural occurrence of a target behavior prior to the introduction of treatment. It provides a standard for evaluating changes in a target behavior after a treatment has been introduced.

behavior (3) Anything a person does.

behavior rehearsal (12) Therapy procedure in which a client practices performing a target behavior.

behavioral activation (7) Therapy, primarily used for depression, that identifies a client's reinforcing activities and then initiates the client's engaging in them.

behavioral approach (or **avoidance) test** (6) Simulated observation to assess fear; clients are asked to engage in a series of steps that involve progressively more fear-inducing behaviors.

behavioral deficit (4) Adaptive behavior that a client is not performing often enough, long enough, or intensely enough. (Compare with *behavioral excess.*)

behavioral excess (4) Maladaptive behavior that a client is performing too often, for too long, or too intensely. (Compare with *behavioral deficit.*)

behavioral momentum compliance training (16) Technique used to get a client to comply with a low-probability request (that the client is not likely to comply with) by preceding it with a series of high-probability requests (that the client is likely to comply with).

behavioral parent training (9) Treatment package taught to parents consisting of acceleration and deceleration behavior therapy procedures to effectively manage their child's behavioral problems.

biofeedback (16) Specific information clients receive about their physiological processes and use to change them.

booster treatment (8) Additional treatment after therapy has been terminated, which is designed to promote long-term maintenance of therapeutic gains.

brief/graduated exposure therapy (10) Treatment for anxiety in which the client is exposed to anxiety-evoking events for a short period and in a gradual manner progressing from less to more anxiety-evoking events.

caring-days technique (14) Behavioral couple therapy procedure in which each partner purposefully performs behaviors that the other partner believes indicate caring.

case study (5) Research method that provides a detailed description of what transpires during the treatment of an individual client.

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checklist (6) List of potential problem behaviors; someone who knows the client well checks those behaviors that are problematic for the client.

clinical significance (5) Change following therapy that makes a practical difference in the client's life.

cognitive defusion (15) Letting go of the idea that one's thoughts are valid descriptions and explanations of one's experiences and viewing them as just thoughts.

cognitive fusion (15) Tendency for humans to take their thoughts literally and to believe that they accurately describe how things are, rather than viewing them as just thoughts.

cognitive processing therapy (13) Adaptation of cognitive therapy for stress disorders in which clients are exposed to written accounts of their precipitating trauma.

cognitive restructuring (13) Cognitive-behavioral technique of recognizing maladaptive thoughts and replacing them with adaptive ones.

cognitive restructuring therapy (13) Cognitive-behavioral treatment that teaches clients to substitute adaptive cognitions for the distorted, illogical, and erroneous cognitions that are maintaining their problem behaviors.

cognitive therapy (13) Cognitive restructuring therapy that emphasizes empirically testing hypotheses about the validity of maladaptive beliefs.

cognitive-behavioral coping skills therapy (14) Treatment that teaches clients specific cognitive and overt-behavioral skills to deal effectively with difficult situations.

cognitive-behavioral therapy (13) Treatment that changes cognitions that are the maintaining conditions of psychological disorders.

collaborative empiricism (13) Cognitive therapy procedure in which the therapist and client work together to frame the client's irrational beliefs as hypotheses and design homework "experiments" that the client uses to test the validity of the hypotheses.

competing responses (4) Two behaviors that cannot easily be performed simultaneously.

consequences (3) Events that occur as a result of a behavior's being performed.

contingency contract (9) Written agreement among the client, the therapist, and other change agents that specifies the relationship between target behaviors and their consequences and each participant's responsibilities.

contingency management (7) Use of reinforcement and/or punishment contingent on the performance of a behavior to be changed.

continuous reinforcement schedule (7) Schedule of reinforcement in which the target behavior is reinforced every time it is performed.

control group (5) Clients in a therapy outcome experiment who do not receive the therapy and serve as a comparison with clients who receive the therapy.

coping desensitization (10) Variation of systematic desensitization in which clients use anxiety-related bodily sensations as cues to actively cope with anxiety.

coping model (12) Model who initially experiences difficulty and uneasiness performing a behavior and gradually becomes competent and relaxed. (Compare with *mastery model.*)

couple-based cognitive-behavioral therapy (14) Using cognitive-behavioral therapy techniques to treat a partner's individual problem behaviors in the context of couple therapy.

covert behavior (3) Behavior that cannot be directly observed in other people, such as thinking and feeling.

covert behavior rehearsal (12) Procedure in which clients visualize their practicing performing a target behavior.

covert modeling (12) Procedure in which clients visualize a model's behaviors.

covert sensitization (8) Aversion therapy in which an aversive stimulus and a maladaptive target behavior are associated completely in the client's imagination.

cue exposure (11) Exposure therapy that exposes clients to cues associated with their addictive behaviors but prevents clients from engaging in the behaviors.

dead person rule (4) The rule, "Never ask a client to do something a dead person can do," reminds therapists to phrase target behaviors as active rather than passive behaviors.

deceleration target behavior (4) Maladaptive behavior that is decreased in therapy.

dialectical behavior therapy (DBT) (15) Acceptance/mindfulness-based behavior therapy for treating borderline personality disorder. It includes group skills training and individual therapy to deal with clients' immediate problems.

dialectical persuasion (15) Subtly highlighting the inconsistencies in a client's actions, beliefs, and values to help the client develop a balanced perspective that is congruent with her or his values.

differential reinforcement (8) Procedure used to indirectly decelerate a maladaptive behavior by reinforcing an alternative acceleration target behavior.

differential reinforcement of alternative behaviors (8) Procedure used to indirectly decelerate a maladaptive target behavior by reinforcing specific adaptive behaviors—but not necessarily behaviors that are either incompatible or competing.

differential reinforcement of competing behaviors (8) Procedure used to indirectly decelerate a maladaptive behavior by reinforcing acceleration target behaviors that *interfere* with the simultaneous performance of the deceleration target behavior.

differential reinforcement of incompatible behaviors (8) Procedure used to indirectly decelerate a maladaptive behavior by reinforcing acceleration target behaviors that *preclude* the simultaneous performance of the deceleration target behavior.

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differential reinforcement of low response rates (8) Procedure used to indirectly decelerate a maladaptive behavior by reinforcing the behavior when it occurs at a less frequent rate.

differential reinforcement of other behaviors (8) Procedure used to indirectly decelerate a maladaptive behavior by reinforcing any behaviors other than the deceleration target behavior.

differential relaxation (10) Relaxing all skeletal muscles not essential to the behavior being performed.

direct self-report inventory (6) Questionnaire containing brief statements or questions requiring simple, discrete answers; clients complete it themselves to provide information about their problem behaviors.

dry-bed training (17) Treatment package for enuresis consisting of shaping and overcorrection.

dry-pants method (17) Daytime version of dry-bed training.

effectiveness/effective (5) The success of therapy in actual clinical settings. (Compare with *efficacy.*)

efficacy/efficacious (5) The success of therapy when it is tested under ideal conditions—in research settings, using rigorous controls and standardized procedures. (Compare with *effectiveness.*)

emotive imagery (10) Exposure therapy procedure in which the client uses pleasant thoughts as competing responses for anxiety.

environment (3) All external influences on behaviors.

evidence based (5) Designation given to a therapy that has been empirically validated using specific research methodologies.

experiential avoidance (15) Efforts to escape from or avoid unpleasant thoughts, emotions, and bodily sensations and the circumstances that might elicit them.

experiment (5) Research method involving groups of clients; all the clients are dealt with in the same way except that some clients receive the therapy being tested and others do not.

exposure therapy (10) Treatment for anxiety (and other negative emotional responses) that exposes clients, under carefully controlled conditions, to stimuli that create the anxiety.

extinction (8) Process of withdrawing or withholding reinforcers in order to decrease maladaptive behaviors.

eye movement desensitization and reprocessing (EMDR) (11) Exposure-based treatment package for alleviating upsetting memories about traumatic experiences; its basic components are imaginal flooding, cognitive restructuring, and the induction of rapid, rhythmic eye movements.

fading (7) Process of gradually withdrawing prompts as the client performs the acceleration target behavior more frequently.

fear survey schedule (6) Direct self-report inventory for rating the severity of fear or anxiety elicited by various situations and objects.

first-order change (15) Changing the form or frequency of problem behaviors rather than their function. (Compare with *second-order change.*)

flooding (11) Prolonged/intense in vivo or imaginal exposure to highly anxiety-evoking stimuli.

follow-up assessment (or **follow-up)** (4) Measurement of the client's functioning after therapy has been terminated to determine the durability of the treatment effects.

functional analytic psychotherapy (7) Behavior therapy that shapes clients' appropriate and adaptive interpersonal behaviors as they occur in the therapist–client relationship.

functional communication training (8) Variant of differential reinforcement that teaches clients to use acceptable ways of communicating the desire for a reinforcer as an alternative to their typical unacceptable means of communicating the same message.

generalization (5) Process in which changes occurring as a result of therapy influence behaviors other than those that were specifically treated.

generalized imitation (12) The basic ability to learn by imitating others.

generalized reinforcer (7) Event that functions as a reinforcer for many people.

graded task assignment (13) Cognitive therapy shaping technique in which clients are encouraged to perform small sequential steps leading to a goal.

group contingency (7) Procedure in which the behaviors of a group of clients determine the consequences for each member of the group. (Compare with *individual contingency.*)

group hierarchy (10) Common anxiety hierarchy used for all the clients in group systematic desensitization.

habit reversal (17) Treatment package for tics and nervous habits that incorporates awareness training, relaxation training, competing response training, and reinforcement.

homework assignments (1) Specific therapeutic activities that clients carry out on their own in their everyday environments.

imitation (12) Response in which a person behaves like a model who the person has observed.

in vivo (1) Term used to designate therapy procedures implemented in the client's natural environment.

in vivo desensitization (10) Brief/graduated exposure to actual anxiety-evoking events.

in vivo flooding (11) Prolonged/intense exposure to actual anxiety-evoking stimuli.

individual contingency (7) Procedure in which the behaviors of an individual client determine the consequences for that client. (Compare with *group contingency.*)

integrative behavioral couple therapy (14) Behavioral couple therapy that employs techniques to create acceptance of one's partner's upsetting behaviors.

intermittent reinforcement schedule (7) Schedule of reinforcement in which only some of the occurrences of a target behavior are reinforced.

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interobserver reliability (6) Extent to which two or more observers agree on their observations of a client's behaviors.

interoceptive exposure (10) Therapy procedure that induces physical sensations of panic attacks so that clients can practice using cognitive-behavioral coping skills to deal with panic attacks.

interrater reliability (6) Extent to which two or more raters agree on their ratings of a client's behaviors.

live model (12) Model who is actually present ("in the flesh").

long-term maintenance (or **maintenance)** (5) Durability over time of changes that occur as a result of therapy.

maintaining antecedents (3) Prerequisites and situational cues, present before a behavior is performed, that set the stage for or elicit the behavior.

maintaining conditions (3) Antecedents and consequences of a behavior that cause the behavior to be performed.

maintaining consequences (3) Events that occur as a result of a behavior's being performed and influence the likelihood that the behavior will be repeated.

maintenance See *long-term maintenance.*

massed negative practice (17) Treatment for tics in which the client purposefully performs the tic as rapidly as possible for a set period.

mastery and pleasure rating (13) Cognitive therapy technique in which clients rate the degree of success and enjoyment they experience engaging in an activity.

mastery model (12) Model who, from the outset, performs a target behavior competently. (Compare with *coping model.*)

meta-analysis (5) Research method that integrates and compares empirical findings from multiple studies regarding a specific research question.

mindfulness (15) Paying attention without judgment to whatever is happening at the moment.

mindfulness-based cognitive therapy (MBCT) (15) Acceptance/mindfulness-based behavior therapy for preventing recurrence of episodes of major depression; mindfulness exercises are employed to teach clients to become more aware of and less engaged with their negative thoughts.

model (12) Person who demonstrates a behavior for another person.

modes of behavior (3) The four types of behavior that are assessed and treated in behavior therapy: overt actions, cognitions, emotions, and physiological responses.

multimethod assessment (6) Use of two or more methods to gather information about a target behavior and its maintaining conditions.

multimodal assessment (6) Assessment of two or more of the four modes of behavior.

multiple baseline study (5) Evaluates the effects of a therapy for multiple target behaviors, clients, or settings.

natural model (12) Person in a client's natural environment who exhibits behaviors that the client can benefit from observing.

natural reinforcer (7) A reinforcer that is available to clients in their natural environments.

negative punishment (7) Removing a pleasant or desirable consequence for a behavior, which decreases the likelihood that the behavior will be repeated.

negative reinforcement (7) Removing an unpleasant or undesirable consequence for a behavior, which increases the likelihood that the behavior will be repeated.

negative reinforcer (7) Stimulus that is removed or avoided as a consequence of a behavior's being performed, which increases the likelihood that the behavior will be repeated.

noncontingent reinforcement (8) Variant of differential reinforcement in which the reinforcer identified as maintaining a problem behavior is administered on a frequent fixed-interval schedule whether or not the client engages in the deceleration target behavior.

observer (12) Person who observes a model's demonstrating a behavior.

overcorrection (8) Punishment technique in which a client corrects the harmful effects of a deceleration target behavior (restitution) and then intensively practices an alternative acceleration target behavior (positive practice).

overt behavior (3) Behavior that can be observed directly by other people.

pain behavior (16) Overt behavior generally indicating a person is experiencing pain sensations (such as grimacing and saying, "Ouch!"). (Compare with *well behavior.*)

participant modeling (12) Treatment in which the therapist models the target behavior for the client and then physically prompts the client to perform the target behavior.

perceived self-efficacy (12) A person's belief that he or she can master a situation or be successful at performing a task.

physically aversive consequences (8) Physically painful or noxious consequences used to decelerate a maladaptive target behavior.

planned activity scheduling (7) Arranging for clients to engage in active desirable behaviors in situations likely to elicit problem behaviors.

positive punishment (7) Presenting an unpleasant or undesirable consequence that decreases the likelihood that a behavior will be repeated.

positive reinforcement (7) Presenting a pleasant or desirable consequence that increases the likelihood that a behavior will be repeated.

positive reinforcer (7) Event presented as a consequence of a behavior's being performed, which increases the likelihood that the behavior will be repeated.

Premack principle (7) Principle stating that a higher-probability behavior will serve as a reinforcer for a lower-probability behavior.

probable maintaining conditions (3) The antecedents and consequences of a behavior that appear to be causing a behavior.

problem-solving therapy (14) Cognitive-behavioral coping skills therapy in which clients use a series of systematic steps for solving a problem for which they specifically have sought treatment.

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problem-solving training (14) Cognitive-behavioral coping skills training to prepare people to use a series of systematic steps for dealing with problems that they may encounter in their daily lives.

progressive relaxation (10) Systematically relaxing groups of skeletal muscles.

prolonged/intense exposure therapy (11) Treatment in which the client is exposed to a highly anxiety-evoking event for a lengthy period (to ultimately reduce the anxiety).

prompt (7) Cue that reminds, instructs, or guides a client to perform a behavior.

prompting (7) Reminding, instructing, or guiding a client to perform a behavior.

psychological flexibility (15) Having options for the behaviors one can engage in.

psychological inflexibility (15) Narrowing of options for the behaviors one can engage in.

punisher (7) Consequence of a behavior that decreases the likelihood that it will be repeated.

punishment (8) Process by which the consequence of a behavior decreases the likelihood that the behavior will be repeated.

randomized controlled trial (5) Well-controlled research study in which participants are randomly assigned to either a treatment condition or a control condition.

rapid smoking (8) Aversion therapy in which clients take puffs of a cigarette in rapid succession, inhaling normally, and continue until they can no longer tolerate the smoking.

rating scale (6) List of potential problem behaviors; someone who knows the client well rates the frequency or severity of each behavior for the client.

rational emotive behavior therapy (REBT) (13) Cognitive restructuring therapy in which clients' irrational thoughts are directly challenged and replaced with rational thoughts.

rational emotive education (13) Training in which children and adolescents learn to apply the basic principles and procedures of rational emotive behavior therapy in their daily lives.

reactivity (6) Phenomenon in which people's behaviors change because they know they are being observed.

reinforcement (7) Process by which the consequence of a behavior increases the likelihood that the behavior will be repeated.

reinforcer (7) The consequence of a behavior that increases the likelihood that the behavior will be repeated.

reinforcer sampling (7) Procedure for making a generalized reinforcer into a reinforcer for an individual client. The client first receives the generalized reinforcer noncontingently; then, when the client comes to value it, the client receives it contingently.

reinforcing agent (7) A person who administers reinforcers.

relapse prevention (14) Procedure for promoting long-term maintenance that involves identifying situations in which clients are likely to relapse, developing skills to cope with such situations, and creating a lifestyle balance that decreases the chances of relapse.

response cost (8) Punishment technique in which a client's access to a valued item or privilege is removed as a consequence of performing a maladaptive behavior.

response prevention (11) Exposure therapy procedure in which clients remain exposed to a threatening situation without engaging in their typical maladaptive anxiety-reducing responses.

retention control training (17) Procedure used in treating enuresis that involves shaping the retention of increasingly greater amounts of urine for increasingly longer periods.

reversal phase (5) Phase in a reversal study in which the therapy is withdrawn temporarily while the target behavior continues to be measured; its purpose is to determine whether the therapy is causing the change in the target behavior.

reversal study (5) Single-subject study in which the therapy is applied to the target behavior and then is withdrawn temporarily to determine whether the therapy is causing the change in the target behavior.

role-playing (6) Assessment or therapy technique in which clients act as if they were in actual problem situations to provide the therapist with samples of how they typically behave in the situations (assessment) or to practice adaptive behaviors (therapy).

schemas (13) Broad, pervasive cognitive themes about oneself, others, and the world, which often stem from childhood experiences and are further developed throughout one's lifetime.

second-order change (15) Changing the function of problem behaviors rather than their form or frequency. (Compare with *first-order change.*)

self-control approach (1) Training clients to initiate, implement, and evaluate behavior therapy procedures on their own.

self-efficacy See *perceived self-efficacy.*

self-instructional training (14) Cognitive-behavioral coping skills therapy that teaches clients to instruct themselves verbally (usually silently) to cope effectively with difficult situations.

self-modeling (12) Therapy procedure in which clients serve as their own models, by observing themselves on videotape or in their imagination performing an acceleration target behavior.

self-monitoring (self-recording) (6) Clients' observing and keeping records of their performing target behaviors.

self-reinforcement (7) Process by which clients administer reinforcers to themselves for performing target behaviors.

self-talk (13) What people "say" to themselves when they are thinking ("inner speech").

setting events (3) Environmental conditions that elicit a behavior.

shaping (7) Reinforcing components of a target behavior that are successively closer approximations of the complete target behavior.

simulated observation (6) Observing a client's behaviors under conditions set up to resemble those in the client's natural environment.

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situation-specific (3) Term used to indicate that behaviors are influenced by the specific environmental context in which they are performed.

skills training (12) Treatment package—including modeling, behavior rehearsal, and reinforcement—used to teach clients skills.

social reinforcers (7) Reinforcers consisting of attention and affirmation from other people.

social skills (12) Interpersonal competencies needed to interact successfully with others.

social validity (5) Therapy outcome measure that evaluates whether a client's behaviors are comparable to the behaviors of individuals judged to be functioning adaptively.

stimulus control (7) Prompts or setting events that "set the stage" for behaviors to occur.

stimulus control procedure (7) Procedure that changes behaviors by modifying prompts or setting events.

stress inoculation training (14) Cognitive-behavioral coping skills therapy in which clients learn coping skills for dealing with stressful situations and then practice the skills while being exposed to stressors.

Subjective Units of Discomfort scale (SUDs) (6) Scale clients use to rate the level of anxiety (usually on a 0 to 100 scale) they experience in anxiety-evoking situations.

symbolic model (12) Model who is not physically present, such as exemplars on TV, in books, and in one's imagination.

systematic desensitization (10) Brief/graduated exposure therapy in which a client imagines successively more anxiety-evoking situations while engaging in a behavior that competes with anxiety.

systematic naturalistic observation (6) Observation and recording of a predetermined set of overt behaviors as the client performs them in her or his natural environment.

tangible reinforcer (7) Material object that serves as a reinforcer.

target behavior (4) Aspect of a client's problem that is a relatively narrow and discrete behavior that can be clearly defined and easily measured; the focus of treatment in behavior therapy.

theft reversal (8) Overcorrection treatment for stealing that involves exaggerated restitution, wherein a client is required not only to return the stolen items to the victim but also to purchase additional similar items for the victim.

thought stopping (13) Cognitive restructuring therapy in which clients interrupt disturbing thoughts by saying "Stop!" (usually silently) and then substitute a prepared pleasant thought for the disturbing thought.

time-out from positive reinforcement (or **time-out)** (8) Punishment technique in which a client's access to generalized reinforcers is withdrawn for a few minutes after the client engages in a maladaptive behavior, often by placing the client in a time-out room or area.

time-out room (8) Isolated room in which a client spends a time-out period with no access to generalized reinforcers.

token economy (9) System for motivating clients to engage in adaptive behaviors. Clients earn token reinforcers for adaptive behaviors and lose tokens for maladaptive behaviors; the tokens are exchanged for backup reinforcers.

token reinforcer (7) Symbolic reinforcer that can be exchanged for desired tangible reinforcers and reinforcing activities or have symbolic value (such as a trophy).

token (9) In a token economy, symbolic reinforcer (such as money and points) that clients earn for performing adaptive behaviors and lose for performing maladaptive behaviors.

traditional behavioral couple therapy (14) Behavioral couple therapy that focuses on communication and problem-solving skills training and increasing positive behavior exchanges.

transdiagnostic behavior therapy (18) Therapy designed to treat the common factors that affect the maintenance of abnormal behaviors that are related to a number of different diagnostic categories (such as eating disorders).

transfer (5) Process in which what is learned and practiced in one setting (such as in therapy) carries over to other settings (such as at home and work).

treatment group (5) Clients in a therapy outcome experiment who receive the therapy.

treatment manual (5) Detailed, session-by-session procedures, derived from a treatment protocol; used by therapists administering a therapy in clinical practice. (Compare with *treatment protocol.*)

treatment package (1) Treatment consisting of two or more therapy procedures.

treatment plan (4) The specific, individualized details of the therapy procedures that will be used for a client.

treatment protocol (5) Detailed session-by-session procedures used by therapists delivering a therapy being tested in efficacy studies. (Compare with *treatment manual.*)

urine alarm (17) Device to treat nocturnal enuresis that sounds an alarm to wake a child when the child begins to urinate; eventually, the child associates bladder tension with awakening, which is its purpose.

vicarious consequences (12) Consequences of a model's behaviors that indicate the consequences that observers are likely to receive for imitating the model.

vicarious extinction (12) Process by which a client's fear is reduced by observing a model perform the feared behavior without the model's incurring negative consequences.

vicarious punishment (12) Consequences of a model's behaviors that decrease the likelihood that an observer will imitate the model.

vicarious reinforcement (12) Consequences of a model's behaviors that increase the likelihood that an observer will imitate the model.

well behavior (16) Overt behavior generally indicating that a person is not experiencing pain sensations. (Compare with *pain behavior.*)

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Glossary of Psychological Disorders and Problems

addictive behavior Recurrent use of substances (for example, alcohol) or engaging in other activities (for example, compulsive gambling) that involve physiological or psychological dependence and result in maladaptive consequences for the individual and others.

agoraphobia Anxiety disorder characterized by intense fear and avoidance of public places or other situations from which escape might be difficult should the individual experience anticipated incapacitating panic-like symptoms (see *panic attack*).

anorexia nervosa Eating disorder characterized by distorted body image, intense fear of gaining weight, intentional reduction in food intake, and excessive exercise, resulting in dangerously low body weight.

antisocial behavior Action characterized by a blatant disregard for and violation of other people's rights.

Asperger's syndrome Pervasive developmental disorder marked by impaired social interactions and limited repetitive patterns of behavior but with minimal impairment of cognitive functioning and language.

attention deficit hyperactivity disorder (ADHD) Disorder emerging in early childhood characterized by age-inappropriate inattention and hyperactive and impulsive behaviors.

autism spectrum disorder (formerly *autistic disorder*) Developmental disorder beginning in infancy characterized by severely impaired social interaction, delayed language development and communication, and highly restrictive and repetitive patterns of behavior.

binge eating Pattern of maladaptive eating in which a person consumes excessively large quantities of (usually high-caloric) food in a short period.

bipolar disorder Mood disorder characterized by fluctuations between depression and manic states.

body dysmorphic disorder Maladaptive preoccupation with an imagined defect or minor flaw in one's appearance.

borderline personality disorder Chronic and pervasive pattern of poor regulation of emotions, instability of interpersonal relationships, distorted self-image, and extreme impulsive behaviors.

bulimia nervosa Eating disorder involving recurrent episodes of uncontrolled binge eating followed by purging (through self-induced vomiting or abusing laxatives) to avoid weight gain.

chronic fatigue syndrome Pervasive fatigue lasting more than 6 months and resulting in a 50% reduction in daily activities.

chronic pain Pain occurring for a duration of at least 6 months after an injury has healed or when no trauma exists.

chronic psychiatric disorder Psychiatric disorder characterized by longstanding and severe psychological impairment in one's ability to function independently (as in schizophrenia).

compulsion Repetitive, ritualistic behavior intended to reduce anxiety resulting from an obsession.

conversion disorder Physical impairment, such as paralysis or blindness, occurring in the absence of a known medical condition and associated with psychological factors.

delusion Blatantly false, maladaptive, and disturbing belief people steadfastly hold despite contrary evidence (most often associated with schizophrenia).

dementia Progressive deterioration of brain functioning characterized by deficits in memory, abstract thinking, problem solving, judgment, and motor control.

depression Mood disorder characterized by intense sadness, feelings of despair and hopelessness, inability to experience pleasure, decreased physical energy, lack of motivation, distorted thinking, and physical complaints.

developmental disability Handicapping condition in which one or more aspects of a person's development (for instance, intellectual, language, motor) are significantly delayed in comparison with the development of others of the same age.

eating disorder Disturbed pattern of eating associated with individuals' distorted perceptions of their body shape and weight.

enuresis Recurrent involuntary bedwetting or wetting of one's clothes after age 5 that has no organic cause.

essential hypertension Chronic high blood pressure with no known cause.

generalized anxiety disorder Anxiety disorder characterized by excessive diffuse worry, tension, apprehension, and often physical complaints.

hallucination False sensory perception that people experience as real (generally associated with schizophrenia).

hypertension See *essential hypertension.*

impulsive behavior Spontaneous behavior characterized by a lack of forethought about the consequences of one's actions.

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insomnia Difficulties initiating and sustaining sleep.

intellectual disability (formerly *mental retardation*) Significantly subaverage intellectual functioning accompanied by difficulties with everyday, adaptive functioning.

irritable bowel syndrome Stress-related disorder that results in abdominal pain and discomfort associated with altered bowel function, including constipation and diarrhea.

nervous habit Repetitive manipulation of objects or movement of body parts, usually occurring when a person is anxious or experiencing stress.

obesity Having a body mass index above 30.

obsession Persistent, unwanted intrusive thought.

obsessive-compulsive disorder Anxiety disorder involving unwanted, persistent intrusive thoughts (obsessions) and repetitive, ritualistic behaviors (compulsions) intended to reduce anxiety resulting from the obsessions.

oppositional behavior Disruptive behavior involving acting contrary to what is expected or requested by an authority figure.

panic attack Unexpected sudden occurrence of intense apprehension and terror accompanied by physical symptoms, such as shortness of breath, dizziness, heart palpitations, and chest pain.

panic disorder Anxiety disorder characterized by repeated panic attacks (see *panic attack*).

paraphilia Sexually deviant behavior in which a person is sexually aroused by socially inappropriate objects, individuals, or behaviors.

personality disorder Longstanding, pervasive pattern of maladaptive behaviors that are inflexible and may involve distress and impairment.

phobic disorder Anxiety disorder characterized by disproportionate and irrational fear of specific objects, activities, or situations and by avoidance of the feared stimuli.

posttraumatic stress disorder Anxiety disorder that emerges sometime after experiencing a traumatic event; it is characterized by emotional numbness, heightened vigilance and arousal, and the reliving of the traumatic event through mental flashbacks and nightmares.

ruminative vomiting (rumination disorder) Regurgitating and reswallowing of partially digested food, which interferes with nutritional intake and weight gain.

schizophrenia Severe, chronic psychiatric disorder characterized by hallucinations and delusions, emotional blunting, disorganized thought and speech, social withdrawal, and bizarre actions.

selective mutism Refusal to speak despite being able to speak.

self-injurious behavior Physically harmful behavior (such as head banging) that people deliberately engage in.

separation anxiety Anxiety in children that involves excessive fear that harm will come to themselves or their primary caregivers while apart from them, resulting in extreme distress when separating from primary caregivers.

sexual dysfunction Impaired functioning in sexual relations involving diminished sexual arousal and desire, inability to achieve sexual gratification, or the experience of pain during sexual intercourse.

skill deficit Absence of an adaptive skill that impairs a person's functioning.

social anxiety Irrational fear and avoidance of social situations.

social phobia Anxiety disorder characterized by fear of scrutiny by others and being embarrassed in social situations.

social withdrawal Maladaptive avoidance of being in the presence of other people.

substance abuse Recurrent substance (drug) use resulting in significant personal distress or adverse consequences.

substance dependence Disorder involving recurrent substance (drug) use that results in a physiological or psychological need for the substance in addition to personal distress and adverse consequences.

tic disorder Pattern of recurring, sudden, rapid involuntary motor movements or vocalizations.

Tourette's disorder Severe tic disorder involving multiple sudden, involuntary motor movements and vocalizations.

Type A behavior Pattern of behavior characterized by competitive, achievement-oriented behaviors; engaging in multiple tasks simultaneously; and a constant monitoring of time.

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