# Chapter Twenty-Five

# Cognitive Behavior Modification

Behavior modification often is focused on analyzing and modifying overt behaviors. Most of the chapters in this text have described procedures for increasing or decreasing target behaviors that can be observed and recorded by an independent observer. However, some target behaviors may be covert, that is, not observable by another individual. Chapter 24 discusses one type of covert target behavior, the physiological responses involved in fear or anxiety problems. This chapter focuses on analyzing and modifying another type of covert behavior, **cognitive behavior**.

Note that people trained in behavior analysis do not favor the term *cognitive* for a variety of reasons (Skinner, 1974, 1977). However, the term is used widely in clinical psychology and behavior therapy, and students are exposed to it regularly. Accordingly, the term is used in this text as a label for certain types of covert behaviors and behavior change procedures. In each case, operational definitions are provided for the behaviors that are labeled as cognitive and the procedures designed to change cognitive behaviors.

- What is cognitive behavior?
- What functions can cognitive behaviors serve?
- What is cognitive restructuring?
- How do you get people to change their thinking in cognitive restructuring procedures?
- How do you implement self-instructional training?

## Examples of Cognitive Behavior Modification

### *Helping Deon Control His Anger*

Deon, a junior in high school, was a recent immigrant to the United States; he had been at the high school since his sophomore year. Sometimes other students called Deon names or made racist comments to him. Deon often reacted to the name-calling or comments by getting into fights. He cursed at the other student, and if the other student did not stop or walk away, Deon began to throw punches or wrestle with him. Fights usually were broken up by teachers or other students. Deon had been suspended on a number of occasions for fighting. He was referred to a school counselor, Dr. Woods, to address this problem.

Through interviews with Deon, Dr. Woods identified a number of antecedents that preceded Deon's fighting. The primary antecedent was a situation in

which another student called him a name or made a racist comment. However, some covert antecedents were also present. Deon experienced autonomic arousal (including rapid heart rate, tense muscles, and rapid breathing), which he labeled as anger. In these situations, he also made a number of angry statements to himself, such as "He can't say that to me!" or "I can't let him get away with that!" The name-calling or comments from the other student preceded his autonomic arousal (anger) and angry statements, which, in turn, preceded his fighting. The consequence for Deon's fighting varied. On some occasions, the other student backed down or ran away after Deon started fighting. On other occasions, the fighting was broken up by a teacher or other third party. In each case, the fighting terminated the name-calling or racist comments, at least temporarily; thus, the fighting was negatively reinforced. The decrease in autonomic arousal that Deon experienced after his fighting may also have been negatively reinforcing.

Dr. Woods could not easily apply any reinforcement or punishment procedures with Deon because she was not present when Deon got into fights. In addition, Dr. Woods could not remove the initial antecedent condition because she could not be there to stop other students from making comments or name-calling. (The high school did have rules against racist behavior and did provide training to reduce racist behavior, but this was not enough to stop the problem.) Dr. Woods decided to use cognitive behavior modification procedures to help Deon change his angry self-statements and autonomic arousal, the covert antecedents to his fighting. First, Dr. Woods helped Deon identify all of the angry self-statements he made in the fighting situations. He learned that his angry self-statements (thoughts) in response to the racist comments elicited more autonomic arousal, which made the fighting more likely to occur. Once Deon was aware of his angry thoughts and understood the role they played, he agreed to work with Dr. Woods to change his thoughts as one way to decrease his fighting.

Dr. Woods taught Deon to replace his angry thoughts with coping self-statements that would not lead to fighting. Deon learned a number of coping self-statements, such as "Don't fight, or you'll get suspended!" or "Walk away, he's a racist. It's not worth it!" or "Don't lower yourself to his level!" Using role-plays to simulate the fighting situations, Dr. Woods taught Deon to recite these coping statements out loud and then to walk away whenever someone called him a name or made racist comments to him. As Deon walked away from a fight in the role-play, he praised himself. He learned to say, for example, "Way to go, you walked away," or "It takes a real man not to fight," or "I'm in control here." Deon practiced in role-plays that simulated all of the racist comments and name-calling that he had heard over the year he had been in school. Dr. Woods provided instructions and modeling to teach Deon appropriate coping statements and provided praise and feedback for Deon's performance in the role-plays. Once Deon successfully recited a variety of coping statements out loud during the role-plays, he then learned to recite his coping statements silently instead of saying them out loud. He did this because it would not be appropriate to recite the coping statements out loud in a real conflict situation.

In addition to learning coping self-statements to replace his angry thoughts, Deon learned relaxation skills to calm himself when he was angry. Dr. Woods used behavioral skills training procedures to teach Deon appropriate assertive

skills—that is, better ways to interact with the other students to decrease the likelihood of racist comments. Finally, Dr. Woods and Deon developed a behavioral contract that specified reinforcing consequences for Deon each time he went for a week without fighting. Deon enjoyed working with Dr. Woods and learning to control his behavior. It became reinforcing for him to walk away from a fight because of the self-praise statements he made and because of the praise he got from Dr. Woods when he recounted the situations in their meetings.

***Which of the behavior modification procedures described earlier in this text did Dr. Woods implement with Deon?***

Dr. Woods first conducted a functional assessment by interviewing Deon to identify the antecedents and consequences of the fighting. She used behavioral skills training procedures (instructions, modeling, rehearsal, praise, and feedback) to teach the coping self-statements and the assertiveness skills. Dr. Woods also taught Deon relaxation skills to decrease his autonomic arousal in the fighting situations. Finally, she used a behavioral contract to motivate Deon to avoid fighting. In this case, as in many others, multiple behavior modification procedures are used to address a problem.

## *Helping Claire Pay Attention in Class*

Claire, a 7 year old in second grade, often got into trouble with her teacher because she got out of her seat many times during each class period. When Claire got out of her seat, she would lean across the aisle to talk to a classmate, tease another student, grab something from another student's desk, or engage in some other disruptive behavior. Claire was given a diagnosis of attention-deficit/hyperactivity disorder; her parents were considering having her put on medication. Before they resorted to the medication, however, they wanted to find out whether behavior modification procedures could help Claire to stay in her seat and pay attention in class.

The family took Claire to a child psychologist, Dr. Cruz, who implemented self-instructional training. As Dr. Cruz described it to Claire and her parents, self-instructional training is a way to teach children how to talk to themselves to control their own behavior in the classroom. With this procedure, Claire would learn to give herself instructions to stay in her seat and pay attention to her teacher.

In his office, Dr. Cruz used behavioral skills training procedures to teach the self-instructions to Claire. First, he modeled the behavior. He sat in a chair and pretended that he was in Mrs. Purdy's classroom. To model the behavior he started to get out of the chair, stopped, and said out loud, "Wait. I'm out of my seat. I have to stay in my seat or I'll get in trouble." As soon as he recited the self-instructions, he sat back down on the chair. Then he said out loud, "Good, I'm in my seat. Mrs. Purdy likes that!" After modeling the behavior and the self-instructions, Dr. Cruz asked Claire to do it just as he did it. When Claire rehearsed the behavior and the self-instructions in the role-play, Dr. Cruz provided praise and feedback. They practiced a number of times, until Claire was doing everything correctly. After Claire was giving herself instructions to sit down when she was out of her chair and then sitting back down immediately, Dr. Cruz had her repeat the instructions to herself more softly. They continued to practice

until Claire was saying the instructions to herself covertly so that no one could hear her. Dr. Cruz provided praise and other reinforcers (such as stickers and treats) as Claire participated in the skills training in his office. At the end of the session, Dr. Cruz told Claire to use her self-instructions in class each time she started to get out of her seat, to sit back down immediately, and to praise herself just as they had practiced.

In addition to the self-instructional training, Dr. Cruz implemented two other procedures. He instructed the teacher to praise Claire periodically when she was in her seat paying attention in class. He told Mrs. Purdy to praise Claire at least two times an hour for being in her seat. She was to walk up to Claire's desk, whisper "Good job," and put a smiley face on a piece of paper on her desk. This way, Mrs. Purdy did not draw the attention of the whole class when she praised Claire. Whenever Claire got out of her seat and did not return immediately, Mrs. Purdy was to take Claire back to her seat immediately without saying anything to her. In this way, Claire was returned to her seat but did not get attention from the teacher that may have reinforced the out-of-seat behavior. The other procedure Dr. Cruz used was self-monitoring, in which Claire recorded at periodic intervals whether she was seated. Claire wore a wrist watch that beeped every 30 minutes. If she was seated when her watch beeped, she got to put a check mark on her self-monitoring chart at her desk. If she was not seated, it was a reminder to her to stay in her seat. Mrs. Purdy also kept track every half hour and, at the end of the day, Claire compared her recording to Mrs. Purdy's recording. This helped Claire record her own behavior accurately. After these procedures were implemented, Claire stayed in her seat and paid attention much more in class. As a result, her school-work improved and she earned better grades.

## Defining Cognitive Behavior Modification

**Cognitive behavior modification** procedures are used to help people change behaviors that are labeled as cognitive. Before describing cognitive behavior modification procedures, it is important to provide a behavioral definition of cognitive behavior.

### *Defining Cognitive Behavior*

When behavior modification procedures are used to change a target behavior, the target behavior must be identified and defined in objective terms so that its occurrence can be recorded. This is true for overt behaviors, as well as covert behaviors such as cognitive behaviors. You can't change a target behavior unless you know exactly what the behavior is and when it is occurring. For overt behaviors, this involves direct observation and recording of the behavior by an independent observer or by the person exhibiting the target behavior (self-monitoring). Because cognitive behaviors are covert, they cannot be observed directly and recorded by an independent observer. Rather, the person engaging in the cognitive behavior must identify and record the occurrence of the behavior. Only the person can identify the occurrence of specific thoughts or self-statements because they are covert.

We know that people think, talk to themselves, solve problems, evaluate themselves, make plans, imagine specific behaviors or situations, and so forth. These are all instances of *cognitive behavior*; they are verbal or imaginal responses made by the person that are covert, and thus not observable to others. To be able to work effectively with cognitive behaviors, we must work with the client to objectively define these behaviors. For example, a person can report the specific thoughts that he or she thinks at a particular time, people can describe the things that they say to themselves, a person can describe the situation or behavior that he or she was imagining, and people can tell you the evaluative statements that they make about themselves. To be a behavioral definition of a cognitive behavior, the thought, image, or self-statement must be described clearly by the person engaging in the behavior. A label for the cognitive behavior is not a behavioral definition. For example, to say that a person has low self-esteem does not define the cognitive behavior. This is merely a label for a specific class of cognitive behaviors. It is a label for negative self-statements, such as "I can't do anything right," or "I'm fat and ugly and nobody likes me," or "I'll never amount to anything in life." These self-statements and others like them are the cognitive behaviors that are labeled as low self-esteem. You must be able to identify the specific cognitive behaviors (self-statements) to help the client change those behaviors using cognitive behavior modification procedures. Table 25-1 provides examples of behavioral definitions for cognitive behaviors and some possible labels for these behaviors.

The cognitive behaviors that make up the target behaviors for cognitive behavior modification include behavioral excesses and behavioral deficits. A behavioral excess is an undesirable cognitive behavior the person would seek to decrease. (The behaviors in Table 25-1 labeled as paranoid thoughts, suicidal thoughts, and low self-confidence are examples of cognitive behavioral excesses.) A behavioral deficit is a desirable cognitive behavior the person would seek to increase. (The behaviors in Table 25-1 labeled as self-efficacy, self-confidence, and self-instructions are examples of cognitive behavioral deficits.)

**TABLE 25-1** Behavioral Definitions of Cognitive Behaviors and Their Corresponding Labels

| Behavioral Definition | Label |
|---|---|
| When the client sees people talking, he thinks, "They're talking about me." When the client sees someone walking behind him he thinks, "That person is following me." | Paranoid thoughts |
| A person thinks, "I can do this! I can succeed at this job. I will do well." | Self-efficacy |
| A person thinks, "I wish I would just die. What's the point of going on? Nobody cares; it would be better for everyone if I were dead." | Suicidal thoughts |
| A batter in a softball game says to herself, "I can hit this pitcher. I'm better than she is. I'm going to win this game." | Self-confidence |
| The right fielder says to himself, "I hope he doesn't hit it to me. I don't know if I can catch it. I wish this game would end." | Low self-confidence |
| As a driver is looking for an address, she thinks, "I'm supposed to turn left at the first light and go three blocks to a stop sign. Then I turn left and go until see the white house on the left." | Self-instructions |

### *Functions of Cognitive Behavior*

Why are we sometimes interested in modifying cognitive behavior? One reason is that cognitive behavior may be distressing to the person; it may function as a conditioned stimulus (CS) that elicits an unpleasant conditioned response (CR). For example, a person's fearful thoughts can function as a CS to elicit autonomic arousal (anxiety) as a CR. Deon's angry thoughts elicited autonomic arousal that he labeled as anger. Cognitive behaviors that elicit undesirable CRs such as anxiety are behavioral excesses that can be decreased with cognitive behavior modification procedures.

Cognitive behaviors can also function as discriminative stimuli ($S^D$s) for desirable behaviors. After reciting a rule or a self-instruction, a person may be more likely to engage in the desirable behavior specified by the rule or self-instruction. For example, a person who repeats a set of directions ("Turn left on Main Street and right on Fifth Avenue") may be more likely to arrive at the destination. Claire's self-instructions made it more likely that she would stay seated in her chair and pay attention in class. Self-instructions or rules sometimes are viewed as behavioral deficits that need to be increased in frequency through cognitive behavior modification procedures.

Cognitive behaviors may function as motivating operations (MOs) that influence the power of consequences to function as reinforcers or punishers. How we talk to ourselves about events in our lives may change the value of those events as reinforcers or punishers. For example, if an employee thinks, "My boss is a rotten guy and doesn't mean what he says," the boss's praise may not function as a reinforcer for the employee. Conversely, if the employee does not negatively interpret the boss's actions or thinks more positive thoughts about the boss and his intentions, the boss's praise is more likely to function as a reinforcer for the employee.

Cognitive behaviors may also function as reinforcing or punishing consequences when they follow some other behavior. Praise statements or critical statements from others can serve as reinforcers or punishers. Likewise, praise statements or critical statements made by a person can serve as reinforcers or punishers for the person's own behavior. Both Deon and Claire learned to make praise statements to themselves after their own desirable behavior.

## Cognitive Behavior Modification Procedures

Cognitive behavior modification procedures are used to help people change cognitive behaviors. Some procedures, called **cognitive restructuring**, are designed to replace specific maladaptive cognitive behaviors with more adaptive ones. Cognitive restructuring is used in the case of behavioral excesses, that is, when existing maladaptive cognitive behaviors contribute to a problem. Other procedures, called **cognitive coping skills training**, are designed to teach new cognitive behaviors that are then used to promote other desirable behaviors. These procedures are used in the case of behavioral deficits, that is, when a person does not have the cognitive behaviors needed to cope effectively with problem situations (Spiegler & Guevremont, 2003, 2010). We now consider these procedures in turn.

Note that in the remainder of this chapter, the term *thought* is used to refer to a cognitive behavior: thinking, making self-statements, or talking to oneself at the covert level (self-talk). The particular cognitive behavior meant by the term must be defined behaviorally in each case.

## *Cognitive Restructuring*

*In cognitive restructuring procedures, the therapist helps the client identify* cognitive behaviors that are distressing and then helps the client get rid of these distressing thoughts or replace them with more desirable thoughts. *Distressing thoughts* might be those that elicit emotional responses such as fear, anxiety, or anger, or those that are associated with unpleasant moods, problem behaviors, or poor performance. For example, when Trisha (from Chapter 24) thinks, "I know I'll be scared to death when I give my talk in class," she experiences anxiety and is more likely to engage in avoidance behavior (such as dropping the class). When Deon says to himself, "I can't let him get away with that!" he is more likely to experience autonomic arousal (anger) and to get into a fight. Cognitive restructuring consists of three basic steps.

1. *Helping the client identify the distressing thoughts and the situations in which they occur.* This can be done by asking clients to report what distressing thoughts they experience in specific situations. This relies on the clients' memory of the situations and associated thoughts. A second way to assess distressing thoughts is to have the client self-monitor, that is, write down a description of the situations and the thoughts as they occur.

2. *Helping the client identify the emotional response, unpleasant mood, or problem behavior that follows the distressing thought.* In this way, the client can see how the distressing thought is an antecedent to the unpleasant emotional response, mood, or problem behavior. The client must report this information from memory or must engage in self-monitoring to record the responses as they occur. Table 25-2 presents a data sheet that a client might use to record distressing thoughts, the situations in which they occur, and the emotional response or behavior that follows the distressing thought. This data sheet includes sample entries by four different people; in practice, of course, only one person would fill in any particular data sheet.

3. *Helping the client stop thinking the distressing thoughts by helping the client think more rational or desirable thoughts.* When the client thinks rational thoughts instead of the distressing thoughts in the problem situation, the client is less likely to have negative emotional responses or to engage in problem behaviors. It is not easy to help a client change his or her pattern of thinking. Cognitive restructuring typically is done by psychologists or other professionals with specific training in these procedures. The therapist challenges the client's distressing thoughts by asking questions that make the client analyze the logic or rationality of the thoughts or interpret the situation differently. Consider the second example from Table 25-2. This client, Danielle, has been feeling depressed, has been engaging in fewer and fewer activities outside of work, and has been reporting increasingly depressive thoughts. In the example, she had a number of distressing thoughts when she was preparing to go out for an evening with her friends.

**TABLE 25-2** Example of a Data Sheet Used in Cognitive Restructuring

| Situation | Thoughts | Emotional or Behavioral Outcome |
|---|---|---|
| Went to my history class. | "Oh my god! I have to give a talk. I can't do it. I'll die!" | Experienced anxiety. |
| Getting ready to go out with my friends. | "They don't really like me. They call me because they feel sorry for me." | Felt depressed.<br>Did not go out with my friends. |
| Husband came home late from work. | "I wonder who he's with. I bet he's at the bar. I bet he's flirting with other women." | Got angry.<br>Ignored my husband when he came home.<br>Yelled at him for being late. |
| Girlfriend talking and laughing with a football player at fraternity party. | "I bet he's hitting on her! How can she do this to me!" | Got jealous, angry.<br>Got drunk.<br>Called girlfriend names and left the party. |

Immediately after these thoughts, she felt more depressed and decided not to go out. To help her stop these distressing thoughts, the therapist might ask her the following questions: "How do you know that your friends don't really like you? Where is the evidence? What evidence do you have that they ask you out only because they feel sorry for you?" As the therapist poses these questions to her, she realizes that there is no evidence to support what she thinks. Eventually, it becomes clear that she is thinking in a distorted way. The therapist's questions challenge her to think more realistically or rationally and to dismiss the thoughts that are not rational or not accurate (Burns, 1980; Hollon & Jacobson, 1985). Cognitive restructuring occurs when she replaces these distorted thoughts with more appropriate thoughts that do not lead to depressed mood or behavior.

### Steps in Cognitive Restructuring

1. Identify distressing thoughts and situations.
2. Identify emotional response or behavior that follows the thoughts.
3. Work to decrease distressing thoughts and replace them with more rational or desirable thinking.

**Cognitive Therapy** Various authors have described the different variations of cognitive restructuring. These variations include rational-emotive therapy, systematic rational restructuring, and cognitive therapy (Beck, 1976; Beck & Freeman, 1989; Ellis & Bernard, 1985; Ellis & Dryden, 1987; Freeman, Simon, Beutler, & Arkowitz, 1989; Goldfried, 1988; Goldfried, Decenteceo, & Weinberg, 1974). This chapter focuses on **cognitive therapy.** David Burns (1980) provides an excellent description of cognitive therapy for depression based on the work of Aaron Beck (Beck, 1972; Beck, Rush, Shaw, & Emery, 1979).

As part of the treatment for depression, Burns uses one form of cognitive restructuring called *cognitive therapy* to help people change their behavior, including their distorted thoughts or self-talk. People who report that they are

depressed engage in fewer reinforcing activities than they used to and engage in a type of distorted thinking in which they negatively evaluate or interpret events in their lives.

Cognitive therapy for depression involves first getting the person to engage in more reinforcing activities. The next step is to use cognitive restructuring to help the person change his or her distorted thinking. When the person engages in more reinforcing activities and replaces the distorted self-talk with more rational or accurate self-talk, the person is less likely to report that he or she is depressed.

Table 25-3 lists some types of distorted thinking that a depressed person may report. Burns calls these *cognitive distortions.*

After identifying the distorted thinking that a person engages in, the next step is to challenge the person to evaluate his or her thoughts and replace the distorted thinking with more accurate or logical thoughts. You challenge a person's distorted thinking by asking three types of questions.

- Where is the evidence?
- Are there any alternative explanations?
- What are the implications?

Consider the following example. Ruth went to see a psychologist because she was feeling depressed. She was recently hired as a midlevel manager in a

**TABLE 25-3** Examples of Cognitive Distortions

**All-or-nothing thinking**
You see everything in terms of black or white with no shades of gray. If something is not perfect, it is not acceptable.

**Overgeneralization**
You take a single negative event as evidence that something is all bad or is always going to be bad.

**Disqualifying the positive**
In a situation or event, there are usually some positive and negative aspects. You discount or ignore the positive aspects and instead focus on the negative aspect of the event, even when the situation or event was largely positive.

**Jumping to conclusions**
You arbitrarily jump to negative conclusions that are not supported by the facts. This may involve mind reading, making assumptions about what other people are thinking, or predicting negative future events without any evidence.

**Magnification and minimization**
You blow negative events out of proportion or minimize the importance of positive events.

**Labeling and mislabeling**
You put negative labels on events or on yourself, which influences how you view yourself or events in the world.

**Personalization**
You assume responsibility for the occurrence of negative events, even when there is no evidence that you are responsible.

Source: Burns (1980).

large manufacturing firm. She often worried about her performance on the job, although she had never been told that she was not doing a good job. One day, she made a mistake on an order. Her boss told her about it and showed her how to do it correctly in the future. After this happened, Ruth said to herself, "I'm no good at this job; I'm too stupid. I know I'm going to get fired. My boss thinks I'm incompetent." She made these and similar statements to herself on the job and at home. When she made these statements to herself, she felt more depressed.

*Identify the cognitive distortions in Ruth's self-statements.*

Ruth is overgeneralizing from a single instance (making one mistake) and telling herself that she is no good at her job. She is labeling herself as stupid. She is jumping to conclusions when she tells herself that her boss thinks she is incompetent and that she is going to get fired. In the following script from a cognitive behavior modification session, notice how the psychologist (P) uses questions to challenge Ruth (R) to change her distorted thinking. Ruth has just made the statement that "I am no good at my job and I'm going to get fired," and says that she feels depressed when she thinks this way.

*P:* Ruth, where is the evidence that you're no good at your job?
*R:* Well, I just know that I'm no good at it.
*P:* Yes, you said that, but where is the evidence for this statement?
*R:* Well, my boss never tells me I'm doing a good job.
*P:* Okay, your boss doesn't tell you that you are doing well. Does this mean you are not doing a good job?
*R:* It must. If I was doing a good job, he would tell me.
*P:* Is there any other explanation for why your boss doesn't tell you that you are doing a good job?
*R:* I don't know.
*P:* Does he tell anybody else that they're doing a good job?
*R:* No.
*P:* Do you think your coworkers do a good job?
*R:* Yes.
*P:* But your boss doesn't tell them that they do. Is it possible that you are doing a good job even if your boss doesn't tell you that you are?
*R:* I suppose.
*P:* Yes, I suppose so, too. Is there any other explanation for why your boss doesn't tell you or your coworkers that you are doing a good job?
*R:* Well, I suppose because he's too busy.
*P:* That's a very reasonable explanation. Is there any other explanation?
*R:* Well, maybe it's just not his supervisory style to tell people when they do a good job.
*P:* Great, so there may be a couple of other explanations for why your boss doesn't tell you that you do a good job at work. Now tell me, where is the evidence that you are going to get fired?

The psychologist would continue to ask Ruth such questions until she came to the conclusion that her original thoughts were not accurate and she made

more reasonable or accurate self-statements to replace these inaccurate or distorted thoughts. As Ruth replaced her distorted, negative self-statements with more reasonable ones, she would be less likely to report a depressed mood. In addition, Ruth would learn the skill of questioning her own distorted thinking in this same way and would be able to use this skill in the future if she engaged in distorted thinking again.

## *Cognitive Coping Skills Training*

In cognitive coping skills training, the therapist teaches clients specific self-statements that they can make in a problem situation to improve their performance or influence their behavior in the situation. In our examples, both Deon and Claire used cognitive coping skills to influence their behavior in a problem situation. Deon made coping self-statements when people called him names or made racist comments at school. When he made the coping statements to himself in these situations, he was less likely to get angry and more likely to walk away from a fight. Claire used a type of coping statement called *self-instructions* when she started to get out of her chair in the classroom. She instructed herself to sit back down in her chair and pay attention to the teacher. In each case, Deon and Claire learned the coping statements through instructions, modeling, rehearsal, and feedback, in role-play situations that simulated the problem situations. Once Deon and Claire started using the coping self-statements in the problem situations, their behavior in those situations improved.

Spiegler and Guevremont (2003) describe three types of procedures for cognitive coping skills training: self-instructional training, stress inoculation training, and problem-solving therapy. This chapter focuses on self-instructional training. (For information on other types of cognitive coping skills training, see Spiegler & Guevremont, 2003, 2010; see also D'Zurilla, 1986; D'Zurilla & Goldfried, 1971; Meichenbaum, 1977, 1985; Nezu, Nezu, & Perri, 1989; Novaco, 1977).

**Self-Instructional Training** **Self-instructional training** consists of three basic steps.

1. *Identify the problem situation and define the desirable behavior most appropriate to the situation.* It is also important to identify any competing behavior that may interfere with the desirable behavior in the problem situation. For Deon, the desirable behavior was to walk away from a provocation by another student. The competing behaviors were fighting (overt behavior) and his anger-related self-statements in the problem situation (covert behavior). For Claire, the desirable behavior was to sit in her chair and pay attention to the teacher. The competing behavior was getting out of her chair and disrupting other students.

2. *Identify the self-instructions that will be most helpful in the problem situation.* Deon learned self-statements that cued him to walk away from the provocation by another student. These self-statements also interfered with his existing self-statements, which elicited arousal (anger) in the problem situation. As a result, he was less likely to get angry and more likely to walk away. Claire learned self-statements in which she instructed herself to stay in her seat and look at the

teacher during class. The self-statements were simple self-instructions appropriate to the developmental level of a 7-year-old child.

3. *Use behavioral skills training to teach the self-instructions.* The person must practice the self-instructions in role-plays that simulate the problem situation so that the self-instructions generalize to the problem situation after behavioral skills training is completed.

## Steps in Self-Instructional Training

1. Identify the problem situation, define the desirable behavior to be increased, and identify competing behaviors.
2. Identify the self-instructions to be used in the problem situation.
3. Use behavioral skills training to teach the self-instructions.

When conducting behavioral skills training, the therapist first models the self-instructions and the desirable behavior in the context of the role-play. For example, as Claire watched, Dr. Cruz sat in a chair at a desk and acted as if he were Claire in her classroom. Each time he started to get out of the chair, he recited the self-instructions out loud and immediately sat back down in the chair. Each time he sat back down in the chair, he praised himself.

After modeling the self-instructions and desirable behavior a few times for Claire, he asked Claire to practice it with him. Now Claire sat down at a desk, and each time she started to get up, she recited the self-instructions and immediately sat back down. Then she praised herself for sitting. Dr. Cruz praised Claire after each rehearsal that she completed with him. After Claire demonstrated the self-instructions and desirable behavior with Dr. Cruz, he asked her to do it by herself. This time, Claire recited the self-instructions out loud as she started to get up and then sat back down and praised herself. She engaged in this sequence of self-instructions and desirable behavior without any help from Dr. Cruz. He praised her each time for her performance.

Dr. Cruz had Claire participate in the same role-play a few more times; each time, she recited the self-instructions more quietly. Finally, Dr. Cruz told her to say the self-instructions to herself so that he could not hear her. In this way, the self-instructions and self-praise occurred covertly so that they did not draw attention to Claire in the classroom. The sequence of steps in behavioral skills training used to teach self-instructions is listed in Table 25-4.

Once the client learns the self-instructions in the context of role-plays that simulate the problem situation, the client is instructed to use the self-instructions in the actual problem situation. If self-instructional training is effective, the problem situation should be a discriminative stimulus for the self-instructions. Having recited the self-instructions in the problem situation, the client is more likely to engage in the desirable behavior because the desirable behavior was chained to the self-instruction in the role-plays. As a result, the self-instruction becomes a discriminative stimulus for the desirable behavior.

Donald Meichenbaum developed self-instructional training and evaluated its effectiveness for helping people control their own behavior. For example, Meichenbaum and Goodman (1971) taught young children to use self-instructions to

**TABLE 25-4** Steps in Behavioral Skills Training Used to Teach Self-Instructions

1. The therapist recites the self-instructions out loud and engages in the desirable behavior.
2. The therapist and the client recite the self-instructions out loud and engage in the desirable behavior.
3. The client recites the self-instructions out loud and engages in the desirable behavior without assistance from the therapist.
4. The client recites the self-instructions in a progressively softer voice and engages in the desirable behavior
5. The client recites the self-instructions without producing any sound and engages in the desirable behavior.
6. The client recites the self-instructions covertly without moving her lips and engages in the desirable behavior.

control their own impulsive behavior. Other researchers have also demonstrated the effectiveness of self-instructional training with children (Bryant & Budd, 1982; Guevremont, Osnes, & Stokes, 1988; Kendall & Braswell, 1985). Meichenbaum has also implemented self-instructional training with schizophrenic adults (Meichenbaum & Cameron, 1973). The patients in this study used self-instructions to increase the amount of "healthy talk" they engaged in and decrease the amount of "sick talk," to increase attention to task, and to improve performance on a variety of tasks. Other researchers have also shown that self-instructional training can be effective with schizophrenic patients (Meyers, Mercatoris, & Sirota, 1976). Self-instructional training has also been used effectively for a variety of problems in nonschizophrenic adults (Masters, Burish, Hollon, & Rimm, 1987; Spiegler & Guevremont, 2003).

### FOR FURTHER READING
### Verbal Control of Behavior in Self-Instructional Training

Although a number of studies have demonstrated that self-instructional training can result in improvements in performance in the classroom, one study in particular showed the importance of the child's verbalization in controlling successful performance. Guevremont, Osnes, and Stokes (1988) conducted self-instructional training with 4- and 5-year-olds in a preschool classroom. The students learned to give themselves instructions to complete simple reading worksheets. The authors showed that when the students used the self-instructions in the training setting, they got many more correct answers on the worksheets. However, when they did similar worksheets in another classroom setting, they did not use the self-instructions and they did not get as many correct answers on their worksheets. Once they were told to use the self-instructions in the second classroom setting and started doing so, their performance on the worksheets improved in that setting as well. This study clearly showed that self-instructional training improved academic performance, but only when the students were observed to use the self-instructions, thus demonstrating the functional role of self-instructions on performance.

## *Acceptance-Based Therapies*

The goal of cognitive restructuring and cognitive coping skills training procedures, as described in this chapter, is to help people change their thinking to change their negative feelings or problem behavior for the better. However, other treatment approaches have the goal of helping people to accept their negative thoughts and feelings rather than to change them (Hayes, Strosahl, & Wilson,

1999; Hayes & Wilson, 1994; Kohlenberg & Tsai, 1991). Acceptance-based therapies have been developed as an alternative to traditional cognitive behavior modification procedures described in this chapter. In one form of therapy called *acceptance and commitment therapy* (ACT, Hayes, 1995; Hayes, Strosahl, & Wilson, 1999), the client learns that he or she has not been able to control troublesome thoughts and feelings in the past, and that attempts to control thoughts and feelings have made the client's problem worse. In the course of therapy, the client learns to accept that the thoughts and feelings can continue to occur but that he or she can still achieve meaningful behavior change goals (Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Paul, Marx, & Orsillo, 1999; Twohig, Schoenberger, & Hayes, 2007). When the client accepts the negative thoughts and feelings, they lose their ability to disrupt the client's life, and he or she can commit to and work toward valued behavior changes.

## Clinical Problems

This chapter is simply an introduction to cognitive behavior modification procedures and does not adequately teach a student to conduct cognitive behavior modification with real clinical problems. Anyone who is experiencing a serious emotional problem, such as depression, should seek help from a psychologist or other licensed mental health professional. Although you might use cognitive behavior modification for self-improvement, serious problems should always be referred to a professional.

## CHAPTER SUMMARY

1. Cognitive behavior is defined as thoughts, images, or self-statements that occur covertly.
2. A cognitive behavior can serve as a CS, an $S^D$, or an MO when it is an antecedent to another behavior, or it can serve as a reinforcer or punisher when it is a consequence of another behavior exhibited by the person.
3. In the cognitive restructuring procedure, the therapist helps the client identify distressing thoughts and replace them with more desirable thoughts.
4. To help people change their thinking, the therapist first helps the client identify maladaptive thoughts that contribute to emotional or behavioral difficulties. The therapist then asks a series of questions to help the client critically evaluate the logic or accuracy of his or her thoughts. Through this process, the client begins to think in more accurate or logical ways, which alleviates emotional or behavioral problems.
5. The self-instructional training procedure includes two basic components. Using behavioral skills training procedures, the therapist teaches the client to make self-statements or self-instructions. Therapist and client practice the self-instructions and the desirable behaviors in role-plays that simulate a problem situation. The client later recites the self-instructions and engages in the desirable behavior in the problem situation.

## KEY TERMS

cognitive behavior, 489
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