People tend to engage in behaviors that they believe will get them what they want and that they believe they can do. We are more likely to pursue those goals we value highly than those we value less; we are more likely to pursue those courses of action we anticipate will lead to the desired goals than those courses of action that appear less likely to be profitable; and, all else being equal, we are more likely to attempt those actions and strategies we believe are within our capabilities than those means that seem to exceed our capacities. A number of important psychological theories have been based on some variation or another of these sound and simple premises concerned with the role of perceived competence, personal effectiveness, and control in psychological health and well-being (see chapters in this volume by Burns; Higgins; Karoly; Lefcourt; Schlenker; Seligman; Solomon; Thompson, & Snyder). Self-efficacy theory (Bandura, 1977, 1982, 1986a) is one of the more recent in a long tradition of personal competence or efficacy theories and probably has generated more research in clinical, social, and personality psychology in the past dozen years than other similar models and theories. The crux of self-efficacy theory is found in the above premises: that the initiation of and persistence at behaviors and courses of action are determined largely by (a) outcome value (the importance of certain outcomes, consequences, or goals); (b) outcome expectancy (expectations concerning the effectiveness of certain behavioral means in producing those outcomes); and, most importantly, (c) self-efficacy expectancy (judgments and expectations concerning behavioral skills and capabilities and the likelihood of being able to successfully implement the selected courses of action). Self-efficacy theory also maintains that these same factors play an important role in psychological adjustment and dysfunction and in effective therapeutic interventions for emotional and behavioral problems.

The major purpose of this chapter is to describe and evaluate self-efficacy theory and the research most directly relevant to the interface of clinical and social psychology. The chapter will provide an
overview of self-efficacy theory, describe the relationships between self-efficacy theory and other theories of personal competence and effectiveness, and discuss the role of self-efficacy and related constructs in psychological health and adjustment, and in psychotherapeutic interventions. One important assumption guiding this chapter is that self-efficacy theory is a true “bridging” theory between social and clinical psychology, a theory of social cognition on which there has been a tremendous amount of basic research and a theory of therapeutic behavioral and emotional change of great practical interest to clinical researchers and practitioners.

MODELS OF PERSONAL EFFICACY

A number of theorists have explored the nature of our feelings and beliefs about personal mastery and competence and the effects of these feelings and beliefs on behavior and psychological adjustment. Because understanding self-efficacy theory and research depends on the ability to place the theory in a larger context, several other models concerned with mastery and efficacy will be reviewed briefly before self-efficacy theory and research are presented in detail. The reviews to follow do not do justice to the richness, diversity, and complexity of this topic, and the reader is urged to consult related chapters in this volume and the other sources noted for more comprehensive presentations.

Effectance Motivation

In attempting to explain human behavior that is not directed toward the satisfaction of biological needs such as hunger, thirst, and sexual desire, White (1959) proposed that humans must be motivated by a different kind of goal, the goal of exploring, manipulating, and mastering the environment. White called this motivation effectance motivation and said that its satisfaction leads to a “feeling of efficacy.” According to White, we are biologically driven to explore and master our environment, and we feel good when we explore new situations, learn about them, and deal with them effectively. White also proposed that this feeling of efficacy is an aim in itself, apart from the practical value of the things we learn about the environment.

Achievement Motivation

The motivation to strive for achievement, success, and excellence is referred to as achievement motivation or achievement need (McClelland, Atkinson, Clark, & Lowell, 1953; McClelland, 1985). Achievement motivation is similar to White's notion of effectance motivation in that each is an inherent (i.e., biologically based) traitlike tendency to set mastery-related goals, work toward them, and gain satisfaction from attaining them. Research has demonstrated that measures of achievement motivation predict performance on specific achievement-related tasks, as well as patterns of performance across time and situations (McClelland, 1985). Theory and research on achievement motivation are concerned more with what people want or need to accomplish than with what they expect to accomplish. The positing of a motive to achieve implies that achieving is satisfying and pleasurable and that feelings of efficacy and success have incentive value independent of the material by-products of success.

Level of Aspiration

Theory and research on level of aspiration (e.g., Festinger, 1942) are concerned with what people would like to achieve and how their aspirations influence their behavior. Level of aspiration is concerned with the goals that people set for themselves in situations relevant to achievement or mastery, not the levels of performance people expect to attain (Kirsch, 1986). In much of the early research on level of aspiration, however, investigators did not make this distinction clearly. Sometimes they asked people about what they would like to be able to do or achieve; other times they asked people what they expected to be able to achieve. The studies that made this important distinction found that people’s levels of aspiration were usually greater than their expectancies for success (Kirsch, 1986). These older studies also found that expectancies concerning performance levels were more strongly correlated with past performance than was level of aspiration. Studies directly comparing the predictive utility (i.e., predicting behavior) of level of aspiration measures with expectancy measures have not been conducted, but a reasonable hypothesis based on these prior studies is that expectancies for success
would predict future performance better than would level of aspiration.

Expectancy-Value Theory

Expectancy-value theories deal with the value placed on certain kinds of reward or reinforcement and with expectations for obtaining these rewards. These theories have a long tradition in psychology. Tolman's (1932) theory of animal learning, Lewin's (1938) field theory, and Edwards' (1954) theory of decision-making are all concerned with the importance of goals or rewards and subjective probabilities for obtaining them and share the basic assumption that people are likely to initiate behaviors that they believe will lead to desirable consequences. In his "social learning theory," Rotter (1954) proposed that the feeling of success and accomplishment itself is a form of reinforcement that is valued and sought for its own sake. Recent models in the expectancy-value tradition include protection motivation theory (Maddux & Rogers, 1983; Rogers, 1975), the theory of reasoned action (Fishbein & Ajzen, 1975), and control theory (Carver & Scheier, 1981).

Locus of Control

Locus of control (Rotter, 1966; Lefcourt, this volume) refers to the general belief that one's behavior can have an impact on the environment and that one is capable of controlling outcomes through one's own behavior. People who believe that their own behavior controls outcomes and that the environment is generally responsive to their behavior are said to have an internal locus of control. People who believe outcomes are determined by luck (good and bad) or powerful others (such as God) and that the environment is generally unresponsive to their own efforts are said to have an external locus of control. Locus of control is more concerned with what people believe they can control than with their need to control or what they want to control. Locus of control also is more similar to an outcome expectancy than to a self-efficacy expectancy because locus of control is concerned with beliefs about the effect of one's behavior on the environment rather than one's beliefs about one's ability to execute certain behaviors. Although measures of locus of control have been shown to be related to a large array of psychological and behavioral variables (see Lefcourt, this volume), research on the role of causal attributions in depression (Burns & Seligman, this volume) suggests that the locus of perceived control (i.e., whether internal or external) may be less important in some cases than beliefs about degree of controllability (i.e., the source of control may be internal yet perceived as uncontrollable).

Self-Concept and Self-Esteem

Self-concept consists of the sum total of attitudes and beliefs about the self—the kind of person one is, one's likes and dislikes, and what one is capable or not capable of doing well. Self-esteem is one's evaluation of these beliefs, or how one feels about these beliefs—one's assessment of one's worth or value as a person. (See Solomon, this volume, & Higgins, this volume.) Beliefs about mastery and personal effectiveness are important aspects of self-concept and self-esteem. If one's sense of competence is high for an ability one values, then this will contribute to high self-esteem (or low self-esteem if perceived competence for the valued skill is low). Judgments of inefficacy in unvalued areas of competence are unlikely to significantly influence self-concept and self-esteem.

Mastery Orientation

Dweck and Leggett (1988) have offered a social-cognitive approach to personality and motivation that seeks to explain patterns of goal-directed behavior by referring to differences in individuals' "implicit theories" concerning the relative mutability or controllability of personal attributes (such as intelligence or social skillfulness) and characteristics of the world (including other people). According to this model, these implicit theories determine the types of goals people choose to pursue and how they respond to challenge and adversity in pursuing goals. Dweck and Leggett describe the mastery-oriented pattern (as opposed to the helpless pattern) as characterized by the belief or theory that aspects of oneself and the world are changeable and controllable rather than fixed, by the pursuit of development or learning goals (competence-enhancement goals) rather than judgment or performance goals (competence judgments from others), and by "the seeking of challenging tasks and the generation of effective strategies in the face of obstacles" (p. 257).
An Organizing Framework

The preceding paragraphs probably do not exhaust the list of terms and concepts in the psychological literature related to personal efficacy, mastery, and control (e.g., see Thompson, this volume). They do, however, provide a sense of the diversity of efficacy and mastery ideas and models. In fact, one of the most confusing aspects of the body of theory and research on efficacy and mastery is the diversity of terms that leave the impression of great diversity of and conflict among ideas. On closer examination, however, this apparent diversity fades. The basic notions employed in these models can be reduced to five:

1. *Motives*—inherent, biologically-based needs to explore, achieve, affiliate, or otherwise master one’s environment

2. *Feelings of esteem*—pleasurable affective or emotional (rather than cognitive) states that result from mastery, achievement, or personal effectiveness

3. *Outcome value*—importance attached to specific goals or outcomes in specific contexts, sometimes referred to as reinforcement value (Rotter, 1954) or incentive value (McClelland, 1985)

4. *Outcome expectancies*—perceived subjective probabilities concerning the contingency between behavior and outcome, or consequence or set of consequences

5. *Self-efficacy expectancies*—perceived subjective probabilities or judgments concerning the effective execution of a behavior or course of action.

That the basic concepts concerning personal effectiveness can be reduced to so few that recur so often is a testimony to the power and importance of these ideas. Most models employ more than one of these notions without incorporating all five. In fact, one of the major differences between the various models of efficacy concerns which one or two of these five concepts or variables is most strongly emphasized.

Effectance motivation, for example, is concerned with two of the five variables noted above: a basic, biologically based motive or drive to master the environment, and a pleasurable affective response to mastery and success. It does not deal directly with the role of expectations for attaining mastery, either expectations concerning behaviors and outcomes or expectations concerning personal ability.

Expectancy-value models are concerned almost exclusively with cognitive rather than motivational factors or feelings of esteem. In addition, prior to self-efficacy theory, few expectancy-value models made clear the distinction between outcome expectancy and self-efficacy expectancy.

Level of aspiration is concerned with motives and outcome values—what people want or need to accomplish. As noted earlier, however, research on level of aspiration has focused sometimes on what people want to achieve and sometimes on what people expect to be able to achieve without making clear the distinction. Also, level of aspiration research has not made clear the distinction between motives and values demonstrated by McClelland (1985) to be important.

Work on achievement motivation has made clear the distinction between motives and values (McClelland, 1985) but is less concerned with expectations for success (i.e., self-efficacy expectancies and outcome expectancies). As noted earlier, the concept of a motive to achieve implies that achieving results in feelings of esteem that are sought for their own sake.

Locus of control is concerned with expectancies rather than motives, outcome values, or subjective feelings of effectance or esteem. At first glance, locus of control sounds similar to self-efficacy expectancy. Bandura (1986a) has argued, however, that locus of control is really a kind of outcome expectancy because it is concerned with whether one’s behavior controls outcomes, not whether one can or cannot perform certain behaviors that might or might not have an effect on the environment. Empirical evidence for the distinction between self-efficacy and locus of control has been provided by Smith (1989) in a study that found that cognitive-behavioral coping skill strategies taught to test-anxious college students led to changes on a measure of general self-efficacy but not on a measure of locus of control. In addition, changes in general self-efficacy were unrelated to changes in locus of control.

Self-concept and self-esteem are generalized sets of beliefs and feelings about the self that consist of expectancies, motives, needs, values, and subjective feelings about one’s skills and abilities. Self-esteem is perhaps most closely related to White’s feeling of efficacy in that both are more affectively charged constructs, whereas expectan-
cies for success and outcome value are more cognitive.

Dweck and Leggett's mastery-oriented pattern might be renamed a "generalized high expectancy for success" pattern and not lose much in the translation. What Dweck and Leggett offer is a model of the more basic and general psychological processes (i.e., the implicit theories) that underlie and explain how people process success and failure experiences, how and why some people develop a strong and relatively impervious sense of personal effectiveness in many aspects of life, and how and why others seem inordinately vulnerable to cessation of effort and demoralization in the face of adversity. In a study of managerial skills, for example, Wood and Bandura (1989) demonstrated that managers who viewed managerial effectiveness as an acquirable skill that could be improved through experience sustained their self-efficacy expectancies in the face of difficult challenges and set more difficult goals than managers who viewed managerial skill as a fixed entity. Dweck and Leggett's framework, however, does not emphasize the distinction between an outcome expectancy and a self-efficacy expectancy.

The various models also differ in the degree of generality or specificity of their constructs and their predictions. For example, effectance motivation, locus of control, and need to achieve are generalized, traitlike constructs proposed to predict long-term trends or patterns in a general class of mastery behaviors (e.g., achievement, affiliation), whereas self-efficacy expectancy and outcome expectancy are typically defined and measured with considerable behavioral and situational specificity and used to predict relatively specific behaviors in relatively specific contexts.

The organizational framework described above is far from novel. For example, in a recent review of theory and research on motivation, McClelland (1985) argued and provided empirical evidence for distinguishing among motivation, incentive value, and probability of success, and for the importance of each in predicting achievement performance and affiliation acts. In McClelland's framework, a motive is a biologically based tendency to work toward a certain class of goals. Thus, motives are physiological and affective rather than purely cognitive in nature. Incentive value, on the other hand, is defined by McClelland as more cognitive than affective and refers to the magnitude of the reward expected in a particular situation and the importance of that reward. Probability of success refers to the probability of goal attainment based on beliefs about skill. Atkinson's (1957) theory of motivation proposed a similar framework by postulating that choice of behavior and persistence are determined by expectancy for success; incentive value of success; and motive, the disposition to strive for particular kinds of satisfactions. Rotter (1954) also emphasized the distinction between expectancy for success and reinforcement value of success. Likewise, self-efficacy theory is concerned largely with expectancies for success but provides a distinction between an outcome expectancy and a self-efficacy expectancy.

Self-efficacy theory focuses on the more cognitive aspects of mastery and effectiveness—expectancies and values—rather than on more affective constructs such as needs, motives, and feelings of efficacy. Yet, to focus on cognitions and expectancies is not to diminish the importance of needs, motives, and feelings. The various models and constructs described here are by no means incompatible with self-efficacy theory, nor with one another. Any model or explanation of human behavior and adjustment will be incomplete unless it considers the individual's inherent motivation toward a general class of goals, the feelings of satisfaction one achieves from meeting challenges and overcoming obstacles, the value attached to the specific goal or outcome sought at a given time and place, and the individual's assessment of the likelihood of attaining the goal or goals, an assessment that will include beliefs about behavior-outcome contingencies and beliefs about personal ability or skill. Therefore, each of the models described here, including self-efficacy theory, is incomplete because one or more important variables are not dealt with directly. Yet, this incompleteness is to be expected because a theorist's or researcher's choice of variables to investigate will depend on what he or she wishes to predict. Motives or needs may be more useful in predicting general trends in mastery-oriented behavior over relatively long periods of time. Predicting relatively specific behaviors in specific situations over relatively brief time frames is likely to be more successful when specific expectancies and values are assessed. In fact, self-efficacy theory's most important contribution to the body of theory and research on personal effectiveness and control—as the rest of this chapter will attempt to demonstrate—is made not by offering an opposing alternative framework to other models of personal efficacy, but, first, by emphasizing the distinction between
three important mastery/efficacy constructs—self-efficacy expectancy, outcome expectancy, and outcome value—and, second, by emphasizing their measurement with a greater degree of behavioral and situational specificity than has been the case in other theories and bodies of research.

OVERVIEW OF SELF-EFFICACY THEORY

Basic Cognitive Processes

Self-efficacy theory maintains that all processes of psychological and behavioral change operate through the alteration of the individual's sense of personal mastery or efficacy (Bandura, 1977, 1982, 1986a). According to Bandura (1977), "people process, weigh, and integrate diverse sources of information concerning their capability, and they regulate their choice behavior and effort expenditure accordingly" (p. 212). Expectations concerning mastery or efficacy are assumed to determine our choice of actions, the effort we expend, our persistence in the face of adversity, and our emotional or affective experiences. The self-efficacy model holds that three basic, cognitive, mediating processes are important in explaining and predicting which behaviors people initiate and to what degree they persist in actions that meet with barriers and obstacles. These same cognitive mediators also can be viewed as important components of psychological problems and effective clinical interventions: (a) self-efficacy expectancies, beliefs concerning one's ability to execute a specified course of action; (b) outcome expectancies, beliefs concerning the probability that this specified course of action will lead to certain consequences or outcomes; and (c) outcome value, the subjective value one places on certain outcomes or sets of outcomes.

Self-Efficacy Expectancy

Self-efficacy expectancy is presumed to have the more powerful influence on behavior (Bandura, 1977). Self-efficacy judgments are concerned "not with the skills one has but with judgments of what one can do with the skills one possesses" (p. 391) or with one's ability to execute courses of action to deal effectively with problematic situations or to obtain desired goals. The vast majority of studies on self-efficacy theory have demonstrated that self-efficacy expectancies are good predictors of behavior (e.g., Bandura, Adams, & Beyer, 1977; Bandura, Adams, Hardy, & Howell, 1980; Condie & Lichtenstein, 1981). Experimental research also has been supportive of the importance of self-efficacy expectancies in directly influencing behavioral intentions and behaviors (e.g., Bandura, Reese, & Adams, 1982; Maddux & Rogers, 1983; Maddux, Norton, & Stoltenberg, 1986; Maddux, Sherer, & Rogers, 1982; Stanley & Maddux, 1986a; Wurtele & Maddux, 1987) and mood states (e.g., Davis & Yates, 1982; Kanfer & Zeiss, 1983; Maddux, Norton, & Leary, 1988; Stanley & Maddux, 1986b).

Self-efficacy expectancies are not personality traits. They are relatively specific cognitions that can only be understood and defined in relation to specific behaviors in specific situations or contexts. Although self-efficacy sometimes is used to refer to one's general sense of competence and effectiveness (e.g., Smith, 1989), the term is most useful when defined, operationalized, and measured as an expectancy specific to a behavior or set of behaviors in a specific context (e.g., Kaplan, Atkins, & Reinsch, 1984; Manning & Wright, 1983). For example, the best way to predict a smoker's attempt and success at giving up cigarettes is to measure his self-efficacy expectancy for quitting, not his general self-confidence or self-esteem. In addition, measuring self-efficacy expectancies for quitting smoking will be more successful if we measure smokers' expectations for being able to refrain from smoking under specific situations (e.g., while at a party, after eating, when around other smokers [DiClemente, 1986]). Although "general self-efficacy" scales have been developed (Sherer et al., 1982; Tipton & Worthington, 1984), these scales have not resulted in much useful research on specific types of behavior change.

Despite the large number of studies supporting its utility, the self-efficacy expectancy construct has not escaped criticism (Maddux & Stanley, 1986a, b). For example, Kirsch (1982, 1983) has raised serious questions about the relationships between self-efficacy expectancy, fear, and intentions to attempt a feared behavior. Kirsch has demonstrated that self-efficacy expectancies for approaching a snake in a glass cage can be enhanced by providing small financial incentives for approach behavior. He argues that if self-efficacy ratings are of a ratings perceived ability, then incentives or rewards should not influence them. Kirsch (1982) found correlations as high as .90
between self-efficacy ratings and ratings of expected fear. He argued (Kirsch, 1986) that in situations involving fear, self-efficacy expectancy can be regarded as indirect measures of expected fear, rather than measures of performance capabilities.

**Outcome Expectancy**

A second controversy and area of criticism is the relationship between self-efficacy and outcome expectancy. In Bandura's framework, outcome expectancies are viewed as less important and as dependent primarily on self-efficacy expectancies (Bandura, 1986a), although good studies of their relationship and relative utility are rare. Bandura (1977) originally proposed that self-efficacy expectancy and outcome expectancy are independent. This proposed orthogonality was then and continues to be an important topic of discussion (Borkovec, 1978; Kazdin, 1978; Kirsch, 1986; Teasdale, 1978). Eastman and Marzillier (1984) have argued that Bandura does not provide a clear conceptual distinction between the two expectancies and "has failed to credit the importance of outcome expectations" (p. 227) as a cognitive mediator. Bandura (1984) has responded to these criticisms by insisting that self-efficacy expectancies and outcome expectancies are conceptually distinct but that the types of outcomes people anticipate are influenced strongly by self-efficacy expectancies (e.g., my expectations for consequences or results depend on my expectations concerning the skillfulness of the execution of the behavior in question).

Most studies that have examined both self-efficacy expectancy and outcome expectancy seem to suggest that the two are not orthogonal and that outcome expectancy does not add significant predictive utility beyond that offered by self-efficacy expectancy. Many of these studies, however, employed measures of self-efficacy expectancy and outcome expectancy that are somewhat questionable (see Maddux & Barnes, 1985; Maddux et al., 1986). For example, in some studies dependent measures of self-efficacy expectancy and outcome expectancy have failed to make a clear distinction between perceived ability to perform a behavior or behavior sequence and the perceived probability that the behavior will lead to certain outcomes (e.g., Davis & Yates, 1982; Manning & Wright, 1983; Taylor, 1989). In some studies, outcome expectancy has been measured as outcome value by items that assess the positive or negative valence of consequences instead of the probability of the occurrence of the consequences (e.g., Cooney, Kopel, & McKeon, 1982; Lee, 1984a, 1984b). In other studies, traitlike measures of outcome expectancy, such as locus of control, have been employed rather than situation-specific and behavior-specific measures (Devins et al., 1982; Meier, McCarthy, & Schmeck, 1984). Recent research, however, indicates that, when defined and measured carefully and in a manner consistent with the conceptual distinction, self-efficacy expectancy and outcome expectancy can be manipulated and assessed relatively independently and that outcome expectancy can make a significant independent contribution in predictive formulas (Maddux et al., 1986).

**Outcome Value**

Outcome value or importance has been proposed as an additional component of the self-efficacy model (Maddux et al., 1986; Maddux & Rogers, 1983; Teasdale, 1978), but has not been studied extensively in self-efficacy research. Most researchers seem to assume, logically, that outcome value needs to be high for self-efficacy expectancy and outcome expectancy to influence behavior. Considerable research in expectancy-value theory has shown that outcome value (reinforcement value, incentive value) is an important predictor of response strength and response probability (e.g., Kirsch, 1986; McClelland, 1985). Only a few studies, however, have investigated the role of outcome value in conjunction with self-efficacy expectancy and outcome expectancy (Maddux et al., 1986; Manning & Wright, 1983). The findings have been mixed. Maddux et al. (1986) found that outcome value did not add significantly to the prediction of behavioral intentions when examined in conjunction with self-efficacy expectancy and outcome expectancy. Maddux and Barnes (1989), however, corrected a problem in the measurement of outcome value found in Maddux et al. (1986) and found that outcome value did serve as a significant predictor variable independent of self-efficacy expectancy and outcome expectancy.

**Dimensions of Self-Efficacy**

Self-efficacy expectancies are viewed as varying along three dimensions: magnitude, strength, and generality (Bandura, 1977, 1982, 1986a). Magnitude of self-efficacy, in a hierarchy of behaviors,
refers to the number of steps of increasing difficulty or threat a person believes himself capable of performing. For example, a person who is trying to abstain from smoking may believe that he can maintain abstinence under conditions in which he feels relaxed and in which no others present are smoking. He may doubt, however, his ability to abstain under conditions of higher stress and/or when in the presence of other smokers (DiClemente, 1986).

Strength of self-efficacy expectancy refers to the resoluteness of a person's convictions that he or she can perform a behavior in question. For example, each of two smokers may feel capable of abstaining from smoking at a party, but one may hold this belief with more conviction or confidence than the other. Strength of self-efficacy expectancy has been related repeatedly to persistence in the face of frustration, pain, and other barriers to performance (Bandura, 1986b).

Generality of self-efficacy expectancies refers to the extent to which success or failure experiences influence self-efficacy expectancies in a limited, behaviorally specific manner, or whether changes in self-efficacy expectancy extend to other similar behaviors and contexts (e.g., Smith, 1989). For example, the smoker whose self-efficacy expectancy for abstinence has been raised by successful abstinence in a difficult or high-risk situation (e.g., in a bar around other smokers) may extend his feelings of self-efficacy to other contexts in which he has not yet experienced success or mastery. In addition, successful abstinence might generalize to other contexts of self-control such as eating or maintaining an exercise regimen.

Although Bandura (1977) has stated that a thorough analysis of self-efficacy expectancy requires a detailed assessment of magnitude, strength, and generality, most studies rely on unidimensional measures of self-efficacy expectancy that most resemble Bandura's strength dimension (e.g., confidence in one's ability to perform a behavior under certain conditions).

Sources of Self-Efficacy Information

Four sources of information are posited to influence self-efficacy expectancies: performance or enactment experiences, vicarious experiences, verbal persuasion (or social persuasion), and emotional or physiological arousal (Bandura, 1977, 1986a). These four sources are presumed to differ in their power to influence self-efficacy expectancies.

Performance Experiences

Performance experiences, in particular clear success or failure, are proposed to be the most powerful sources of self-efficacy information (Bandura, 1977). Success at a task, behavior, or skill strengthens self-efficacy expectancies for that task, behavior, or skill, whereas perceptions of failure diminish self-efficacy expectancy. A person who once tried to quit smoking for a day but failed probably will doubt his or her ability to quit for a day in the future. On the other hand, a person who is able to go a full day without smoking may hold strong self-efficacy expectancies for abstaining for another day.

Vicarious Experiences

Vicarious experiences (observational learning, modeling, imitation) influence self-efficacy expectancy when we observe the behavior of others, see what they are able to do, note the consequences of their behavior, and then use this information to form expectancies about our own behavior. The effects of vicarious experiences depend on such factors as the observer's perception of the similarity between him- or herself and the model, the number and variety of models, the perceived power of the models, and the similarity between the problems faced by the observer and the model (Bandura, 1986a; Schunk, 1986). Vicarious experiences generally have weaker effects on self-efficacy expectancy than do direct personal experiences (e.g., Bandura, Adams, & Beyer, 1977).

Verbal Persuasion

Verbal persuasion (or social persuasion) is presumed to be a less potent source of enduring change in self-efficacy expectancy than performance experiences and vicarious experiences. The potency of verbal persuasion as a source of self-efficacy expectancies should be influenced by such factors as the expertness, trustworthiness, and attractiveness of the source, as suggested by decades of research on verbal persuasion and attitude change (see, Claiborn, Cacioppo, & Petty, this volume). Experimental studies have shown that verbal persuasion is a moderately effective means for changing both self-efficacy expectancies and outcome expectancies (e.g., Maddux & Rogers, 1983; Maddux et al., 1986).
Emotional Arousal

Emotional or physiological arousal influences self-efficacy expectancies when people associate aversive emotional states with poor behavioral performance, perceived incompetence, and perceived failure. Thus, when a person becomes aware of unpleasant physiological arousal, he or she is more likely to doubt his or her behavioral competency than if the physiological state were pleasant or neutral. Likewise, comfortable physiological sensations (e.g., feelings of relaxation) are likely to lead one to feel confident in one’s ability in the situation at hand. Physiological indicants of self-efficacy expectancy, however, extend beyond autonomic arousal because, in activities involving strength and stamina, perceived efficacy is influenced by such experiences as fatigue and pain, or the absence thereof (e.g., Bandura, 1986b).

SELF-EFFICACY AND PROBLEMS OF ADJUSTMENT

A self-efficacy approach to psychological problems and their treatment assumes that people become distressed, unhappy, or anxious, get into conflicts with other people, and experience other emotional and behavioral problems in adjustment because they hold inaccurate and unrealistic expectations about their own behavior and the behavior of others, undervalue or overvalue certain outcomes or consequences, feel nothing can be done to control important life events and achieve valued life goals, or feel incapable of doing those things that might control events and obtain goals (things that others seem capable of doing). Also, a self-efficacy perspective suggests that people are motivated to seek professional help following the experience of a major failure or series of failures (or what they believe are failures) in one or more important areas of their lives such as in their jobs, at school, or in relationships. Because of these perceived failures, these people may come to hold a number of specific low self-efficacy expectancies about specific areas of life. These low self-efficacy expectancies may lead them to give up or stop trying to be effective in their lives.

Measures of self-efficacy expectancies (or measures of outcome expectancy and outcome value) are not direct measures of psychological adjustment. Low self-efficacy expectancies are not sufficient for diagnosing psychological dysfunction, nor are high self-efficacy expectancies a guarantee of psychological health. Instead, self-efficacy expectancies are important because of their influence on subjective distress (e.g., anxiety, depression, low self-esteem) and on the initiation of and persistence at adaptive behaviors and attempts at coping.

Self-efficacy theory has inspired a tremendous number of studies on the etiology, assessment, and treatment of emotional and behavioral problems (Maddux, Stanley, & Manning, 1987). Research has shown, for example, that low self-efficacy expectancies are an important feature of depression (see Stanley & Maddux, 1986a, for a review). Depressed people usually believe they are less capable than other people of performing effectively in their lives and feel little control over their environments. Low self-efficacy is also an important feature of anxiety problems and specific fears. Much of the work of Bandura and his associates has focused on understanding the role of self-efficacy in the development and treatment of extreme fears or phobias (Bandura, 1986a). Self-efficacy also seems to be important in social or interpersonal anxiety (Leary & Atherton, 1986; Maddux et al., 1988). Also, some research has examined the importance of self-efficacy in many other problems such as cigarette smoking, alcoholism, obesity, and eating disorders (e.g., bulimia).

The following section discusses research on the role of self-efficacy in five general types of problems commonly presented by psychotherapy and counseling clients: (a) specific fears and phobias; (b) interpersonal or social anxiety; (c) depression; (d) addictive behaviors and substance abuse; and (e) career choice. The selection of topics is not meant to be exhaustive but representative of the research on self-efficacy theory that can most readily be used by practitioners. Much good research has been conducted on several other topics that may also be of interest to clinicians, such as pain control (e.g., Manning & Wright, 1983), academic achievement (Schunk, 1986), athletic performance (Wurtele, 1986), and a variety of other health-related behaviors (Bandura, 1986b; O’Leary, 1985).

Anxiety and Fear

Problems involving anxiety, fear, and avoidance have provided fertile ground for self-efficacy research. In their earlier studies, Bandura and his colleagues used people with specific fears or pho-
bias to test both the basic assumptions and hypotheses of self-efficacy theory and to demonstrate its practical clinical utility. A self-efficacy model of anxiety is concerned primarily with the anticipation or expectation that danger or harm is imminent and the expectation that one will not be able to prevent or otherwise cope effectively with the anticipated aversive event. Perceptions of coping ability can be viewed in terms of both outcome expectancy, the belief that the means for preventing the aversive event are at hand, and, most importantly, self-efficacy, the belief that one will be able to implement the course of action that seems likely to avert the threat.

According to Bandura (1986a), anxiety is the direct result of low self-efficacy expectancies. People who have confidence in their ability to deal effectively with a threatening situation will approach the situation with self-assurance and calm, whereas those who have serious doubts about their coping skills will anticipate catastrophes and generate a state of affective arousal that will then interfere with effective functioning. A recent study by Tilley and Maddux (1989) provides evidence for the causal link between self-efficacy expectancies and anxiety. This study induced self-efficacy for coping with imagined stressful life events (e.g., a difficult exam, an important social encounter) and found that low self-efficacy expectancies were associated with anticipated anxiety. Self-efficacy theory also hypothesizes that the key element common to all successful clinical interventions for anxiety disorders is increasing the client’s sense of self-efficacy in mastering the anxiety-provoking situation (Bandura, 1977).

Beck’s cognitive model of anxiety disorders (Beck, Emery, & Greenberg, 1985) includes elements identical to those of self-efficacy theory. In Beck’s model, anxiety is elicited when a person anticipates danger or threat and anticipates that he or she will not be able to cope with the threat. The anxious person is viewed as following a set of “rules” about danger, vulnerability, and his or her inability to cope with perceived danger of threat. Beck et al. (1985) define vulnerability as “a person’s perception of himself as subject to internal or external dangers over which his control is lacking or is insufficient to afford him a sense of safety” (p. 67). The vulnerable person lowers his assessment of his abilities and focuses on his weakness and ineptness and makes predictions about being unable to cope with the threatening situation. Thus, Beck’s formulation gives a prominent role to low self-efficacy expectancies.

Barlow (1988) has noted that research on the power of self-efficacy in predicting anxiety as an emotional response has not been as compelling as research on the ability of self-efficacy to predict approach and avoidance behaviors. He also has noted, however, that Bandura proposed self-efficacy theory as a model for behavioral change, not of emotional experience. As Bandura (1984) has stated, “Self-efficacy scales ask people to judge their performance capabilities and not if they can perform nonanxiously” (p. 238). Barlow (1988) credits self-efficacy theory with generating considerable useful research on anxiety and fear problems, but he also suggests that application to the most common clinical anxiety disorders, panic disorder and generalized anxiety disorder, may be limited because these disorders are characterized primarily by anxiety states rather than behavioral avoidance patterns. A recent study suggests, however, that self-efficacy is related not just to control of behavior, but to control of cognitions related to anxiety. In a study of dental anxiety, Kent and Gibbons (1987) found that people low in dental anxiety had fewer negative thoughts about dental appointments than did people high in dental anxiety, and, more important, that low-anxiety people expressed having more control over their negative thoughts than high-anxiety people. If self-efficacy can be applied to the control of anxiety-related cognitions, then it also might be applied effectively to control of anxiety states.

**Phobic Disorders**

The earliest application of self-efficacy theory to clinical problems was the exploration of the relationship between self-efficacy expectancies and specific phobias and phobic avoidance behavior (Bandura, 1977). This research has found consistently that self-efficacy expectancies are significant predictors of phobic individuals’ ability to approach feared stimuli. This effect has been reported for subjects who experience phobias of snakes and spiders (Bandura et al., 1977; Bandura et al., 1980; Bandura et al., 1982), heights (Williams & Watson, 1985), driving (Williams, Dooseman, & Kleinfield, 1984), and the dark (Biran & Wilson, 1981). The effect also has been demonstrated with agoraphobic subjects (Bandura et al., 1980) despite the controversy regarding the appropriateness of classifying agoraphobia as a true
phobic disorder (Turner, McCann, Beidel, & Messick, 1986).

The relationship between self-efficacy expectancies and phobic approach and avoidance behavior has been reported following diverse types of treatment (Bandura, 1986a). Self-efficacy expectancy measures at posttreatment appear to be better predictors of approach behavior and therapeutic outcome than perceived danger and subjective anxiety measures (Williams, Dooseman, & Kleinfield, 1984; Williams, Turner, & Peer, 1985; Williams & Watson, 1985). Self-efficacy theory also has been invoked to explain the treatment-enhancing effect of imipramine (an antidepressant) in exposure-based behavioral interventions with agoraphobics. Research by Telch and his colleagues (e.g., Telch, 1988) suggests that, by elevating mood, imipramine leads agoraphobic clients to judge their behavioral success more positively, generating greater feelings of self-efficacy.

Social Anxiety

Anxiety or discomfort during social or interpersonal situations is one of the most common problems of behavioral and emotional adjustment (Buss, 1980; Leary, 1983). Schlenker and Leary's (1982) self-presentational model proposes that all instances of social anxiety arise from concerns with how we are perceived and evaluated by others. In this model, social anxiety occurs when we are motivated to make a particular impression on others but hold a low subjective probability that we will do so. Most existing research supports the hypothesized link between self-presentational concerns and social anxiety (Leary, 1983; Schlenker & Leary, 1982; Schlenker, this volume).

In an elaboration of the self-presentational model, Maddux et al. (1988) demonstrated that the subjective probability of making the impression one desires can be better understood as a combination of self-presentational outcome expectancy (the belief that certain interpersonal behaviors, if performed competently, will lead to the desired impression) and self-presentational efficacy expectancy (the belief that one is or is not capable of performing the necessary interpersonal behaviors). This distinction has implications for the situational and dispositional antecedents of social anxiety, other affective reactions that may accompany social anxiety, the attributions people make about the causes of their interpersonal difficulties, and the treatment of social anxiety and inhibition (Leary, 1987). For example, a self-efficacy analysis suggests that social skills training should include explicit efforts to ensure that socially anxious clients perceive the improvement in their social skills (a focus on self-efficacy expectancy as well as skills) and that setting realistic interpersonal goals or outcomes also may be crucial (a focus on outcome expectancies). Finally, a self-efficacy approach suggests that successful social experiences will be the best source of efficacy information for the socially anxious client, perhaps even more important than systematic training in specific social skills (Leary, 1987; Leary & Atherston, 1986).

Depression

Depression is probably the most common diagnosis in the practice of clinical psychology and psychiatry (Goodwin & Guze, 1984). In recent years, cognitive approaches to the study and treatment of depression have dominated the literature (see Coyne & Gotlib, 1983, for review of theories). The two models that have received the most attention and support, the revised learned helplessness theory (Abramson, Seligman, & Teasdale, 1978) and Beck's cognitive theory (Beck, 1976), both emphasize the individual's perceptions of control over his or her own behavior and, more important, over environmental events. Also, both deal with general and specific expectancies and beliefs about the contingencies between personal behavior and positive and negative life events. Self-efficacy theory offers a third but related perspective on the role of cognitions, particularly expectancies for control, in depression.

In the self-efficacy model, depression is predicted under conditions of high outcome value, high outcome expectancy, and low self-efficacy expectancy (Bandura, 1982). Specifically, when people believe that highly valued outcomes are obtainable through the performance of certain behaviors (high outcome expectancy), and believe that they are incapable of performing the requisite behaviors (low self-efficacy expectancy), they will display performance deficits (e.g., lack of behavioral initiative and persistence), self-devaluation, and depressed affect. This perspective is compatible with other cognitive models of depression. For example, self-efficacy theory incorporates both an emphasis on perceptions of response-outcome noncontingency, which is important in the revised
learned helplessness theory, and an emphasis on perceptions of personal incompetence and self-devaluation, which is important in Beck’s (1976) cognitive model.

**Self-Efficacy and Learned Helplessness**

The revised learned helplessness model of depression (Abramson et al., 1978) is concerned primarily with the perception of the controllability of aversive outcomes. According to Peterson and Seligman (1984), “the central prediction of the reformulation is that individuals who have an explanatory style that invokes internal, stable, and global causes for bad events tend to become depressed when bad events occur” (p. 347). Research on the model has demonstrated that depressed people are characterized by a particular style of causal attributions concerning the noncontingency or uncontrollability of past and present negative life events, that these attributions lead to expectancies of future uncontrollability, and that these expectancies concerning negative life events and their uncontrollability are the proximal cause of depressed mood (e.g., Riskind, Rholes, Brannon, & Burdick, 1987).

Self-efficacy expectancy and outcome expectancy are directly related to noncontingency and uncontrollability, which are often used interchangeably in the depression literature. A low outcome expectancy is a perception of noncontingency between a behavior and a desired consequence. A low self-efficacy expectancy, however, is a perception not of noncontingency but of inability to perform a behavior upon which a given outcome may or may not be contingent. Both low self-efficacy expectancies and low outcome expectancies can contribute to one’s perceptions of the uncontrollability of outcomes because, to obtain desired outcomes or prevent aversive outcomes, one must believe that a particular behavioral strategy will have the desired consequence and that one is capable of implementing the course of action. From an attributional standpoint, people who attribute the causes of bad events to personal flaws and defects also are expressing low self-efficacy expectancies or lack of confidence in their skills and abilities. Such people are likely to believe that bad outcomes are uncontrollable not because they perceive responses and outcomes as noncontingent, but because they perceive themselves as incapable of implementing the necessary courses of action.

The distinction between self-efficacy expectancy and outcome expectancy may clarify the revised learned helplessness theory’s distinction between “personal helplessness,” the belief that one is uniquely deficient in the ability to control specific outcomes, and “universal helplessness,” the belief that no one is able to control the outcome or outcomes in question. In self-efficacy theory, universal helplessness can be defined in terms of either universal low outcome expectancies (no responses can control the outcome) or universal self-efficacy expectancies (no one is capable of implementing the behaviors that might control the outcome). Personal helplessness, however, is a combination of high outcome expectancy and low self-efficacy expectancy; the personally helpless individual believes that certain behaviors might or will lead to the desired outcomes (or prevent a negative outcome), that others are capable of performing these behaviors, but that he or she is not.

**Self-Efficacy and Cognitive Theory**

According to Beck’s (1976) cognitive theory, depressed people hold negative views of themselves (seeing themselves as defective and deficient), negative views of the world (seeing the world as difficult, uncaring, and fraught with obstacles and problems), and negative views of the future (viewing their condition as hopeless and their future as bleak). The depressed person’s negative view of self can be seen as a generalized low self-efficacy expectancy that is the product of and is manifested in numerous situation-specific and behavior-specific low self-efficacy expectancies (e.g., Kanfer & Zeiss, 1983). The negative view of the world can be defined as a set of low outcome expectancies, a set of expectations about response-outcome noncontingency—the world is filled with obstacles that cannot be overcome because nothing works to change undesirable situations. Finally, the depressed person’s negative view of the future can be expressed as a set of low outcome expectancies (the world will continue to be as it is) and low self-efficacy expectancies (he or she will remain incapable and incompetent).

**Research on Self-Efficacy and Depression**

Correlational studies provide evidence for the relationship between specific and general low self-efficacy expectancies and depressive symptoms (Devins et al., 1982; Kanfer & Zeiss, 1983; Rosenbaum & Hadari, 1985; Stanley & Maddux, 1986b). In addition, experimental studies that have attempted to induce self-efficacy expectan-
cies (Stanley & Maddux, 1986b & c; Tilley & Maddux, 1989) have provided evidence a causal relationship between low self-efficacy expectancies and depressed mood. Perceived uncontrollability of outcomes seems to be the heart of the cognitive problem of depressed people, and low self-efficacy expectancies appear to be more important than low outcome expectancies in depressed people's perceptions of uncontrollability (Anderson, Horowitz, & French, 1983; Anderson & Arnoult, 1985). A self-efficacy analysis might aid the clinician in determining which component of a cognitive intervention program to emphasize for a particular client. For example, should unrealistic outcome expectancies or inappropriate outcome values be the primary target of change? Or should the client's inaccurate perceptions of his or her interpersonal skills be emphasized?

The low self-efficacy expectancies held by depressed people may be accurate estimations of skills deficits rather than cognitive errors or distortions (Lewinsohn, Mischel, Chaplin, & Barton, 1980). Therefore, research is needed on the accuracy of depressed people's low self-efficacy expectancies at different times during depression. This issue may have important treatment implications in that the clinician could focus either on enhancing an unskilled client's social skills or helping a relatively skilled client to recognize and take credit for the skills he or she is capable of exercising (or both approaches could be taken) (e.g., skills training vs. persuasion).

Addictive Behaviors and Substance Abuse

A number of recent studies indicate that self-efficacy theory is a useful model for exploring the process of addictive behavior change and the impact of clinical interventions, especially the prediction of relapse and maintenance (DiClemente, 1986). The role of self-efficacy expectancies in smoking cessation has been studied most thoroughly, but the application of self-efficacy theory to understanding alcohol abuse and eating disorders such as obesity and bulimia also has received good initial support.

DiClemente (1986) has proposed that addictive behavior change efficacy can best be conceptualized and assessed in terms of (a) treatment behavior efficacy (the client's ability to perform treatment behaviors such as self-monitoring and stimulus control); (b) recovery efficacy (the client's ability to recover from a temporary relapse in addictive behavior control); (c) and control efficacy or abstinence efficacy (the client's confidence in his or her ability to abstain from engaging in the problem behavior in a variety of situations that typically serve as cues for the behavior).

Smoking has received the most attention from self-efficacy researchers. Scales based on self-efficacy theory have proven useful in predicting successful completion of a treatment program (Myerson, Foreyt, Hammond, & DiClemente, 1980), posttreatment relapse (Coelho, 1984; Condio & Lichtenstein, 1981; DiClemente, 1981), and smoking rates following treatment (Coletti, Supnik, & Rizzo, 1981; DiClemente, Prochaska, & Gibertini, 1985; Godding & Glasgow, 1985; Nicki, Remington, & MacDonald, 1984). Research suggests, however, that self-efficacy for abstinence assessed at pretreatment may predict treatment program attendance but not treatment success. Also, efficacy ratings increase during successful treatment, and posttreatment self-efficacy assessments are significant predictors of maintenance of smoking cessation for at least 3 to 6 months after treatment. To the author's knowledge, the relationship between outcome expectancy and smoking behavior has been assessed in only one published study (Godding & Glasgow, 1985), and no significant correlation was found.

Efficacy scales designed for alcohol abuse (Annis, 1982; Chambliss & Murray, 1979; DiClemente, Gordon, & Gibertini, 1983; Marlatt & Gordon, 1985), obesity (O'Leary, 1985; Weinberg, Hughes, Crittelli, England, & Jackson, 1984; Weinberg & Agras, 1984), and bulimic behavior (Schneider, O'Leary, & Agras, 1985) have shown some promise in predicting treatment success for these problems. Self-efficacy for weight loss has been a significant predictor of actual weight loss (Weinberg et al., 1984), and self-efficacy to resist bulimic behaviors has been found predictive of binge-and-purge episodes. In alcoholism treatment, self-efficacy expectancy measures have been related to relapse categories identified in previous research (Marlatt & Gordon, 1985), alcohol use patterns, and deterioration (DiClemente, 1986). These scales were developed primarily for research purposes and have been used mainly in research settings, but most are suitable for common clinical use. Utility of these scales in typical private practice clinical settings remains an important area for research. A clinician could use scales based on self-efficacy theory to determine which
clients would benefit most from extensive relapse prevention. Self-efficacy scales might also be useful for planning appropriate individualized follow-up treatment.

Career and Vocational Choice

Although decision-making about career or vocation is not usually considered a topic for clinical or abnormal psychology, few decisions one makes about one's life can have such long-lasting effects on happiness and adjustment as one's choice of work. Research and theory on vocational and career choice have been dominated by trait and developmental approaches (Betz & Hackett, 1986). Only recently have social cognitive models been applied systematically to the explanation, prediction, and modification of career and vocational behavior. Among social cognitive models, self-efficacy theory has been the most thoroughly investigated, especially in relation to women's career and vocational issues. The concept of self-efficacy helps us understand two continuing problems in women's career development: (a) women's underrepresented in many male-dominated career fields, such as mathematics, engineering, and the sciences; and (b) the underutilization of women's talents and skills in career pursuits (Betz & Hackett, 1986). Betz and Hackett (1981, 1986) propose that gender differences in self-efficacy expectancies significantly influence the career choices of young women and that these self-efficacy expectancies are derived from sex role socialization experiences that are different from those of men.

In their review of career self-efficacy, Lent and Hackett (1987) evaluate research relating self-efficacy to career entry behavior, college major choice, academic achievement, career choice, career decision-making, career adjustment, and gender differences in career behavior. They conclude that self-efficacy measures have been useful in predicting some aspects of career and vocational behavior, but that the "incremental contribution" of self-efficacy measures to interest and ability measures is questionable. They also point out that research is especially needed on the causal links between self-efficacy and career behavior.

Betz and Hackett (1986) suggest that self-efficacy theory may not lead to the development of completely new interventions in career decision-making but should lead to the enhancement of existing interventions by encouraging the development of multiple-intervention packages. The self-efficacy model also should enhance these interventions by providing more focused goals (e.g., the enhancement of specific self-efficacy expectancies, more accurate and reliable measures of intervention success).

CLINICAL APPLICATIONS OF SELF-EFFICACY THEORY

In addition to contributing to the understanding of the etiology of emotional and behavioral problems, self-efficacy theory offers guidelines for their assessment and treatment. In trying to understand and help people who are experiencing emotional or psychological problems, evaluating specific self-efficacy expectancies about specific behaviors and specific life goals is usually more useful than simply examining a person's general sense of competence or effectiveness because specificity helps a clinician determine exactly what beliefs and behaviors need to be changed to help the person experience success and begin to feel and be more effective and productive. Once a client begins to experience some success in one or two aspects of his or her life, the client may develop stronger self-efficacy expectancies for behaviors in other areas of life. For example, an extremely shy client may be helped with calling a friend to arrange a lunch date, or a severely depressed person may be encouraged to simply get up and get dressed in the morning. According to self-efficacy theory, these small successes strengthen the client's sense of self-efficacy and his or her expectations for additional, more important successes. Most effective clinical interventions help people experience success as a way of restoring high self-efficacy expectancies and a general sense of personal efficacy (Goldfried & Robins, 1982).

Clinical Assessment

In assessing clients' problems, the self-efficacy model and the considerable research on measurement of self-efficacy expectancies may be useful in two ways. First, an assessment of self-efficacy before treatment, at various stages in treatment, and following treatment can help the clinician target specific competency-related beliefs and situations, predict areas of potential difficulty, and tailor interventions to meet a client's special needs. For example, a self-efficacy scale that provides
detailed information about “at risk” situations for clients with eating problems or substance abuse problems (e.g., DiClemente, 1986; Schneider et al., 1985) can help the therapist clarify, anticipate, and prevent problems clients typically encounter when attempting new or anxiety-provoking behaviors such as being assertive, controlling food intake in the face of temptation, or refusing a drink when offered one at a party. Such information can also assist in the timing of interventions because the therapist and the client are better able to predict relapse.

Second, self-efficacy measures may be helpful in the evaluation of treatment effectiveness. Most theories and models of psychotherapy emphasize the importance of helping the client attain a greater sense of personal mastery or competence (Goldfried & Robins, 1982). Perceptions of personal mastery, if measured at all as a part of treatment outcome, usually have been measured as global traitlike constructs (e.g., locus of control, self-esteem). Self-efficacy theory has encouraged research on the development of assessment instruments that are more problem specific and therefore more useful clinically. Such measures should be of particular interest to behavioral and cognitive-behavioral clinicians.

Most measures of self-efficacy expectancies have been developed for research rather than for direct clinical use, but many of them share a number of characteristics that make them suitable for use in clinical settings. Most have good logical or face validity, are brief and straightforward, are highly specific regarding problem behaviors and problem situations, and lend themselves to use at frequent intervals to provide efficient monitoring of client progress. (See previous section on specific disorders and problems.)

Although a number of measures of self-efficacy expectancies have been developed that are suitable for clinical use, the measurement of outcome expectancy and outcome value has been largely ignored. Research suggests that outcome expectancy and outcome value can be useful predictor variables along with self-efficacy expectancy. Thus, the development of measures of these constructs deserves attention. For example, an outcome expectancy measure might consist of a list of possible coping strategies for a specific problem and allow for ratings of the client’s perception of the potential effectiveness of these strategies. An outcome value measure might consist of a list of the anticipated consequences (both positive and negative) that might result from being more assertive or losing weight, and the extent to which these consequences are desired or feared (e.g., Saltzer, 1981). Both kinds of measures might assist the therapist in assessing a client’s motivation for treatment in general, the value they place on attaining certain treatment goals, and their expectations about the effectiveness of specific intervention strategies (see Thompson, this volume, for additional information about the use of outcome expectancy in psychotherapy).

Enhancing Self-Efficacy in Psychotherapy

In social learning (e.g., cognitive-behavioral) approaches to clinical psychology, assessment and intervention are integrated activities rather than conceptually and procedurally distinct. Therefore, a self-efficacy theory approach to clinical interventions is guided by the same principle that guides the use of self-efficacy theory in assessment—that situational and behavioral specificity are crucial to understanding clinical problems and designing successful therapeutic procedures. Few theories or models provide explicit step-by-step guidelines for conducting clinical interventions, but a good theory should provide the clinician with a conceptual framework that serves as a general guide to understanding and conducting the clinical situation (Kanfer, 1984). Goldfried and Robins (1982) suggest that self-efficacy theory can be most useful not by suggesting new strategies for engineering initial behavior change but by providing an index of the way clients cognitively process behavior changes and experiences that occur in psychotherapy. They point out that many clients may encounter success experiences in certain areas of their lives but may fail to benefit fully from these experiences because they interpret these experiences in ineffective ways, such as by overlooking, ignoring, or discounting the importance of these success experiences. In other words, “self-efficacy expectancies often lag behind behavior change” (Goldfried & Robins, 1982, p. 373).

Sources of Efficacy Information

All four sources of self-efficacy information—verbal persuasion, vicarious experience, emotional arousal, and performance experience—are important in effective clinical interventions. Most forms of psychotherapy rely strongly on ver-
bal persuasion as a means of enhancing a client’s sense of self-efficacy and encouraging clients to take small risks that may lead to small successes (Harvey, Weary, Maddux, Jordan, & Galvin, 1985). Almost all psychotherapists rely initially upon their own powers of persuasion to convince clients that they can make some small changes in their behavior. In cognitive and cognitive-behavioral therapies, the therapist engages the client in a discussion of the client’s dysfunctional beliefs, attitudes, and expectancies, and helps the client see the irrationality and self-defeating nature of such beliefs. The therapist encourages the client to adopt new, more adaptive beliefs, and the client is then encouraged to act on these new beliefs and expectancies and to encounter the success that will lead to more enduring alterations in self-efficacy expectancies and adaptive behavior. (See Hollon & Beck, 1986, and Ingram & Kendall, this volume, for reviews of cognitive and cognitive-behavioral psychotherapy.)

Some clinical interventions use vicarious means for enhancing self-efficacy. For example, modeling films and videotapes have been used successfully to encourage socially withdrawn children to interact with other children. In such films, the socially withdrawn child observes another child similar to himself or herself encounter and then master problems similar to his or her problems. The child model initially expresses some fear about approaching another group of children, but then takes a chance and starts talking to the children and joins in their play. The child watching the film sees the model child, someone much like himself or herself, experience success and comes to believe that he or she too can do the same thing (see Conger & Keane, 1981, for a review.) In vivo modeling has been used successfully in the treatment of phobic individuals. This research has shown that changes in self-efficacy expectancies for approach behaviors mediate therapeutic behavioral changes (Bandura, 1986a).

Biofeedback, relaxation training, and meditation are attempts to reduce emotional or physiological arousal (e.g., anxiety) and to reduce the association between this arousal and low self-efficacy. As noted above, actual performance of behaviors that lead to success is perhaps the most powerful way to enhance personal efficacy in psychotherapy. For example, the most effective treatments for phobias and fears involve in vivo experience with the feared object or situation during therapy sessions and between sessions as homework assignments (Bandura, 1986a; Barlow, 1988). In cognitively based treatments of depression, depressed clients are provided structured guidance in the arrangement of success experiences that will counteract low self-efficacy expectancies (Beck, Rush, Shaw, & Emery, 1979).

Most psychotherapy and counseling approaches involve combinations of more than one source of self-efficacy information. For example, successful treatment with agoraphobic clients may require intervention using all four sources of efficacy information: (a) emotional arousal, teaching the client to relax and feel less anxious when out in public; (b) verbal persuasion, encouraging the client to attempt feared behaviors and challenging the client’s expectations of catastrophe; (c) vicarious experiences, observation of filmed or live models (such as the therapist) engaging in feared behaviors or participation in an agoraphobic group; (d) performance experiences, actual practice in engaging in feared behaviors such as leaving one’s home and approaching a feared situation or setting, such as a supermarket.

A Self-Efficacy Focus for Psychotherapy

Goldfried and Robins (1982) suggest that a self-efficacy framework can be useful in helping clients process success experiences more beneficially in four specific ways. First, the self-efficacy model suggests that therapists should help clients discriminate between past and present behavior to more accurately gauge their progress. For example, therapists can help clients feel more self-efficacious by encouraging them to contrast recent successful coping strategies with past ineffective behaviors and view competence not as a trait but as a set of specific behaviors performed in specific situations, and by discouraging them from comparing their behavior with others who may seem more competent. Second, therapists can encourage clients to attribute successful behavioral changes to effort and competence rather than to environmental circumstances.

Third, therapists and counselors can encourage clients to retrieve past success experiences to use as a guide for future behavior. In other words, “clients must not only behave in competent ways but must also view these behavior patterns as being part of their personal history” (Goldfried & Robins, 1982, p. 371). Fourth, therapists can assist clients in aligning or attaining greater consonance among expectancies, anticipatory feelings, behav-
iors, objective consequences of behaviors, and their self-evaluation. For example, Goldfried and Robins point out that clients may perform adequately in threatening situations yet feel unpleasant emotional arousal and thus face two conflicting sources of self-efficacy information. In such situations, the therapist needs to emphasize that the emotional arousal did not predict the outcome of the situation and thereby discount a source of efficacy information that previously had great importance for the client but was maladaptive. (See Thompson, this volume, for additional strategies.)

FUTURE DIRECTIONS

Since the publication of Bandura's (1977) Psychological Review article, "self-efficacy" has become one of the most ubiquitous terms in the literature of social, clinical, counseling, health, and personality psychology and probably will continue to be the subject of considerable research by psychologists interested in the cognitive mediation of behavior and emotion. A sampling of this literature reveals that most researchers, regardless of their specialty field, are concerned with a relatively small number of questions on the role of basic cognitive processes in human behavior and affective experience, including the following:

1. What is the role of perceived ability or competence in the individual's decision to engage in certain behaviors and to persist in the face of obstacles or failure?
2. How are perceptions of competence related to the expected consequences of behavior?
3. How well can these "cognitive" factors predict behavior and affect?
4. How are these cognitions related to the development and treatment of psychological, behavioral, and emotional maladjustment?

Two different but overlapping research goals probably will continue to receive the most attention. The first of these concerns the relative utility of self-efficacy expectancy, outcome expectancy, and outcome value (including similar concepts with different names) in predicting and influencing a wide variety of behaviors. These studies are concerned with the relationships of various cognitive patterns and styles to behavior and emotion. The second line of research is concerned with the relationships among these cognitive mediators, such as studies on the orthogonality of self-efficacy expectancy and outcome expectancy. These goals and lines of research are mutually informative. Studies of the relationship of cognition to affect and behavior will shed light on the relationships among the cognitive mediators. More important, assessing the utility of cognitive mediators, alone and in combination, in predicting behavior and emotion is dependent on a clear understanding of their relationships to one another, which itself is dependent on clear definition and measurement. The following goals and guidelines are suggested for future research on self-efficacy and related constructs.

Theory and research involving self-efficacy expectancy, outcome expectancy, and outcome value (and similar concepts) should begin to employ a common set of terms to avoid confusion and to facilitate communication among researchers in various areas. For example, Kirsch (1986) reviewed research on such topics as expectancy and achievement motivation and argued that much of this past research deals with self-efficacy expectancy but refers to the construct by various other terms. Thompson (this volume) provides additional evidence for this problem by noting the many terms in the literature on "control" that are used for similar concepts and by showing the similarity between control terms and self-efficacy theory's terms. The use of a common set of terms by researchers and theorists working in the broad area of personal competence, efficacy, and control (including researchers in clinical, social, health, and industrial/organizational psychology) would facilitate communication and enhance research efforts and theory development by allowing researchers to more easily see the links between their own work and that of others. The classification of personal efficacy concepts as (a) motives, (b) feelings of esteem, (c) outcome value, (d) outcome expectancies, and (e) self-efficacy expectancies may provide a starting point (see earlier discussion).

Further attention needs to be given to the role that behavioral intention, commitment, or behavioral plan may play in mediating the relationship between behavior and self-efficacy expectancy, outcome expectancy, and outcome value. The relationships among attitudes, beliefs, intentions, and behaviors continue to be the topic of research, most of which is based on Fishbein and Ajzen's (1975; Ajzen & Fishbein, 1980) theory of reasoned action. This theory proposes that the
most powerful and immediate influence on behavior is behavioral intention, which in turn is determined by the attitude toward the behavior and perceptions of social norms regarding the behavior. (See Chaiken & Stangor, 1987, for review of recent research). If self-efficacy expectancies, outcome expectancies, and outcome value are viewed as beliefs and attitudes, then a model integrating self-efficacy theory with the theory of reasoned action, now revised as the theory of planned behavior (Ajzen, 1985), may be possible. Such an integration might involve measuring attitudes toward the behavior as self-efficacy expectancies and outcome expectancies for the behavior in question and the importance or value placed on the anticipated consequences. Social norms also might be measured in terms of expected social support for engaging in the behavior in question and the value of social support. In addition, theoretical and conceptual links need to be established between self-efficacy theory and related theories, such as learned helplessness theory (Abramson et al., 1978), control theories (Carver & Scheier, 1981; Thompson, this volume), attributional theories (e.g., Harvey, Ickes, & Kidd, 1978), and general behavior theory (McClelland, 1985). This chapter has explored briefly some of these links, but much more work is needed.

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