CHAPTER 1

Emotion, Stress, and Coping

Implications for Intervention

Life without emotions would be bland and empty. Our subjective experiences of love, anger, fear, joy, and other emotions energize and add color to our lives. Modern psychology's focus on the study of emotion echoes a timeless fascination expressed in songs, paintings, stories, poems, and scholarly treatises. However, emotions are a two-edged sword; they can foster happiness and well-being, or they can contribute to psychological and physical dysfunction.

NEGATIVE EMOTION AND STRESS

Negative emotions such as anxiety, depression, and anger are core components in psychological stress; are involved in many physical and psychological disorders; and are the most pervasive targets of psychological interventions (Barlow, Sauer-Zavala, Carl, Bullis, & Ellard, 2014; Mennin & Fresco, 2010). Anxiety is the most prevalent form of stress response (Narrow, Rae, Robins, & Regier, 2002). Epidemiological studies reveal that nearly one in five Americans suffer from a diagnosable anxiety disorder in any given year. In more than 70% of cases, anxiety-based disorders interfere significantly with life functions or cause the person to seek medical or psychological treatment (Kessler, Chiu, Demler, & Walters, 2005). A survey of 340,000 college students who sought treatment at campus counseling centers revealed that 86.2% of them presented with anxiety or depression as their primary complaint. The survey also showed that anxiety self-referrals had increased from 39.3 to 46.9% since a similar survey

in 2007. In a national survey of 150,000 entering college students, 34.6% reported feeling "overwhelmed" by schoolwork and other commitments (Higher Education Research Institute, 2015). Many other people who do not meet criteria for a mental disorder experience high levels of stress that interfere with their functioning and reduce life satisfaction.

Failure to cope successfully with stressful life events takes a significant toll on people's physical, social, and psychological well-being. Stressful life events, negative emotional responses to them, and failures to cope effectively are prime components or causal factors in a wide range of illnesses and psychological disorders (Folkman, 2011; Taylor, 2014; Zautra, 2006). In *Stress in America: Missing the Health Care Connection*, a nationwide survey of adults and teens, commissioned by the American Psychological Association (2013), the average level of life stress reported by adult respondents was 4.9 on a 10-point scale, but 20% of the adults reported stress levels of 8, 9, or 10, frequently accompanied by physical and psychological symptoms. Sixty-five percent said managing their stress is very or extremely important, but just 38% reported doing an excellent or very good job managing stressful situations and their responses to them. A sizeable proportion of respondents said that their stress level had increased in the past year, and only 17% of the high-stress respondents reported doing a good job of managing their stress. Teens reported even higher average stress levels at 5.8, and they reported similar levels of emotional and physical symptoms as the adult sample.

Nearly half (47%) in the Stress in America survey thought psychologists and other mental health providers could help with stress management, but more than half reported that they did not receive needed support from their health care provider. In a discussion of emerging public health needs, Kazdin and Blase (2011) cited the need for brief, effective stress management treatments that can be widely administered to individuals and groups for both preventive and treatment purposes as a key element in "rebooting psychotherapy" to respond to current mental health needs. It is widely accepted that helping people cope more successfully with stress would make a positive contribution to the nation's levels of physical and psychological well-being (American Psychological Association, 2013).

"Affect" is a general term that subsumes emotions (both positive and negative), moods, and stress responses (e.g., Gross, 2014b; Scherer, Schorr, & Johnstone, 2001). Contemporary developments in affective science and psychotherapy research provide a useful integrative framework for understanding and treating a wide range of psychological disorders that involve negative emotional states (e.g., Barlow et al., 2014; Mennin & Fresco, 2014).

There are seven empirically supported postulates about emotion that are acknowledged by therapists across a variety of therapeutic orientations (e.g., Barlow et al., 2014; Goldfried, 2013; Linehan, 2014; Messer, 2013; Renninger, 2013; Paivio, 2013).

1. Negative affect and ineffective attempts to cope with it are central underlying mechanisms of many (though not all) psychological disorders, and many physical ones as well.
2. Deficits in emotion regulation capabilities render people susceptible to psychological disorders in the wake of both routine stressors and extreme or traumatic events.
3. Regardless of type of therapy, clients' avoidance of emotional engagement can create an impediment to successful treatment.
4. Success in treating emotional disorders depends in part on the ability of the therapist and the treatment technique to counter emotional avoidance.
5. Active experiencing of emotion within the therapy room is a key component in successful outcome.
6. Emotional engagement often facilitates the emergence of related thoughts, memories, and action tendencies that are important aspects of the client's personality functioning.
7. Techniques are needed that can effectively activate the cognitive–affective networks, emphasized in current emotion science, which are the targets for therapeutic change.

Evidence-based interventions for developing client emotion regulation and stress management skills should be a part of every clinician's skill set. In this book, we provide just such a skill set in the form of cognitive–affective stress management training (CASMT), which addresses each of the postulates listed above. This brief six-session (or six-phase, if expanded) stress management program helps clients to access and control negative affect (particularly anxiety and anger) by applying empirically supported cognitive and somatic coping skills. In CASMT, experiencing and controlling high levels of affect are accomplished using a procedure known as "induced affect" (IA). Though developed within a behavioral framework and used in CASMT, the IA procedure can also be used in any therapeutic modality to elicit affect, or it can be used as a stand-alone treatment. We use the technique not only to achieve insights into cognitive–affective–motivational relations specific to the individual, but also to provide clients with an opportunity to rehearse previously acquired coping skills, such as somatic relaxation, adaptive cognitions, and mindfulness strategies to respond to and control affective arousal.

WHAT IS CASMT?

CASMT was initially developed as a clinical intervention of indeterminate length for the treatment of individuals presenting with high levels of anxiety and distress (Smith, 1980; Smith & Ascough, 1985). It constitutes a coping skills alternative to deconditioning treatments (i.e., systematic desensitization and extinction-based treatments such as exposure), which have exhibited little evidence of generalizing to new stressors. CASMT has also been adapted to a brief six-session group format that is described in this book. The intervention is applicable to both nonclinical and clinical populations. In addition to clinical applications, the brief manualized program has been applied successfully in a group format to a variety of nonclinical populations, including test-anxious college students (Smith & Nye, 1989), heavy college-age drinkers (Rohsenow, Smith, & Johnson, 1985), stress-ridden medical and graduate students (Chen et al., in press; Holtzworth-Munroe, Munroe, & Smith, 1985; Shoda, Wilson, Chen, Gilmore, & Smith, 2013), military officer candidates undergoing stressful training (Jacobs, Smith, Fiedler, & Link, 2012), and athletes and coaches whose performances were negatively affected by stress (Crocker, Alderman, & Smith, 1988; Smith, 1984; Watson, 1998; Ziegler, Klinzing, & Williamson, 1982).

Although CASMT differs in some important respects from other coping skills programs, such as self-control desensitization (Goldfried, 1971), stress inoculation training (Meichenbaum, 1977, 1985) and anxiety management training (Suinn & Richardson, 1971), and the self-guided multimedia Stress Management and Resilience Training for Optimal Performance (SMART-OP) program (Rose et al., 2013), it also has some notable similarities. Like these interventions, the CASMT program combines a number of empirically supported clinical techniques into an emotion self-regulation intervention. The current version of CASMT is also informed by recent theoretical and empirical developments in the burgeoning area of emotion regulation discussed later in this chapter; the result is the recent addition of several empirically supported training elements and client resource materials.

Although the conceptual and treatment models for CASMT predate Mischel and Shoda's (1995) cognitive–affective processing system (CAPS) model (described below), the CAPS metamodel is highly compatible with the CASMT program and has served to guide recent developments in collaborative assessment as well as our current research agenda (Chen et al., in press; Shoda et al., 2013; Smith et al., 2011). The CASMT program focuses on associative links among appraisals, affects, and self-regulatory competencies. Specifically, the program is designed to help people discover and modify dysfunctional appraisals that cause needless distress,

acquire empirically supported cognitive and somatic coping skills, and thereby gain increased control over their affective responses. The process is designed to enhance stress-resilience by altering the demands-to-resources stress equation and by increasing the client's "learned resourcefulness." In essence, CASMT combines the principles derived from stress and coping research with the affect regulation methods described later in this chapter. It therefore addresses the goal of the current dissemination–implementation movement to "synthesize existing knowledge about evidence-based practices into modular components and tailor them to the implementation context" (Shoham et al., 2014, p. 10).

Though clearly not as comprehensive as some recently developed treatment packages, the CASMT protocol is more narrowly focused and, at six sessions, is appreciably shorter than the 15–25 sessions required by other empirically supported interventions, such as Barlow et al.'s (2014) unified protocol; Leahy, Tirch, & Napolitano's (2011) emotional schema therapy; Berking and Schwarz's (2014) affect regulation training; Mennin and Fresco's (2014) emotion regulation therapy; and other stress management programs that average 10 or more sessions (van Dixhoorn & White, 2005). Nonetheless, given its empirical support (summarized in Chapter 2), CASMT can help address the widely articulated need for brief interventions that provide economical treatment and prevention programs to the many people with stress-related problems who receive no assistance from the current health care system (American Psychological Association, 2013). To respond to today's mental health needs, brief, effective treatments that can be widely disseminated are needed for both treatment and prevention of stress-related disorders (Kazdin & Blase, 2011). Such interventions are consistent with current National Institute of Mental Health priorities that emphasize "reach"—that is, that address specific mechanisms of psychological disorders in a highly focused fashion, that can be disseminated at a population level as part of a stepped-care approach, and that can be administered in either a clinical context or in an educational or group format (Insel, 2012; Insel & Cuthbert, 2013; Onken, Carroll, Shoham, Cuthbert, & Riddle, 2014).

CASMT occupies a niche with several other brief and efficacious interventions focused on specific disorders, such as a one-session extended exposure treatment for specific phobias (Ollendick & Davis, 2013; Öst, 1989), a five-session treatment for panic disorder (Otto et al., 2012), and brief motivational interviewing treatment for addictive disorders (Miller & Rollnick, 2002). As Kazdin and Blase (2011) point out, brief interventions, whether they are stand-alone treatments or techniques that augment existing empirically supported therapies, can have a positive impact by addressing the mental health needs that threaten to overwhelm the traditional treatment delivery system. If a cost-effective intervention can

be disseminated to enough people, even small outcome effect sizes can translate into large societal benefits.

As noted earlier, there exists a large untreated stress-ridden population that is on its way to developing clinical disorders in the absence of preventive intervention (Lahey, 2009; Kendler, Gatz, Gardner, & Pederse, 2006). In nonclinical populations, high negative affective reactivity to daily stressors predicts the development of clinically significant anxiety and depressive disorders in future years (Charles, Piazza, Mogle, Sliwinski, & Almeida, 2013). The lower rungs of a stepped-care approach using brief interventions can help reduce this trajectory toward psychological disorders.

In the remainder of this chapter, we review literature that is relevant to the emotion regulation interventions discussed in the remainder of the book. We review key concepts of emotion, the relation of emotion to other psychological phenomena, and the role of emotion in psychopathology. We then survey current knowledge about stress, coping, and emotion regulation and the relevance of this body of theory and research to clinical practice. In Chapter 2, we provide an overview of CASMT intervention strategies and the empirical support for the program. In Chapter 3, we address the topic of affect elicitation in therapy and review theoretical principles and techniques that have been employed in the service of affect elicitation and emotional processing. We focus in particular on the IA procedure, how it is employed in psychotherapy and coping skills training to elicit and control affective arousal, and how it has been successfully applied in a variety of clinical and nonclinical populations. Chapters 4 through 9 present session-by-session guidelines for conducting CASMT with either a group or an individual. End-of-book appendices provide all of the assessment and training materials used in the intervention.

EMOTION: COMPONENTS AND PROCESSES

As noted above, emotion is one type of affective response, distinct from moods in being more transitory and from stress in being either positive or negative in nature, rather than primarily negative. Psychologist James Averill (1980) found more than 550 words in the English language that refer to various positive and negative emotional states. We surely do not have 550 different emotions, but the emotions we do have share four common features.

1. Emotions are responses to external or internal stimuli that become the focus of attention (Gross, 2014b). Attentional processes

are biased toward the detection of stimuli that have survival implications or are relevant to a currently salient goal or motivational state or to an already-existing emotional response (Joorman & Siemer, 2014). Attentional biases have been found in a variety of emotional disorders (Mathews & MacLeod, 2005).

2. Stimulus input triggers *appraisal* of these stimuli, which gives the situation its perceived meaning and significance (Arnold, 1960; Gross, 2014b; Lazarus, 1991a). These appraisals need not be linguistic in nature; they can be represented within a number of subcortical and cortical brain structures that permit varying levels of conscious awareness (Kihlstrom, 2008; LeDoux, 2000).

3. Our bodies respond physiologically to our appraisal of the stimuli. The *physiological response* can involve an array of biological systems both within and outside of the brain (Ochsner & Gross, 2014). We may become physically aroused as in fear, joy, or anger, or we may experience decreased arousal, as in contentment or dysphoria. Situational features help define the meaning of the arousal (Lazarus, 1991a). As arousal occurs, it acquires stimulus properties and feeds back into the ongoing appraisal process. For example, internal cues from an intense arousal response may result in a more negative reappraisal of the situation or of one's capacity to deal with it. Behavioral signs of intense arousal may also serve as social stimuli that affect the behavior of others, thus changing the eliciting situation.

4. Emotions include *action tendencies*. Some are expressive behaviors (e.g., exhibiting surprise, smiling with joy, crying) that are innate, but also subject to cultural display rules. Others are instrumental behaviors—that is, ways of doing something about the stimulus that aroused the emotion (e.g., studying for an anxiety-arousing test, fighting back in self-defense, running away). Some theorists (e.g., Frijda, 1986) assume that each of the basic emotions has its own innate action tendency shaped by evolutionary forces (e.g., attack in anger, avoidance or escape in fear, withdrawal from activity in depression).

Emotion is thus a dynamic ongoing process of reciprocal causal relations involving the situation, the person, and the person's behavior (Bandura, 1986; Lazarus, 1991a). Moreover, emotion is not only a biopsychological network unto itself, but it is also embedded in broader networks that involve other important psychological phenomena, including cognitive, motivational, behavioral, and personality factors (Bower, 1981; Mischel & Shoda, 1995; Rumelhart & McClelland, 1986). In this respect, emotions operate both as stimuli that activate other processes and as responses

from other psychological processes, such as self-schemas (Baldwin, 1999). They thus comprise a central hub for psychological functioning. Most contemporary emotion theorists acknowledge functional links between motives and emotions (e.g., Gross, 2014b; Lazarus, 1991a, b; Scherer et al., 2001). Lazarus (1991b), for example, insisted that there is *always* a link between motives and emotions, because we react emotionally only when our motives and goals are gratified, threatened, or frustrated. Emotional reactions are especially strong when an experience is pertinent to goals that are very important to us. Each emotion, therefore, has its own "core relational theme," appraisal pattern, and innate action tendency.

Table 1.1 summarizes Lazarus's (1991b, p. 826) proposed relational themes that link specific motives with emotions. These relational themes are central concerns in psychotherapy as therapists and clients work on important client agendas. Successful therapy occurs when clients are empowered to pursue meaningful positive goals and are unshackled by impediments, including fears and self-defeating behavioral tendencies. Moreover, emotional reactions act as a window through which one can gain insights into important motivational factors. This premise is reflected in the importance ascribed to emotional expression in most therapeutic orientations, and it is the underlying theme for this book's focus on affect elicitation in psychological treatments.

Emotion plays an important role in virtually every theory of personality. For example, today's cognitive-behavioral therapy (CBT) movement shares a close kinship with social-cognitive personality theory (Shoda & Smith, 2004). In the CAPS model of personality functioning advanced by Mischel and Shoda (1995), emotions play a prominent role because of their associative links with four other psychological processes: appraisals, expectancies and beliefs, goals and values, and cognitive-behavioral competencies and self-regulatory skills. As in other network models, CAPS units can have either excitatory or inhibitory associations with other units, creating distinctively different personality structures. This dynamically organized personality system interacts continuously with the social world in which it functions, generating distinctive patterns of behavior that can differ markedly across different situations.

Entry into the personality system at the level of affect can be an important means of understanding the person's idiographic system of cognitions, memories, and motives. For example, self-schemas activated by a particular encoding can create specific sensitive areas or emotional vulnerabilities that contribute to psychological disturbances (Leahy et al., 2011). Finally, many forms of therapy are directed at the improvement of self-regulation competencies, including emotion regulation capabilities (e.g., Barlow, Allen, & Choate, 2004; Berking & Schwarz, 2014; Mennin & Fresco, 2014). Because of its heuristic and explanatory value, the CAPS

TABLE 1.1. Core Relational Themes Underlying Basic Emotions, According to R. S. Lazarus

Emotion	Relational theme
Fear	Perceived threat of imminent harm
Anxiety	Facing an uncertain threat
Guilt	Personal violation of a moral standard
Shame	Failure to live up to idealized standards
Sadness	Perception of an irrevocable loss
Depression	Complex themes relating to loss, shame, guilt, hopelessness, self-deprecation
Envy	Desire for what someone else has
Jealousy	Combination of anger and envy themes
Relief	Departure of an imminent threat
Happiness	Perceived progress toward or achievement of a prized goal or object
Pride	Ego enhancement from attaining a prized object or accomplishment
Disgust	Exposure to a revolting object or act by another
Hope	Fearing a negative outcome but yearning for a more positive one
Love	Desiring or experiencing affection for another
Compassion	Vicarious suffering and desire to help

Note. Based on Lazarus (1991b).

metamodel is increasingly being applied to clinical topics (e.g., Cervone, Shadel, Smith, & Fiori, 2006; Freitas & Downey, 1998; Huprich & Bornstein, 2007; Rhadigan & Huprich, 2012; Shoda & Smith, 2004; Shoda et al., 2013).

POSITIVE AND NEGATIVE EMOTIONS: STATES AND DISPOSITIONS

Like other psychological processes, emotions have important adaptive functions, many of which have evolutionary origins (Ochsner & Gross, 2014; Scherer, Schorr, & Johnstone, 2001). Some emotions are part of an emergency arousal system that increases the chances of survival by energizing, directing, and sustaining adaptive behaviors. The most basic

of these behavioral tendencies, seen in virtually all species, is fighting, freezing, or fleeing when confronted by threat. The physiological arousal that is so central to the emotions of anger and fear energizes and intensifies such behaviors.

Positive and negative emotions have different adaptive functions (Fredrickson, 1998). Evolutionary survival pressures have sculpted negative emotions to *narrow* attention and action tendencies so that the organism can respond to a threatening situation with a focused set of responses. In contrast, positive emotions usually arise under conditions of safety and goal attainment in which high physiological arousal is not needed. Rather than narrowing attention and behavior tendencies, positive emotions such as interest, joy, contentment, and love broaden our thinking and behavior so that we explore, consider new ideas, try out new ways to achieve goals, play, and savor what we have. In these ways, positive emotions also are highly adaptive for humans.

The distinction between positive and negative emotions has strong empirical support. Factor analytic studies, whether involving affective state measures collected over time or trait measures that ask how one generally feels, consistently reveal statistically independent dimensions that have been labeled "positive affect" (PA), including such feelings as energetic, happy, relaxed, and optimistic, and "negative affect" (NA), which encompasses fear, anger, and sadness (Tellegen, Watson, & Clark, 1999). Unless conflicting emotions are being simultaneously experienced, people's momentary emotions typically fall along a single dimension featuring PA at one end and NA at the other (Russell & Carroll, 1999).

The majority of emotional problems involve inappropriate levels, duration, or modulation of NA such as anxiety, depression, and anger (Barlow et al., 2014). As a disorder of negative affect, anxiety involves experiences of tension, physiological hyperarousal, worry, concentration disruption, and negative self-appraisals. In addition, it is an emotional marker for Gray's (1991) NA-related behavioral avoidance system of retreat from threat. Depression involves not only NA (typically sadness), but also a marked reduction in the capacity to experience PA (Clark & Watson, 1991). Like anxiety and depression, anger loads strongly on the NA dimension, but it also has a unique property lacking in the other two emotions: namely, a disposition toward approaching and engaging the offending object, presumably reflecting the joint operation of Gray's (1991) behavioral approach system (Harmon-Jones, 2003).

Other disorders also represent variations in NA and PA. Emotion dysregulation, including marked affective instability in both NA and PA, is especially pronounced in borderline personality disorder (Linehan, 1993; Neacsiu, Bohus, & Linehan, 2014). Among the many maladaptive behaviors linked to attempts to downregulate negative emotions and/or

upregulate positive emotions are substance abuse and eating disorders (Kober, 2014). However, in contrast to disorders that involve high levels of NA, psychopathy is marked by low baseline levels of affect, contributing to a lack of capacity to experience anticipatory anxiety or guilt (or to experience empathic emotion) that would inhibit acting out in most people, thereby resulting in dysfunctional impulsive behaviors (Raine, 2008). Finally, although PA is more generally associated with positive adjustment than is NA, one notable exception exists in manic reactions, where unbridled energy, optimism, and faulty judgments regarding the long-term consequences of impulsive approach behaviors can have dire consequences (Meyer & Baur, 2009).

Neuroticism (Negative Affectivity) as a Target for Intervention

PA and NA have dispositional as well as state properties. The disposition to experience frequent and intense NA states in response to threat, frustration, or loss has been termed "neuroticism" (Eysenck, 1947; McCrae & Costa, 2003). Its psychometric markers include such terms as "anxiety, "worry," "depression," "sadness," "vulnerability," "irritability," "anger," and "negative self-consciousness." In contemporary personality research, neuroticism is regarded as a global, transculturally consistent dispositional construct and is a prominent component (along with extraversion, conscientiousness, agreeableness, and openness to experience) in the five-factor model (FFM) of normal personality functioning (McCrae & Costa, 2003). At the extremes of the dimension, neuroticism also involves the construal of the world as dangerous and threatening and of oneself as incapable of coping with the challenges it presents. Current conceptualizations of emotional disorders view neuroticism as the major dispositional variable underlying the development and maintenance of anxiety, depression, and other NA disorders, as well as the common or core factor in the high levels of comorbidity observed among the emotional disorders (Weinstock & Whisman, 2006). This personality variable figures prominently in the dimensional emphasis in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5; American Psychiatric Association, 2013), and it has therefore become a prime target for intervention (e.g., Barlow et al., 2014). Successful treatment of neuroticism implies, in part, the ability to gain regulatory control over NA by acquiring effective coping skills.

There are very good reasons to target neuroticism, given that it has been established as an important factor in both mental and physical health. In a meta-analysis involving 33 population-based samples, high effect sizes exceeding 1.0 were found for elevated neuroticism in mood disorders, anxiety disorders, somatoform disorders, eating disorders, and

schizophrenia (Malouff, Thorsteinsson, & Schutte, 2006). Medium effect sizes have been found for associations between neuroticism and borderline, avoidant, and dependent personality disorders (Saulsman & Page, 2004). In a prospective study involving more than 20,000 participants with no previous history of major depression, each standard deviation in neuroticism scores was associated with a 31% increase in the likelihood of developing a major depressive disorder over the next 25-year period (Kendler et al., 2006). Highly elevated risk for future suicide attempts (Fergusson, Woodward, & Horwood, 2000) and for developing schizophrenia (van Os & Jones, 2001) has also been found in individuals with high neuroticism scores. Finally, in a daily diary study with a nonclinical sample, levels of daily NA and affective reactivity to daily stressors predicted self-reported anxiety and depressive disorders 10 years later (Charles et al., 2013). The combined estimated 12-month prevalence of psychological disorders shown to be strongly or moderately related to neuroticism may exceed 20% of the U.S. population (Narrow et al., 2002; Lahey, 2009).

High levels of chronic NA are associated with other adverse life outcomes as well, including low marital satisfaction and future separation and divorce, poor occupational success, and low levels of subjective well-being in both clinical and nonclinical populations (Lahey, 2009; Ro & Clark, 2013). Importantly in terms of our previous discussion of life stress, individuals high in neuroticism are more prone to negative psychological, physical, and behavioral outcomes when they encounter stressful life events, and they react more strongly to such events than do low-NA individuals (Vogeltanz & Hecker, 1999).

In addition to its negative relation to psychological well-being, neuroticism is a risk factor for physical health outcomes, including lowered longevity (Sareen, Cox, & Asmundson, 2005; Smith & MacKenzie, 2006). Even in nonclinical populations, neuroticism is associated with increased risk of illness, such as cardiovascular disease (Suls & Bunde, 2005), asthma (Huovinen, Kaprio, & Koskenvuo, 2001), irritable bowel syndrome (Spiller, 2007), and atopic eczema (Buske-Kirschbaum, Geiben, & Hellhammer, 2001). It is also associated with a heightened tendency to engage in health-compromising behaviors, such as smoking, drug and alcohol use (Malouff et al., 2006), and unprotected sex (Hoyle, Fejfar, & Miller, 2000). Given the associations of neuroticism with reduced physical and psychological well-being, together with the personal and societal costs involved in its negative outcomes and their treatment, Lahey (2009) has argued persuasively that neuroticism is a major public health issue that requires attention at both the prevention and intervention levels. Barlow et al. (2014) have targeted their unified protocol to the treatment of emotional disorders and the reduction of neuroticism. In like manner,

the techniques presented in this book are designed to decrease negative emotional overreactivity to stressful events through the development of emotion regulation skills.

STRESS AND COPING

As noted above, "emotion" and "stress" are closely related affective concepts. Emotion is a broader construct because it involves both PA and NA states, whereas stress (when discussed as a mind–body response) involves only NA states (Gross, 2014b; Lazarus & Folkman, 1984). According to Lazarus, "The concept of emotion includes that of stress, and both are subject to appraisal and coping theory" (1993, p. 12).

The concept of stress has been a focus of scientific interest and research for many decades in psychology, medicine, psychiatry, and other disciplines, and the term has been used in several different ways. Various theorists have treated stress as a stimulus, as a response, or as a process that involves an interaction between the situation and the individual.

The first (stimulus) usage refers to situations that tax the physical and/or psychological capabilities of the individual. The focus here is on the balance between the demands of the situation and the personal and environmental resources available to the individual. Situations are likely to be labeled as *stressors* when the demands test or exceed the resources of the person. Life event scales (e.g., Holmes & Rahe, 1967; Sarason, Johnson, & Siegel, 1978) are often used to operationally define stress in stimulus terms.

In the second use of the term, stress refers to cognitive, affective, and behavioral responses to a stressor. This conception of stress was popularized in the work of Walter Cannon (1932), Hans Selye (1956), and Harold G. Wolff (1953), all of who treated stress (or in Selye's case, *distress*) as an organized pattern of physiological responses to noxious stimulation. Clearly, these two uses of the term are not synonymous, since people may vary considerably in how "stressful" they find the same situation.

The third and most comprehensive model of stress combines the stimulus and response conceptions into a transactional process model that involves reciprocal, recursive transactions among the person, the person's behavior, and the environment, the latter used broadly to refer to both external and internally generated stimuli (e.g., Lazarus & Folkman, 1984). Stress involves a subset of negative emotional responses to threats to well-being; thus the concept of stress aligns closely with prevailing theories of emotion. Although anxiety, anger, and other emotional states involving physiological arousal are the emotions most often included under the umbrella of stress, the stress response can be broadened to

include the entire range of negative or aversive emotional states, including guilt, shame, and depression, which constitute the more global concept of "distress" (Lazarus, 1991a).

A Transactional Model of Stress

Derived from the contributions of several theorists, including Richard S. Lazarus (1966), Stanley Schachter (1966), Magda Arnold (1970), and Albert Ellis (1962), the model of stress shown in Figure 1.1 emphasizes relations among cognition, physiological responses, and behavior. This model has four major elements: (1) the situational demands; (2) the person's cognitive appraisals of the situation, his or her ability to cope with it, its possible consequences, and the personal meaning ascribed to the consequences should they occur; (3) physiological arousal responses; and (4) instrumental and coping behaviors. As in the case of emotion in general, personality and motivational variables are assumed to influence each of the four primary components.

Situational Demands

The stimuli that constitute the situation may be either external or internal in origin. Although one ordinarily thinks of affect as being elicited

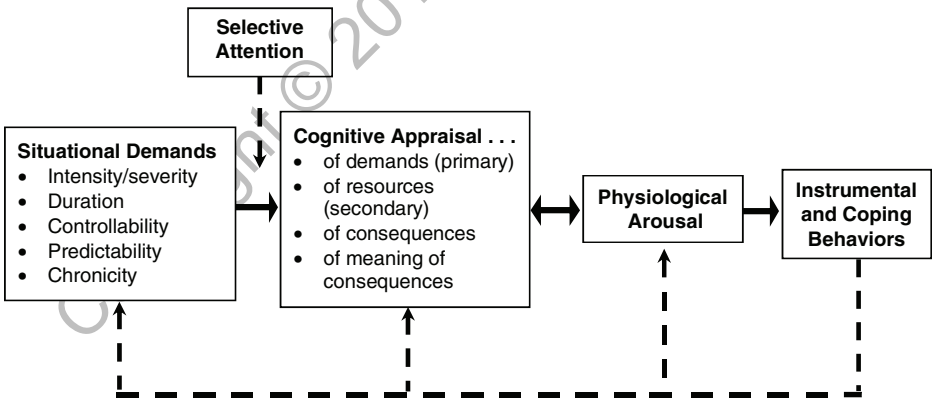

FIGURE 1.1. A mediational and recursive model of stress involving reciprocal relations among (1) the situation; (2) the person's cognitive appraisal of the situation, his or her ability to cope with it, and its possible consequences; (3) physiological arousal responses; and (4) instrumental and coping behaviors. Personality and motivational variables can influence each of the four primary components, and behavioral responses can alter any of the previous components in the model. Adapted with permission of the author from Smith (1993).

by external situations, internal cues in the form of thoughts, images, or memories may also be stimuli that elicit a stress response. Whatever the exact nature of the situation, it involves an imbalance between the demands of it and the resources at hand. This imbalance taxes the coping resources of the person and threatens his or her well-being or goals in some fashion.

As shown in Figure 1.1, stressors can differ in a number of ways that affect their capacity to generate stress responses. One dimension of differentiation is intensity or severity. Intensity or severity of stressors can range from the micro level, such as minor inconveniences and annoyances, to the macro level of major events, such as the death of a loved one or a serious illness. The most severe stressors are catastrophic events that affect large numbers of people. In addition to intensity or severity, several other characteristics of stressors have been identified as important, as shown in Figure 1.1. In general, events over which the person has little or no perceived control, which occur suddenly and unpredictably, and which impact a person over a long period of time seem to take the greatest toll on physical and psychological well-being (Lazarus & Folkman, 1984; Taylor, 2014).

Cognitive Appraisals

Cognitive appraisal processes are of critical importance in the stress response. Although clients (and people in general) typically view their emotions as direct responses to situations, in most instances situations exert their effects through the intervening influence of thoughts and beliefs that create the psychological reality to which they respond. These effects occur in part through selectively attending to particular features of situations—features that then become the "active ingredients" or "hot buttons" to which individuals are particularly reactive (Shoda & Smith, 2004; Shoda et al., 2013). In a social situation, for example, one person may be especially attuned to cues of disapproval, whereas another may be selectively vigilant to indicators of disrespect. Thus, the same "objective" or nominal situation may elicit anxiety in the first person and anger in the second because of attentional biases and differential reactivity to the array of cues that is present to both people. Distinctive feature reactivity profiles or stress signatures have been demonstrated in CAPS-inspired research (Shoda et al., 2013).

As shown in Figure 1.1, the nature and intensity of stress responses are a function of at least four different appraisal elements, all of which are frequent therapeutic targets, particularly in cognitive therapy. The first (termed "primary appraisal" by Lazarus, 1966, 1991a) involves a construal of the demands and their relevance to the person's well-being.

Stress appraisals include judgments of harm or loss, threat, and challenge. *Harm* or *loss* relates to the consequences of previous transactions, whereas *threat* concerns losses or harms that are anticipated. This appraisal is the cognitive representation of the demands element in the situational component of the model.

The second appraisal element corresponds to Lazarus's (1966; 1991a) process of secondary appraisal in which the person evaluates the extent to which he or she has the resources to cope with the perceived demands. Resources may be capabilities, knowledge, social support, or tangible ones such as money. In a related social-cognitive theoretical model, Bandura (1997) emphasized the role of self-efficacy expectancies in effective behavior.

The third appraisal is the construal of the nature and likelihood of potential consequences if the demands are not met. Obviously, strong negative consequences that are deemed highly likely to occur have the greatest capacity to arouse negative emotional responses. Worrisome rumination about the possibility of threatening outcomes (sometimes specific and sometimes nonspecific) is a significant factor in generating and maintaining anxiety states (Barlow, 2004; Borkovec, Alcaine, & Behar, 2004). Worry has also been shown to be strongly associated with stress responses in nonclinical populations (Szabo, 2011).

The fourth appraisal element relates to the personal meaning of one's success or failure to cope adequately with the demands. Again, this set of appraisals is strongly linked to the person's motivational structure and commitments—that is, to what has personal meaning and importance. The greater the strength of a commitment, the more vulnerable the person is to a perceived threat in that area (Lazarus, 1991a, b). For a person whose self-esteem is strongly tied to successful achievement, anticipated or actual failure can be devastating. Individual differences in the nature and strength of commitments can result in completely different appraisals and emotional responses.

Excessive or inappropriate stress responses can result from errors or distortions in any of these appraisal elements, and such distortions are prime targets for cognitive therapy (A. T. Beck, 1976). Thus, a person with low self-confidence or self-efficacy (but objectively adequate resources) may misappraise the balance between demands and resources as "too much for me to handle" so that negative consequences seem imminent. Misappraisals in the other direction can cause one to underestimate the demands and inhibit the engagement of coping responses. Likewise, appraisal errors may occur in relation to the subjective likelihood and/or valence of the potential consequences, as when a person anticipates that the worst is sure to happen. Finally, personal belief systems and internalized standards influence the ultimate meaning of the situation for the

person. For example, an internalized belief that self-worth depends on success will attach a different and more urgent meaning to performance outcomes than will occur for someone who can divorce self-worth from success or failure. Finally, as Ellis (1962), A. T. Beck (1976), and other cognitive theorists have noted, many people are victimized by irrational "should" and "ought" beliefs concerning the meaning and importance of success and social approval, and such beliefs predispose them to inappropriate stress reactions (Strauman et al., 2013).

Physiological Arousal

The third component of the stress model shown in Figure 1.1 is physiological arousal. It is related in a bidirectional or reciprocal fashion to the appraisal processes described above. Physiological responses can differ along a number of dimensions, including frequency, intensity, and duration. Whether and to what extent people react with emotional arousal depends largely on mediational cognitive responses. When appraisal indicates the threat of harm or danger, physiological arousal occurs as part of the mobilization of resources to deal with the situation. Arousal, in turn, provides feedback concerning the intensity of the emotion being experienced, thereby contributing to the process of appraisal and reappraisal (Lazarus & Folkman, 1984). Thus, a person who becomes aware of somatic cues of increasing arousal may appraise the situation as one that is very stressful or upsetting, thereby creating a spiraling acceleration of emotional arousal, as occurs in panic disorders (Barlow, 2004). Conversely, a person who experiences evidence of low physiological arousal in a potentially stressful situation is likely to appraise the situation as less threatening and as one with which he or she can cope successfully, thereby enhancing self-efficacy and reducing anxiety (Bandura, 1997).

Instrumental and Coping Behaviors

The fourth component of the model consists of the behavioral responses to the situation. There are countless ways that people can respond to a stressor. Many different classes of coping strategies, some adaptive and others generally maladaptive, have been described (e.g., Aldao, Nolen-Hoeksema, & Schweizer, 2010; Carver, Scheier, & Weintraub, 1989; Holahan & Moos, 1986; John & Eng, 2014). One popular classification divides coping strategies into three categories: problem-focused coping, emotion-focused coping, and seeking social support. Problem-focused coping strategies involve attempts to confront and directly deal with the demands of the situation, or to change the situation so that it is no longer stressful. Emotion-focused coping strategies are efforts to manage the emotional

responses that result from encountering the situation. A third class of coping strategies involves seeking social support, that is, turning to others for assistance and emotional support in times of stress. Social support can come in a variety of forms, including informational support, tangible support, and emotional support. In psychotherapy, a positive client–therapist relationship can be a potent source of emotional support.

Research on Coping Strategies

Although it is widely recognized that coping with stress is situation-specific and that what is effective in one situation may not be effective in another, researchers have nonetheless assessed the general effectiveness of various coping strategies. These studies have also helped to identify some of the stressor and person characteristics that influence coping efficacy.

Using a diary methodology, Holahan and Moos (1986) tracked coping episodes and psychological outcomes in more than 400 adults over a 1-year period, asking respondents to rate the extent to which they used a variety of different coping strategies. Although people typically reported using several coping methods in dealing with a given stressor, problem-focused coping methods and seeking social support were most often associated with favorable outcomes. In contrast, emotion-focused strategies that involved denial, avoiding feelings, denigrating or blaming oneself, or taking things out on other people predicted less satisfactory outcomes.

In children and adults and across many different types of stressors, customary use of emotion-focused strategies that involve avoidance, denial, and wishful thinking are related to poorer outcomes (Aldwin, 2007; Snyder, 2001). Problem-focused coping, positive reappraisal of demands, and infusing ordinary events with positive meaning (e.g., focusing on the enjoyment derived from an interaction with a friend) helps generate positive emotional responses that counter distress created by life stressors (Tugade, 2011). Adaptive emotion-focused strategies, such as identifying and changing irrational negative thinking and learning relaxation skills to control arousal, can reduce stress responses without avoiding or distorting reality, and they can be effective ways of dealing with stress (Gross, 1998; John & Eng, 2014). Physical exercise also has well-established stress-reduction effects (Taylor, 2014).

Despite the evidence generally favoring problem-focused coping, attempts to change the situation are not always the most adaptive way to cope with a stressor. Problem-focused coping works best in situations where there is some prospect of controlling the stressor, given that the coping behaviors are well executed (Lazarus & Folkman, 1984; Park, Armeli, & Tennen, 2004). However, there are other situations where

situational control is absent or limited. In those instances, problem-focused coping may be ineffective and may actually worsen the situation. Instead, emotion-focused coping may be the most adaptive approach we can take, for although we cannot master the situation, we may be able to prevent or control maladaptive emotional responses to it (Auerbach, 1989). Likewise, acceptance can be a preferred strategy in such situations (Berking & Schwarz, 2014). Of course, in the long run, total reliance on emotion-focused coping can be counterproductive if it prevents people from acting to change situations in which they actually *do* have control.

Although we have stressed the context-dependent nature of coping and its outcomes, we should expect not only variability but also some degree of transituational consistency in coping strategy use (Lazarus & Folkman, 1984). Although dispositional preference measures (e.g., "How do you generally cope?") are poor predictors of coping in specific situations, distinctive patterns of coping preferences do emerge from single-event reports when aggregated over time (Ptacek, Smith, Raffety, & Lindgren, 2008).

Research with dispositional coping measures that ask people how they *typically* cope with stressful situations they encounter (as opposed to assessing coping strategies within discrete situations) has revealed differential relations of coping strategies with measures of NA and maladjustment. As would be predicted from the laboratory studies described above as well as clinical research, habitual use of strategies such as rumination, suppression, denial, and avoidance has been associated with maladaptive outcomes, whereas problem-focused coping, reappraisal, acceptance, and mindfulness have been linked to generally positive outcomes (e.g., Aldao et al., 2010; Goldin, McRae, Ramel, & Gross, 2007; Hoffman, Heering, Sawyer, & Asnaani, 2009; Kring & Sloan, 2010). However, in both community and clinical populations, positive correlations between putatively maladaptive strategies and psychopathology symptoms such as anxiety and depression have been larger than the negative correlations found for adaptive strategies such as reappraisal and acceptance. Across anxiety, depression, eating disorders, and substance abuse disorders, meta-analytic results revealed stronger effect sizes for rumination, suppression, and avoidance than for reappraisal and acceptance. Of the adaptive strategies, problem solving exhibited a larger positive effect size with adaptive outcomes than did reappraisal and acceptance (Aldao et al., 2010). However, in a community sample, Aldao and Hoeksema (2012) found that adaptive strategies exhibited positive relations with adjustment only in people who also reported high levels of maladaptive strategy use, suggesting that adaptive strategies can serve a compensatory function, helping to blunt or cancel out the negative effects of maladaptive strategies. This finding indicates the importance of teaching people adaptive coping skills,

such as those that are the focus of CASMT. Such skills can help counteract the use of previously acquired maladaptive coping strategies, eventually replacing them as the adaptive skills are executed more effectively and are reinforced by positive outcomes.

Approaches to Stress Reduction

We now come to the model's implications for clinical practice. In stress theory and research, the term "coping" includes in part the concept of emotion regulation in emotion research, but it focuses on the downregulation of negative emotional states. Emotion regulation, however, involves upregulation of PA as well as downregulation of NA. Lazarus and Folkman have described the process of coping with stress as "constantly changing cognitive and behavioral efforts to manage specific demands that are appraised as taxing or exceeding the resources of the person" (1984, p. 141).

The process model of stress shown in Figure 1.1 suggests a variety of ways in which stress can be reduced. In a general sense, any of the model's components can be a target for action. Thus, coping and interventions can be directed at the situational, cognitive, physiological, or behavioral components of stress, as well as at the broader level of the personality and motivational variables that are assumed to influence the four basic components. It is important to recognize, however, that measures taken to modify any one of the components will almost certainly affect other components as well.

Problem Solving for Situational Demands

At the situational level, changes in certain features of the environment can dramatically alter its capacity to generate stress. Problem-focused coping may involve attempts to reduce demands, to increase resources, or both. Among clinical interventions, training in problem solving is typically directed at dealing with situational demands by generating alternative solutions, choosing among them, removing obstacles to goal attainment, and acting (D'Zurilla & Nezu, 2007). In work settings, stress reduction interventions can be directed at changing the physical environment (e.g., through noise reduction or greater privacy), the work requirements (e.g., by decreasing workloads), or the interpersonal environment (e.g., through changes in leadership or human relations training of supervisors and coworkers). Interventions for couples can help create a less conflictual setting as new relational skills are learned.

Clearly, the environment influences behavior, but the environment is also influenced and sometimes transformed by behavioral changes.

Problem-focused coping can also involve acquisition of social, problem-solving, or work skills to increase personal resources and reduce demands. Acquiring parenting skills can reduce problematic behaviors in noncompliant children that create family stress. Social skills training can increase the resources that socially anxious people can bring to bear in social situations, reducing social avoidance and the stresses of anxiety and loneliness. Assertiveness training can help create a more benign and less exploitative interpersonal environment. Besides affecting the situational component, behavioral changes affect future situational appraisals and self-efficacy expectancies.

Modifying Cognitions and Controlling Physiological Arousal

Intervention strategies can be directed at modifying cognitive responses. This is a key component in the model, since other model components are ultimately mediated by or exert their effects through the appraisal processes (Lazarus & Folkman, 1984). Even if the situation cannot be changed, people can be trained to discover, challenge, and change the appraisal elements that are, in actuality, generating their stress responses. They can also use covert self-instructional strategies to focus on task-relevant cues and engage in goal-directed behavior.

Second, stress can be reduced at the level of physiological arousal. Arousal-control skills such as muscle relaxation and meditation can be highly effective in reducing affective arousal and preventing it from interfering with performance. These cognitive and arousal-control interventions are the focus of the emotion-focused coping techniques presented in this book. We now turn to a review of the research on emotion regulation strategies and their effects, including cognitive reappraisal and control of physiological arousal. This literature has clear implications for evidence-based practice.

The Evidence on Emotion-Focused Coping Strategies

Although teaching problem-focused coping strategies is an appropriate aim of treatment and can easily be combined with training in adaptive emotion-focused skills, CASMT has a fundamentally emotion-focused treatment orientation. Over the past decade, emotion regulation has been the focus of much research (extensively reviewed in Gross, 2014a) and intervention (e.g., Barlow et al., 2014; Leahy et al., 2011; Mennin & Fresco, 2014). The study of emotion-focused strategies by emotion regulation researchers has produced a wealth of information concerning their range of application and the conditions under which certain strategies are most likely to yield positive or negative outcomes (Webb, Miles, &

Sheeran, 2012). Such information provides an empirical basis for developing coping skills interventions.

Much theoretical and empirical attention has focused on six strategies for the self-regulation of NA: attentional deployment (especially distraction), suppression, reappraisal, acceptance, mindfulness, and somatic relaxation. Derived from both laboratory and treatment research, the findings have clear relevance to clinical interventions and are the focus of the discussion to follow. All are also coping strategies taught in the CASMT program described later in the book. Although some of the strategies have been deemed more generally adaptive than others, we shall see that this is not universally the case and that contextual factors can markedly influence each strategy's degree of adaptiveness. Even rumination, considered to be a generally maladaptive strategy, can be helpful as a defensive strategy in some situations by focusing attention on thoughts and thereby deflecting attention from gut-level affective experience that could have a disorganizing impact (Borkovec et al., 2004). Healthy adaptation therefore requires flexibility in the use of coping strategies, skillfulness in executing them, and discriminative facility in judging their applicability to the stressful situation at hand (Bonanno, Papa, Lalande, & Coifman, 2004).

Attention Deployment (Distraction)

Self-regulation may occur very early in the emotional process. As noted in the CAPS model, every situation contains numerous stimulus features or potential "active ingredients" that can be the focus of attention, and attentional deployment is necessarily selective (Mischel & Shoda, 1995). One relatively simple strategy is to move one's attention away from aversive stimulus elements and to focus on more innocuous ones. This is the essence of distraction strategies, which require few cognitive resources and can be easily learned and widely applied. Distraction has a long history of efficacy as a physical pain tolerance strategy (McCaul & Mallott, 1984). In one medical application, the use of distraction by means of a virtual reality intervention presented during wound cleaning has proven highly effective in reducing subjective pain ratings in burn patients (Hoffman, Patterson, Canougher, & Sharar, 2001).

Successful distraction cuts off emotional processing before it can create a negative primary appraisal that elicits or augments NA. Laboratory studies in which participants were exposed to noxious visual stimuli, such as gory pictures, have shown that distraction manipulations (e.g., instructing participants to subtract numbers by 7's or to focus attention on innocuous aspects of the situation) have resulted in reductions in NA and decreased activation in the amygdala and other affect-generating

brain structures (Ochsner & Gross, 2014). Distraction appears more useful (and more preferred by participants) than other cognitive strategies when affect intensity is high and higher-order cognitive processing, such as reappraisal, is thereby impaired. Experimental studies have also shown that training in attentional avoidance of negative information and in focusing instead on positive stimuli can reduce NA arousal in the laboratory as well as in response to real-world stressors. Likewise, distraction that involves generating a pleasant memory or imagining a pleasant situation has positive effects on physiological arousal (MacLeod & Grafton, 2014). Clinically, redirection of attentional focus to external stimuli (e.g., the 5-4-3-2-1 exercise described in Chapter 9) can be a temporary antidote to distressing internal cognitions.

One potential disadvantage of distraction is that, if successful, it can prevent processing of information that could be useful in guiding problem-focused coping or in evaluating the situation from the perspective of personal agendas and goals (Hayes, Strosahl, & Wilson, 2012). Not surprisingly, distraction has been found to be maladaptive when used repetitively over the long term (Kross & Ayduk, 2008). Like other coping strategies, distraction can be a two-edged sword if used indiscriminately.

Suppression and Avoidance

As we shall see in Chapter 3, virtually every school of psychotherapy cites the expression and processing of affective arousal is a primary treatment goal. Moreover, terms such as "defensive avoidance," "affect phobias," and "experiential avoidance" reflect an assumption that suppression and avoidance of emotional arousal and expression are detrimental to treatment effectiveness. Emotion regulation researchers have examined the consequences of emotion-avoidant coping, as have psychopathology and treatment researchers. Emotional suppression occurs as an attempt to modulate expressive and/or experiential emotional responses after they have been elicited. Avoidance, in contrast, involves attempts to prevent or block emotional responses from occurring.

Emotion suppression strategies can be beneficial in situations when intensive emotional displays would be dysfunctional or inappropriate (Bonanno & Keltner, 1997). Suppression of expressive behavior can be appropriate and adaptive in some situations where "maintaining one's cool" helps to facilitate problem solving and goal attainment, or helps defuse a potential confrontation. Used habitually, however, suppression can have an array of negative consequences (John & Eng, 2014), though apparently more so in Western cultures than in Asian ones, where it is more normative (Soto, Perez, Kim, Lee, & Minnick, 2011). In Western samples, scores on measures of habitual suppression are related to higher

levels of NA, lower levels of PA and life satisfaction, and less intimate and satisfying relationships (English, John, & Gross, 2013). The cognitive and behavioral demands required for successful suppression of emotional responses can degrade the processing of socially relevant information. Though intended to dampen emotional arousal, suppression can result in increased sympathetic nervous system responses and greater activation in the amygdala and other brain regions that are involved in affect generation (Ochsner & Gross, 2014). Emotional constraint takes a toll on the body and is associated with an array of health problems (Eysenck, 1994; Kring & Sloan, 2010).

The many cues present in any situation can include "active ingredients" that have special significance to an individual, which in turn may trigger suppression or avoidance. In anxiety disorders, according to the hypervigilance–avoidance model (Barlow, 2004), attentional biases increase sensitivity to threat-related stimuli and engage avoidance behaviors, including efforts to deny or escape threatening information, reduced processing of both external and interoceptive emotion-related cues, and overt avoidance behaviors. Worry and rumination can also serve a defensive function by deflecting attention away from emotional experience. With time and repeated instances of negative reinforcement in the form of anxiety reduction, disengagement strategies may generalize from high-intensity situations, where they can be adaptive in the short term, to low-intensity ones that would ordinarily not require disengagement (Campbell-Sills, Ellard, & Barlow, 2014).

Cognitive Reappraisal

As noted in the model of stress presented in Figure 1.1, reappraisals can change the perceived demands-to-resources balance by reevaluating the demands as less threatening or the resources as more numerous or potent. One might also reappraise the seriousness or likelihood of the threatening consequences. At the most complex level of reappraisal, the "personal meaning" of the consequences can influence or reinforce important elements of the self-concept. Such personalized appraisals are often the target of cognitive restructuring and other CBT interventions that are intended to change negative self-construals (e.g., A. T. Beck, 1976; Ellis, 1962; Leahy et al., 2011).

Across a large number of studies, reappraisal has proven to be an effective coping strategy, both for decreasing NA and for increasing PA (Webb et al., 2012). In laboratory studies, perspective-taking reappraisal (e.g., "See it from a third-person perspective, noting that it doesn't affect you") seems easier to do and has stronger effects than stimulus reappraisal (e.g., "It's not really happening right now"). Reappraisal has also proven to be a more effective emotion regulation strategy than expressive and

experiential suppression for reducing subjective NA, autonomic arousal, and activation of emotion-related brain regions, such as the amygdala (Gross, 2014b; Webb et al., 2012). Mediational analyses in both laboratory and clinical studies show that reappraisal self-efficacy (i.e., belief in one's capacity to generate stress-reducing self-statements) is a powerful mediator of successful stress management (Goldin et al., 2012).

Reappraisal has also been compared with distraction. Meta-analytic results indicate that, overall, the two strategies have similar overall effects in reducing NA. However, the effects of reappraisal can dissipate at high levels of arousal, and distraction then becomes more effective and more likely to be preferred by participants. Whereas distraction is relatively simple from a cognitive resources perspective, reappraisal requires more complex cognitive processes because the generation of alternative construals is in conflict with the original emotional appraisal and because it occurs later in the stress process (Sheppes, 2014). This is one reason why, in the training of reappraisal skills, a primary goal should be to replace dysfunctional appraisals with more adaptive ones. This relearning should occur in the process of treatment as the prevention or dampening of NA negatively reinforces adaptive self-statements (Smith, 1980). It is this process that is reflected in statements such as "Since I changed my attitude, the situation doesn't bother me anymore." From this perspective, successful cognitive therapy can be seen as a process of changing the appraisal response hierarchy so that, with time, adaptive appraisals become stronger and more likely to occur than dysfunctional ones.

From a clinical practice perspective, these studies provide evidence that relatively simple and easily learned reappraisals can reduce subjective and physiological stress responses to aversive stimuli. As also demonstrated in the pain control literature (Ehde, Dillworth, & Turner, 2014), relatively brief cognitive interventions that help clients to adopt a small number of stress-reducing self-statements as substitutes for catastrophizing appraisals can be effective. As discussed in Chapter 2, this can also be accomplished in our brief stress management intervention.

Acceptance

In his classic treatise on physical pain, Melzack (1973) differentiated between the sensory aspect of aversive stimulation and the emotional component, which turns aversive sensory stimulation into emotion-infused suffering. In one effective pain reduction strategy, patients are told to focus on the stimulus characteristics in an objective, nonemotional fashion rather than on its aversiveness (McCaul & Mallott, 1984; McCracken & Vowles, 2014).

The same principle is applicable to emotional pain, and it is reflected in the recent emphasis on acceptance in third-wave behavior therapies,

particularly acceptance and commitment therapy (ACT; Hayes et al., 2012), in which experiential avoidance is viewed as a major contributor to maladjustment and a major target for intervention. The client is encouraged to regard emotional responses in a manner that divests them of their avoidance-eliciting and personalized aversive qualities. In ACT, the goal is to gain a new perspective on emotions as natural responses that are best accepted and not avoided.

To the extent that people can be receptive to whatever inner experiences are occurring and can divest them of their negative implications for personal identity, the experiences can be used to guide and stimulate movement toward fulfilling life values. Decentering and defusion exercises—which sometimes take the form of turning emotions into objects like waves that rise and fall on a sea that will become calm in time, or the image of standing on a sturdy mountain that remains stable and permanent as storms come and go and the angry clouds give way to sunshine—can be useful metaphors for the natural trajectory of emotional experience. This notion is similar to one associated with Gestalt therapy: "Emotions are neither good nor bad; they simply are" (Perls, 1969, p. 27). According to Hayes et al. (2012), acceptance is an important mechanism that not only helps people divest themselves of nonadaptive construals of who they are, but also fosters sustained movement toward intrinsically valued goals.

Experimental studies have shown that instructions to accept emotional experiences are associated with lowered subjective stress and behavioral avoidance (e.g., Wolgast, Lundh, & Viborg, 2011). A meta-analysis of acceptance instructions for confronting negative stimuli yielded a modest but statistically significant effect size of 0.31 over 30 separate experimental comparisons (Webb et al., 2012).

Acceptance has been established as an adaptive coping strategy and has been incorporated into many contemporary CBT protocols. In addition to ACT, these include dialectical behavior therapy (Linehan, 2015), emotion regulation therapy (Mennin & Fresco, 2014), emotion schema therapy (Leahy et al., 2011), and affect regulation therapy (Berking & Schwarz, 2014), all of which have as a treatment goal the reduction of experiential avoidance and enhanced emotional regulatory competence. Berking and Schwarz (2014) regard the ability to feel acceptance and tolerance as a critical skill, particularly whenever affective arousal cannot be handled with other coping skills, such as reappraisal or relaxation.

Mindfulness

Mindfulness is both a specific state of consciousness and a meditation-based procedure that has experiential acceptance as a core objective

(Farb, Anderson, Irving, & Segal, 2014). It is designed to foster present-moment experiential awareness through a focus on interoceptive attention and an attitude of acceptance. One major vehicle is a passive meditation technique derived from Buddhist practices and built upon the Benson meditation technique popularized in the 1970s as a stress management procedure (Benson & Klipper, 1976; Benson & Proctor, 2010).

The Benson technique was designed to promote a hypometabolic state of lowered arousal that is incompatible with the stress response. One of its chief principles is the acceptance of immediate experience without evaluation. Kabat-Zinn (1982) adapted the technique first as a pain reduction treatment, then as a stress management intervention. The prototype meditation technique involves a focused attention on one's breathing, which in itself lowers metabolic activity. Awareness of internal and external stimuli is encouraged, but the stimuli are to be regarded in a nonjudgmental manner. All experiences are to be accepted, even lapses in the meditation process, in which case the person simply returns interoceptive attention to the act of breathing. A goal is to promote new appraisals of experience, thereby allowing the person to approach experiences with a sense of exploration and curiosity. Recent evidence suggests that mindfulness training helps prevent sensory input from activating brain regions (e.g., the midline prefrontal cortex) that are involved in negative self-referential evaluation (Farb, Segal, & Anderson, 2013). Mindfulness training is being successfully applied as a stress reduction technique in both nonclinical and clinical populations (Alidina, 2015; Chiesa & Serretti, 2009), and it is being used efficaciously in the treatment of many medical problems as well (Farb et al., 2014).

Somatic Relaxation

Somatic relaxation has a long history as an emotion regulation strategy. Early on, it was recognized as a physiological response that is incompatible with the emotional arousal produced by the autonomic and endocrine systems (Cannon, 1932; Jacobson, 1938; Wolpe, 1958). Relaxation training has been applied within behavior therapies for more than a half century either to countercondition anxiety (e.g., Wolpe, 1958) or as a voluntarily applied self-control skill (e.g., Goldfried, 1971). It continues to be incorporated in many CBT modalities as an arousal-control coping skill.

WHAT'S AHEAD

Having considered the nature of emotion, stress, and coping, as well as the relative effectiveness of various emotion regulation strategies, and

drawing on the evidence regarding the effectiveness of emotion regulation coping strategies, we apply this scientific base to the practical matter of helping clients develop more effective emotion regulation skills. In Chapter 2, we describe CASMT, which assists clients in acquiring and then utilizing relaxation and cognitive coping skills to reduce high levels of affective arousal created by the use of the IA technique. CASMT also incorporates empirically supported stress reduction techniques reviewed above, including acceptance, defusion, and mindfulness training. As we shall see in the research described in Chapter 2, success in controlling such arousal has salutary effects on coping self-efficacy, stress resilience, and performance measures.

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