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Coping

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This chapter addresses the topic of coping, a concept about which there is an extensive literature (see, e.g., Carver & Connor-Smith, 2010; Folkman & Moskowitz, 2004; Skinner, Edge, Altman, & Sherwood, 2003). Given the wealth of available information, this chapter is limited to introducing some of the themes of this topic rather than providing a comprehensive review. The chapter is organized according to the logical flow of the experiences that induce and define coping. To understand coping (and its role in promoting or impeding health), one must ask why coping happens. For that reason the chapter begins with brief consideration of the concept of psychological stress. Then it turns to coping per se, addressing several key issues in how coping is conceptualized and distinctions among ways in which people cope with stress. Finally, it briefly considers issues in studying how these diverse ways of coping may influence health.

PSYCHOLOGICAL STRESS

Several theorists have proposed models of psychological stress over the years, with varying points of emphasis. Nearly all statements made in the past 40 years, however, orient in one way or another to the work of Richard Lazarus and Susan Folkman (e.g., Lazarus, 1966, 1999; Lazarus & Folkman, 1984). To Lazarus and Folkman, stress is a transaction between the person and the context. Stress exists when people confront circumstances that tax or exceed their ability to manage them.

APPRAISALS AND STRESS

Lazarus (1966) consistently emphasized that people's *appraisal* of the circumstance often matters more in the transaction than does the objective circumstance itself (see also Smith & Kirby, chapter 15). Appraisals are cognitive evaluative processes that incorporate both information from the stressor and information from the person. For example, most people are not alarmed by the approach of a small dog, but for people with phobias about dogs, that circumstance is appraised quite differently. As another example, a student who has been thoroughly engaged in

a course will appraise the announcement of a surprise quiz very differently than will a student who has not yet done any of the readings.

A second kind of appraisal is the person's appraisal of whether he or she will be able to deal with the circumstance. Some people in a given circumstance will be able to bring to mind responses to the stressor that they expect to be useful, others will not. People who can easily bring to mind ways to avoid or minimize potential bad outcomes will have a very different experience than a person who can think of nothing useful to do.

The appraisal of an aversive outcome looming or at hand is called *primary appraisal*. The appraisal of whether there are ways to respond to it is called *secondary appraisal*. Obviously these appraisals influence one another. A person who is very confident about having useful strategies will see the circumstance as being less problematic than will a person who can bring no useful strategies to mind.

Several further labels have been applied to appraisals of stressors. *Threat* appraisal means that the person perceives an impending event that may have bad or harmful consequences. *Harm* appraisal is the perception that something bad has already happened. *Loss* appraisal is a specific kind of harm appraisal, in which something that is positively valued becomes inaccessible. That is, harm can mean either the bringing about of pain and punishment or the removal of something desirable. Loss, in contrast, tends to be restricted to the latter case.

Another appraisal of events is also mentioned in this context: *challenge* appraisal. This means seeing the situation as demanding, but also as something you can benefit from. Challenge implies an "optimal" obstacle—something that will be surmountable (with effort), and something that will allow a better state of affairs because of being surmounted. Challenge also seems to imply the expectation of a good outcome. The properties of challenge experiences are different enough from those of threat and loss that some doubt that challenge should be viewed as a form of stress appraisal (Blascovich, 2008; Tomaka, Blascovich, Kelsey, & Leitten, 1993).

Another popular analysis of stress makes extensive use of an economic metaphor (Hobfoll, 1989, 1998). It starts from the idea that people have resources that they try to protect, defend, and conserve. Resources can be physical

(e.g., house, car), conditions of life (e.g., having friends and relatives, stable employment), personal qualities (e.g., a positive world view, work skills), or other assets (e.g., money or knowledge). Resources are anything the person values. In this view, stress occurs when resources are threatened or lost. This viewpoint emphasizes the utility of the resources as being critical to stress. Ultimately, however, even in this view threat and loss remain crucial to the experience of stress.

PHYSIOLOGICAL RESPONSES

Confronting threat and loss produces negative emotions, which incorporate a variety of physiological changes within the body: cardiovascular, neuroendocrine, and immune. Many kinds of emotion (e.g., fear or anger) are intrinsically organized around preparing the body for sudden or sustained action. Fear prepares the body for escape, anger prepares it for attack. Given this functional focus, the physiological changes that occur are aimed at making energy available to muscles. Because the body cannot do everything at once, these changes also divert resources from other functions such as digestion or self-repair (Miller, Cohen, & Ritchey, 2002).

Some negative emotions tied to stress have a different character, however. This is particularly true of emotions related to loss. Dejection and sadness are not about preparing for action, but rather about giving up the effort to attain desired ends (Carver, 2004; Nesse, 2000). There are physiological changes associated with deep sadness, but they are different from those associated with fear or rage.

These various physiological responses are functional for the purposes to which they evolved. In the short term, it is critically important, for example, to escape from a predator or from falling rocks. Indeed, this need is so urgent that it can temporarily preempt longer-term necessities such as fighting off an infection.

Even functional and adaptive processes can produce problems if they occur too often or for too extended time. As an example, extensive and repeated cardiovascular responses can place physical strain on arteries. Over time, this creates small tears in the inner lining of the artery. Normally, the tears are repaired without negative consequences. So far, so good. However, over time, the formation of plaques at the sites of these tears eventually turns into atherosclerosis, clogging of the artery (e.g., Krantz & McCeney, 2002; Rozanski, Blumenthal, & Kaplan, 1999; Smith & Ruiz, 2002). In this example, a normal function is accelerated, compressed into a briefer time span, so that it reaches a maladaptive endpoint sooner than it otherwise would.

As another example, the processes that control blood pressure respond to situational demands by creating increases from baseline levels. If the increases occur too often or are too sustained, the internal regulatory process begins to adjust the baseline upward—for example, by causing functional and even structural changes in blood

vessels. Now blood pressure returns not to its preexisting resting level, but to a slightly higher level. Over many iterations, the resting level itself becomes elevated, and now constitutes a case of hypertension (cf. Fredrikson & Matthews, 1990).

Cardiovascular responses are one part of the physiological component of stress. Underlying those responses, and to some extent driving them, is a set of neuroendocrine mechanisms that play a major role in the body's stress response: the sympathetic adrenomedullary (SAM) system and the hypothalamic–pituitary–adrenocortical (HPAC) axis (McEwen, 2006, 2008). SAM and HPAC activation are manifested in elevations of several hormones, including catecholamines (epinephrine and norepinephrine) and cortisol. Cortisol is considered a particularly important stress hormone because of its links to other elements in the overall stress response. For example, an increase in cortisol can suppress immune functioning (e.g., Choi, Fauce, & Effros, 2008; Kronfol, Madhavan, Zhang, Hill, & Brown, 1997). That is, as was noted earlier, when appraisals indicate a strong and lasting need for vigorous physical behavior, immune surveillance takes a lower priority and is suppressed (Miller et al., 2002). As a result of its central involvement, cortisol is a frequent object of research on stress.

The immune system is another favorite target of discussions of stress-related physiological responding (Kiecolt-Glaser, 2009; Segerstrom & Miller, 2004). The immune system obviously has important implications for health. It is the body's main line of defense against disease agents that range from bacteria to cancer cells. If immune functioning is impaired over a sustained period, rather than just temporarily, the person becomes more vulnerable both to opportunistic infectious agents and to agents of disease that had already been at work in the body. The immune system is far more complicated than was assumed two decades ago, and there are several distinct ways in which stress can influence immune function (Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002; Robles, Glaser, & Kiecolt-Glaser, 2005).

In thinking about the psychophysiological patterns involved in responding to stress, one last point should be made. Stress can be acute (relatively short term) or chronic (existing over much longer periods of time). Short-term stress responses are generally adaptive, unless previous damage has set the body up for the failure of some system. However, chronic activation of the body's stress response can have damaging effects on the body. When you imagine an example of stress, it may be easiest to imagine a stressor that is time-limited. Many of the stressors that people confront in today's world, however, are relatively chronic and long-lasting.

COPING

Stress leads to coping. Coping is generally defined in language such as this: Coping is efforts to deal with a

threatening or harmful situation, either to remove the threat or to diminish the ways in which it can have an adverse impact on the person. Some prefer to limit the concept of coping to responses that are voluntary and intentional (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001); others include automatic and involuntary responses within the construct (Eisenberg, Fabes, & Guthrie, 1997; Skinner & Zimmer-Gembeck, 2007). Of course, distinguishing between voluntary and involuntary responses to stress is not necessarily easy; indeed, responses that begin as intentional may become automatic with repetition.

Even limiting the definition to responses that are voluntary, the definition given above is very broad. Not surprisingly, a good many distinctions have been made within the broad concept of coping (see also Compas et al., 2001; Folkman & Moskowitz, 2004; Skinner et al., 2003). A few of them are described in the sections that follow.

EMOTION-FOCUSED AND PROBLEM-FOCUSED COPING

Early on, Lazarus and Folkman (1984) and their colleagues made a basic distinction between problem-focused coping and emotion-focused coping. Problem-focused coping is aimed at the stressor itself and its physical impact. Problem-focused coping may entail taking steps to remove the stressor or evade its arrival, or to reduce its physical impact. Problem-focused coping in the face of an impending hurricane, for example, would include such actions as leaving the city for a safer place, putting up hurricane shutters, and obtaining supplies for a potential period without electric power. Emotion-focused coping stems from the fact that stress experiences generally lead to emotional distress. Emotion-focused coping is aimed at preventing, minimizing, or reducing this distress. Because there are many ways to try to reduce distress, emotion-focused coping includes an extraordinarily wide range of potential responses.

Once this distinction is made between problem-focused and emotion-focused coping, a number of other points arise. First, although the distinction may be useful, it does not apply easily to all coping responses. That is, some coping responses do not fit neatly into either category. For example, self-blame is hardly an attempt to remove the stressor; it may be an attempt to alleviate distress, but it often has the opposite effect. In contrast to that example, some responses can fit into either category, depending on what effect is intended. For example, people can seek social support to help them out in problem-focused efforts or to help in soothing distress emotion.

A second point concerns the fit between properties of the stressor and the adaptive value of the response. It is generally believed that the controllability of the stressor influences whether the person tends to turn to problem-focused or emotion-focused coping and how effective these classes of coping responses are. Problem-focused

coping is well-suited if the stressor seems controllable; emotion-focused coping is better-suited if the stressor seems uncontrollable (Park, Armeli, & Tennen, 2004).

Third, although problem-focused and emotion-focused coping have different immediate goals, they often facilitate one another. For example, engaging in effective problem-solving strategies tends (indirectly) to reduce emotional distress. Engaging in effective emotion-focused coping may help the person face a problem more calmly and generate better problem-focused strategies.

APPROACH AND AVOIDANCE COPING

Another very important distinction among responses is between approach and avoidance coping, also labeled engagement versus disengagement coping (Roth & Cohen, 1986; Skinner et al., 2003). Approach coping represents efforts to deal directly with the stressor or the emotions evoked by it (as described just above). Avoidance strategies are attempts to escape, in one way or another, from having to deal with the stressor.

Disengagement coping is often emotion-focused: an attempt to escape from feelings of distress. Sometimes this kind of coping is almost literally an effort to act as though the stressor does not exist, so that the person does not have to react. An example is wishful thinking and fantasy, which temporarily distance the person from the stressor. Another example is denial that creates a boundary between reality and the person's experience.

Avoidance coping can be useful in the short term, in that it often does provide an opportunity for emotions to calm. It is generally ineffective in the longer term, however, when the stressor the person is confronting poses a real threat that will have to be faced eventually. If you go shopping at the mall to avoid thinking about a problem, the problem will still be there when you get home. Indeed, for many stressors, the longer it is avoided, the more difficult and urgent the problem becomes. Finally, some kinds of disengagement coping create problems of their own. Excessive use of alcohol or drugs can create social and health problems, and shopping or gambling as an escape can create financial problems.

POSITIVE, MEANING-FOCUSED, AND SPIRITUAL COPING

It has become increasingly clear that positive as well as negative experiences occur during periods of stress and adversity. For example, people report both negative emotions and positive emotions during stressful periods (e.g., Andrykowski, Brady, & Hunt, 1993; Norekvål et al., 2008). Although the evidence is mixed (Pressman & Cohen, 2005), there is also some basis for holding that positive emotions per se can have beneficial effects on health (Folkman & Moskowitz, 2000, 2004; Frederickson, Mancuso, Branigan, & Tugade, 2000). Thus, there is reason

to try to cope with adversity by finding experiences that induce positive emotions.

Another positive occurrence that is sometimes associated with stress is experiencing positive life changes, or finding meaning, in response to stressors (e.g., Jim & Jacobsen, 2008; Park, Lechner, Antoni, & Stanton, 2009; Tomich & Helgeson, 2004). Several terms have been used to refer to this sort of experience. Labels include *stress-related growth* (Park, Cohen, & Murch, 1996), *post-traumatic growth* (Tedeschi & Calhoun, 2004), and *benefit finding* (Tomich & Helgeson, 2004). Finding benefits in adversity has been linked to other positive psychosocial outcomes (Carver & Antoni, 2004; Helgeson, Reynolds, & Tomich, 2006). The responses that fall under these category labels are often treated as equivalent, but the labels appear to capture several phenomena that are distinguishable from each other (Sears, Stanton, & Danoff-Burg, 2003; Weaver, Llabre, Lechner, Penedo, & Antoni, 2008).

Another class of coping that has drawn widespread interest in recent years is coping through spirituality or religiosity. Spirituality and religiosity are distinct concepts (Zinnbauer & Pargament, 2005), but they are often treated together. It is a little hard to pin down exactly what this kind of coping consists of. Use of spiritual or religious coping may mean attending religious services and activities; it may mean engaging in frequent prayer; it may mean taking strength in one's faith or convictions; it may mean turning oneself over to a higher power. These are not the same activities, though they do often co-occur.

This class of coping response appears to focus mostly on distress emotions. Religious or spiritual coping is generally aimed (at least partly) at producing a sense of peace. In some circumstances, however, it can be thought of as indirect problem-focused coping. For example, the coping may involve praying for a stressful situation to change. Spiritual/religious coping appears to be common among people with chronic illnesses, such as HIV/AIDS (Cotton et al., 2006), cancer (Vachon, 2008), and chronic pain (Büssing et al., 2009). This may reflect the fact that these diseases have an uncontrollable nature that may be amenable to spiritual/religious coping strategies (Baldacchino & Draper, 2001).

CONCLUSIONS AND METHODOLOGICAL ISSUES

This brief review of distinctions among types of coping has been far from exhaustive (Compas et al., 2001; Skinner et al., 2003). Even so, it makes clear that there are many ways to group coping responses. No single distinction fully captures the structure of coping. Various kinds of analyses indicate clearly that coping incorporates multiple dimensions (Skinner et al., 2003). Unfortunately, the various distinctions do not form a neat matrix into which specific coping responses can be sorted. The distinction that may matter most is the one made between approach (engagement) versus avoidance (disengagement) coping.

In general, approach coping keeps the person engaged in the effort to deal with the stressor; avoidance coping amounts to a tacit admission of defeat.

Many people are interested in coping primarily because they are interested in whether coping influences well-being. As studies address that question, a large number of methodological issues arise (Carver, 2006). One of the most difficult is how, and how often, to assess coping. Conceptually, coping is an ever-changing response to constantly evolving situational demands. The procedures of most coping studies do not reflect this conceptualization very well, however. Many of the studies that would be widely viewed as relatively good representatives of research on this topic assessed coping only once a week, or once a month, across the span of adapting to some stressor. Usually the coping measure asks the extent to which the person has engaged in various responses over the past day (or week). Those studies tell us very little about how the timing, order, combination, or duration of coping influences the outcome of interest, but such factors may be quite important.

Tennen, Affleck, Armeli, and Carney (2000) have proposed that a great deal is lost when we study coping across large aggregations of people without looking at what goes on within the person over time. They argued that people use emotion-focused coping mostly after they have tried problem-focused coping and found that it did not take care of the problem. This position suggests an approach to research that is very different from the typical study of the past. In this view, the question is whether (and how) the person changes from one sort of coping to another, across assessment points, as a function of ineffectiveness of the first response. Tennen et al. (2000) argued quite convincingly that, in order to answer these questions, coping must be assessed online and repeatedly. Unfortunately, not much work of that sort has yet been done.

STRESS, COPING, AND HEALTH

As noted just above, in some ways the ultimate question regarding coping (at least for the intended audience of this book) is whether it has an impact on health. Much of the research on coping has focused on psychosocial outcomes—emotional well-being and quality of life—or on physiological responses that occur very early in the pathway toward illness. What can be said about how coping affects physical health per se is limited (much more is known about effects of stress on health than about coping and health). We can, however, point to some issues that lie hidden behind that question.

Relative health in this context is the presence versus absence of a diagnosable, verifiable illness. Outcomes pertaining to health, however, are more varied than might be immediately apparent. They include disease “promotion” (initiation of the disease versus not), disease

progression (how quickly an early form of the disease advances), recurrence of disease, and mortality or survival time. This diversity among outcomes raises more methodological issues. For example, it is possible that stress and coping affect some outcomes but not others (e.g., progression but not promotion). Indeed, it is possible that stress and coping affect outcomes for some diseases but not for others (e.g., cardiovascular disease but not cancer). This complexity among possibilities means that to generate a clear conclusion about the role of coping in health requires the study of coping effects regarding diverse outcomes for diverse diseases. It would be overstepping at this point to make sweeping statements about effects of stress or specific coping strategies on "health" or "disease" in general.

COPING AND HEALTH: BEHAVIORAL PATHWAYS

Another issue that must be considered in thinking about relations between coping and health concerns pathways of influence. It is often taken for granted that the pathway to illness is physiological reactivity and disease pathways that follow from that reactivity. However, there are also far simpler and more direct ways in which coping can influence health. For example, people sometimes cope by engaging in actions that are antithetical to health. This is a pathway to illness that sometimes is overlooked but is quite important.

As was noted when discussing the distinction between problem-focused and emotion-focused coping, there is great diversity among emotion-focused coping responses. Virtually anything a person does with the intent of diminishing distress can legitimately be called emotion-focused coping. Some of these behaviors have effects other than the desired one. Indeed, some of these behaviors can actively promote health problems.

Smoking, alcohol and drug use, and casual sex are all common ways to self-soothe, or to diminish negative emotions when under stress (cf. Cohen, Schwartz, Bromet, & Parkison, 1991; Holahan, Moos, Holahan, Cronkite, & Randall, 2003; Horowitz & White, 1991). Activities of this sort may reduce negative feelings over the short term, thereby serving a role as emotion-focused coping. However, in the longer term they can have adverse effects on health, including risk of lung cancer, automobile accidents, and HIV exposure.

One behavioral pathway by which maladaptive coping influences health is engaging in behaviors that are harmful. Another pathway is reducing or even abandoning health-supportive behaviors. For example, exercise and a well-balanced diet are important contributors to the maintenance of good health. Yet exercise and proper eating habits often fall by the wayside when people are under stress. Putting aside these health-promoting activities robs the person of the benefits he or she would otherwise experience (Smith & Leon, 1992). Abandoning

these beneficial behaviors thus can be considered maladaptive coping.

PSYCHOPHYSIOLOGICAL PATHWAYS

Direct behavioral pathways to health or illness are clearly important. However, most discussions of stress, coping, and health proceed from a viewpoint that begins with negative events inducing distress emotions with all of their physiological concomitants. If the distress experienced is intense, prolonged, or repeated, one or another kind of disruption of one or more physiological system may develop. The physiological disruption then leads gradually to disease outcomes.

From this viewpoint, the main role of coping in health is to influence the intensity and longevity of the physiological responses. That is, coping is beneficial if it minimizes the initial distress or dampens or abbreviates the negative emotions, because it thereby constrains the opportunity for system disruption. Coping is ineffective if it in some way promotes, intensifies, or maintains distress and the associated physiological responses.

In addressing psychophysiological effects of stress and coping, one might focus at several levels of abstraction. The focus could be on the effects of episodic change in some endocrine or immune parameter. The focus could be on the emergence of an intermediate disease state such as atherosclerosis or the eventual emergence of full-blown clinical events such as heart attacks. Effect of coping on outcomes at all these levels has been examined, though certainly not exhaustively. Here are just a few relevant examples.

One set of physiological parameters that has received attention concerns the stress hormone cortisol. In general, problem-focused and approach coping styles both are related to lower overall levels of cortisol, more favorable diurnal cortisol rhythms, and faster recovery to normal patterns after a stressor (Mikolajczak, Roy, Luminet, Fillée, & de Timary, 2007; Nicolson, 1992; O'Donnell, Badrick, Kumari, & Steptoe, 2008; Sjogren, Leanderson, & Kristenson, 2006). Measures that reflect social integration and social support have also been linked to favorable cortisol profiles (O'Donnell et al., 2008). Social isolation (living alone and having little contact with friends and family, suggesting underutilization of social resources for coping in times of stress) predicts a greater cortisol response at awakening and greater cortisol output over the day (Grant, Hamer, & Steptoe, 2009). Higher levels of religiosity have also been associated with more favorable cortisol patterns in women with fibromyalgia (Dedert et al., 2004).

Coping responses have also been linked to variations in immune system functioning. For example, in studies of HIV patients, those who showed difficulty in recognizing and expressing their emotions had higher levels of an immune marker related to HIV disease progression (Temoshok et al., 2008). Also among HIV patients,

those expressing disengagement-coping tendencies had higher viral loads and lower immune cell counts (Wald, Dowling, & Temoshok, 2006). In a non-patient sample, instrumental coping was linked to better immune system functioning, along with lower HPA activation (Olff et al., 1995).

Another body of work examines disease progression. Studies have shown that denial coping and lower satisfaction with social support relate to the progression from HIV to AIDS (Leserman et al., 2000). Active coping and spirituality show some evidence of predicting slower disease progression (Ironson & Hayward, 2008). A meta-analysis of coping among men with prostate cancer found that approach coping (both problem-focused and emotion-focused) improved physical outcomes such as self-reported fatigue and physical well-being, and that avoidance coping was associated with lower self-reported physical functioning (Roesch et al., 2005).

Enough research has examined coping and health-related outcomes in nonclinical samples to warrant a meta-analysis (Penley, Tomaka, & Wiebe, 2002). This analysis found that certain kinds of problem-focused coping (self-control and use of social support) related positively to diverse kinds of good health outcomes (ranging from self-reports of symptoms to objective illness-related measures). Other types of coping (e.g., confrontive coping and wishful thinking) related to poorer health outcomes. There were also cases in which the controllability of the stressor and whether the stressor was acute or chronic moderated the relationship between coping and outcomes. For example, distancing was related to poorer health outcomes when the stressor was chronic and controllable; taking responsibility was related to poorer outcomes when the stressor was acute and uncontrollable.

Another meta-analysis was reported even more recently, on a more focused set of studies (Moskowitz, Hult, Bussolari, & Acree, 2009). All of these studies examined persons with HIV. Outcomes were categorized as emotional, health-related behavior, and physical. Coping that involved direct action and positive reappraisal (engagement types of coping) had consistently positive relations to better results across all categories of outcome. Disengagement coping was consistently associated with poorer outcomes.

CAUTIONS AND QUALIFICATIONS

Before concluding this brief discussion of coping and health, a bit more should be said about what the literature does and does not show. As was noted earlier, much more is known about effects of stress than about effects of coping. A good deal of research on coping, even research that bears on health, has other limitations. One limitation is that some of these studies rely on self-reported health outcomes. These are much less reliable as indicators of health than are objective outcomes, and must be interpreted much more cautiously.

Further, a good deal of the research on coping and health assesses coping tendencies in general rather than coping with a specific problem, or assesses at a single time point how people coped with a specific problem over an extended period. This research may be telling us about coping and health, but it also may be telling us about something different: personality and health. That is, personality is an important determinant of how a given person copes with a given stressor at a given moment (Carver & Connor-Smith, 2010; see also Smith & Kirby, Chapter 15 in this volume). Personality may be an important influence on outcomes even apart from coping.

As an example of how the line between these concepts can be blurred, consider the literature on optimism. Optimism is a personality trait, but the essence of this trait dimension has much in common with certain ways of coping (positive reframing, looking on the best side of things, moving forward with a positive outcome in mind). To the extent that optimism predicts favorable health-related outcomes (Chida & Steptoe, 2008; Ironson & Hayward, 2008; Segerstrom, 2005), an unanswered question remains. Are better outcomes a product of differences in coping, or are they a product of something else embedded in personality? This question actually pertains not just to optimism but to a good deal of the literature on coping and health.

COPING INTERVENTIONS

This chapter closes with a brief look at the possibility of changing one's coping responses in ways that may foster better health. An emerging literature, though limited, is suggesting that health benefits may follow from certain coping strategies. This has helped to encourage creation of interventions for people who already are suffering from various kinds of disease. Here are two examples (for a more thorough review, see de Ridder & Schreurs, 2001).

Antoni and his colleagues have developed a 10-week cognitive behavioral stress management intervention involving relaxation, cognitive restructuring, and coping skills training for women being treated for nonmetastatic breast cancer. This intervention is broad in focus, with the intention of enhancing skills for dealing effectively with all sorts of life stresses, not just those associated with cancer treatment. It has been shown to lead to improvement in a variety of psychosocial outcomes (Antoni et al., 2006a, 2006b). It also led to greater reductions in cortisol levels through a 12-month follow-up, compared with a control group (Phillips et al., 2008). Finally, it led to greater production of cytokines that are involved in tumor surveillance (Antoni et al., 2009). Many of these effects were also shown to be mediated by confidence in being able to use the techniques; the intervention had taught the women for relaxing when stressed.

Another research team developed a year-long intervention (4 months of weekly sessions and eight monthly

sessions), which trained breast cancer patients strategies to reduce stress, improve mood, and maintain treatment adherence. Again the intervention was broad in scope. This intervention improved symptoms and functional status, compared with what was seen in a control group (Andersen et al., 2007). A recent report indicated that it even increased survival rates (Andersen et al., 2008). This is a particularly encouraging result, given the substantial controversy about whether such interventions can influence survival.

A number of other coping-based interventions have been developed for other health populations. Examples include dyadic interventions for enhancing communication skills for persons with HIV and their partners (Fife, Scott, Fineberg, & Zwickl, 2008) and pain-specific coping skills for persons suffering from sickle cell anemia (Gil et al., 2000). Both of these are more focused than, for example, the Antoni et al.'s intervention. Yet both represent a kind of coping training, teaching people to handle specific aspects of difficult situation. It seems likely that further exploration of such coping-based interventions will be an important agenda for the future in behavioral medicine.

SUMMARY AND CONCLUSIONS

This chapter reviews some of the themes of the extensive literature on coping with stress. Psychological stress occurs when people confront situations that challenge their ability to deal with them. Psychological stress and the emotional reactions produced by that experience bring with them a host of physiological as well as behavioral reactions. Although behavioral reactions to stress sometimes influence health (e.g., they sometimes are health-impairing behaviors), most of the work linking stress to health focuses on how physiological reactions ultimately create damage or dysfunction in the body.

Coping is efforts to minimize the adverse reactions that stress can create. Some kinds of coping are aimed at diminishing the threat value of the stress-inducing event, thereby preventing or attenuating the physiological responses. Some kinds of coping are aimed at diminishing the emotional reactions to the threat, thereby either attenuating the physiological response or limiting its duration. Approach coping is making all of these kinds of efforts to limit the stressor's impact. Avoidant or disengagement coping, in contrast, is action that temporarily avoids dealing with the threat. Some kinds of avoidant coping are health-damaging in their own right; avoidant coping can also exacerbate the situation because it simply delays the inevitable—that is, the stressor generally has not gone away while the person was avoiding doing anything about it.

If certain kinds of coping are successful in reducing the physiological responses that yield health impairment, those ways of coping should be encouraged. If certain kinds of coping make reactions worse rather

than better, those ways of coping should be discouraged. Efforts to link various aspects of coping to physical health generally address the physiological changes that do and do not follow from those various ways of coping. This research faces a number of obstacles, including the difficulty of separating the influences of various aspects of coping from each other in the complex world outside the lab, and including as well the difficulty of assessing rapid changes in coping across time and changing circumstances. Nonetheless, efforts to determine what are the least health-damaging ways to respond to adversity represent an important part of health science.

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