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Assessing Coping Strategies: A Theoretically Based Approach

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We developed a multidimensional coping inventory to assess the different ways in which people respond to stress. Five scales (of four items each) measure conceptually distinct aspects of problem-focused coping (active coping, planning, suppression of competing activities, restraint coping, seeking of instrumental social support); five scales measure aspects of what might be viewed as emotion-focused coping (seeking of emotional social support, positive reinterpretation, acceptance, denial, turning to religion); and three scales measure coping responses that arguably are less useful (focus on and venting of emotions, behavioral disengagement, mental disengagement). Study 1 reports the development of scale items. Study 2 reports correlations between the various coping scales and several theoretically relevant personality measures in an effort to provide preliminary information about the inventory's convergent and discriminant validity. Study 3 uses the inventory to assess coping responses among a group of undergraduates who were attempting to cope with a specific stressful episode. This study also allowed an initial examination of associations between dispositional and situational coping tendencies.

Interest in the processes by which people cope with stress has grown dramatically over the past decade (cf. Moos, 1986). The starting point for much of this research is the conceptual analysis of stress and coping offered by Lazarus in 1966 (see also Lazarus & Folkman, 1984). Lazarus argued that stress consists of three processes. *Primary appraisal* is the process of perceiving a threat to oneself. *Secondary appraisal* is the process of bringing to mind a potential response to the threat. *Coping* is the process of executing that response.

Although these processes are most easily described as a linear sequence, Lazarus has emphasized that they do not occur in an unbroken stream. Rather, an outcome of one process may reinvoke a preceding process. For instance, realizing that an adequate coping response is readily available may cause you to reappraise a threat as less threatening. As another example, if a coping response is less effective than expected, you may reappraise the level of threat or reappraise what coping response is appropriate. The entire set of processes, then, may cycle repeatedly in a stressful transaction.

How People Cope

To study the coping process, Lazarus and his colleagues developed a measure called Ways of Coping (Folkman & Lazarus, 1980), which has since been revised (Folkman & Lazarus, 1985). This measure consists of a series of predicates, each of which portrays a coping thought or action that people sometimes engage in when under stress. Respondents indicate whether they used each of these responses in a given stressful transaction (or a given portion of such a transaction), either by giving a *yes* or *no* response or by making a rating on a multipoint scale.

Embedded in the Ways of Coping scale is a distinction between two general types of coping. The first, termed *problem-focused coping*, is aimed at problem solving or doing something to alter the source of the stress. The second, termed *emotion-focused coping*, is aimed at reducing or managing the emotional distress that is associated with (or cued by) the situation. Although most stressors elicit both types of coping, problem-focused coping tends to predominate when people feel that something constructive can be done, whereas emotion-focused coping tends to predominate when people feel that the stressor is something that must be endured (Folkman & Lazarus, 1980).[1]

The distinction between problem-focused and emotion-focused coping is an important one. It has proven, however, to be too simple. Research typically finds that responses to the Ways of Coping scale form several factors rather than just two (e.g., Aldwin, Folkman, Schaefer, Coyne, & Lazarus, 1980; Aldwin & Revenson, 1987; Coyne, Aldwin, & Lazarus, 1981; Folkman & Lazarus, 1985; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Parkes, 1984; Scheier, Weintraub, & Carver, 1986). In general, researchers view factors other than problem-focused coping as variations on emotion-focused coping. However, these factors often diverge quite sharply in charac-

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[1] We should note that the pattern of coping responses a given stressor elicits from a given person is determined by many variables. Although we believe this characterization is generally valid, it is important to remain aware of this complexity.

ter, to the extent of being inversely correlated (Scheier et al., 1986).

The nature of this diversity would seem to deserve further scrutiny. That is, some emotion-focused responses involve denial, others involve positive reinterpretation of events, and still others involve the seeking out of social support. These responses are very different from each other, and they may have very different implications for a person's success in coping.

Problem-focused coping also deserves closer examination (cf. Aldwin & Revenson, 1987). At first glance a single process, problem-focused coping can potentially involve several distinct activities: planning, taking direct action, seeking assistance, screening out other activities, and sometimes even forcing oneself to wait before acting. To study these activities separately, one needs to be able to measure them separately. Indeed, this point is a more general one: to study the diversity of potential coping responses separately requires ways to measure them separately.

Existing Measures

A survey of existing measures of coping processes, with this research goal in mind, revealed what we regarded as three problems. First, although there is a good deal of diversity in what various measures assess (see McCrae, 1982, 1984), none of the preexisting measures sampled all of the specific domains that we felt to be of theoretical interest.

Second, the scales seem to suffer to a greater or lesser degree from a lack of clear focus in some items. Sometimes this occurs because the item describes an act without fully indicating why the act is being done. Consider, for example, this item from the Ways of Coping scale: "Took a big chance or did something risky." A risky act might be done for any of several diverse reasons. Doing something risky might mean something such as taking drugs or driving recklessly to avoid thinking about the stressor. Alternatively, it might mean taking action that is unlikely to be successful, but that—if successful—would solve the problem. These, of course, have very different implications.

Ambiguity also exists when a single item combines conceptually distinct qualities. An example from the Ways of Coping scale is "I did something which I didn't think would work, but at least I was doing something." In this case, it is unclear which is more important in the response, the fact that something is being done or the fact that the respondent does not think the act is going to work. When there is lack of clarity about why an act is being done, or when two or more qualities are combined in a single item, there is a certain degree of ambiguity about what the item measures.[2]

The third problem is in some ways the most fundamental. It also undoubtedly contributes to the two problems already described. This problem concerns the manner in which the scales typically were developed. Put simply, to a large degree existing scales have been derived empirically rather than theoretically. That is, items were chosen initially as being diverse and representative examples of potential coping responses, not because they represented theoretically interesting categories of coping. Factor analysis was then used to identify dimensions that might underlie them. The result is that the scales tend to be linked to theoretical principles only somewhat loosely and post hoc.

The issue here—whether to construct scales empirically or theoretically—is a central issue in personality assessment. One view holds that it is best to sample widely from the specific qualities that compose the domain of interest and let statistical tools such as factor analysis tell you what the important underlying dimensions might be (the empirical approach). The alternative view holds that it is best to begin with a theory and let that theory guide the scale's content (the theoretical, or "rational," approach). In effect, we are suggesting that existing scales were developed largely by the more empirical path, and that it may be useful at this stage to develop one through the theory-based path (cf. Aldwin & Revenson, 1987).

This article reports the development of such a measure. We used two theoretical models as guidelines: the Lazarus model of stress and a model of behavioral self-regulation that has guided our research for some time (Carver & Scheier, 1981, 1983, 1985; Scheier & Carver, 1988). We also made considerable use of the body of research findings generated from preexisting measures of coping. Each of these sources contributed in important ways to the inventory that resulted.

Proposed Dimensions of Coping

The instrument we developed incorporates 13 conceptually distinct scales. Several of them were based on specific theoretical arguments about functional—and potentially less functional—properties of coping strategies. Other scales were included because previous research indicates that the coping tendencies they reflect either may be of value or may impede adaptive coping. The focus of each scale and the reason for its inclusion are described in the following paragraphs.

Active coping is the process of taking active steps to try to remove or circumvent the stressor or to ameliorate its effects. Active coping includes initiating direct action, increasing one's efforts, and trying to execute a coping attempt in stepwise fashion. What we term active coping is very similar to the core of what Lazarus and Folkman (1984) and others term problem-focused coping. We are, however, making several additional distinctions within the overall category of problem-focused coping. These distinctions are reflected by inclusion of the following three additional scales.

Planning is thinking about how to cope with a stressor. Planning involves coming up with action strategies, thinking about what steps to take and how best to handle the problem. This activity clearly is problem focused, but it differs conceptually from executing a problem-focused action. Moreover, planning

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[2] Although our critique here is framed in terms of the Ways of Coping scale (the most widely used measure of coping), we believe that the arguments are equally applicable (either in whole or in part) to other measures (cf. Billings & Moos, 1981, 1984; Stone & Neale, 1984). Indeed, other measures often suffer from additional problems, such as confounding of several conceptually distinct qualities within a single scale. McCrae (1982, 1984) dealt with the latter problem by differentiating carefully among an array of coping reactions. Unfortunately, his approach (which appears more conceptually based than most work in this area) yielded many one- and two-item scales.

occurs during secondary appraisal, whereas active coping occurs during the coping phase.

Another aspect of certain kinds of problem-focused coping is a constriction in the range of one's phenomenal field. The person may suppress involvement in competing activities or may suppress the processing of competing channels of information, in order to concentrate more fully on the challenge or threat at hand. *Suppression of competing activities* means putting other projects aside, trying to avoid becoming distracted by other events, even letting other things slide, if necessary, in order to deal with the stressor.

Another tactic from the arsenal of problem-focused coping is the exercise of restraint. Although restraint is often overlooked as a potential coping strategy, it sometimes is a necessary and functional response to stress. *Restraint coping* is waiting until an appropriate opportunity to act presents itself, holding oneself back, and not acting prematurely. This is an active coping strategy in the sense that the person's behavior is focused on dealing effectively with the stressor, but it is also a passive strategy in the sense that using restraint means *not* acting.

Another coping response that can be considered as relevant to problem-focused coping is the seeking out of social support. People can seek social support for either of two reasons, which differ in the degree to which they imply problem focus. *Seeking social support for instrumental reasons* is seeking advice, assistance, or information. This is problem-focused coping. *Seeking social support for emotional reasons* is getting moral support, sympathy, or understanding. This is an aspect of emotion-focused coping. We have distinguished between these two social support functions because they are distinct conceptually. In practice, however, they often co-occur (see, e.g., Aldwin & Revenson, 1987).

The tendency to seek out emotional social support is a double-edged sword. It would seem to be functional, in many ways. That is, a person who is made insecure by a stressful transaction can be reassured by obtaining this sort of support. This strategy can thereby foster a return to problem-focused coping. On the other hand, sources of sympathy sometimes are used more as outlets for the ventilation of one's feelings. There is evidence that using social support in this way may not always be very adaptive (Berman & Turk, 1981; Billings & Moos, 1984; Costanza, Derlega, & Winstead, 1988; Tolor & Fehon, 1987).

The notion that it may not always be useful to seek emotional support begins to raise a broader question about whether certain responses to stress may tend to be maladaptive (see also McCrae & Costa, 1986; Rippetoe & Rogers, 1987). As just implied, one possible candidate for such a role is *focusing on and venting of emotions:* the tendency to focus on whatever distress or upset one is experiencing and to ventilate those feelings (cf. Scheff, 1979). Such a response may sometimes be functional, for example, if a person uses a period of mourning to accommodate to the loss of a loved one and move forward. There is reason to suspect, however, that focusing on these emotions (particularly for long periods) can impede adjustment (see Felton, Revenson, & Hinrichsen, 1984). The phenomenological salience of distress may exacerbate the distress (e.g., Scheier & Carver, 1977); focusing on the distress may also distract people from active coping efforts and movement beyond the distress.[3]

Two other coping tendencies that we believe may be dysfunctional in many circumstances are tied more to laboratory research than to coping research (although conceptually related ideas have been used by Cronkite & Moos, 1984; Holohan & Moos, 1985; and by McCrae, 1982, 1984). The first of these tendencies is *behavioral disengagement:* reducing one's effort to deal with the stressor, even giving up the attempt to attain goals with which the stressor is interfering. Behavioral disengagement is reflected in phenomena that are also identified with terms such as *helplessness.* In theory, behavioral disengagement is most likely to occur when people expect poor coping outcomes.

Mental disengagement is a variation on behavioral disengagement, postulated to occur when conditions prevent behavioral disengagement (cf. Carver, Peterson, Follansbee, & Scheier, 1983). Mental disengagement occurs via a wide variety of activities that serve to distract the person from thinking about the behavioral dimension or goal with which the stressor is interfering. Tactics that reflect mental disengagement include using alternative activities to take one's mind off a problem (a tendency opposite to the suppression of competing activities), daydreaming, escaping through sleep, or escape by immersion in TV. It should be noted that these tactics are more diverse than those that make up the other coping categories under discussion. It thus may be useful to think of the conceptual category of mental disengagement as forming a "multiple act criterion" (Fishbein & Ajzen, 1974) rather than as being a unitary class of behavior.

Behavioral and mental disengagement presumably function in coping as they do in other domains, such as test anxiety (Carver et al., 1983) and social anxiety (Carver & Scheier, 1986), and in the self-regulation of behavior more generally (Scheier & Carver, 1988). Although disengaging from a goal is sometimes a highly adaptive response (cf. Klinger, 1975), this response often impedes adaptive coping (Aldwin & Revenson, 1987; Billings & Moos, 1984; Cronkite & Moos, 1984; Wills, 1986). At a minimum, it would seem to be important to better understand the role of such responses in the effectiveness with which people cope with stress (cf. Roth & Cohen, 1986).

The scales discussed to this point are theoretically based. We included several other scales on the basis of empirical precedents suggesting that these coping strategies are important. Although their origin is not primarily theoretical, it is possible to draw links from each of them to various kinds of theoretical principles. One of these scales is *positive reinterpretation and growth.* Lazarus and Folkman (1984) regarded this tendency (which they termed *positive reappraisal*) as a type of emotion-focused coping: coping aimed at managing distress emotions rather than at dealing with the stressor per se. Clearly, however, the value of this tendency is not limited to reduction of distress. That is, construing a stressful transaction in positive terms

[3] We should reemphasize that coping responses discussed in this section may well be beneficial for some people in some situations, whereas they might not be beneficial for other people or in other situations (cf. Wortman & Lehman, 1985). To put it differently, a given coping strategy may not be intrinsically maladaptive, but may become dysfunctional if it is relied on for long periods when other strategies are more useful. This general question—when a coping response is adaptive and when it is not—would seem to deserve a good deal of additional attention from researchers.

should intrinsically lead the person to continue (or to resume) active, problem-focused coping actions.

Another scale measures *denial,* a response that sometimes emerges in primary appraisal. Denial is somewhat controversial. It is often suggested that denial is useful, minimizing distress and thereby facilitating coping (cf. Breznitz, 1983; F. Cohen & Lazarus, 1973; Wilson, 1981). Alternatively, it can be argued that denial only creates additional problems unless the stressor can profitably be ignored. That is, denying the reality of the event allows the event to become more serious, thereby making more difficult the coping that eventually must occur (cf. Matthews, Siegel, Kuller, Thompson, & Varat, 1983). A third view is that denial is useful at early stages of a stressful transaction but impedes coping later on (Levine et al., 1987; Mullen & Suls, 1982; Suls & Fletcher, 1985). Because it seems desirable to gain additional information on these questions, we included a denial scale in our instrument. Although we recognize that the term *denial* has several possible referents, we chose to operationalize denial here as reports of refusal to believe that the stressor exists or of trying to act as though the stressor is not real.

The opposite of denial is *acceptance.* It is arguable that acceptance is a functional coping response, in that a person who accepts the reality of a stressful situation would seem to be a person who is engaged in the attempt to deal with the situation. Acceptance impinges on two aspects of the coping process. Acceptance of a stressor as real occurs in primary appraisal. Acceptance of a current absence of active coping strategies relates to secondary appraisal. One might expect acceptance to be particularly important in circumstances in which the stressor is something that must be accommodated to, as opposed to circumstances in which the stressor can easily be changed.

A final scale measures *turning to religion* as a coping response. Data collected recently by McCrae and Costa (1986) suggest that such a coping tactic may be quite important to many people. In considering how to treat this as a coping strategy, we faced something of a dilemma. One might turn to religion when under stress for widely varying reasons: religion might serve as a source of emotional support, as a vehicle for positive reinterpretation and growth, or as a tactic of active coping with a stressor. Thus, in principle it would be possible to have multiple religion-related scales assessing each of these potential functions. We opted instead for a single scale that assessed, in a general way, the tendency to turn to religion in times of stress.

Individual Differences in Coping

A final issue to be addressed concerns the role played in the coping process by individual differences. There are two ways to think about how individual differences might influence coping. The first, perhaps more obvious, possibility is that there are stable coping "styles" or "dispositions" that people bring with them to the stressful situations that they encounter. According to this view, people do not approach each coping context anew, but rather bring to bear a preferred set of coping strategies that remains relatively fixed across time and circumstances.

The idea that such stable coping styles exist is somewhat controversial. Folkman and Lazarus (1980, 1985; Folkman et al., 1986), for example, have repeatedly emphasized that coping should be thought of as a dynamic process that shifts in nature from stage to stage of a stressful transaction. Such a view suggests that the development of a coping style would at best be counterproductive, because it locks the person into one mode of responding rather than allowing the person the freedom and flexibility to change responses with changing circumstances.

The second possibility goes a step further. Specifically, it might be argued that preferred ways of coping with stress derive from more traditional personality dimensions (see McCrae, 1982). That is, perhaps certain personality characteristics predispose people to cope in certain ways when they confront adversity. It was, in fact, a test of this stronger position that seems to have raised such skepticism on the part of Folkman and Lazarus (1980) regarding the role of dispositions more generally. Specifically, F. Cohen and Lazarus (1973) found no support for the hypothesis that the personality dimension of repression versus sensitization (Byrne, 1961) would predict the course of recovery from surgery. The conclusion apparently drawn from that null finding is that traditional personality dispositions are not likely to be useful as predictors of coping (e.g., Folkman & Lazarus, 1980).

We are not, however, ready to assume that individual differences play no role in determining the degree to which a given coping strategy is engaged at any given point in the transaction. Nor are we willing at this point to discount entirely the possibility of systematic relations between particular personality dispositions and the patterns, sequences, and changes that occur in coping over time. The fact that trait measures were poor predictors in the past may tell us more about the predictive value of specific personality differences than it tells about the role of individual differences in general.

There seem to be three separate questions underlying this broad set of issues. The first is whether people have preferred coping strategies that they use relatively consistently across a range of situations. The second is whether these coping preferences relate in a systematic way to personality variables. The third is whether dispositionally preferred coping strategies exert an influence on specific coping responses. In developing and validating our coping inventory, we tried to be sensitive to each of these three questions. Accordingly, we have collected data relevant to each question, respectively, in the three studies reported in this article.

Investigating questions pertaining to dispositionally preferred coping styles requires that one be able to measure coping dispositions as well as situational coping responses. Operationally, this is not difficult (cf. the state–trait strategy used by Spielberger, Gorsuch, & Lushene, 1970). When differentiating coping dispositions from situational coping responses, the content of the behavior that is described in the items remains the same; only the frame of reference is altered. When assessing a dispositional coping style, the items are framed in terms of what the person *usually* does when under stress. When assessing situational responses, the items are framed in terms of what the person did (or is doing currently) in a *specific coping episode* or during a *specific period of time* (in a manner analogous to the way in which the Ways of Coping scale is typically administered). In developing our coping inventory, we made an effort to include only items that could be answered from both orienta-

tions, so that the inventory could be used to examine both coping dispositions and situation-specific coping tendencies (depending on the researcher's needs and desires).

Study 1: Item Selection and Scale Construction

Method and Results

We gave the name COPE to the inventory we set out to develop. The inventory went through several generations in its development, as item sets were administered to several hundred subjects, items with weak loadings were revised or discarded, new items written, and the inventory readministered. In addition to this typical process of scale refinement, the inventory also went through several stages of evolution regarding the number of distinct tendencies we attempted to measure. Because of this, the composition of some scales was determined early in the development process, whereas other scales are more recent in origin.

We collected the data reported as Study 1 using a dispositional response format. The following orienting instructions were used:

> We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what *you* generally do and feel, when *you* experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you *usually* do when you are under a lot of stress.

Three additional points were emphasized: that respondents should treat each item separately from every other item, that there are no right or wrong answers, and that responses should indicate what the respondent does rather than what "most people" do. Response choices were "I usually don't do this at all," "I usually do this a little bit," "I usually do this a medium amount," and "I usually do this a lot" (scored from 1 to 4).[4]

The final item set was completed by 978 undergraduates at the University of Miami, in group sessions. Their responses were subjected to a principal-factors factor analysis, using an oblique rotation to allow for correlations among factors (Lee & Comrey, 1979). This analysis yielded 12 factors with eigenvalues greater than 1.0, 11 of which were quite easily interpreted (the remaining factor had no item loading that exceeded .30).

Factor structure. The composition of these 11 factors (see Table 1) was fully in accord with a priori assignment of items to scales, with two exceptions. These exceptions were two cases in which a single factor incorporated what had been intended to be two separate scales. In particular, the active coping and the planning items all loaded together on one factor. Similarly, items reflecting the seeking of social support all loaded as a single factor, independent of the basis for seeking out social support. The loadings listed in Table 1 for these two item sets are their loadings on the relevant composite factor; the items are listed, however, according to their a priori designations. (The highest loading of each item was on its a priori scale; only 2 of the 52 items had secondary loadings that exceeded .25.)

A second deviation from expectations concerned the relatively weak loadings of items on two scales. Two items each from the Mental Disengagement factor and the Positive Reinterpretation and Growth factor loaded below .30 in this sample. One of the Mental Disengagement items loaded .28, whereas the other attained only a .23 loading. The weak items in Positive Reinterpretation and Growth loaded .23 and .19, respectively. In each of these cases, however, the loading on the a priori factor was the item's highest loading.

One item is included in Table 1 despite the fact that it did not load on any of the scales presented there. This item, pertaining to alcohol and drug use, was originally proposed as an aspect of mental disengagement (cf. Carver & Scheier, 1983; Hull, 1981), but it never loaded well on that factor. The item was retained separately, for exploratory purposes, in all three studies reported in this article.

Alpha and test–retest reliabilities. Additional information concerning the internal consistency of the COPE scales comes from Cronbach's alpha reliability coefficients, which were computed for each scale (see Table 2). In general, these values were acceptably high, with only one falling below .6. This exception was the mental disengagement scale. Recall that this scale differs from the others in being more of a multiple-act criterion. Thus this lower reliability is not entirely unexpected.

Evidence concerning the test–retest reliability of the various scales comes from two samples.[5] Eighty-nine students completed COPE in an initial session and again 8 weeks later. An earlier sample of 116 students had completed a nearly final version of the item set over an interval of 6 weeks. The test–retest correlations from these two samples are also shown in Table 2. These correlations suggest that the self-reports of coping tendencies that are measured by COPE are relatively stable, although they do not in general appear to be as stable as personality traits.

Table 2 also displays means and standard deviations of responses to the final scales among a large sample of college students. It is apparent from inspection of these means that respondents reported using the coping strategies that theoretically are adaptive (active coping, planning) to a far greater degree than they reported using strategies that theoretically may become less adaptive over the long term (e.g., behavioral and mental disengagement). On the other hand, there was a surprisingly high report of at least some of these ostensibly less adaptive strategies. For example, the incidence of reported mental disengagement approached the midpoint of the possible range of values.

There were also several significant gender differences in the reported use of these various strategies. The largest and most reliable of these differences were on tendencies to focus on and vent emotions, and to seek social support, both for instrumental and emotional reasons. These tendencies were all greater among women than among men, consistent with sex role stereotypes. The only tendency that was stronger among men than women was use of alcohol or drugs as a way of coping.

Correlations among scales. Correlations among the COPE

[4] Complete instructions and a copy of the inventory with correctly sequenced items are available on request from Charles S. Carver.

[5] Because of the large number of statistical tests conducted in the various analyses reported here, we have elected to use a more conservative significance criterion than usual. In general, findings are not discussed unless they are significant at the .01 level.

Table 1
Study 1: COPE Scales: Items Listed by A Priori Scale Assignment, With Loadings on the Factor to Which Each Item Pertains

Scale name and items	Loading
Active coping	
I take additional action to try to get rid of the problem.	.42
I concentrate my efforts on doing something about it.	.37
I do what has to be done, one step at a time.	.33
I take direct action to get around the problem.	.29
Planning	
I try to come up with a strategy about what to do.	.73
I make a plan of action.	.68
I think hard about what steps to take.	.53
I think about how I might best handle the problem.	.49
Suppression of competing activities	
I put aside other activities in order to concentrate on this.	.68
I focus on dealing with this problem, and if necessary let other things slide a little.	.55
I keep myself from getting distracted by other thoughts or activities.	.51
I try hard to prevent other things from interfering with my efforts at dealing with this.	.48
Restraint coping	
I force myself to wait for the right time to do something.	.71
I hold off doing anything about it until the situation permits.	.67
I make sure not to make matters worse by acting too soon.	.62
I restrain myself from doing anything too quickly.	.40
Seeking social support for instrumental reasons	
I ask people who have had similar experiences what they did.	.66
I try to get advice from someone about what to do.	.65
I talk to someone to find out more about the situation.	.60
I talk to someone who could do something concrete about the problem.	.55
Seeking social support for emotional reasons	
I talk to someone about how I feel.	.71
I try to get emotional support from friends or relatives.	.71
I discuss my feelings with someone.	.69
I get sympathy and understanding from someone.	.58
Positive reinterpretation & growth	
I look for something good in what is happening.	.75
I try to see it in a different light, to make it seem more positive.	.59
I learn something from the experience.	.23
I try to grow as a person as a result of the experience.	.19
Acceptance	
I learn to live with it.	.68
I accept that this has happened and that it can't be changed.	.60
I get used to the idea that it happened.	.43
I accept the reality of the fact that it happened.	.38
Turning to religion	
I seek God's help.	.95
I put my trust in God.	.88
I try to find comfort in my religion.	.84
I pray more than usual.	.81
Focus on & venting of emotions	
I get upset and let my emotions out.	.79
I let my feelings out.	.76
I feel a lot of emotional distress and I find myself expressing those feelings a lot.	.57
I get upset, and am really aware of it.	.45
Denial	
I refuse to believe that it has happened.	.75
I pretend that it hasn't really happened.	.72
I act as though it hasn't even happened.	.52
I say to myself "this isn't real."	.46
Behavioral disengagement	
I give up the attempt to get what I want.	.49
I just give up trying to reach my goal.	.42
I admit to myself that I can't deal with it, and quit trying.	.37
I reduce the amount of effort I'm putting into solving the problem.	.30
Mental disengagement	
I turn to work or other substitute activities to take my mind off things.	.45
I go to movies or watch TV, to think about it less.	.43
I daydream about things other than this.	.28
I sleep more than usual.	.23
Alcohol–drug disengagement	
I drink alcohol or take drugs, in order to think about it less.	

Note. Items are listed in order of strength of loading. Loadings for active coping and planning come from a single factor that incorporated both scales. Loadings for seeking social support for instrumental reasons and seeking social support for emotional reasons come from a single factor that incorporated both scales.

scales (unit-weighted totals of the four items of each scale) are displayed in Table 3. Perhaps most notable about these correlations is the fact that (with very few exceptions) the scales are not strongly intercorrelated. Indeed, even the inverse correlations between conceptually polar opposite tendencies such as acceptance and denial were not strong.

The relative weakness of these correlations has two implications: one conceptual, the other more pragmatic. Conceptually, this pattern tends to support the assumption that people dealing with stress experience a relatively wide range of coping impulses, including instances of both sides of a mutually exclusive dichotomy such as acceptance and denial. Pragmatically, the

Table 2
Cronbach's Alpha Reliability, Test–Retest Reliabilities on Two Samples, and Means and Standard Deviations Among a College Student Sample for the Dispositional COPE Scales

COPE scales	α (n = 978)	r (n = 89)	r[a] (n = 116)	M[b] (n = 1,030)	SD (n = 1,030)
Active coping	.62	.56	.69	11.89	2.26
Planning	.80	.63	.69	12.58	2.66
Suppression of competing activities	.68	.46	.64	9.92	2.42
Restraint coping	.72	.51	—	10.28	2.53
Seeking social support—instrumental	.75	.64	.76	11.50	2.88
Seeking social support—emotional	.85	.77	.72	11.01	3.46
Positive reinterpretation & growth	.68	.48	.63	12.40	2.42
Acceptance	.65	.63	.61	11.84	2.56
Turning to religion	.92	.86	.89	8.82	4.10
Focus on & venting of emotions	.77	.69	—	10.17	3.08
Denial	.71	.54	—	6.07	2.37
Behavioral disengagement	.63	.66	.42	6.11	2.07
Mental disengagement	.45	.58	.56	9.66	2.46
Alcohol–drug disengagement		.57	.61	1.38	0.75

Note. Column 2 interval = 8 weeks, Column 3 interval = 6 weeks.
[a] Final composition of three scales had not been determined when these data were collected.
[b] Range of possible values is 4–16, except for alcohol–drug disengagement, which is 1–4.

fact that the coping tendencies are separable empirically means that it should be possible to study their effects separately.

Although the correlations are not very strong, the scales do tend to correlate in conceptually meaningful ways. One cluster is made up of what theoretically are adaptive strategies. Active coping and planning were associated with suppression of competing activities, with restraint coping, with positive reinterpretation and growth, and with the seeking out of social support, both for instrumental reasons and (to a lesser degree) for emotional reasons. Positive reinterpretation and, to a lesser degree, the other adaptive strategies were also correlated with acceptance.

A second cluster was made up of tendencies that theoretically are of more questionable value. More specifically, denial, behavioral disengagement, mental disengagement, focus on and venting of emotions, and alcohol use were all moderately inter-

Table 3
Study 1: Correlations Among Dispositional COPE Scales, Computed as Unweighted Sums of the Items Composing Each Scale (n = 978)

COPE scales	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Active coping	—	.67	.45	.31	.36	.19	.43	.19	.13	.07	−.11	−.28	−.06	−.10
2. Planning		—	.44	.36	.34	.20	.45	.23	.16	.10	−.14	−.28	−.04	−.10
3. Suppression of competing activities			—	.30	.23	.14	.24	.13	.10	.13	.05	.02	.05	.04
4. Restraint coping				—	.17	.05	.37	.21	.25	−.04	−.01	.00	.07	−.07
5. Seeking social support—instrumental					—	.69	.28	.17	.14	.39	.03	−.02	.20	.02
6. Seeking social support—emotional						—	.17	.14	.13	.56	.06	.05	.21	.02
7. Positive reinterpretation & growth							—	.36	.21	.02	−.15	−.24	.06	−.14
8. Acceptance								—	.07	.03	−.21	−.05	.06	−.02
9. Turning to religion									—	.09	.11	.07	.06	.00
10. Focus on & venting of emotions										—	.16	.17	.22	.13
11. Denial											—	.45	.29	.17
12. Behavioral disengagement												—	.29	.26
13. Mental disengagement													—	.18
14. Alcohol–drug disengagement														—

Note. With this sample size, all correlations greater than .09 are significant at the .01 level.

correlated. Not surprisingly, this group of coping strategies tended to be inversely correlated with the theoretically more functional strategies. That is, active coping and planning were inversely associated with denial and behavioral disengagement, and more weakly but still inversely with the tendency to report disengaging through alcohol or drug use.

It is of some interest that seeking social support seems to bridge between the clearly functional tendencies and the other group. That is, seeking social support was associated with active coping and with planning, but also with focus on and venting of emotions, which in turn is linked to such strategies as denial and disengagement. This pattern suggests that the tendency to seek out social support may have both good and bad overtones, and whether it is primarily good or bad may depend on what other coping processes are occurring along with it.

To explore these associations among scales further, we conducted a second order factor analysis (i.e., using scale totals as the raw data, omitting the alcohol item). This analysis yielded four factors with eigenvalues greater than 1, each capturing three scales. One factor was composed of active coping, planning, and suppression of competing activities. Another was composed of seeking social support (both scales) and focus on emotion. A third factor was composed of denial and both mental and behavioral disengagement. The fourth factor incorporated acceptance, restraint coping, and positive reinterpretation and growth. Only turning to religion failed to load substantially on one of these factors, with its highest loading (on the Acceptance factor) being .23. As was true in the scale correlations, the factor that incorporated seeking of social support tended to bridge between other coping strategies, correlating positively with both the Active Coping and Disengagement factors (rs = .19 and .21, respectively).

Discussion

In general, the results of the factor analysis supported our attempt to develop scales that would assess relatively distinct and clearly focused aspects of coping. With only two exceptions, the items that were intended to comprise separate scales did load separately from each other as distinct factors. These exceptions were the merging of active coping and planning and the merging of seeking out social support for instrumental reasons and seeking out social support for emotional reasons.

The fact that two conceptually distinct item sets loaded together in these two cases raises questions about whether the tendencies reflected in the item sets are actually distinct from one another in people's behavior. It may turn out that active coping efforts almost invariably are accompanied by planning. Similarly, the seeking out of social support may invariably blend the two reasons for seeking it, as we and others have found (e.g., Aldwin & Revenson, 1987). On the other hand, we suspect that there may be populations for which, or circumstances in which, these conceptually distinct tendencies are also empirically distinct (see also S. Cohen & Hoberman, 1983; S. Cohen & Wills, 1985). For this reason we see merit in measuring the tendencies separately at this stage of research.

Study 2: Associations With Personality Dimensions

To gain more information concerning the coping tendencies measured by COPE, we administered a variety of personality measures to undergraduates who also completed the COPE. We chose these specific personality variables because each seemed to suggest a conceptual basis for either a preference for active, task-engaged coping or a tendency to respond poorly to the stresses of life.

We chose the personality dimension of optimism versus pessimism for both theoretical and empirical reasons. That is, the theoretical analysis behind several COPE scales also underlies our understanding of the behavioral effects of optimism versus pessimism (see Scheier & Carver, 1987, for a review of these effects). That is, because optimists have favorable expectations for their future, optimism should be associated with active coping efforts and with making the best of whatever is encountered. Because pessimists have unfavorable expectations for the future, pessimism should be associated with focus on emotional distress and with disengagement. Indeed, previous research has found exactly this pattern in coping with specific stressful transactions (Scheier et al., 1986). The prior research used the Ways of Coping scale and a content analysis of free format statements. If similar associations were to emerge using the COPE scales as the criterion, and for general coping tendencies rather than coping in specific situations, the finding would be important evidence of convergent validity for the inventory.

Another variable that previous research has linked to variations in coping is the controllability of the stressor. When situations are controllable, active coping strategies predominate; when situations seem less controllable, alternative strategies predominate (Folkman & Lazarus, 1980; Scheier et al., 1986). This association presumably should extend to dispositional variations in sense of control. To test this, we asked people whether they felt they typically could or could not do something about the stressful situations they experienced. People who reported they typically could do something were expected to report reliance on active coping strategies. People who reported they typically could do nothing should tend to rely more on such strategies as denial and disengagement.

Five other personality dispositions were also measured, each of which might be expected to predict patterns of coping tendencies. Two of these were self-esteem (e.g., Rosenberg, 1965, 1979) and locus of control (Rotter, 1966). People high in self-esteem presumably engage in positive, active attempts to cope with stressors (cf. Pearlin & Schooler, 1978). Those low in self-esteem should tend to become preoccupied with distress emotions, and should be more likely to disengage from their goals when under stress. Similarly, people with an internal locus of control should report engaging in planning and active coping more than those with an external locus of control (cf. Parkes, 1984).

The third disposition measured was hardiness (Kobasa, 1979), a composite of three dimensions (commitment, control, and challenge) that are important in the existentialist approach to personality. Kobasa (1979) proposed that hardiness diminishes the adverse effects of stress (although both this assertion and the construct more generally have recently been subjected to criticism, see Funk & Houston, 1987; Hull, Van Treuren, & Virnelli, 1987; Rhodewalt & Zone, 1989). Hardy individuals presumably are active copers, making the best of situations they are in and unlikely to engage in denial or disengagement. Note that this construct has a built-in partial conceptual and empiri-

cal overlap with locus of control, although it also incorporates the additional qualities of commitment and challenge.

The fourth disposition—quite different from the others—was the Type A behavior pattern (Friedman & Rosenman, 1974; for recent reviews, see Matthews, 1982, 1988; Siegel, 1984). Type A incorporates a competitive achievement orientation, a sense of time urgency, and a tendency toward hostility. Glass (1977) characterized this pattern as reflecting a continual attempt to gain and maintain control over significant aspects of one's environment. It seems an easy inference that Type As should prefer active coping and should suppress awareness of distress emotions (cf. Carver, Coleman, & Glass, 1976; Matthews et al., 1983). Type As should also be relatively unlikely to disengage from goals with which stressors are interfering.

The fifth personality dimension was trait anxiety (Spielberger et al., 1970). The associations for this variable, however, were expected to be opposite to those discussed thus far. Trait anxiety should be associated with a tendency to become preoccupied with distress emotions when under stress. It also seems reasonable that high trait anxiety may also predict unwillingness to engage in active coping and a tendency to disengage from goals.

One scale was included explicitly because it was intended to measure a pair of coping styles. These styles, termed monitoring versus blunting (Miller, 1987), are different from the strategies we have been discussing. Monitoring is seeking out information about one's situation and its potential impact. Blunting is dealing with an impending stressor by attempting to distract oneself from it (Miller, 1987). We hypothesized that blunting would be linked with disengagement tendencies and that monitoring would be linked with planning, a tendency to focus on emotional reactions to the event, and perhaps a tendency to seek social support for instrumental (informational) reasons. On the basis of previous data (Miller, Brody, & Summerton, 1988), we did not expect monitoring to be correlated with active coping (its problem-focused character apparently is limited to the seeking of information).

A final scale included in this study was the Marlowe–Crowne Social Desirability Scale (Crowne & Marlowe, 1964). This scale was used to determine the degree to which the various COPE scales may be related to the tendency to portray oneself in an overly favorable light. Whereas we were looking for moderately strong associations between certain COPE scales and the other measures in this study, we were hoping to find relatively weak associations with social desirability.

Method

Subjects completed the COPE and the other instruments in large group sessions. No subject completed all of the scales under examination, nor were all scales administered in the same session (thus *n*s differ from scale to scale). In general, subjects in this study each completed two group sessions within 3 weeks of each other, one of which included the COPE, the other of which included one additional measure or more.

Optimism was measured by the Life Orientation Test, or LOT (see Scheier & Carver, 1985, for psychometric information). The LOT is an eight-item scale (with five response options ranging from *strongly agree* to *strongly disagree*), scored such that high values indicate greater optimism. Perceived control over stressful situations was assessed by a single item with the stem "When you are under stress, do you usually feel . . ." followed by four answer choices ranging from "you definitely can do something about the situation" to "you definitely can do *nothing* about the situation."

Self-esteem was measured by Rosenberg's (1965) 10-item Self-Esteem Scale, using four response options (with no noncommittal neutral response being permitted). Locus of control was measured by Rotter's (1966) forced-choice Internal–External Locus of Control (IE) Scale. For ease in comparison across scales, we coded the IE such that higher values indicate a more *internal* orientation.

Hardiness was measured using the Personal Views Survey (Hardiness Institute, 1985), which has items measuring each of the three components of hardiness: control, commitment, and challenge. Responses are on a 4-point scale ranging from *not at all true* to *completely true*, and the three conceptual components are weighted equally in the composite hardiness score. Type A tendencies were measured by the student version of the Jenkins Activity Survey (Krantz, Glass, & Snyder, 1974; Glass, 1977), with higher values indicating stronger Type A tendencies. We should note that self-report measures of Type A characteristics tend not to correlate well with interview assessment (Matthews, 1982). This limitation should be kept in mind when interpreting results for this scale.

Trait anxiety was measured by the trait portion of the State–Trait Anxiety Inventory (Spielberger et al., 1970), 20 statements related to the experience of anxiety. Respondents rate how often they feel the way indicated by each statement, with four response options (*almost never* to *almost always*). Monitoring and blunting were measured by the Miller Behavioral Style Scale (Miller, 1987). This scale presents hypothetical situations, followed by statements representing ways of dealing with the situation, to which respondents either agree or disagree. Monitoring responses (information seeking) and blunting responses (distraction from the stressor) are summed separately. Although the two tendencies are opposite ends of a dimension conceptually, Miller prefers to treat them in research as distinct from each other. Indeed, in our sample they were distinct empirically ($r = -.21$).

The Marlowe–Crowne Social Desirability Scale (Crowne & Marlowe, 1964) consists of 33 statements answered in a true–false format. The statements are written in such a way that answering in one direction or the other is "too good to be true" for most people. The responses are scored such that higher values indicate a stronger tendency to portray oneself positively.

Results

Table 4 displays the correlations between the COPE scales and the other instruments.[6] As expected, active coping and planning were positively associated with optimism, the feeling of being generally able to do something about stressful situations, self-esteem, hardiness, and Type A; active coping was inversely associated with trait anxiety. A similar pattern of associations emerged for positive reinterpretation and growth, except for an absence of correlation with Type A. This absence of correlation, however, is consistent with the conceptual picture of Type As as irritable and hostile and seems to reflect one way in which the Type A person differs from individuals who are optimistic, high in self-esteem, and hardy.

In contrast to this picture, the COPE denial and behavioral disengagement scales displayed essentially the opposite pattern

[6] Except for correlations involving trait anxiety, which correlated −.50 with hardiness, −.56 with self-esteem, and −.50 with optimism, associations among the personality variables were modest. The correlation between optimism and self-esteem, at .32, was the only one to exceed .3.

Table 4
Study 2: Correlations Between COPE Scales and Selected Personality Measures

COPE scales	Optimism (n = 476)	Control (n = 476)	Self-esteem (n = 162)	Internality (n = 162)	Hardiness (n = 162)	Type A (n = 162)	Monitoring (n = 162)	Blunting (n = 162)	Anxiety (n = 162)	Social desirability (n = 209)
Active coping	.32††	.21††	.27††	.17†	.20††	.30††	.04	.02	−.25††	.10
Planning	.25††	.14††	.22††	.09	.17†	.23††	.12	.01	−.15	.06
Suppression of competing activities	.08	.04	.07	.07	−.06	.19†	.08	−.09	−.10	.02
Restraint coping	.20††	.09	−.03	.03	.13	−.07	.00	−.07	−.19†	.14
Seeking social support—instrumental	.10†	.02	.12	−.15	.14	.09	.16†	.04	.01	−.04
Seeking social support—emotional	.07	−.07	.06	−.08	.05	.13	.12	.05	.14	−.08
Positive reinterpretation & growth	.41††	.16††	.16†	−.02	.23††	.03	.03	−.01	−.25††	.23††
Acceptance	.19††	.02	.12	.08	.07	.07	.11	.09	−.15	−.01
Turning to religion	.15††	−.02	−.06	−.02	−.06	−.09	.20††	−.05	.11	.11
Focus on & ventilation of emotions	−.11†	−.16††	−.01	−.16†	−.06	.18†	.21††	.05	.36††	−.17†
Denial	−.27††	−.19††	−.28††	−.13	−.21††	−.04	.05	.01	.35††	−.11
Behavioral disengagement	−.34††	−.20††	−.31††	−.08	−.29††	−.28††	−.16†	.01	.37††	−.20††
Mental disengagement	−.14††	−.12††	−.08	−.11	−.09	−.07	.03	.09	.21††	−.07
Alcohol–drug disengagement	−.11†	−.02	−.11	−.05	−.13	−.16†	−.13	.14	.11	−.27††

Note. Significance levels of $p < .05$ did not meet our adopted criterion.
† $p < .05$, two-tailed. †† $p < .01$, two-tailed.

of associations. That is, they were positively correlated with trait anxiety and negatively correlated with optimism, the feeling of being generally able to do something about stressful situations, self-esteem, hardiness, and (for behavioral disengagement) Type A. This pattern is also in accord with our expectations.

An interesting set of associations was obtained for focusing on and venting of emotions. As one might expect, this scale was inversely associated with the feeling of being able to do something about stressful situations and with internal locus of control. In addition, it was positively related to trait anxiety and monitoring and marginally related to Type A. We would speculate that the latter positive associations occurred for rather different reasons. Type As tend to be emotionally expressive, and their responses on this scale probably reflect the tendency to vent emotions rather than a tendency to feel distressed. The association with trait anxiety, in contrast, would seem to reflect high levels of subjective distress when confronted with adversity.

The association for monitoring is more ambiguous. Perhaps monitors, as part of their vigilance, are especially alert to any distress emotions they are experiencing. Another possibility is that the high monitoring style itself leads to greater emotionality when under stress (inasmuch as attending to an emotional state seems to heighten the experience of that state; Scheier & Carver, 1977). Whatever the basis for this correlation, it fits with the recent finding that monitoring is associated with high levels of distress relative to the severity of the medical problem being experienced (Miller et al., 1988).

Monitoring also correlated significantly with one additional COPE scale and marginally with two others. Monitoring related positively to seeking instrumental social support and negatively to behavioral disengagement (but in both cases below the .01 criterion). Monitoring was also correlated reliably with turning to religion, an association that is not readily interpreted.

Somewhat conspicuous by their absence were associations between COPE scales and either blunting (consistent with an absence of associations reported by Miller et al., 1988) or locus of control. The COPE scales also proved to be relatively free of strong association with the social desirability scale, although several of the correlations were statistically significant.

Discussion

The pattern of associations obtained in Study 2 provides useful evidence of both the convergent and discriminant validity of the COPE. As expected, active coping and planning were correlated with several conceptually related personality qualities, as were denial and behavioral disengagement. This converging pattern of associations suggests that the coping strategies postulated to be functional are in fact linked to personality qualities that are widely regarded as beneficial. Similarly, coping tendencies hypothesized to be less functional were inversely associated with desirable personality qualities.

The data also suggest evidence of discriminant validity, in three ways. First, although the personality variables tended to correlate with coping strategies in accord with theoretical predictions, the correlations were not overly strong. This implies that the personality variables and the coping styles are not identical. Second, the COPE scales were not strongly correlated with

the social desirability scale, even where one might expect such associations (e.g., for positive reinterpretation and growth). Third, the COPE scales were relatively unrelated to the other measure of coping styles included in the study, monitoring and blunting. This suggests that the two measures are complementary to each other, rather than assessing similar qualities of coping.

Study 3: Coping With a Specific Event

The COPE scales, as described thus far, were used to measure relatively stable dispositional coping tendencies. As mentioned earlier, however, it was not our intent that the COPE be used only as a measure of coping dispositions. We also assume that the strategies under consideration are used to varying degrees from situation to situation. The COPE thus should be applicable to assessment of situational or time-limited coping efforts as well as dispositional coping styles.

To investigate the applicability of the COPE to situational coping efforts, we conducted a study in which subjects described how they dealt with an actual stressful event in their lives. This study used the procedure developed by Lazarus and his colleagues for the Ways of Coping scale (e.g., Folkman & Lazarus, 1980). Subjects are asked to recall and think about their most stressful event of the past 2 months. They describe the event, then complete a series of ratings, indicating (among other things) the degree to which they engaged in each of a series of coping activities when trying to deal with the event. The coping activities, in this case, were COPE items. Accordingly, for this study we rephrased the items of the COPE to indicate an action that took place in the past, rather than indicating a "typical" response tendency.

Study 3 had two purposes. The first was to investigate the adequacy of the COPE as a measure of situational coping, as opposed to a measure of dispositional coping style. We expected the factor structure of subjects' responses to be much in line with the factor structure obtained in Study 1. We also expected the pattern of associations among situational coping strategies to fit the conceptual pattern with which we began, and which was found in the dispositional data of Study 1.

Our second purpose was to begin to examine the relation between subjects' general coping styles and the situation-specific coping responses that they make to a particular stressful event. We expected to find significant associations between situational and dispositional reports, although we did not expect the associations to be overwhelming. Our somewhat conservative prediction here was based on the fact that people vary their use of particular coping strategies as a function of the kind of situation in which they find themselves (e.g., Folkman & Lazarus, 1980; see also Costa & McCrae, in press). Thus, we expected the association between dispositional tendencies and specific coping responses to be less than perfect. The data from this study should allow us, however, to obtain a first approximation of the degree of association between the one and the other.

Method

The dispositional version of COPE was administered in large group sessions to undergraduates at the University of Miami at the beginning of an academic semester. Three weeks later the situation-specific version was administered (to groups of approximately 15 people) in a format similar to that used by Folkman and Lazarus (1980). In this latter procedure subjects were asked to recall and think about the most stressful event they had experienced during the past 2 months. They were asked to describe the event briefly in their own words, indicating what happened, where the event took place, who was involved, what made the event important, and so on. They then indicated (from a list provided for them) what factors had made the event stressful for them, how much the situation mattered to them, and whether they felt the situation was amenable to change.

Following this, subjects completed the situationally framed items of the COPE to indicate how much they had relied on each coping strategy in dealing with the problem. Specifically, subjects were instructed to "think about the situation you have just described, and how you reacted to it. Then indicate the extent to which you did whatever each following statement says." Response choices were "I didn't do this at all," "I did this a little bit," "I did this a medium amount," and "I did this a lot" (scored from 1 to 4).

A total of 156 students completed this latter procedure. Of these, 128 had also completed the dispositional version of the COPE. The vast majority of the subjects chose to write about an event that they rated as mattering either "quite a bit" or "a great deal" (most concerned either relationship or academic problems). To ensure that most data analyses dealt with relatively stressful events, the 11 subjects who rated their event as mattering "somewhat" or as not mattering were deleted prior to the analyses in which dispositional measures were related to situational ratings, leaving a sample of 117 (45 men and 72 women) for those analyses.

Results

Factor structure and alpha reliabilities. Despite the relatively small sample size (n = 156), we conducted exploratory factor analysis on the situational COPE items. This analysis yielded an outcome very similar to that for the dispositional items (Study 1), with the following exceptions. First, the mental disengagement items had higher loadings than in Study 1 (all were .30 or above, M = .42). Second, three items loaded slightly higher on an unintended factor than on their intended factor (of the remaining 49 items, only 11 had secondary loadings exceeding .25, and only 5 of these exceeded .30). Third, positive reinterpretation and growth split into two factors in this data set, although the alpha reliability for these 4 items as a group was fairly high (.74). Indeed, all scale alphas tended to be higher than those obtained in Study 1 for the dispositional COPE scales, suggesting that people's ratings may have greater internal consistency when rating specific behavioral situations than when rating general tendencies.

Having determined that the situational version of the COPE had an interpretable factor structure, we turned to the second question: What coping strategies predominated in people's attempts to deal with the event they brought to mind? Means and standard deviations for situational COPE scales are shown in Table 5. For comparison, means of the dispositional tendencies that these same subjects had reported in the initial session are also displayed in this table. Patterns of dispositional and situational reports are similar, but repeated measures analyses of variance revealed several differences between absolute levels of responses for this incident and those reported as dispositional tendencies. Compared with their "usual" responses to stress, subjects reported using less active coping, less seeking of instru-

Table 5
Study 3: Means and Standard Deviations of Situational COPE Scales, Completed as Responses to a Stressful Event Experienced in the Recent Past (n = 117), Mean Dispositional COPE Scores From the Same Subjects, and Differences Between Dispositional and Situational Scores and Significance Levels of Those Differences

COPE scales	$M_{situational}$[a]	*SD*	$M_{dispositional}$[a]	$M_{situational} - M_{dispositional}$	$p <$
Active coping	10.69	3.18	11.69	−1.00	.01
Planning	11.86	3.08	12.31	−0.55	*ns*
Suppression of competing activities	9.31	3.38	9.62	−0.31	*ns*
Restraint coping	9.38	3.43	10.13	−0.75	*ns*
Seeking social support—instrumental	9.69	3.39	11.62	−1.93	.0001
Seeking social support—emotional	11.08	3.60	10.81	0.27	*ns*
Positive reinterpretation & growth	11.35	2.85	12.56	−1.21	.001
Acceptance	11.49	2.81	11.79	−0.30	*ns*
Turning to religion	7.56	4.24	8.56	−1.00	.001
Focus on & venting of emotions	10.37	3.50	10.14	0.23	*ns*
Denial	5.57	2.28	5.98	−0.41	*ns*
Behavioral disengagement	6.03	2.22	6.35	−0.32	*ns*
Mental disengagement	8.07	2.86	9.56	−1.49	.0001
Alcohol–drug disengagement	1.29	0.72	1.33	−0.04	*ns*

[a] Range of possible values is 4–16, except for alcohol–drug disengagement, which is 1–4.

mental social support, less positive reinterpretation and growth, less turning to religion, and less mental disengagement in dealing with their specific stressors.

There were also several significant sex differences. As in Study 1, women more than men reported that they usually sought social support for both emotional and instrumental reasons and that they usually focused on and vented emotions. Men reported usually turning to alcohol more than did women ($p < .03$). Two sex differences in situational coping responses paralleled these dispositional differences. Men reported more alcohol use in the situation they were focusing on than did women, and women reported seeking social support for emotional reasons more than did men.

Correlations among scales. The third question was how the situational coping strategies would intercorrelate (see Table 6). As with the dispositional data of Study 1, predictable clusters emerged, although most correlations were low to moderate. One cluster focused around active coping, planning, and their concomitants; another cluster centered on denial and mental and behavioral disengagement. As in Study 1, the scales of one cluster tended to be negatively associated with those of the other. Also as in Study 1, the seeking of social support for emotional reasons seemed to bridge between the two clusters. Seeking of emotional support was associated with focusing on and venting of emotions (hypothesized to be a dysfunctional tendency), but also with planning and with positive reinterpretation and growth (hypothesized as functional tendencies).

We further explored these correlations among scales by second order factor analysis, which yielded a four-factor pattern similar to that of Study 1. Active coping, planning, and suppression of competing activities formed one factor; seeking social support (both scales) and focus on emotion formed another; acceptance, restraint coping, and positive reinterpretation and growth formed a third. The fourth factor, varying somewhat from the result of Study 1, incorporated denial, mental disengagement, and behavioral disengagement, but also incorporated turning to religion (with a positive loading). As was true in the scale correlations, the second order factor that incorporated seeking of social support tended to bridge between other coping strategies, correlating positively with both Active Coping and Disengagement factors (*r*s = .27 and .17, respectively).

Variations among situational coping patterns. The fourth question to be addressed in the data was how coping strategies would vary with variations in the situation being coped with. One situational variation was the rated importance of the stressful event. Recall that the subjects retained for data analysis all rated the event they had described as mattering either "quite a bit" ($n = 40$) or "a great deal" ($n = 77$). Despite this restricted range, rated importance of the event was significantly correlated with variations in use of one coping strategy, with three others approaching the .01 criterion: The more the situation mattered to the subject, the more the subject also reported focusing on and venting emotions ($r = .32$), engaging in denial ($r = .22, p < .02$), and seeking social support both for emotional reasons ($r = .23, p < .02$) and for instrumental reasons ($r = .21$, $p < .03$).

Subjects also characterized the situation they had described by choosing a label for it. Most subjects labeled their event ei-

Table 6
Study 3: Correlations Among Situational Version of COPE Scales, Computed as Unweighted Sums of the Items Comprising Each A Priori Scale (n = 117)

COPE scales	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Active coping	—	.64††	.47††	.13	.33††	.17	.12	−.09	.12	.02	−.21†	−.23†	−.13	−.17
2. Planning		—	.35††	.31††	.43††	.25††	.27††	.12	.08	−.08	−.30††	−.22†	−.22†	−.27††
3. Suppression of competing activities			—	.14	.18	.03	.01	−.11	.11	.10	−.03	−.10	−.14	−.05
4. Restraint coping				—	.21†	.22†	.28††	.24††	.13	−.07	.07	.16	−.04	−.13
5. Seeking social support—instrumental					—	.57††	.28††	.05	.11	.14	−.06	.03	−.06	−.08
6. Seeking social support—emotional						—	.26††	.10	.17	.49††	.08	.11	−.05	−.19†
7. Positive reinterpretation & growth							—	.44††	.23†	.00	.03	.02	.07	−.09
8. Acceptance								—	.13	.02	.07	.09	.12	.06
9. Turning to religion									—	.13	.31††	.09	.17	−.25††
10. Focus on & venting of emotions										—	.27††	.10	.19†	−.01
11. Denial											—	.44††	.41††	.00
12. Behavioral disengagement												—	.31††	.19†
13. Mental disengagement													—	.27††
14. Alcohol–drug disengagement														—

Note. Significance levels of $p < .05$ did not meet our adopted criterion.
† $p < .05$, two-tailed. †† $p < .01$, two-tailed.

ther *a situation you could change or do something about* or *a situation that must be accepted or gotten used to* (*n*s = 47 and 46, respectively). Analyses of variance revealed that these groups differed in several ways. Subjects who saw their situation as amenable to change reported engaging in more active coping, planning, suppression of competing activities, and seeking of social support for instrumental (but not emotional) reasons, compared with subjects who said their situation was something that had to be gotten used to. The latter group reported higher levels of both acceptance and denial than were reported by those whose situation was potentially changeable.

Correlations between dispositional coping styles and situational coping responses. The final question addressed in this study concerns the relation between what people report to be their typical ways of coping with stress and how they respond to a specific stressor. As can be seen in Table 7, most of the dispositional coping dimensions correlated with their situational counterparts at a low–moderate level (at about the level of the typical "personality" coefficient). Exceptions were the strong association shown by the scale measuring turning to religion, and the absence of reliable associations for three scales: restraint coping, suppression of competing activities, and seeking of social support for instrumental reasons. There was one sex difference: Women displayed a significantly stronger correlation between situational and dispositional reports of acceptance than did men ($Z = 2.91, p < .01$).

Discussion

The data collected in Study 3 make several points. First, the factor structure of the situational version of the COPE was similar to the structure of the dispositional version, the alpha reliabilities were as high or better, and the factors correlated in similar patterns. Subjects appear to have been distinguishing among the various coping strategies in meaningful and consistent ways in their responses when reporting on the events they had brought to mind.

Second, the pattern of coping reported by our subjects was consistent with that obtained by Folkman and Lazarus (1980) in a community sample of older adults using the Ways of Coping scale, while also elaborating somewhat on their results. The higher level of active coping in controllable than in uncontrollable situations replicates a difference found by Folkman and Laz-

Table 7
Study 3: Correlations Between Dispositional and Situational Versions of COPE Scales (n = 117)

COPE scale	*r*
Active coping	.25††
Planning	.24††
Suppression of competing activities	.14
Restraint coping	.07
Seeking social support—instrumental	.10
Seeking social support—emotional	.39†††
Positive reinterpretation & growth	.31††
Acceptance	.30††
Turning to religion	.76†††
Focus on & venting of emotion	.37†††
Denial	.28††
Behavioral disengagement	.22†
Mental disengagement	.34†††
Alcohol–drug disengagement	.50†††

† $p < .05$, two-tailed. †† $p < .01$, two-tailed. ††† $p < .001$, two-tailed.

arus. We add, however, the finding that planning, suppression of competing activities, and to a lesser degree seeking out of instrumental social support also occur more in controllable than in uncontrollable situations. Whereas Folkman and Lazarus found that emotion-focused coping as a global category was more likely in uncontrollable than in controllable situations, this difference was limited in our data to two specific aspects of emotion-focused coping: acceptance and denial. Our data also add information about variations in coping as a function of the appraised importance of the situation. The more the situation mattered to the subject, the more likely was the subject to report focusing on and venting emotions, engaging in denial, and seeking out social support.

Finally, this study allowed us to begin to study associations between dispositional coping styles and comparable coping acts in a specific situation. Although the associations were generally modest, they were significant for most of the scales, and were in some cases quite strong. These findings paint a somewhat more optimistic picture of the role of individual differences in the coping process than was suggested by earlier research (F. Cohen & Lazarus, 1973; Folkman & Lazarus, 1980). On the other hand, the findings should be viewed as first approximations because of two characteristics of the data.

First, we had no control over the nature of the situations on which subjects reported. Differences in situations (to the extent they existed) may have obscured the role of dispositions by adding an extraneous source of variation to subjects' responses. Second, we could not ensure that subjects were reporting on comparable stages of their events. As Lazarus and his colleagues have emphasized repeatedly, coping strategies vary over the course of a stressful transaction (just as they vary between situations with differing demands). Thus, associations between dispositional coping styles and situational strategy use might have been stronger had all subjects responded to the same stressful episode and reported on the same stage of the transaction.

General Discussion

In this article we have reported the development of a new instrument to assess people's coping styles and strategies (cf. Lipowski, 1970). This inventory differs somewhat from preexisting alternative scales, although it does share certain conceptual similarities with those scales. As do earlier instruments, our inventory assesses people's active coping efforts. It also distinguishes, however, among several distinct aspects of active coping. Thus, we have separate sets of items to measure planning, active coping, suppression of attention to competing activities, and the exercise of restraint.

We also intended this instrument to measure a set of coping responses that may potentially impede or interfere with active coping. Indeed, we tried to develop separate scales to assess several logically distinct functions, all of which may have this dysfunctional quality. Thus, separate item sets measure behavioral disengagement from continued efforts at goal attainment, mental disengagement from one's goals, focusing on and venting of emotions, and use of alcohol or drugs as a way of disengaging. Interestingly enough, these item sets are somewhat similar to a cluster of scales that McCrae and Costa (1986) characterized as "neurotic coping." It is also of interest that subjects in McCrae and Costa's study who used those coping tactics viewed them as ineffective.

The various coping qualities measured by our item sets were derived from a consideration of the structure of motivated action (renewed efforts vs. giving up). This approach is consistent with our view that coping is not fundamentally different from other motivated action, except that coping may reflect greater urgency. Our intent in developing this inventory thus was to reflect the range of self-regulatory functions that we and others have studied in a range of other contexts (see Scheier & Carver, 1988). On the other hand, we have also come to believe that it is important to cast a wide net, theoretically. Accordingly, the COPE includes scales to measure aspects of coping that are less obviously related to the self-regulatory functions that we have emphasized but which seem at the same time to be important to measure.

Does this mean that we regard the COPE to be the final word on what aspects of coping should be measured? Certainly not. There are too many different ways to deal with life's adversity to be able to measure them all in one inventory. Although we have tried to assess a broad range of functions with our scales, it will be obvious to anyone who works in this area that we have not covered every possibility. We have not, for example, measured the seeking of information (cf. Miller, 1987), or responses such as assessing blame, engaging in social comparison, or wishful thinking (cf. McCrae, 1982, 1984; McCrae & Costa, 1986). Diversity among measures of coping should be constrained only by limits on insight into the nature of the coping process (and by the need to keep the size of any given instrument within reasonable bounds).[7] Which coping functions are important and which are not can be determined only by measuring and testing them.

Individual Differences

One aspect of the research reported here was an attempt to explore the possible existence of individual differences in preferred coping styles by using the COPE items in a dispositional format. We regard the findings presented on that question to be a useful beginning, although they certainly do not represent a definitive statement on the role of individual difference in the coping process. We noted two limitations on our ability to draw conclusions in discussing Study 3. There are, however, additional issues to consider as well.

A fundamental issue is how best to construe individual differences in coping strategies. As we noted at the outset, some theorists have assumed that differences in coping style are intrinsically tied to personality differences. The approach taken here, on the other hand, assumes only that people tend to adopt certain coping tactics as relatively stable preferences. Stable preferences may derive from personality, or they may develop for other reasons. We do not deny the potential importance of

[7] Indeed, after conducting the research reported in this article, we expanded the single item on drinking and drug use to a set of four items, and wrote another set of items that concern joking about the stressor. At present, we know the alpha reliabilities of these item sets in their dispositional formats (.93 and .90, respectively, among a sample of 768 students), but nothing more.

personality traits in coping; indeed, we have studied the role of one such trait ourselves (Scheier et al., 1986). We do suggest, however, that there may be merit in studying coping preferences apart from personality traits. Whether traits or coping dispositions will turn out to be more important, or whether both contribute to successful coping, should be a subject for further research.

The possibility that both categories of variable contribute to successful coping is hinted at by aspects of the data reported here, taken in combination with data reported elsewhere. In Study 2 we found relatively modest links between coping dispositions and several, more traditional personality variables. In Study 3 we found relatively modest links between coping dispositions and situational coping activities. The size of these correlations may cause some to doubt that traditional personality variables play a role in situational coping at all. Other research, however, contradicts this conclusion. The personality traits of optimism, locus of control, neuroticism, and extraversion have all been linked to situational coping activities in one or another study (McCrae & Costa, 1986; Parkes, 1984, 1986; Scheier et al., 1986). Taken as a group, the findings suggest the possibility that personality traits and coping dispositions both play roles in situational coping, roles that may be somewhat complementary rather than competing (see also McCrae & Costa, 1986).

A second issue regarding individual differences that commands further study is the role played by the degree of fit between people's preferred coping strategies and the constraints of the situation. That is, it seems reasonable to suggest that people cope better when they are able to turn easily to familiar and comfortable strategies than when those strategies are unavailable or unworkable. This raises some interesting questions. What happens to a person who usually deals with stress by seeking out social support if he or she is in a stressful situation in which social support resources are unavailable? What happens to a person who prefers to engage in active coping if the situation is one that requires restraint? We find these questions intriguing and potentially important. Having an inventory that permits the assessment of individual differences in dispositional coping responses as well as situational coping responses should make it easier to answer questions such as these.

Concluding Comment

Given the various scales currently available, a reasonable question to ask is whether the world really needs another measure of coping strategies. We think that the answer is yes. As we said in the introduction, we feel that it is time to give more thought to what self-regulatory functions are implicit in people's coping efforts. We think it should be useful to probe specific aspects of the coping process that may be important despite their not coming to mind most immediately as coping tactics. In brief, it may be time to take a more theoretical approach to scale development, in order to cast light on the coping process from a slightly different direction than has been done before.

It is worth noting, in that regard, that the theoretical viewpoint underlying this inventory has proven in the past to be useful in analyzing behavior in a variety of domains. These domains include laboratory research on pressured performance tasks and also such naturally occurring phenomena as test anxiety and social anxiety. Our own approach to these phenomena is not unique in all respects, but rather is representative of a broader range of expectancy-value theories. Given the usefulness of such ideas elsewhere, we have every reason to hope they can also be of value in the examination of coping.

References

Aldwin, C., Folkman, S., Schaefer, C., Coyne, J. C., & Lazarus, R. S. (1980, September). *Ways of Coping: A process measure.* Presented at the 88th annual meeting of the American Psychological Association, Montreal, Quebec, Canada.

Aldwin, C., & Revenson, T. A. (1987). Does coping help? A reexamination of the relation between coping and mental health. *Journal of Personality and Social Psychology, 53,* 337–348.

Berman, W. H., & Turk, D. C. (1981). Adaptation to divorce: Problems and coping strategies. *Journal of Marriage and the Family, 43,* 179–189.

Billings, A. G., & Moos, R. H. (1981). The role of coping responses and social resources in attenuating the stress of life events. *Journal of Behavioral Medicine, 4,* 139–157.

Billings, A. G., & Moos, R. H. (1984). Coping, stress, and social resources among adults with unipolar depression. *Journal of Personality and Social Psychology, 46,* 877–891.

Breznitz, S. (Ed.). (1983). *The denial of stress.* New York: International Universities Press.

Byrne, D. (1961). The repression-sensitization scale: Rationale, reliability, and validity. *Journal of Personality, 29,* 334–349.

Carver, C. S., Coleman, A. E., & Glass, D. C. (1976). The coronary-prone behavior pattern and the suppression of fatigue on a treadmill test. *Journal of Personality and Social Psychology, 33,* 460–466.

Carver, C. S., Peterson, L. M., Follansbee, D. J., & Scheier, M. F. (1983). Effects of self-directed attention on performance and persistence among persons high and low in test anxiety. *Cognitive Therapy and Research, 7,* 333–354.

Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control-theory approach to human behavior.* New York: Springer-Verlag.

Carver, C. S., & Scheier, M. F. (1983). A control-theory model of normal behavior, and implications for problems in self-management. In P. C. Kendall (Ed.), *Advances in cognitive-behavioral research and therapy* (Vol. 2, pp. 127–194). New York: Academic Press.

Carver, C. S., & Scheier, M. F. (1985). Self-consciousness, expectancies, and the coping process. In T. Field, P. M. McCabe, & N. Schneiderman (Eds.), *Stress and coping* (pp. 305–330). Hillsdale, NJ: Erlbaum.

Carver, C. S., & Scheier, M. F. (1986). Analyzing shyness: A specific application of broader self-regulatory principles. In W. H. Jones, J. M. Cheek, & S. R. Briggs (Eds.), *Shyness: Perspectives on research and treatment* (pp. 173–185). New York: Plenum Press.

Cohen, F., & Lazarus, R. S. (1973). Active coping processes, coping dispositions, and recovery from surgery. *Psychosomatic Medicine, 35,* 375–389.

Cohen, S., & Hoberman, H. M. (1983). Positive events and social support as buffers of life change stress. *Journal of Applied Social Psychology, 13,* 99–125.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98,* 310–357.

Costa, P. T., Jr., & McCrae, R. R. (in press). Personality, stress, and coping: Some lessons from a decade of research. In K. S. Markides & C. L. Cooper (Eds.), *Aging, stress, social support, and health.* New York: Wiley.

Costanza, R. S., Derlega, V. J., & Winstead, B. A. (1988). Positive and negative forms of social support: Effects of conversational topics on coping with stress among same-sex friends. *Journal of Experimental Social Psychology, 24,* 182–193.

Coyne, J. C., Aldwin, C., & Lazarus, R. S. (1981). Depression and coping in stressful episodes. *Journal of Abnormal Psychology, 90,* 439–447.

Cronkite, R. C., & Moos, R. H. (1984). The role of predisposing and moderating factors in the stress–illness relationship. *Journal of Health and Social Behavior, 25,* 372–393.

Crowne, D. P., & Marlowe, D. (1964). *The approval motive: Studies in evaluative dependence.* New York: Wiley.

Felton, B. J., Revenson, T. A., & Hinrichsen, G. A. (1984). Stress and coping in the explanation of psychological adjustment among chronically ill adults. *Social Science & Medicine, 18,* 889–898.

Fishbein, M., & Ajzen, I. (1974). Attitudes toward objects as predictors of single and multiple behavioral criteria. *Psychological Review, 81,* 59–74.

Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior, 21,* 219–239.

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: A study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology, 48,* 150–170.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology, 50,* 992–1003.

Friedman, M., & Rosenman, R. H. (1974). *Type A behavior and your heart.* New York: Knopf.

Funk, S. C., & Houston, B. K. (1987). A critical analysis of the hardiness scale's validity and utility. *Journal of Personality and Social Psychology, 53,* 572–578.

Glass, D. C. (1977). *Behavior patterns, stress, and coronary disease.* Hillsdale, NJ: Erlbaum.

Hardiness Institute. (1985). *The Personal Views Survey.* Chicago: The Hardiness Institute.

Holohan, C. J., & Moos, R. H. (1985). Life stress and health: Personality, coping, and family support in stress resistance. *Journal of Personality and Social Psychology, 49,* 739–747.

Hull, J. G. (1981). A self-awareness model of the causes and consequences of alcohol consumption. *Journal of Abnormal Psychology, 90,* 586–600.

Hull, J. G., Van Treuren, R. R., & Virnelli, S. (1987). Hardiness and health: A critique and alternative approach. *Journal of Personality and Social Psychology, 53,* 518–530.

Klinger, E. (1975). Consequences of commitment to and disengagement from incentives. *Psychological Review, 82,* 1–25.

Kobasa, S. C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality and Social Psychology, 37,* 1–11.

Krantz, D. S., Glass, D. C., & Snyder, M. L. (1974). Helplessness, stress level, and the coronary-prone behavior pattern. *Journal of Experimental Social Psychology, 10,* 284–300.

Lazarus, R. S. (1966). *Psychological stress and the coping process.* New York: McGraw-Hill.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer.

Lee, H. B., & Comrey, A. L. (1979). Distortions in a commonly used factor analytic procedure. *Multivariate Behavioral Research, 14,* 301–321.

Levine, J., Warrenburg, S., Kerns, R., Schwartz, G., Delaney, R., Fontana, A., Gradman, A., Smith, S., Allen, S., & Cascione, R. (1987). The role of denial in recovery from coronary heart disease. *Psychosomatic Medicine, 49,* 109–117.

Lipowski, Z. J. (1970). Physical illness, the individual, and the coping processes. *Psychiatry in Medicine, 1,* 91–102.

Matthews, K. A. (1982). Psychological perspectives on the Type A behavior pattern. *Psychological Bulletin, 91,* 293–323.

Matthews, K. A. (1988). Coronary heart disease and Type A behaviors: Update on and alternative to the Booth-Kewley and Friedman (1987) quantitative review. *Psychological Bulletin, 104,* 373–380.

Matthews, K. A., Siegel, J. M., Kuller, L. H., Thompson, M., & Varat, M. (1983). Determinants of decisions to seek medical treatment by patients with acute myocardial infarction symptoms. *Journal of Personality and Social Psychology, 44,* 1144–1156.

McCrae, R. R. (1982). Age differences in the use of coping mechanisms. *Journal of Gerontology, 37,* 454–460.

McCrae, R. R. (1984). Situational determinants of coping responses: Loss, threat, and challenge. *Journal of Personality and Social Psychology, 46,* 919–928.

McCrae, R. R., & Costa, P. T., Jr. (1986). Personality, coping, and coping effectiveness in an adult sample. *Journal of Personality, 54,* 385–405.

Miller, S. M. (1987). Monitoring and blunting: Validation of a questionnaire to assess styles of information seeking under threat. *Journal of Personality and Social Psychology, 52,* 345–353.

Miller, S. M., Brody, D. S., & Summerton, J. (1988). Styles of coping with threat: Implications for health. *Journal of Personality and Social Psychology, 54,* 142–148.

Moos, R. H. (Ed.). (1986). *Coping with life crises: An integrated approach.* New York: Plenum Press.

Mullen, B., & Suls, J. (1982). The effectiveness of attention and rejection as coping styles: A meta-analysis of temporal differences. *Journal of Psychosomatic Research, 26,* 43–49.

Parkes, K. R. (1984). Locus of control, cognitive appraisal, and coping in stressful episodes. *Journal of Personality and Social Psychology, 46,* 655–668.

Parkes, K. R. (1986). Coping in stressful episodes: The role of individual differences, environmental factors, and situational characteristics. *Journal of Personality and Social Psychology, 51,* 1277–1292.

Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior, 22,* 337–356.

Rhodewalt, F., & Zone, J. B. (1989). Appraisal of life change, depression, and illness in hardy and nonhardy women. *Journal of Personality and Social Psychology, 56,* 81–88.

Rippetoe, P. A., & Rogers, R. W. (1987). Effects of components of protection-motivation theory on adaptive and maladaptive coping with a health threat. *Journal of Personality and Social Psychology, 52,* 596–604.

Rosenberg, M. (1965). *Society and the adolescent self-image.* Princeton, NJ: Princeton University Press.

Rosenberg, M. (1979). *Conceiving the self.* New York: Basic Books.

Roth, S., & Cohen, L. J. (1986). Approach, avoidance, and coping with stress. *American Psychologist, 41,* 813–819.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*(1, Whole No. 609).

Scheff, T. J. (1979). *Catharsis in healing, ritual, and drama.* Berkeley: University of California Press.

Scheier, M. F., & Carver, C. S. (1977). Self-focused attention and the experience of emotion: Attraction, repulsion, elation, and depression. *Journal of Personality and Social Psychology, 35,* 625–636.

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4,* 219–247.

Scheier, M. F., & Carver, C. S. (1987). Dispositional optimism and physical well being: The influence of generalized outcome expectancies on health. *Journal of Personality, 55,* 169–210.

Scheier, M. F., & Carver, C. S. (1988). A model of behavioral self-regulation: Translating intention into action. In L. Berkowitz (Ed.), *Ad-*

vances in experimental social psychology (Vol. 21, pp. 303–346). New York: Academic Press.

Scheier, M. F., Weintraub, J. K., & Carver, C. S. (1986). Coping with stress: Divergent strategies of optimists and pessimists. *Journal of Personality and Social Psychology, 51,* 1257–1264.

Siegel, J. M. (1984). Type A behavior: Epidemiologic foundations and public health implications. *Annual Review of Public Health, 5,* 343–367.

Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E. (1970). *Manual for the State-Trait Anxiety Inventory (Self-Evaluation Questionnaire).* Palo Alto, CA: Consulting Psychologists Press.

Stone, A. A., & Neale, J. M. (1984). New measure of daily coping: Development and preliminary results. *Journal of Personality and Social Psychology, 46,* 892–906.

Suls, J., & Fletcher, B. (1985). The relative efficacy of avoidant and nonavoidant coping strategies: A meta-analysis. *Health Psychology, 4,* 249–288.

Tolor, A., & Fehon, D. (1987). Coping with stress: A study of male adolescents' coping strategies as related to adjustment. *Journal of Adolescent Research, 2,* 33–42.

Wills, T. A. (1986). Stress and coping in early adolescence: Relationships to substance use in urban school samples. *Health Psychology, 5,* 503–529.

Wilson, J. F. (1981). Behavioral preparation for surgery: Benefit or harm? *Journal of Behavioral Medicine, 4,* 79–102.

Wortman, C. B., & Lehman, D. R. (1985). Reactions to victims of life crises: Support attempts that fail. In I. G. Sarason & B. R. Sarason (Eds.), *Social support: Theory, research, and applications.* Dordrecht, the Netherlands: Martinus Nijhoff.

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