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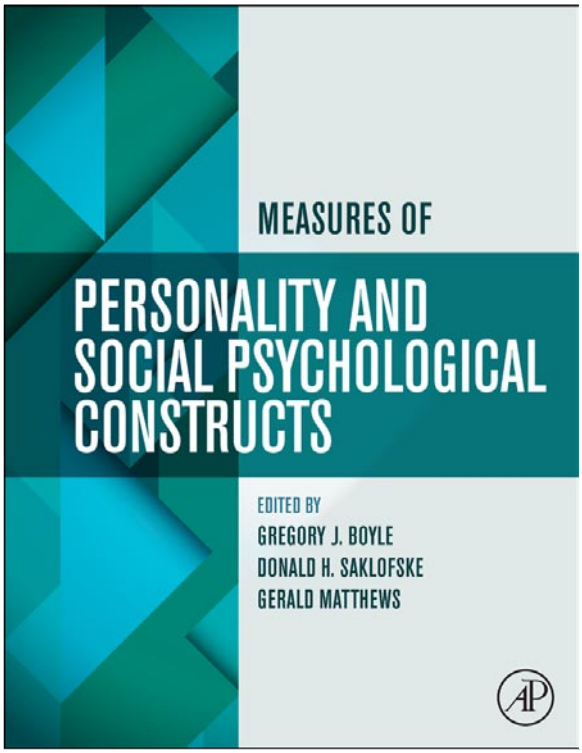

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CHAPTER

12

Measures of Coping for Psychological Well-Being

Katharine H. Greenaway[1], *Winnifred R. Louis*[1], *Stacey L. Parker*[1], *Elise K. Kalokerinos*[1], *Joanne R. Smith*[2] *and Deborah J. Terry*[1]

[1]University of Queensland, St Lucia, Queensland, Australia; [2]University of Exeter, Exeter, UK

As individuals go through life they face adversity, encounter resistance, experience stress, and meet challenges. People deal with these threats and challenges in a variety of different ways. They might confront the problem head on; engage in other activities to distract themselves from the problem; use substances to alter their senses; or turn to others or religion to help them cope. Researchers have developed instruments designed to distinguish and measure specific coping strategies in stressful situations. We review six of the most prominent instruments used in coping research (see below).

Coping can take various forms. Animal models conceptualize coping as acts that resolve aversive environmental conditions, thereby reducing psychophysiological disturbance (Miller, 1980; Ursin, 1980). Cognitive theories define coping as 'constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person' (Lazarus & Folkman, 1984, p. 141). These theories typically conceptualize coping as a dynamic interplay of person and environment factors. That is, people may be exposed to the same environmental stressor but cope in different ways depending on their personal characteristics. Similarly, the same individual may cope differently from one situation to the next depending on variation in the specific environmental demands.

This theoretical distinction between a focus on the individual as possessing static versus malleable coping tendencies across situations has led to some confusion in the field. What researchers do agree on is that the process of coping should be considered as separate from the outcome of coping (Lazarus & Folkman, 1984; Leventhal, Suls, & Leventhal, 1993; Schwarzer & Schwarzer, 1996). That is, definitions of coping should include *efforts* to manage stressful demands, regardless of whether those efforts are successful. An inclusive study of coping should include assessment of both adaptive and maladaptive coping strategies.

Coping is generally thought of as a reactive process triggered in response to a causal event. It is this element of an external trigger that distinguishes coping specifically from the related process of self-regulation more generally (Folkman & Moskowitz, 2004). Most commonly, people encounter a stressful event with which they need to cope. There are a number of features of the trigger, or stressful event, that influence *how* people cope with that event. In cognitive theories, the most important factor in determining how people cope is their appraisal of the situation. Individuals also may identify and utilize resources at their disposal to assist their coping efforts.

People differ widely in their response to stress. Some react strongly to minor stresses while others are not fazed by even major stresses in life. An event that evokes fear and avoidance in one individual may inspire energy and approach in another. A main determinant of a person's coping response is the way they appraise a stressful situation. Lazarus' (1966) classic stress and coping theory distinguishes between two types of cognitive appraisals: primary and secondary appraisals (for a more recent review see Lazarus, 2006).

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Primary appraisals are made when an individual evaluates a situation as having significance for their well-being. Appraisals of stressful situations fall into three main categories: harm, threat, and challenge (Lazarus & Folkman, 1984). Harm appraisals are made about situations in which psychological or physical damage has been sustained. Threat appraisals are made about anticipated negative situations in which psychological or physical damage could occur. In contrast, challenge appraisals are made about situations that carry the potential for positive outcomes, improvement, and growth. Whether someone appraises a stressful situation as representing harm, threat, or a challenge critically impacts on that individual's orientation towards the stressor, choice of coping strategies, and his/her emotional experience of stress. Primary appraisals are not static or one-off cognitive representations of events, however; individuals engage in a constant process of appraisal and reappraisal until stress is resolved.

Secondary appraisals concern an individual's perceived ability to handle a stressful event. These appraisals are key in identifying what might and can be done to cope with the stressor. An important element that influences secondary appraisal is the availability of *coping resources* – practical and psychological tools that assist people in meeting and overcoming demands in the environment.

Coping resources may be actual features of the environment that enable people to cope with stress (e.g., access to money, availability of social support; Schwarzer & Leppin, 1991) or factors internal to the individual that aid coping efforts (e.g., optimism, Scheier & Carver, 1992; hardiness, Eschleman, Bowling, & Alarcon, 2010; self-efficacy; Jerusalem & Schwarzer, 1992). These personal resources are distal predictors of coping strategies. For example, internal locus of control is associated with greater problem-focused coping strategies (Parkes, 1994). In a recent meta-analysis, Conner-Smith and Flaschsbart (2007) found that extraversion and conscientiousness predicted more problem-solving and cognitive restructuring coping strategies. In contrast, neuroticism predicted maladaptive coping strategies such as wishful thinking, withdrawal, and emotion-focused coping.

Given the wide variety of specific coping strategies available, researchers have found it useful to identify more parsimonious dimensions by which to distinguish and categorize coping strategies (Skinner, Edge, Altman, & Sherwood, 2003). A common theoretical distinction in coping research is between approach and avoidance (an individual's orientation towards or away from threatening stimuli) – (Roth & Cohen, 1986).

Several measures reviewed here draw on this distinction. The Miller Behavioral Style Scale (Miller, 1981) distinguishes between *monitors* – individuals who seek out information about threats in the environment – and *blunters* – individuals who seek to distract themselves from threat. The Mainz Coping Inventory (Krohne, 1993) distinguishes the use of *vigilant* coping styles from *avoidance* coping styles. Vigilant coping involves the direction of attention towards threatening information, and avoidance coping involves the direction of attention away from threatening information.

Another basic distinction is between assimilation and accommodation (e.g., Brandstadter & Renner, 1990; Piaget, 1985). Assimilative processes involve altering the environment or situation to bring it more in line with one's desires (e.g., trying to change stressful circumstances; exerting primary control). In contrast, accommodative processes involve adjusting one's desires to fit with situational constraints (e.g., accepting the situation and looking for positives; exerting secondary control; Band & Weisz, 1988; Heckhausen & Schulz, 1995; Rothbaum, Weisz, & Snyder, 1982; Weisz, McCabe, & Dennig, 1994). Lazarus and Folkman's (1984) classic distinction between *problem-focused coping* and *emotion-focused coping* draws on the assimilation-accommodation distinction. The Ways of Coping Questionnaire (Folkman & Lazarus, 1988), reviewed in this chapter, measures coping efforts aimed at altering the stressful event, and those aimed at regulating emotional reactions to the stressful event.

The dimensions of approach–avoidance and assimilation–accommodation can provide useful taxonomies for classifying specific strategies into higher-order coping categories. This theoretical approach has received criticism, however (Skinner et al., 2003). There is ambiguity regarding the concrete classification of specific coping strategies into either one dimension or another. For example, seeking social support could be considered an approach coping strategy in that people seek out methods of helping them cope with a stressful event, or it could be considered an avoidance coping strategy whereby people seek to escape from the stressful event. Information seeking may represent either a method of assimilation (to the extent that people seek to use the information to change the situation) or accommodation (to the extent that people seek to use the information to accept and adjust to the situation). Therefore, although broad coping taxonomies are useful theoretically, the multi-faceted nature of coping necessitates use of specific measures that assess a broad range of coping strategies (e.g., Skinner, 2003). Measurement of specific coping strategies presents its own challenges, however.

The most pervasive debate in the coping literature centers on the measurement of dispositional coping styles compared with situational coping strategies. Coping styles are dispositional tendencies toward a

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particular way of coping that are considered to be relatively stable across different stressful situations (e.g., Carver, Scheier, & Weintrab, 1989). In comparison, coping strategies are flexible responses to situational demands (Lazarus & Folkman, 1984). Coping strategies are considered to be dynamic and responsive moment-by-moment efforts in response to a specific stressful situation.

Conceptualization of coping as a trait (i.e., fixed) or as a state (i.e., flexible) process has its own merits and limitations. There is utility in measuring stable coping styles across individuals (Carver et al., 1989). Such an approach allows for the identification of consistent ways of coping with stress. Does an individual in general tend to orient towards or away from threat? Are they more likely to draw on social support rather than other forms of coping? Answering these questions addresses predictive validity across a range of situations. Indeed, trait coping measures share variance with personality traits (Conner-Smith & Flachsbart, 2007), indicating that these types of measures tap stable and predictable differences between individuals.

The study of coping styles has received criticism, however (e.g., Lazarus, 1991). Lazarus and Folkman (1984) argued that an assessment of coping at the trait level stifles predictive validity within specific coping contexts, because it ignores variation in behavior due to specific situational demands. They claimed that this underestimates the complexity and variability in actual coping efforts and that an analysis of coping styles does not capture the multidimensional nature of coping processes.

In contrast, situational assessments view coping as a dynamic process that changes within individuals across situations. State measures of coping assess how an individual reports coping in specific stressful situations, rather than how they report coping with stress in general. Lazarus and Folkman (1984) claimed that in order to gain a full understanding of the coping process, one must understand what problem an individual is coping with and the specific strategies being used to cope in that situation. State coping measures are therefore likely to be more predictive of coping outcomes within specific situations than trait coping measures.

A situation-specific analysis also allows for assessment of stress and coping as a dynamic feedback process that unfolds over time. That is, an individual's coping efforts respond flexibly to changes in the environment (Daniels & Harris, 2005; Lazarus & Folkman, 1984). This conceptualization is distinct from the relatively static analysis provided by trait measures of coping.

Thus, there is a tension in the coping literature between researchers who propose the use of trait measures of coping and those who propose the use of state measures of coping. Yet both analyses are important for a full understanding of the coping process. People are not 'locked into' a particular coping style that dictates their response in every stressful situation. Such an adaptation would be useless and potentially dysfunctional. Nor are people 'blank slates', reacting to every new situation in a completely novel way. Carver et al. (1989) proposed that after repeated exposure to stress and successful resolution of this stress, some people come to habitually implement the specific coping strategies that led to the successful outcome. Coping styles then provide the dispositional scaffolding that predisposes individuals to a particular way of coping. It appears that people engage actively in the coping process, using tailored coping strategies and reacting dynamically to the demands of the specific situation.

MEASURES REVIEWED HERE

The measures reviewed in this chapter fall into the two broad categories of dispositional (or trait) coping and situational (or state) coping. The measures and their subscales are outlined below.

Trait Coping Measures

1. Miller Behavioral Style Scale (Miller, 1987)
2. Mainz Coping Inventory (Krohne, 1993)
3. Coping Inventory for Stressful Situations (Endler & Parker, 1990, 1994)
4. COPE Inventory (Carver et al., 1989)

State Coping Measures

1. Coping Strategy Indicator (Amirkhan, 1990)
2. Ways of Coping Questionnaire (Folkman & Lazarus, 1988)

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OVERVIEW OF THE MEASURES

The first four instruments outlined in this chapter measure dispositional coping styles, although they assess coping in different ways. The Miller Behavioral Style Scale (MBSS; Miller, 1987) and the Mainz Coping Inventory (MCI; Krohne, 1993) conceptualize coping style in terms of the direction of attention toward or away from threatening stimuli. Both these measures assess ways of focusing on threatening or stressful stimuli in a process akin to 'attentional deployment' in models of emotion regulation (Gross, 1998). This basic distinction between monitoring and blunting (MBSS) or vigilance and avoidance (MCI) is thought to direct and shape later coping efforts, although researchers rarely combine these instruments with other measures that assess dispositional coping strategies (e.g., the Coping Inventory for Stressful Situations or CISS; the COPE Inventory).

The CISS (Endler & Parker, 1990, 1994) and the COPE Inventory (Carver et al., 1989) measure a wide range of dispositional coping styles. Although they assess different content, both measures are psychometrically well validated and used widely in coping research. Modified versions of both the CISS and the COPE were constructed to assess specific coping strategies in addition to dispositional coping styles. To distinguish dispositional coping styles from situational coping strategies, researchers typically alter the frame of reference when measuring coping responses. When adopting a dispositional perspective, researchers ask about how people respond to stressful events *in general*. When adopting a situational perspective, researchers ask about how people respond to a *specific* stressful event.

The final two measures, the Coping Strategy Indicator (CSI; Amirkhan, 1990) and the Ways of Coping Questionnaire (WCQ; Folkman & Lazarus, 1988) assess situational coping strategies in response to a specific stressful event. These measures provide a counterpoint to dispositional measures. The WCQ is the most commonly used situational measure in coping research, possibly because it assesses a wider range of coping strategies, or because of the seminal impact of Folkman and Lazarus' work on coping theory.

These measures represent some of the most widely used and psychometrically validated coping scales currently available. There are many other coping measures available that specifically target particular populations, such as children and adolescents (e.g., Coping Scale for Children and Youth; Brodzinsky et al., 1992; Adolescent Coping Orientation for Problem Experiences Inventory; Patterson & McCubbin, 1987) or employees (e.g., Career Attitudes and Strategies Inventory; Holland & Gottfredson, 1994; Occupational Attributional Styles Questionnaire; Furnham, Sadka, & Brewin, 1992). Similarly, there are coping measures that target particular domains, such as health and sports (e.g., Health and Daily Living Form; Moos, Cronkite, Billings, & Finney, 1983; Drinking Motives Questionnaire; Cooper, 1994) and academic performance (e.g., Academic Coping Strategies Scale; Sullivan, 2009). We focus on measures that are not domain or sample specific, and thus have a broad applicability across a wide range of research and other contexts.

TRAIT COPING MEASURES

Miller Behavioral Style Scale (MBSS)

(Miller, 1987).

Variable

The MBSS assesses stable differences in attentional focus during uncontrollable threatening events.

Description

The MBSS distinguishes between two possible ways of dealing with threat: To seek out information about the threat, or to distract oneself from the threat. The scale categorizes individuals as monitors (information seekers) or blunters (distractors). One's preference for seeking threat-related information and the availability of threat-related information in the environment determines how stressed and anxious individuals become. Accordingly, monitors prefer high information input during threatening episodes, and show a reduction in stress and arousal when such information is available. Conversely, blunters prefer low information input during threatening episodes, and show a reduction in stress and arousal when able to distract themselves from the situation.

The MBSS consists of four hypothetical stressful scenarios (visiting a dentist, being held hostage by terrorists, potential job loss, and a turbulent plane ride) that participants are asked to imagine and respond to. There is also a brief version of the MBSS (see Steptoe, 1989) that uses the two most ecologically valid

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hypothetical situations: The dentist and job loss scenarios. Each scenario is followed by eight possible ways of dealing with the situation, four of which represent monitoring or information seeking strategies (e.g., 'I would ask the dentist exactly what he was going to do') and four that represent blunting or distraction strategies ('I would try to think about pleasant memories'). Individuals indicate whether or not they would use each strategy on a forced-choice yes/no response scale.

The scale yields two scores: A total monitoring score, derived from adding the number of selected 'monitoring' options and a total blunting score, derived from adding the number of selected 'blunting' options. Individuals can be categorized as high or low monitors and blunters by employing a median split procedure. Alternatively, researchers can treat the scales as unipolar constructs by summing the items for each scale and using the resulting scores as independent predictors (Myers & Derakshan, 2000). In some instances researchers have created a summary score by subtracting blunting scores from monitoring scores (e.g., Miller & Mangan, 1983).

Sample

The scale was normed in two experiments on American undergraduate students with sample sizes of 30 and 40 respectively (equal gender ratios in both studies; Miller, 1987). The means on the monitoring subscale were 9.70 ($SD = 2.63$; Experiment 1) and 11.10 ($SD = 2.46$; Experiment 2) and the means on the blunting subscale were 5.57 ($SD = 2.86$; Experiment 1) and 4.55 ($SD = 2.09$; Experiment 2).

Reliability

Internal Consistency

The MBSS exhibited Cronbach alpha coefficients ranging from .67 (blunting, Miller, 1987; Experiment 2) to .79 (monitoring, Miller, 1987; Experiment 1). Its use in different populations such as children (e.g., Kliewer, 1991) and adults (e.g., Ben-Zur, 2002) has yielded similarly varied estimates, with some researchers finding smaller Cronbach alpha coefficients particularly for the blunting subscale ($\alpha = .41$; Rees & Bath, 2000).

Test–Retest

Test–retest reliability over four weeks was adequate for the monitoring subscale (.71) although the test–retest reliability of the blunting subscale was not assessed (Rees & Bath, 2000). Miller (1987) reported test–retest reliabilities for the monitoring (.72) and blunting (.75) subscales over an interval of four months.

Validity

Convergent/Concurrent

Research has revealed meaningful relationships between the MBSS and situation-specific coping strategies (as measured by the COPE, reviewed later in this chapter). In a study with 52 university students, Myers and Derakshan (2000) found that monitoring was positively related to active coping ($r = .26$), Similarly, van Zuuren and Wolfs (1991) found that monitoring was positively related to more problem-focused forms of situation specific coping ($r = .35$).

Divergent/Discriminant

Coping validation studies often do not set out to show evidence of discriminant validity, preferring instead to focus on demonstrating convergent, construct, and predictive validity. Despite this, some evidence can be found to show that monitoring and blunting *are not* associated with constructs to which they should be unrelated. For example, monitoring and blunting have been found to be unrelated to use of humor as a coping strategy and negatively related to seeking instrumental social support ($r = -.34$) and acceptance ($r = -.28$; Myers & Derakshan, 2000). Blunting tends to be unassociated with functional, approach-related forms of coping, such as problem-focused help-seeking, and adaptive attribution styles that predict lower depression (van Zuuren & Wolfs, 1991).

Construct/Factor Analytic

The MBSS was originally validated in two experiments by Miller (1987). Participants were placed in aversive situations that carried the potential of a physical threat (an electric shock; Experiment 1) or an ego threat (poor test performance; Experiment 2). In Experiment 1, participants were able to choose between two radio channels that played information about the electric shock (high monitoring channel) or distracting music (high blunting channel). In Experiment 2, participants could obtain on-line information about their test performance by

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attending to a light (high monitoring behavior). In both experiments, high monitors and low blunters attended more to the information about the threat than low monitors and high blunters. In Experiment 1, low monitors and high blunters attended more to the distracting music than did high monitors and low blunters. The factor structure of the scale holds up in tests conducted by independent researchers (Muris & Schouten, 1994). In this study, 583 students completed the 5-point version of the MBSS, and an exploratory factor analysis was conducted. Two factors were extracted; monitoring items loaded on to the first factor, blunting items on to the second factor.

Criterion/Predictive

In a variety of contexts, monitors have been found to have higher levels of worry and distress than blunters. For example, more so than blunters, monitors have been found to be particularly prone to anxiety (Muris, van Zuuren, & De Vries, 1994), depression (Shiloh, Koehly, Jenkins, Martin, & Hadley, 2008), displays of distress during invasive screening examinations (Wardle et al., 1993), and anticipation of discomfort and physical pain during medical procedures (Miller, Roussi, Altman, Helm, & Steinberg, 1994). Other researchers (Rees & Bath, 2000; Wakefield, Homewood, Mahmut, Taylor, & Meiser, 2007) have validated the general tendency of monitors to attend to threatening information among patients with a family history of cancer. High monitors are more likely than low monitors to seek out information about cancer (Rees & Bath, 2000), and high blunters are more likely than low blunters to engage in distraction (Wakefield et al., 2007).

Location

Miller, S.M. (1988). The interacting effects of coping styles and situational variables in gynecologic settings: Implications for research and treatment. *Journal of Psychosomatic Obstetrics and Gynaecology*, *9*, 23–34. doi: 10.3109/01674828809030946.

Results and Comments

The MBSS is a measure of the degree to which people seek out or avoid information about threatening events. These issues of information search and threat are particularly relevant in the context of health (Miller, 1992), and the measure has been used extensively in this domain. Among other applications, the MBSS has been used to investigate the experience of chronic pain (Litt, Shafer, & Kreutzer, 2010), physician visits (Miller, Brody, & Summerton, 1988), dental fear (Muris et al., 1996), HIV testing (Delaney & O'Brien, 2009; Miller, Rodoletz, Schroeder, Mangan, & Sedlacek, 1996), gynecological surgery (Steptoe & O'Sullivan, 1986), prenatal diagnosis (van Zuuren, 1993), genetic screening (Miller et al., 2007), and cancer chemotherapy (Gard, Edwards, Harris, & McCormach, 1988).

In addition to being more reliable than the blunting subscale, the monitoring subscale has been shown to be a more consistent predictor of health-related coping behaviors (Miller et al., 1987). However, this does not mean that monitoring is a more effective strategy than blunting in coping with health threats. Although high monitors are more likely than high blunters to take preventative health care actions, they are also more likely to experience arousal and anxiety about their health, and are more prone to ruminative thoughts about their illness (Miller et al., 1988, 1996). In clinical samples, efforts to avoid disturbing thoughts require extreme defensive strategies including denial as well as mental and behavioral disengagement. This suggests there might be costs to a monitoring attentional style for patients with severe long-term medical threats.

Treatment of the monitoring and blunting subscales can be critiqued on the grounds that dichotomizing reduces the variance unnecessarily and introduces error at the category boundaries. In addition, the response format of the scale requires a forced-choice yes/no response from participants, further reducing potentially explainable variance. It should be noted that researchers have successfully adapted the response scale to a 5-point Likert-type, however (see van Zuuren, De Jongh, Beekers, & Swinkels, 1999). It is also the case that the subscales are not always equally reliable, valid, or strongly negatively associated with each other. Thus independent use of the subscales, or sole use of the monitoring subscale, can be considered.

MILLER BEHAVIORAL STYLE SCALE (SAMPLE ITEMS)

1. Vividly imagine that you are on an airplane, 30 minutes from your destination, when the plane unexpectedly goes into a deep dive and then suddenly levels off. After a short time the pilot announces that nothing is wrong, although the rest of the ride may be rough. You, however, are not

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convinced that all is well. Tick *all* of the statements that might apply to you.

____ I would carefully read the information provided about safety features in the plane and make sure that I knew where the exits were. (M)
____ I would make small talk with the passenger beside me. (B)
____ I would watch the end of the movie, even if I had seen it before. (B)
____ I would call the flight attendant and ask him/her exactly what the problem was. (M)
____ I would order a drink from the stewardess. (B)
____ I would listen carefully to the engines for unusual noises and would watch the crew to see if their behavior was out of the ordinary. (M)
____ I would talk to the passenger beside me about what might be wrong. (M)
____ I would settle down and read a book or magazine or write a letter. (B)

Subscales: M = Monitoring, B = Blunting.
Source: Miller (1988). The interacting effects of coping styles and situational variables in gynecologic settings: Implications for research and treatment. *Journal of Psychosomatic Obstetrics and Gynaecology*, *9*, 23–34. Reprinted with permission from Informa Healthcare.

Mainz Coping Inventory (MCI)

(Krohne, 1993).

Variable

The MCI measures the degree to which individuals adopt a vigilant or avoidant coping style when approaching threatening situations.

Description

The MCI distinguishes between coping strategies that are designed to reduce ambiguity and increase understanding (vigilance) and strategies designed to protect the individual from threatening information and manage emotional distress (cognitive avoidance). Unlike the MBSS, which was originally intended to categorize people as either high monitors/low blunters or low monitors/high blunters, Krohne's measure treats vigilance and avoidance as independent from one another. Thus, it is possible for people to score high in both cognitive avoidance and vigilance at the same time.

Given that the scales are relatively independent, people can be grouped in terms of four coping profiles. People high in vigilance and low in cognitive avoidance are referred to as *sensitizers* and adopt a rigid monitoring style in threatening situations. People low in vigilance and high in cognitive avoidance, however, are known as *repressors* and adopt a consistent avoidant style in threatening situations. A high score on both vigilance and cognitive avoidance is thought to be a particularly maladaptive coping profile (indeed, this group is referred to as *unsuccessful copers* or *high anxious*) while a low score on both dimensions is the hallmark of *flexible* or *non-defensive* coping.

The MCI consists of eight hypothetical threat scenarios, half of which depict a physical threat situation (e.g., a turbulent plane ride) and the other half an ego threat situation (e.g., making a public speech). The MCI can therefore be divided into two subtests of responses to physical and ego threats. Each scenario is followed by 18 possible responses that are reworded to reflect the content of the particular scenario. These 18 responses comprise nine vigilant coping strategies and nine avoidance coping strategies. The nine vigilant coping strategies are: (1) recalling negative events; (2) self-pity; (3) information search; (4) comparison with others; (5) planning; (6) escape tendency; (7) control via information; (8) anticipation of negative events; and (9) situation control. The nine cognitive avoidance coping strategies are: (1) minimization; (2) self-enhancement; (3) re-interpretation; (4) attentional diversion; (5) down playing; (6) denial; (7) emphasizing one's own efficacy; (8) accentuating positive aspects; and (9) trust. These 18 coping strategies do not represent independent dimensions or sub-facets of vigilant and avoidance coping; these merely serve as test items to generate scores for the two scales (Schwarzer & Schwarzer, 1996). Confirmatory factor analysis verified that vigilance and avoidance are distinct and distinguishable dimensions of the scale (Krohne et al., 2000).

Participants respond on a true–false scale to indicate whether or not they would use each strategy. Scores can be obtained for each coping style (i.e., vigilance and avoidance) and each type of threat, resulting in four scores

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representing vigilant coping in physical threat situations, vigilant coping in ego threat situations, avoidant coping in physical threat situations, and avoidant coping in ego threat situations.

Sample

The initial test of the MCI was conducted with 426 West German participants ranging in age from 14 to 76 years (Krohne, Rosch, & Kursten, 1989). An English version of the MCI was also created and tested with native speaking university students in America and Canada ($N = 348$; Krohne et al., 2000). The mean for the vigilance subscale was 26.26 ($SD = 6.59$) for men and 28.06 ($SD = 6.35$) for women. The mean for the cognitive avoidance subscale was 22.95 ($SD = 5.69$) for men and 20.33 ($SD = 6.91$) for women.

Reliability

Internal Consistency

The MCI exhibited Cronbach alpha coefficients between .80 and .88 (Krohne, 1989; Krohne et al., 1989; Schumacher, Krohne, & Kohlmann, 1989). The English version of the scale also exhibited alpha coefficients of .84 for each subscale.

Test–Retest

The English version of the scale yielded acceptable test–retest reliability over two weeks of .70 for the vigilance subscale and .84 for the cognitive avoidance subscale (Krohne et al., 2000).

Validity

Convergent/Concurrent

The MCI showed convergent validity in tests of associations with other coping-related measures (Krohne et al., 2000). Vigilance correlated positively with negative affect ($r = .14$ to .18), behavioral inhibition ($r = .19$ to .23), and several subscales from the COPE scale (Carver et al., 1989, reviewed later in this chapter) including planning coping ($r = .19$ to .23), active coping ($r = .15$ to .22), instrumental social support ($r = .20$ to .26), venting emotions ($r = .23$ to .26), and restraint coping ($r = .19$ to .24).

Consistent with the observation that the MCI assesses attentional deployment in a similar way to the MBSS (Miller, 1987), Muris et al. (1994) found that the monitoring subscale of the MBSS was highly correlated with the vigilance subscale of the MCI ($r_s > .40$), and that the blunting subscale of the MBSS was similarly correlated with the avoidance subscale of the MCI ($rs > .50$). Within the MCI, the vigilance subscales were strongly positively correlated across the physical threat and ego threat scenarios (.60), as were the cognitive avoidance subscales (.57) (Krohne et al., 2000). This finding was replicated by Krohne and Egloff (2005), who also found positive correlations across scenarios within the vigilance ($r = .59$) and avoidance scales ($r = .47$).

Divergent/Discriminant

Showing evidence of discriminant validity, vigilance was unrelated to meaningful subscales of the COPE, including acceptance, and various forms of disengagement (behavioral, mental). In contrast, cognitive avoidance tended to be uncorrelated with more problem-focused forms of coping, such as active coping and planning. This scale was also uncorrelated with behavioral activation, or approach (Krohne et al., 2000). Cognitive avoidance was negatively correlated with negative affect, $r = -.20$ to $-.39$ and behavioral inhibition, $r = -.16$ to $-.28$) although not always significantly for the coping variables (e.g., active coping and venting emotions). Finally, Krohne et al (2000) found that vigilance and cognitive avoidance coping strategies were modestly negatively correlated with one another ($r = -.23$), a finding replicated by Krohne and Egloff (2005).

Construct/Factor Analytic

To examine the factor structure of the MCI, Krohne et al. (2000) had 169 students complete the MCI, and conducted confirmatory factor analyses separately for the ego threat and physical threat subscales. For the ego threat subscale, fit indices demonstrated that the two-dimensional model had good fit to the data. For the physical threat subscale, the two-dimensional model demonstrated good fit once the model was respecified to allow the residuals associated with vigilance and cognitive avoidance in the 'visiting the dentist' and 'turbulent flight' situations to covary. This suggests that for these two scenarios, vigilance and cognitive avoidance were not completely independent of each other. In another study, Krohne, Schmukle, Burns, Egloff, and Spielberger (2001) had 720 college students (360 North Americans and 360 Germans) complete the MCI and conducted both

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exploratory and confirmatory factor analyses. The exploratory factor analysis identified two factors with eigenvalues over 1, with the vigilance items mapping on to one factor, and the cognitive avoidance items mapping on to the other factor. The confirmatory factor analyses showed that a two-factor model had good fit for the North American sample, but failed to meet the criteria for good fit for the German sample. The misfit for the German sample was rectified by allowing the residuals of 'dentist' and 'flight' to covary, as in Krohne et al. (2000).

Criterion/Predictive

The MCI has been found to predict emotion regulation and health outcomes in medical contexts (Krohne & Egloff, 2005). Vigilance was associated with greater negative affect ($r = .18$), lower self-esteem ($r = -.19$), and higher neuroticism ($r = .34$). On the other hand, avoidance predicted less negative affect ($r = -.41$), greater positive affect ($r = .32$), better self-esteem ($r = .26$), and lower neuroticism ($r = -.43$), marking it as a useful emotion regulation strategy in these contexts. However, vigilance was positively associated ($r = .27$) and avoidance negatively associated ($r = -.25$) with symptom reporting. As a result, vigilant individuals may be less happy than avoidant individuals, but also more likely to receive treatment for potentially life-threatening illnesses.

The MCI also predicted self-reported and physiological stress reactions in a sample of patients awaiting surgery (Krohne, 1989). Individuals high in both vigilance and avoidance (unsuccessful copers) showed the most subjective and objective levels of stress, while individuals low in both dimensions (flexible copers) showed the lowest levels of stress.

Location

Krohne, H., Egloff, B., Varner, L., Burns, L., Weidner, G., & Ellis, H. (2000). The assessment of dispositional vigilance and cognitive avoidance: Factorial structure, psychometric properties, and validity of the Mainz Coping Inventory. *Cognitive Therapy & Research, 24*, 297–311. doi: 10.1023/A:1005511320194.

Results and Comments

The MCI has been used to investigate reactions to a number of threatening life events. For example, the measure has been used to test how people cope with the stress of surgery (Krohne, Heinz, Kleeman, Hardt, & Thesen, 1990), high-stakes athletic competitions (Krohne & Hindel, 1988), exposure to threatening health communications (Nestler & Egloff, 2012), reactions to media violence (Krahe, Moller, Berger, & Felber, 2011), and academic performance (Krohne, 1993; Krohne & Hock, 1993). In general, cognitive avoidance has been found to be a particularly effective strategy in achievement situations; individuals who scored high in cognitive avoidance tended to outperform those who scored low on this dimension, or high in vigilance, in the athletic and academic stress situations. This echoes findings with the conceptually similar monitoring subscale of the MBSS (Miller, 1987), which suggest that cognitive vigilance may ultimately prove to be a maladaptive and stressful coping strategy in situations of extreme or chronic stress.

Krohne's theory proposes that the environment plays an important role in successful coping, and the degree to which people are enabled by the environment to use their coping strategies of choice. For example, in one test of this logic Krohne (1993) found that repressors and sensitizers performed equally well on an academic test when provided with structured instructions on the content of the test ('structured preparation'). However, sensitizers were impeded and repressors facilitated in their performance when given no information about the content that would be tested ('unstructured preparation'). Accordingly, it is important to consider how people's dispositional coping styles may result in adaptive or maladaptive coping depending on the situation. This theorizing represents an example of the kind of attempt to synthesize research on dispositional and situational coping that we called for in the introduction of this chapter.

The two dimensions of vigilance and cognitive avoidance provide a useful framework with which to categorize reactions to stressful events. However, the MCI as a measure does suffer from some limitations. As with the MBSS, the instrument relies on hypothetical scenarios to measure dispositional reactions to stress. Some researchers have criticized this type of measurement as lacking ecological validity (e.g., Muris & Schouten, 1994; Steptoe, 1989) and as a sub-optimal way of measuring people's actual coping style.

It can also be noted that within the vigilance subscale there are both measures of rumination (self-pity, recalling negative information) and more problem-focused responses (planning, information search). Similarly, within the avoidance measure there are measures of self-enhancement and denial as well as reappraisals such as focusing on one's own efficacy and on the positive aspects of the situation. The dimensions thus reflect considerable diversity in coping methods. As a broader philosophical point, the measure focuses on the absence of pathological coping strategies rather than the presence of functional coping strategies. Other measures of coping take a

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more balanced approach to include both adaptive and maladaptive coping strategies (e.g., Ways of Coping Questionnaire; Folkman & Lazarus, 1988 and the COPE Inventory; Carver et al., 1989).

It should be further noted that the MCI until recently had only been validated in German samples (see Schwarzer & Schwarzer, 1996). Krohne et al. (2000) have reported on the construction and validation of an English version of the MCI, demonstrating it has acceptable reliability and validity in terms of the factorial structure. To-date, however, limited research has been conducted with the English version of the MCI.

MAINZ COPING INVENTORY

Ego Threat Subtest

1. Speech: Imagine that you have to make a speech to a group of people (i.e., participants of a course or seminar, parents at a meeting at their children's school) in about 1 hour.
2. Exam: Imagine that you will have an important examination the next morning.
3. Job interview: Imagine that you applied for a job and that, in a few minutes, your application interview will start.
4. Mistake on the job: Imagine that you have made a mistake on the job which shouldn't have happened and that you are to have a talk with your boss.

Physical Threat Subtest

1. Dentist: Imagine that you haven't been to the dentist for quite a long time. You are now sitting in his waiting room because you are having problems with your teeth.
2. Group of people: Imagine that you are walking along through town in the late evening. A group of people, who look suspicious, approach you out of a side street.
3. Inexperienced driver: Imagine that you are a front seat passenger next to an obviously inexperienced driver. Road conditions are poor due to snow and ice.
4. Turbulent flight: Imagine that you are sitting in an airplane. The flight has been turbulent for quite a while now, and the 'No Smoking' and 'Fasten Seat Belts' signs have lit up.

Source: Krohne et al. (2000). The assessment of dispositional vigilance and cognitive avoidance: Factorial structure, psychometric properties, and validity of the Mainz Coping Inventory. *Cognitive Therapy & Research, 24*, 297–311.
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COPING REACTIONS FOR THE THREAT SCENARIO 'PUBLIC SPEECH'

Imagine that you have to make a speech to a group of people (i.e. participants of a course or seminar, parents at a meeting at their children's school) in about one hour.

In this situation . . .

1. I carefully review the topics I'm going to present.
2. I tell myself: 'Everything will go well.'
3. I don't think about the speech any more.
4. I think about what I can do if I lose track of what I wanted to say.
5. I'm considerably more stressed than most people I know.
6. I prefer to talk with friends about something other than the speech.
7. I think about what questions might be asked after the speech.
8. I stay completely calm.
9. I remember the advice of people who already had to make a similar speech.
10. I tell myself: 'I've been able to cope with situations that were far more trying.'

Items No. 1, 4, 5, 7, and 9 indicate vigilant coping, items 2, 3, 6, 8, and 10 indicate cognitive avoidance.

Source: Reprinted from *Personality and Individual Differences*, *30* (7), Krohne, H.W., Schmukle, S.C., Burns, L.R., Egloff, B., & Spielberger, C.D. The measurement of coping in achievement situations: An international comparison, 1225–1243. Copyright (2001), with permission from Elsevier.

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COPING REACTIONS FOR THE THREAT SCENARIO 'INEXPERIENCED DRIVER'

Imagine that you are riding in a car as a front-seat passenger next to an obviously inexperienced driver. Road conditions are poor due to snow and ice.

In this situation . . .

1. I remember similar dangerous situations that I have experienced in the past.
2. I tell myself: 'Nothing terrible is going to happen.'
3. I am glad that I don't lose my composure as easily as most others.
4. I think: 'I'm the one this always happens to.'
5. I tell myself: 'Thank goodness, he's not driving that fast.'
6. I watch the driver carefully and try to tell in advance when he is going to make a mistake.
7. I think that I don't cope with this kind of situation (for instance, by staying calm and relaxed) as well as most of my acquaintances.
8. I just stop looking at the road and either think about something else, or look at the scenery.
9. I stay completely calm.
10. I tell myself: 'In future, I'll only go on rides like this if I myself am the driver, never again as a passenger.'
11. I'd very much like to say: 'Stop, I want to get out.'
12. I tell myself: 'As a passenger, one often perceives the driver's way of driving as unsteady, whereas in fact, the driver isn't driving all that badly.'
13. I tell myself: 'I've been able to cope with situations that were far more trying than this one.'
14. 'I drive along with the driver', i.e., I act as if I myself were driving.
15. I think about everything that could go wrong.
16. I think: 'Somehow this driver also has to have the opportunity to practice driving when road conditions are poor.'
17. I tell myself: 'When one has fastened one's seat belt and is moreover driving so slowly, not too much can go wrong.'
18. I think about what I should do if the car should start to skid.

Source: Used with permission from *Attention and Avoidance* by Heinz Walter Krohne, ISBN 0-88937-108-3 and ISBN 3-8017-0664-8, Hogrefe & Huber Publishers and Hogrefe, 1993. Copyright © 1993 Hogrefe & Huber Publishers, Seattle, WA.

Coping Inventory for Stressful Situations (CISS)

(Endler & Parker, 1990, 1994).

Variable

The CISS is a dispositional measure of coping style.

Description

The CISS was developed as an alternative to other coping measures that suffered from poor psychometric properties and consequently underwent rigorous empirical development and testing. The CISS is a 48-item instrument comprised of three 16-item subscales measuring task-oriented coping, emotion-oriented coping, and avoidance-oriented coping. Individuals indicate the extent to which they engage in these various coping strategies when encountering a difficult, stressful, or upsetting situation.

Although the CISS was developed as a dispositional measure of coping, a modified situational measure was developed by Endler and Parker (1994). The CISS Situation-Specific Coping (CISS-SSC) is a 21-item instrument with three 7-item subscales measuring task-oriented, emotion-oriented, and avoidance-oriented coping. Instead of reporting how they normally react in stressful situations, in the CISS-SSC, individuals focus on a particular stressful event and answer the items as they relate to that particular event.

Sample

The CISS was normed on a sample of 559 undergraduate students (Endler & Parker, 1990). The mean for task-oriented coping was 3.53 ($SD = 0.57$) for men and 3.54 ($SD = 0.63$) for women; the mean for emotion-oriented coping was 2.85 ($SD = 0.65$) for men and 3.20 ($SD = 0.73$) for women; and the mean for avoidance-oriented coping was 2.75 ($SD = 0.64$) for men and 3.08 ($SD = 0.70$) for women. The CISS-SSC was normed on 432 undergraduate students (Endler & Parker, 1994). Means and standard deviations for the CISS-SSC were omitted from the paper.

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Reliability

Internal Consistency

The CISS exhibited Cronbach alpha coefficients for task-oriented coping of .88 for men and .91 for women; emotion-oriented coping alpha coefficients were .76 for men and .81 for women; and avoidance-oriented coping alpha coefficients were .77 for men and .83 for women (Endler & Parker, 1990). The CISS-SSC produced similarly consistent scales, with alpha coefficients of .78 for men and .78 for women on task-oriented coping, .83 for men and .84 for women on emotion-oriented coping, and .70 for men and .80 for women on avoidance-oriented coping.

Test–Retest

Test–retest reliability statistics were moderate over eight weeks (Endler & Parker, 1994). The three subscales yielded test–retest reliabilities of .74, .66, and .68 for task-oriented, emotion-oriented, and avoidance-oriented coping, respectively. Later tests by Endler and Parker (1994) confirmed the consistency of these psychometric findings in new samples. Test–retest reliability over 12 weeks was found to be poor to moderate by other researchers, however (.58 to .62; Rafnsson, Smari, Windle, Mears, & Endler, 2006).

Validity

Convergent/Concurrent

The CISS showed acceptable convergent validity in tests that compared the measure with the Ways of Coping Questionnaire (WCQ; Folkman & Lazarus, 1988) and the Coping Strategy Indicator (CSI; Amirkhan, 1990, both measures reviewed later in this chapter). The CISS task-oriented coping subscale correlated strongly and positively with the WCQ and CSI problem-focused subscales ($r = .67$ and .50, respectively; Endler & Parker, 1990; Endler & Parker, 1994).

Subscales in the CISS also correlate in expected ways with relevant personality traits. For example, Cosway, Endler, Sadler, and Deary (2007) found task-oriented coping was positively associated with extraversion ($r = .24$), while emotion-oriented coping was positively associated with neuroticism ($r = .63$). In addition to these patterns, task-oriented coping was positively associated ($r = .35$) with conscientiousness, a personality trait that is associated with thoroughness, efficiency, and task-focused action.

Divergent/Discriminant

Cosway et al. (2007) found that emotion-oriented and avoidance coping were unrelated to problem-focused subscales of the WCQ and CSI. They also found that task-oriented coping was negatively associated with neuroticism ($r = -.23$), and emotion-oriented coping was negatively associated with extraversion ($r = -.26$) and conscientiousness ($r = -.32$). All three coping subscales tended to be uncorrelated with psychoticism, suggesting good discriminant validity (Endler & Parker, 1990).

Construct/Factor Analytic

Construct validity of the CISS was established in Endler and Parker's (1994) original assessment. In this study, 832 college students and 483 adult community members completed the CISS, and a principal components analysis was conducted to determine the CISS structure. In both samples, there was support for a three-component structure. The task-oriented items loaded uniquely on one component, the emotion-focused items uniquely on another component, and with the exception of two items in the adult community sample, the avoidance items loaded uniquely on a third component. This structure has since been replicated in a range of other populations, including health professionals (Cosway et al., 2007) and patients with major depressive disorder (McWilliams, Cox, & Enns, 2003).

Criterion/Predictive

In initial tests by Endler and Parker (1990), emotion-oriented coping was found to covary positively with a number of disorders of emotion regulation, including depression and anxiety in both men ($r = .43$ and .49) and women ($r = .55$ and .51). Task-oriented coping was negatively associated with these disorders in women ($r = -.34$ and $-.45$), while avoidance-oriented coping was positively associated with depression and anxiety among men ($r = .38$ and .37).

More recently, Hurt et al. (2011) have found support for the validity of the CISS with patients suffering from Parkinson's disease. In support of the construct validity, the authors demonstrated that the use of emotion-focused coping was positively associated with depression ($r = .45$) and anxiety ($r = .65$). In addition, avoidance

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coping was positively correlated with anxiety ($r = .12$), replicating the findings among men in Endler and Parker's (1990) original analysis. In contrast, task-orientated coping was negatively associated with depression ($r = -.20$) and anxiety ($r = -.12$), replicating Endler and Parker's findings among women.

Location

Endler, N., & Parker, J. (1990). *Coping Inventory for Stressful Situations (CISS): Manual*. Toronto: Multi-Health Systems.

Results and Comments

Overall, research using the CISS supports the notion that task-oriented coping is associated with greater well-being and positive adjustment to stress, while emotion-oriented and avoidance-oriented coping tend to be associated with greater distress and maladaptive adjustment. These associations have been found across a wide variety of stressful circumstances, including among people coping with academic worries (Zeidner, 1994), eating disorders (Koff & Sangani, 1998), chronic disease (Hurt et al., 2011), desire to quit smoking (Naquin & Gilbert, 1996), and insomnia (Morin, Rodrigue, & Ivers, 2003).

The main strength of the CISS lies in its robust psychometric properties, rather than its theoretical novelty. The factor structure has been replicated in an impressive array of populations (Cosway et al., 2007; Furukawa, Suzuki-Moor, & Hamanaka, 1993; Hurt et al., 2011; McWilliams et al., 2003; Pedrabissi & Santinello, 1994; Rafnsson et al., 2006), yet the instrument is not as widely used as some others in the field. The CISS was developed mainly from items adopted from previous instruments, and echoes the basic dimensions of other measures (e.g., Folkman & Lazarus, 1980). As a result, the measure has gained less traction in the literature than might have been expected based on its impressive psychometric pedigree.

COPING INVENTORY FOR STRESSFUL SITUATIONS (SAMPLE ITEMS)

Task Coping

Schedule my time better
Think about how I solved similar problems
Analyze the problem before reacting
Come up with several different solutions to the problem

Emotion Coping

Preoccupied with aches and pains
Tell myself that it is not really happening to me
Blame myself for not knowing what to do
Worry about what I am going to do

Avoidance Coping

Go out for a snack or meal
Watch TV
Try to be with other people
Phone a friend

Source: Endler, N.S., & Parker, J.D.A. (1994). Assessment of multidimensional coping: Task, emotion, and avoidance strategies. *Psychological Assessment*, *6*, 50–60.

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COPE Inventory (COPE)

(Carver et al., 1989).

Variable

The COPE is a measure of dispositional tendencies to adopt particular coping styles.

Description

Carver et al. (1989) constructed the COPE to assess stable individual differences in coping, partly in reaction to claims by Folkman and Lazarus (1980, 1985); Lazarus & Folkman, 1984 that coping is a dynamic and malleable process. The authors argued that it was important to consider the personality characteristics that might predispose individuals towards a particular way of coping with stress.

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The COPE is a 60-item measure comprising 15 subscales with 4 items each. The subscales are planning, active coping, suppression of competing activities, restraint, use of instrumental support, use of emotional support, positive reinterpretation and growth, acceptance, religious coping, focusing on and venting emotions, denial, behavioral disengagement, mental disengagement, substance use, and humor. Individuals are asked to indicate the extent to which they use these coping strategies when encountering difficult or stressful events in their lives. Like the CISS, a situational version of the COPE Inventory was developed by rewording the instructions so that participants think about a particular event when answering the items. A brief 28-item version of the scale is also available (Carver, 1997; Kapsou, Panayiotou, Kokkinos, & Demetriou, 2010).

Sample

The COPE Inventory was normed on 978 undergraduate students (Carver et al., 1989). The means and standard deviations for the subscales are shown below. The brief COPE was assessed using a sample of 168 hurricane victims (Carver, 1997).

MEANS AND STANDARD DEVIATIONS FOR THE COPE INVENTORY

	M	*SD*
1. Active coping	11.89	2.26
2. Planning	12.58	2.66
3. Suppression of competing activities	9.92	2.42
4. Restraint coping	10.28	2.53
5. Instrumental social support	11.50	2.88
6. Emotional social support	11.01	3.46
7. Positive reinterpretation	12.40	2.42
8. Acceptance	11.84	2.56
9. Turning to religion	8.82	4.10
10. Focus on and venting emotions	10.17	3.08
11. Denial	6.07	2.37
12. Behavioral disengagement	6.11	2.07
13. Mental disengagement	9.66	2.46
14. Alcohol disengagement	1.38	0.75

Note: Range of possible values is 4–16 (except for alcohol disengagement which ranges from 1–4). The humor subscale is omitted because it was added in a later version of the instrument (Carver et al., 1989, p. 280).

Reliability

Internal Consistency

The dispositional COPE Inventory exhibited Cronbach alpha coefficients ranging from .45 (Mental disengagement) to .92 (Turning to religion) in the large sample of 978 undergraduates (Carver et al., 1989).

Test–Retest

Test–retest reliability over 6- and 8-week intervals yielded correlations higher than .42 (mental disengagement; Carver et al., 1989). Other researchers found acceptable test–retest reliability over four weeks (ranging from .60 to .82; Fillion, Kovacs, Gagnon, & Endler, 2002) and one year (ranging from .58 to .72; Cooper, Katona, & Livingston, 2008).

Validity

Convergent/Concurrent

Based on their reasoning that the COPE measured stable individual differences in coping, Carver et al. (1989) tested the associations between COPE subscales and personality traits that they hypothesized would covary. The

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authors demonstrated predicted positive associations between 'desirable' coping strategies and 'desirable' personality traits (e.g., active coping and optimism, $r = .32$, planning and self-esteem, $r = .22$, positive reinterpretation and optimism, $r = .41$), Clark, Bormann, Cropanzano, and James (1995) provided evidence that the COPE subscales correlated as expected with corresponding subscales in the CSI (Amirkhan, 1990; e.g. COPE active coping, planning, and suppression of competing activities and CSI problem-solving, $r = .69$, COPE mental disengagement and CSI avoidance, $r = .89$) and WCQ (Folkman & Lazarus, 1988; e.g. WCQ seeking social support and COPE seeking instrumental and social support, $r = .86$).

Divergent/Discriminant

As evidence of discriminant validity, many of the COPE subscales were uncorrelated with social desirability (Carver et al., 1989) and the more adaptive coping strategies showed inverse associations with 'undesirable' traits (e.g., active coping and anxiety, $r = -.25$).

Construct/Factor Analytic

Carver et al. (1989) initially found evidence for an 11-factor structure, with the active coping and planning subscales loading on one factor. The authors subsequently separated these scales on theoretical grounds. Cook and Heppner (1997) found both 12-factor and 14-factor solutions, although the confirmatory factor analysis fit indices for the 14-factor solution were slightly better. Lyne and Roger (2000) found that 11-, 12-, and 13-factor solutions fit the data equally well, and reported that a high number of items loaded on more than one factor at over .40. The most robust subscales in their analysis were seeking social support, personal growth, planning and active coping, turning to religion, venting, denial, and behavioral disengagement. Based on the observation that the COPE structure was highly unstable, Lyne and Roger (2000) suggested a new scoring key that reduces the scale to three factors labeled (1) rational or active coping; (2) emotion coping; and (3) avoidance coping or helplessness.

Criterion/Predictive

In an analysis that compared the COPE with the CSI (Amirkhan, 1990) and WCQ (Folkman & Lazarus, 1988), Clark et al. (1995) demonstrated that the COPE Inventory explained the most variance in relevant outcome measures such as physical stress symptoms (35%, versus 22% for WCQ and 14% for CSI), life satisfaction (30% vs. 26% for WCQ and 15% for CSI), positive affect (41% vs. 28% for WCQ and 15% for CSI) and negative affect (40% vs. 33% for WCQ and 23% for CSI).

In general, problem-focused coping subscales such as active coping and planning are found to predict positive social and well-being outcomes, including more functional attachment styles (Cooper et al., 2008), fewer symptoms of psychological distress (Khawaja, 2008), more physical and psychological well-being at work (Muhonen & Torkelson, 2011), and an absence of anxiety and depression (Fillion et al., 2002). The relationship between emotion-focused subscales such as seeking emotional support from close others, and mental health outcomes is less clear. Often using emotional support is associated with more problematic mental states, including anxiety and depression (Fillion et al., 2002; Khawaja, 2008), although this is likely reflective of individuals' attempts to improve their mental state, rather than a negative mental health outcome of using emotional support.

Location

Carver, C.S., Scheier, M.F., & Weintraub, J.K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, *56*, 267–283. doi:10.1037/0022-3514.56.2.267.

Results and Comments

The COPE Inventory is one of the most widely used coping measures in the literature. The instrument has been used to assess how people cope in a variety of stressful situations, ranging from the health domain (e.g., Antoni, Esterling, Lutgendorf, Fletcher, & Schneiderman, 1995; Carver et al., 1993; Ironson et al., 1994; Mackay, Charles, Kemp, & Heckhausen, 2011), to sporting activity (e.g., Abrahamsen, Roberts, Pensgaard, & Ronglan, 2008; Voight, 2009), academic achievement (e.g., Carver et al., 1989; Thompson & Gaudreau, 2008), work stress (e.g., Muhonen & Torkelson, 2011), and even missile attacks (e.g., Ben-Zur & Zeidner, 1991; Zeidner & Hammer, 1992). The COPE Inventory has proven to be a useful and effective measure of dispositional coping styles.

The COPE taps more fine-grained, or specific forms of coping than other measures of coping styles (e.g., the CISS), meaning that it may have greater practical utility (Folkman & Moskowitz, 2004). A potential limitation of

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this specificity is that the output is 15 subscales, which makes for a somewhat cumbersome instrument. Some researchers may find that this impedes its practical application in samples that are under time pressure (e.g., convenience sampling; some clinical groups). Fortunately, the brief COPE appears to be an adequate substitute for the full COPE Inventory in such circumstances (Carver, 1997).

BRIEF COPE INVENTORY

Instructions: 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.

1 = I usually don't do this at all
2 = I usually do this a little bit
3 = I usually do this a medium amount
4 = I usually do this a lot

Active coping
I take additional action to try to get rid of the problem.
I concentrate my efforts on doing something about it.
I do what has to be done, one step at a time.
I take direct action to get around the problem.

Planning
I try to come up with a strategy about what to do.
I make a plan of action.
I think hard about what steps to take.
I think about how I might best handle the problem.

Suppression of competing activities
I put aside other activities in order to concentrate on this.
I focus on dealing with this problem, and if necessary let other things slide a little.
I keep myself from getting distracted by other thoughts or activities.
I try hard to prevent other things from interfering with my efforts at dealing with this.

Restraint coping
I force myself to wait for the right time to do something.
I hold off doing anything about it until the situation permits.
I make sure not to make matters worse by acting too soon.
I restrain myself from doing anything too quickly.

Seeking social support for instrumental reasons
I ask people who have had similar experiences what they did.
I try to get advice from someone about what to do.
I talk to someone to find out more about the situation.
I talk to someone who could do something concrete about the problem.

Seeking social support for emotional reasons
I talk to someone about how I feel.
I try to get emotional support from friends or relatives.
I discuss my feelings with someone.
I get sympathy and understanding from someone.

Positive reinterpretation and growth
I look for something good in what is happening.
I try to see it in a different light, to make it seem more positive.
I learn something from the experience.
I try to grow as a person as a result of the experience.

Acceptance
I learn to live with it.
I accept that this has happening and that it can't be changed.
I get used to the idea that it happened.
I accept the reality of the fact that it happened.

Turning to religion
I seek God's help.
I put my trust in God.
I try to find comfort in my religion.
I pray more than usual.

Focus on and venting of emotions
I get upset and let my emotions out.
I let my feelings out.
I feel a lot of emotional distress and I find myself expressing those feelings a lot.
I get upset, and am really aware of it.

Denial
I refuse to believe that it has happened.
I pretend that it hasn't really happened.
I act as though it hasn't even happened.
I say to myself 'this isn't real.'

Behavioral disengagement
I give up the attempt to get what I want.
I just give up trying to reach my goal.
I admit to myself that I can't deal with it, and quit trying.
I reduce the amount of effort I'm putting into solving the problem.

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Mental disengagement

I turn to work or other substitute activities to take my mind off things.
I go to movies or watch TV, to think about it less.
I daydream about things other than this.
I sleep more than usual.

Alcohol–drug disengagement

I drink alcohol or take drugs, in order to think about it less.

Source: Carver, C.S., Scheier, M.F., & Weintraub, J.K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56, 267–283.

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STATE COPING MEASURES

Coping Strategy Indicator (CSI)

(Amirkhan, 1990).

Variable

The CSI measures coping responses to a specific stressful event.

Description

Amirkhan (1990) constructed the CSI using a bottom-up method of taking items from previous research and submitting them to a principal-factor analysis. The CSI is a situational measure of coping because it asks individuals to recall a problem that was important and caused them to worry. Individuals then indicate the extent to which they used 33 coping strategies while dealing with the problem. The CSI consists of three subscales of 11 items each: problem-solving, seeking social support, and avoidance.

Sample

The CSI was developed by soliciting responses from 458 community members who were recruited at supermarkets, health clinics, and unemployment agencies. The psychometric properties were tested in a sample of 92 undergraduate student sample (Amirkhan, 1990). Information about means and standard deviations was not available from the original paper.

Reliability

Internal Consistency

Amirkhan (1990) reported Cronbach alpha coefficients of .93 for seeking support, .89 for problem solving, and .84 for avoidance.

Test–Retest

Amirkhan (1990) also reported that test–retest reliability up to four and eight weeks later was .82 for a sample of 92 community members and .81 among 87 undergraduate students.

Validity

Convergent/Concurrent

Amirkhan (1990) reported that the CSI correlated as expected with counterpart subscales from the WCQ (Folkman & Lazarus, 1988) using revised scales by Vitaliano, Russo, Carr, Maiuro, and Becker (1985). In particular, CSI problem solving correlated highly and positively with WCQ problem-focused coping ($r = .56$), as did CSI avoidance and WCQ avoidance ($r = .55$), and did CSI social support and WCQ social support ($r = .46$). Somewhat surprisingly, WCQ social support was positively correlated more strongly with CSI problem solving ($r = .55$) than CSI seeking social support. This may have been due to the instrumental nature of the social support items in the WCQ (e.g., 'Talked to someone who could do things about the problem').

Clark et al. (1995) found no correlation between the CSI seeking social support subscale and WCQ social support. The authors did report high correlations between other corresponding subscales (and null correlations

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between non-corresponding subscales) in the CSI, WCQ, and COPE Inventory, however. They concluded that the scales tap similar constructs and are highly congruent.

Amirkhan (1994) assessed the convergent and discriminant validity of the CSI in three studies. Replicating a procedure by Miller (1987), participants who scored high on problem solving were most likely to choose to hear information about an upcoming electric shock; participants who scored high on avoidance were most likely to choose to hear distracting music; and participants who scored high on social support and avoidance were likely to choose to talk to a confederate. In a second study, Amirkhan found that students scored higher in problem solving after completing a critical thinking course compared with completing an introductory psychology course. Finally, a substance abuse treatment program was evaluated and found to reduce avoidant coping and increase seeking of social support.

Divergent/Discriminant

In the study by Amirkhan (1994) outlined above, participants who scored high on problem solving were not likely to seek distraction or support, participants who scored high on avoidance were not likely to seek information, and participants who scored high on social support and avoidance were not likely to seek information or distraction.

Construct/Factor Analytic

Generally, researchers have replicated the 3-factor structure described by Amirkhan (1990). Ager and MacLachlan (1998) had 415 Malawian students complete the CSI, and found, using an exploratory factor analysis, that a three-factor solution explained the data. Desmond, Shevlin, and MacLachlan (2006) had 618 elderly veterans with acquired limb amputations complete the CSI and using confirmatory factor analysis, showed accepted fit for a three-factor model. However, these researchers have argued that a 4-factor structure distinguishing between two types of avoidance coping fits the data best (i.e., support seeking, problem solving, avoidance distraction, and avoidance-withdrawal). Both Ager and MacLachlan (1998) and Desmond et al. (2006) demonstrated that four-factor model had significantly better fit to the data than a three-factor model. Some researchers have even suggested that an 8-factor model is the most appropriate based on confirmatory factor analysis goodness-of-fit indices (Cook & Heppner, 1997).

Criterion/Predictive

In general, avoidance is the subscale most commonly predictive of negative mental health outcomes. Avoidance coping was associated with general stress in college samples (Amirkhan, Risinger, & Swickert, 1995), and with depression, anxiety, and poor marital adjustment in at-risk patients suffering from a major depressive disorder (Spangenber & Theron, 2010). Neither problem solving nor seeking social support were associated with mental health outcomes in these samples.

Location

Desmond, D., Shevlin, M., & MacLachlan, M. (2006). Dimensional analysis of the coping strategy indicator in a sample of elderly veterans with acquired limb amputations. *Personality and Individual Differences, 40*, 249–259. doi: 10.1016/j.paid.2005.04.015.

Results and Comments

Given that the CSI is a situational measure of coping, it can be applied to assess coping in a wide variety of contexts. For example, the CSI has been used to investigate how people cope with physical disability (e.g., Kara & Acikel, 2011), alcohol dependence (Campbell & Spangenberg, 2008), partner violence (e.g., Sullivan, Ashare, Jaquier, & Tennen, 2012), spousal bereavement (Somhlaba & Wait, 2008), and dementia caregiving (e.g., Ashley & Kleinpeter, 2002). Overall, problem solving and social support are associated with positive outcomes and increased well-being, while use of avoidance coping strategies tend to be associated with pathology and dysfunction.

The CSI is a useful tool for assessing specific coping strategies. Yet, the measure has been criticized for comparatively poor goodness-of-fit statistics at the development stage, and some questionable correlations with other established coping measures (Schwarzer & Schwarzer, 1996), as reviewed in the Validity section, above. The range of coping strategies assessed in the CSI is also less than the other well-known situational coping instrument, the Ways of Coping Questionnaire.

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COPING STRATEGY INDICATOR

CSI Item (Subscale)

1. Described your feelings to a friend (SS)
2. Rearranged things so your problem could be solved (PS)
3. Thought of many ideas before deciding what to do (PS)
4. Tried to distract yourself from the problem (A)
5. Accepted sympathy and understanding from someone (SS)
6. Did all you could to keep others from seeing how bad things really were (A)
7. Talked to people about the situation because talking about it made you feel better (SS)
8. Set some goals for yourself to deal with the situation (PS)
9. Weighed up your options carefully (PS)
10. Daydreamed about better times (A)
11. Tried different ways to solve the problem until you found one that worked (PS)
12. Talked about fears and worries to a relative or friend (SS)
13. Spent more time than usual alone (A)
14. Told people about the situation because talking about it helped you come up with solutions (SS)
15. Thought about what needs to be done to straighten things up (PS)
16. Turned your full attention to solving the problem (PS)
17. Formed a plan in your mind (PS)
18. Watched television more than usual (A)
19. Went to someone friend or professional to help you feel better (SS)
20. Stood firm and fought for what you wanted in the situation (PS)
21. Avoided being with people in general (A)
22. Buried yourself in a hobby or sports activity to avoid the problem (A)
23. Went to a friend to help you feel better about the problem (SS)
24. Went to a friend for advice about how to change the situation (SS)
25. Accepted sympathy and understanding from friends who had the same problem (SS)
26. Slept more than usual (A)
27. Fantasized about how things could have been different (A)
28. Identified with characters in movies or novels (A)
29. Tried to solve the problem (PS)
30. Wished that people would just leave you alone (A)
31. Accepted help from a friend or relative (SS)
32. Sought reassurance from those who know you best (SS)
33. Tried to carefully plan a course of action rather than acting on impulse (PS)

Notes:
SS = Social Support; PS = Problem Solving; A = Avoidance.

Source: Desmond et al. (2006). Reprinted from *Personality and Individual Differences, 40* (2), Desmond, D.M., Shevlin, M., & MacLachlan, M. Dimensional analysis of the coping strategy indicator in a sample of elderly veterans with acquired limb amputations, 249–259. Copyright (2006), with permission from Elsevier. Copyright © 1990 by the American Psychological Association.

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The official citation for the scale is: Amirkhan, J.H. (1990). A factor analytically derived measure of coping: The Coping Strategy Indicator. *Journal of Personality and Social Psychology*, *59*, 1066–1074.

Ways of Coping Questionnaire (WCQ)

(Folkman & Lazarus, 1988).

Variable

The Ways of Coping Questionnaire (WCQ) or Ways of Coping Checklist (WCC) is a situational measure of coping strategies.

Description

Individuals focus on a real-life stressful situation and respond to the WCQ based on their responses to that specific situation. The questionnaire consists of 66 items with eight coping scales and 16 filler items. In a student sample, the subscales were problem-focused coping, wishful thinking, detachment, seeking social support,

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focusing on the positive, self-blame, tension reduction, and keep to self (Folkman & Lazarus, 1985). In a community sample of married couples, the scales were planful problem solving, positive reappraisal, escape–avoidance, seeking social support, accepting responsibility, self-controlling, distancing, and confrontive coping (Folkman, Lazarus, Dunkel-Schetter, Delongis, & Gruen, 1986). The latter set is reported as the definitive set of subscales in the WCQ manual (Folkman & Lazarus, 1988).

Vitaliano et al. (1985) published a shorter, updated version of the scale called the Ways of Coping Checklist – Revised (WCC-R). The scale comprised 42 items with five subscales: Problem-focused, seeks social support, blamed self, wishful thinking, and avoidance.

Sample

The WCQ was first tested in a sample of 108 undergraduate students about to undergo a college examination (Folkman & Lazarus, 1985). The means and standard deviations for each scale are contained below (Folkman & Lazarus, 1988).

MEANS AND STANDARD DEVIATIONS FOR WCQ SUBSCALES

	M	*SD*
1. Confrontive coping	3.94	2.09
2. Distancing	3.05	1.78
3. Self-controlling	5.77	2.87
4. Seeking social support	5.40	2.40
5. Accepting responsibility	1.87	1.44
6. Escape–Avoidance	3.18	2.48
7. Planful problem solving	7.25	2.34
8. Positive reappraisal	3.48	2.96

The WCC-R was first tested among a sample of 425 medical students (Vitaliano et al., 1985). The means and standard deviations for each scale are shown below.

MEANS AND STANDARD DEVIATIONS FOR WAYS OF COPING CHECKLIST – REVISED SUBSCALES

	M	*SD*
1. Problem-focused	24.70	8.37
2. Wishful thinking	12.72	5.92
3. Seeks social support	8.87	3.69
4. Blamed self	4.35	2.48
5. Avoidance	12.82	5.37

Reliability

Internal Consistency

The WCQ coping scales exhibited Cronbach alpha coefficients ranging from .61 (distancing) to .79 (positive reappraisal). The WCC-R scales overall exhibited slightly higher alpha coefficients ranging from .74 (avoidance) to .88 (problem-focused).

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Test–Retest

Test–retest reliability of the WCQ was relatively poor over two weeks in surgical patients (ranging from .36 to .52; Sørlie & Sexton, 2001) and over 4 years in parents of children with Down's syndrome (ranging from .39 to .89; Hatton, Knussen, Sloper, & Turner, 1995). However, it should be noted that Folkman and Lazarus (1988) argued that it is inappropriate to consider the test–retest reliability of the WCQ because of the dynamic process the measure is designed to capture. Individuals are expected to adjust their coping responses based on the specific situation, and the success or failure of particular strategies.

Validity

Folkman and Lazarus (1988) claimed evidence for convergent and discriminant validity in the fact that findings with the WCQ were consistent with their theoretical predictions.

Convergent/Concurrent

Clark et al. (1995) provided further evidence for convergent validity by showing generally expected correlations between the WCQ and comparable subscales from the COPE and CSI, reviewed elsewhere in this chapter.

Divergent/Discriminant

Problem-focused coping ($r = -.14$) and seeking social support ($r = -.12$) were significantly negatively related to occupational stress while the other coping strategies (i.e., self-blame, wishful thinking, and avoidance) had smaller relationships with occupational stress ($r = -.02$ to $-.06$) – (Clark et al., 1995).

Construct/Factor Analytic

Using a sample of 306 students and conducting confirmatory factor analysis, Clark et al. (1995) concluded that the factor structure identified by Folkman et al. (1986) fit the data well. Among 137 employees, Wright (1990) demonstrated support for the 7-factor structure of the measure as well as the Internal Consistency of the seven scales.

Vitaliano et al. (1985) examined the WCC-R, and found that a principal components analysis originally supported a six-component solution, although loadings on the items suggested that a five-component solution was more parsimonious. Since the original Vitaliano et al. (1985) validation study, the WCC-R has been validated using a confirmatory approach rather than an exploratory approach. In a large sample of full-time Asian employees, Sawang and colleagues (2010) found that a briefer, 5-factor structure model (i.e., problem-focused, seeks social support, self-blame, wishful thinking, and avoidance) fit the data better.

Criterion/Predictive

The WCC-R subscales have been found to correlate with reports of occupational stress in a meaningful way (Sawang et al., 2010). For instance this pattern of relationships indicates that coping strategies related to self-blame, wishful thinking, and avoidance might not be as adaptive as problem-focused coping and seeking social support for the work context.

In terms of mental health, the WCC-R predicted anxiety and depression in spouses of patients with senile dementia, psychiatric outpatients, and medical students (Vitaliano et al., 1985). Overall, wishful thinking and seeking social support were the strongest predictors of anxiety, accounting for up to 14% and 15% of the variance, respectively. Wishful thinking was also a strong positive predictor of depression, accounting for up to 21% of variance, as was problem-focused coping, which accounted for the same amount of variance (but was linked with lower depression).

Folkman et al. (1986) found that the WCQ was a good predictor of mental well-being among married couples. Coping as measured by the WCQ scales was found to be an excellent predictor of psychological health and only a weak predictor of physical health. In a study with nurses, using the briefer WCC-R, Mark and Smith (2011) found no relation between problem-focused coping and clinical anxiety scores, while escape/avoidance ($r = .34$), wishful thinking ($r = .34$), and self-blame ($r = .48$) were all significant predictors. There was a small, but significant, negative correlation between problem-focused coping ($r = -.10$) and depression scores, while self-blame ($r = .38$) and wishful thinking ($r = .28$) were significant positive predictors of depression.

Somewhat surprisingly, Bolger (1990) found that the WCQ did not predict concrete academic outcomes among medical students, although certain subscales like wishful thinking predicted greater anxiety about exam performance ($r = .36$). In line with this, Wright and Sweeney (1989) found civil service employees experienced higher

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diastolic blood pressure when they used the coping strategies of wishful thinking and avoidance. The overall power of the WCQ and WCC-R in predicting psychological outcomes, but limited evidence in predicting practical performance outcomes, suggests it is better used as a predictor of physical and psychological health than of productivity. In addition, these findings indicate less frequent use of maladaptive coping strategies (e.g., wishful thinking), as opposed to more frequent use of adaptive coping strategies (e.g., problem-focused coping), might potentially have greater implications for psychological health.

Folkman and Lazarus (1985) found that the WCQ predicted responses to a stressful examination in a theoretically meaningful way. Students varied their coping style depending on the temporal distance from the exam, measured two days before the exam, after the exam before the grades were posted, and again after the grades were posted. Students showed greater use of problem-focused coping before the exam, distancing after the exam, and wishful thinking, social support, and self-blame depending on the grade received.

Location

Folkman, S., Lazarus, R., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology, 50*, 992–1003. doi: 10.1037/0022-3514.50.5.992.

Vitaliano, P.P., Russo, J., Carr, J.E., Maiuro, R.D., & Becker, J. (1985). The ways of coping checklist: Revision and psychometric properties. *Multivariate Behavioral Research*, *20*, 3–26, doi: 10.1207/s15327906mbr2001_1.

Results and Comments

The WCQ and briefer WCC-R assesses a larger range of coping strategies than the CSI (Amirkhan, 1990). Given that both the WCQ and WCC-R measure situation-specific coping, the authors have encouraged researchers to adjust the wording of the items to reflect the study context. Consequently, the measures are highly adaptable and useful to assess coping in a wide range of contexts. As a result, these questionnaires have been employed to investigate coping with a wide variety of stressful situations in an impressive variety of populations, including children (e.g., Horowitz, Boardman, & Redlener, 1994; Kuther & Fisher, 1998), adolescents (e.g., Chan, 1994; Puskar & Lamb, 1991), parents (e.g., Hatton et al., 1995; Murphy, Flowers, McNamara, & Young-Saleme, 2008; Vidyasagar & Koshy, 2010), working adults (e.g., Sawang et al., 2010; Scherer & Brodzinski, 1990), clinical samples (e.g., Hamilton, Stewart, Crandell, & Lynn, 2009; Lysaker, Davis, Lightfoot, Hunter, & Stasburger, 2005; Siegel, Schrimschaw, & Pretter, 2005), and older adults (e.g., Drozdick & Edelstein, 2001; Lowis, Jewell, Jackson, & Merchant, 2011).

The WCQ and WCC-R have been translated into other languages and validated. A Farsi version of the WCQ, tested on Iranian adults, has also been validated finding a similar 7-factor structure to what Folkman et al. originally identified (Padyab, Ghazinour, & Richter, 2012). The psychometric properties of the WCQ also have been validated in a Turkish community and student sample (Senol-Durak et al., 2012). In addition, a French validation has been conducted on the WCC-R, finding some support for the 5-factor structure but also support for a 3-factor structure of seeking social support, avoidance/self-blame, and problem-solving (Cousson, Bruchon-Schweitzer, Quintard, & Nuissier, 1996; Cousson-Gelie et al., 2010). More recently, a Spanish validation of the WCC-R was conducted and also found support for the reliability of the scales as well as the 5-factor structure (Mayo, Real, Taboada, Iglesias-Souto, & Dosil, 2012).

WAYS OF COPING (SAMPLE ITEMS)

Instruction: To respond to the statements in this questionnaire, you must have a specific stressful situation in mind. Take a few moments and think about the most stressful situation that you have experienced in the past week.

As you respond to each of the statements, please keep this stressful situation in mind. Read each statement carefully and indicate, by circling 0, 1, 2 or 3, to what extent you used it in the situation.

0 = Does not apply or not used
1 = Used somewhat
2 = Used quite a bit
3 = Used a great deal

Planful Problem Solving

Just concentrated on what I had to do next – the next step.
I made a plan of action and followed it.

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Confrontive Coping
I did something which I didn't think would work, but at least I was doing something.
Tried to get the person responsible to change his or her mind.

Distancing
Made light of the situation; refused to get too serious about it.
Went on as if nothing had happened.

Self-Controlling
I tried to keep my feelings to myself.
Kept others from knowing how bad things were.

Seeking Social Support
Talked to someone to find out more about the situation.
Talked to someone who could do something concrete about the problem.

Accepting Responsibility
Criticized or lectured myself.
Realized I brought the problem on myself.

Escape–Avoidance
Wished that the situation would go away or somehow be over with.
Hoped a miracle would happen.

Positive Reappraisal
Changed or grew as a person in a good way.
I came out of the experience better than when I went in.

Source: 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.
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FUTURE RESEARCH DIRECTIONS

The effectiveness of a given coping strategy depends on a complex interplay of people's appraisals, coping resources, and specific features of the environment. This complexity makes it difficult to capture the full variation in coping in one measure, leading some researchers to conclude that, 'the measurement of coping is probably as much art as it is science' (Folkman & Moskowitz, 2004, p. 751). The structure of coping has dominated the approach towards its measurement. It is difficult to establish a consistent structure across the diverse contexts in which coping occurs (see Folkman & Moskowitz, 2004; Skinner, 2003).

Despite the challenges posed by the multidimensional nature of the coping process, improvements can still be made in the measurement of coping. Parker and Endler (2006) recently identified two main problems. First, the proliferation of coping scales has made it difficult to observe meaningful and consistent coping patterns across different populations or stressors. Second, coping research should be limited to using only the most psychometrically rigorous scales to procure valid and generalizable information about coping behavior. We have attempted to follow these guidelines, and chose to highlight only a few key coping scales to meet the challenge set out by Parker and Endler (2006).

Another challenge is the length of coping questionnaires, which has limited published studies where the complete instrument is used (and therefore validated). This is especially the case for some participant groups (e.g., employees, some clinical samples). Indeed, most validation studies reported here were conducted using student samples. The lengthiness of coping instruments has resulted in many researchers only selecting the specific 'ways of coping' that interest them, or is relevant to the specific stressor or context under investigation.

Skinner's (2003) review on coping taxonomies highlighted that specific 'ways of coping' are potentially more relevant and powerful predictors of outcomes, as opposed to broader 'families of coping'. Skinner concluded that focusing on the specific coping mechanism is more likely to unravel the complex processes of coping behavior as these indicators will be more specific predictors of coping outcomes. Researchers should be selective in the coping instruments they choose to administer and base their decision-making on the content of the measures; i.e., ensuring the specific 'ways of coping' are included in any measure, which are relevant to the phenomenon, context, or sample under investigation. This might mean researchers select a smaller number of relevant subscales from the instruments reviewed here.

Criticisms have been leveled at current coping instruments (Folkman & Moskowitz, 2004; Parker & Endler, 2006). One criticism is that most coping inventories, including the measures reviewed above, involve responding either to hypothetical scenarios or recalling past coping experiences (Coyne & Gottlieb, 1996; Porter & Stone, 1996; Steptoe, 1989). Both these procedures fail to assess actual 'in-the-moment' coping. An alternative method of measurement is to use experience sampling to assess 'real time' attempts at self-regulation and coping (Hofmann, Vohs, & Baumeister, 2012).

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Stone and Neal (1984) constructed the Daily Coping Inventory to reduce recall inaccuracy in coping reports. The instrument is completed at the same time each day with respondents asked to report their reactions to the most bothersome event of the day. This method of assessment correlates moderately with recall procedures – between .47 and .58 (Ptacek, Smith, Espe, & Raffety, 1994). Such experience sampling-type measures may change the way people respond to stressors, alerting them to alternative functional (or dysfunctional) ways of coping.

Daily measures of coping may also act as self-regulation interventions in addition to measuring coping. Indeed, counselors, consulting psychologists, and coaches have successfully used experience sampling techniques as a tool for self-tracking and guided analysis with clients (see Foster & Lloyd, 2007). These techniques are useful in practice, as the method prompts the respondent to record affect, coping, or any range of predefined behaviors in real time. The technique can then be used to track the progress or effectiveness of any interventions that are implemented. The major challenges of these approaches are (1) keeping measures brief and easy to complete; and (2) capturing the right information. Because these techniques are emergent, researchers and practitioners alike should draw on the validity evidence presented here when devising coping items for experience sampling.

A relatively new development has been an emerging focus on future-oriented proactive coping (Folkman & Moskowitz, 2004). The majority of coping measures focus on how people coped with past stressful events. This model considers coping as a process that occurs after the onset of a stressful event, and positions individuals as reactive rather than proactive agents in crafting their coping response. An alternative model is to consider how people cope in anticipation of a stressful event to avert or minimize its impact (Aspinwall & Taylor, 1997; Greenglass, Schwarzer, & Taubert, 1999; Schwarzer & Knoll, 2003; Sohl & Moyer, 2009).

This perspective overlaps with emotion regulation research more generally. Gross's (1998, 2002) model of emotion regulation views emotion as an unfolding process. Emotion regulation reflects both attempts to avoid or lessen negative emotions as well as attempts to foster or heighten positive emotions. Stressful events or episodes may trigger an unfolding emotional experience (Folkman & Moskowitz, 2004), which people can attempt to avoid or reduce by using antecedent-focused emotion regulation strategies (i.e., situation selection, situation modification, attention deployment, cognitive reappraisal). Once the emotional experience is 'full blown' individuals can attempt to regulate emotions via response modulation (i.e., attempts at managing physiological, affective, and behavioral reactions). Coping research too can benefit from an understanding of the preventive steps people take to avoid or mitigate the experience of future negative emotions associated with stress, as well as reactive coping responses after a stressful event has occurred.

Burgeoning research on proactive coping has found that it has considerable power for cultivating and maintaining psychological well-being. Sohl and Moyer (2009) concluded that proactive coping was particularly protective – resulting in enhanced positive affect and life satisfaction, and fewer stress-related physical symptoms – when conceptualized as a positively-focused striving for goals (Aspinwall & Taylor, 1997) rather than prevention of negative outcomes (Bode, de Ridder, Kuijer, & Bensing, 2007). The results demonstrated that aspiring for a positive future is distinctly predictive of well-being and suggests that research should focus on accumulating resources and goal setting in designing interventions to promote proactive coping. Sohl and Moyer's (2009) work further suggests that interesting overlaps may exist between proactive coping and promotion regulatory focus (Higgins, 1997) that could combine to predict an optimal level of positive goal engagement in stressful situations.

Finally, integrating research into the measurement of coping with assessments of self-regulation and emotion-regulation more generally would seem desirable. Just as assessing the interplay between dispositional coping styles and situational coping strategies may provide a more nuanced understanding of coping behavior, so too may including the assessment of state or trait regulatory capacities. Specific coping strategies differ in the degree to which they require self-regulatory resources. For example, interacting directly with a stressor via problem-focused coping strategies may take more willpower than engaging in distraction or avoidance. People who are dispositionally low in self-regulation ability may therefore be more likely to be unsuccessful in certain coping efforts, and consequently more predisposed toward using particular coping strategies over others.

In summary, this chapter provides a theoretical and methodological outline of the assessment of coping. Six widely-used coping measures were reviewed and critiqued. We hope to have provided a comprehensive reference for scholars interested in assessing successful coping and its implications for psychological well-being.

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APPENDIX: SUBSCALES FOR THE SIX COPING MEASURES REVIEWED IN THIS CHAPTER

Miller Behavioral Style Scale (Miller, 1987)

1. Monitoring
2. Blunting

Mainz Coping Inventory (Krohne et al., 2000)

1. Vigilance
2. Cognitive avoidance

Coping Inventory for Stressful Situations (Endler & Parker, 1990)

1. Task-oriented coping
2. Emotion-oriented coping
3. Avoidance-oriented coping

COPE Inventory (Carver et al., 1989)

1. Active coping
2. Planning
3. Suppression of competing activities
4. Restraint coping
5. Instrumental social support
6. Emotional social support
7. Positive reinterpretation
8. Acceptance
9. Turning to religion
10. Focus on and venting emotions
11. Denial
12. Behavioral disengagement
13. Mental disengagement
14. Alcohol disengagement
15. Humor

Coping Strategy Indicator (Amirkhan, 1990)

1. Problem solving
2. Seeking social support
3. Avoidance

Ways of Coping Questionnaire (Folkman & Lazarus, 1988)

1. Confrontive coping
2. Distancing
3. Self-controlling
4. Seeking social support
5. Accepting responsibility
6. Escape–avoidance
7. Planful problem solving
8. Positive reappraisal

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