

# **A RESOURCE-CONGRUENCE MODEL OF COPING AND THE DEVELOPMENT OF THE COPING SCHEMAS INVENTORY**

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## 1. INTRODUCTION

For most people, living is a fulltime occupation, which exacts a great deal of effort and energy. At times, life can also be a risky business, with hidden traps and lightning strikes. Considering the manifold sources of stress in modern life that cover the whole gamut from traumatic events, interpersonal conflicts, situational obstacles, existential crises to everyday hassles, one wonders why more people have not succumbed to stress-related disorders, and why so many people are still able to transcend their difficulties and lead a healthy, fulfilling life.

The key to answering these questions is *coping*. The ability to cope is essential to surviving and thriving in a rapidly changing and highly competitive global village. That is one of the reasons why coping has become a key concept in psychology and health disciplines. This chapter is all about the art and science of coping as a major part of the larger story of human adaptation and survival (Wong, Wong, & Scott, Chapter 1). The art aspect draws from human experiences and theoretical speculations, while the science part draws from empirical studies.

Even to a casual observer of people, there are vast individual differences in how we react to life stress. While some are vulnerable and become easily overwhelmed by stress, others are very resilient and become even stronger by their stress-encounters. Why do similar misfortunes lead one person to distress and another person to success? What accounts for these differential effects of stress? What are the mediating variables? What are the most effective ways to cope with life's demand? Should we **approach** it as a

problem to be solved **or avoid** it as an unsolvable problem? Alternatively, should we simply **embrace** life in its totality as a mystery to be appreciated?

After more than 10,000 research articles, we still do not have a clear roadmap to help us journey through life's obstacle course. In this chapter, we review what has been accomplished in coping research, present our own thinking and research findings, and then propose future research directions in a world that is increasingly multicultural.

Coping after all is a universal human drama. How can we gain a deeper understanding without a broader lens?

### **1.1. A historical overview**

Just as we need to know what the stressors are, so we need to know what kinds of coping strategies are at our disposal. This chapter is primarily concerned with psychological rather than physiological and genetic coping mechanisms.

Sir Walter Cannon's (1936) landmark research on emotional stress led to his discovery not only of physiological arousal reactions to signals of danger, but also the instinctive fight-and-flight coping patterns. Cannon considered stress and its "emergency response" as vitally important to survival and adaptation. However, it was not until Selye (1976) that research on stress and coping was introduced to the larger scientific community as well as the public arena.

The psychoanalytical literature is another rich source on coping responses, which are largely unconscious. S. Freud's (1894/1962) psychoanalytical formulations of defence mechanisms were primarily concerned with unconscious mechanisms to protect the ego against neurotic anxiety. Haan (1977) and Vaillant (1977) have continued this analytical tradition in their research on coping and defence.

The next major development focuses on traits/styles of coping. Various scales have been developed to measure individual differences such as repressors vs. sensitizers (Byrne, 1971), screeners vs. nonscreeners (Baum, Calesnick, Davis, & Gatchel, 1982), monitors vs. blunters (Miller, 1979), and Type A vs. Type B individuals (Glass, 1977). More recent research favoring the trait approach includes McCrae's (1982) personality-based coping, Epstein and Meier's (1989) constructive thinking, and Carver, Scheier & Weintraub's (1989) dispositional coping styles.

However, both the psychoanalytic and trait approaches have been criticized for failing to capture the complexity of coping and for their inability to predict coping behaviors in specific situations. Lazarus and Folkman's (1984) seminal publication continues to dominate the field because of its emphasis on identification of functional categories of specific coping behaviors to deal with specific situations. Folkman (1984) provides a comprehensive definition of stress and coping:

"The cognitive theory of stress and coping on which this discussion is based is relational and process oriented. The relational characteristic is evident in the definition of stress as a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and as endangering his or her well-being. Coping refers to cognitive and behavioral efforts to master, reduce, or tolerate the internal and/or external demands that are created by the stressful transaction" (p. 840).

The impact of the cognitive-relational approach was greatly enhanced by the development of The Ways of Coping Questionnaire (Folkman & Lazarus, 1980), which was designed to measure two functionally different broad coping categories. Problem-focused

coping consists of various learned instrumental strategies while emotion-focused coping includes some of Freud's (1936) defence mechanisms and other types of cognitive strategies.

Wong (1993) in his discussion of the evolution of coping has emphasized the following coping strategies as being important for future research: creative, proactive, collective, existential, and spiritual coping. Various chapters in this volume attest to the gradual inclusion of these additional coping categories in the literature.

### **1.2 Lack of progress in stress and coping research**

Several contributors in this volume have bemoaned the lack of progress in stress and coping research (Chapters 1, 2, 3, 4, 7, and 8). One frequent complaint is the ethnocentric bias in stress and coping research. Related to this bias is the undisputed hegemony of the cognitive-relational approach; somehow researchers, including the present authors have difficulty going beyond this conceptual framework.

Recent reviews of the coping literature indicate very little cross-cultural research on stress and coping (Folkman & Moskowitz, 2000; Snyder, 1999a; Chapters 1 and 2). Given the importance of the sociocultural context in shaping every aspect of the stress and coping process, the next major step in the psychology of effective coping needs to seriously consider culture-related variables.

### **1.3 The need for a comprehensive measure of coping**

Several researchers have suggested that research in this area has been hindered by the lack of valid and comprehensive coping measures (Parker & Endler, 1992, 1996; Fleming, Baum, & Singer, 1984). For example, Amirkhan (1990) has criticised that most studies focus on specific coping strategies related to specific life situations rather than

“more universal modes of response” (p. 1066). We wonder whether the “more universal modes of response” can be discovered without cross-cultural studies.

Folkman and Lazarus (1981) have long pointed out the need for developing a comprehensive and general taxonomy of coping without sacrificing the richness of specific cognitive and behavioral coping strategies. However, without some consensus regarding a comprehensive taxonomy, progress in both research and applications will remain difficult.

#### **1.4 The need for a comprehensive theory of coping**

The lack of an integrative and comprehensive coping theory has also been cited as a hindrance to progress. Parker and Endler (1992) point out the need for “the development of a systematic understanding of the empirical and theoretical relationships among coping behaviors and both mental and physical health” (p. 339). Similarly, Carver, Scheier, and Weintraub (1989) argue for a more theoretical approach to scale development in order to achieve a more systematic understanding of the stress-coping process. Litt (1988) emphasizes the need to more clearly differentiate the various components in the stress process.

Ideally, a comprehensive theory needs to accomplish at least three goals: (a) Take into account the major stressors in life and most commonly employed coping strategies, (b) Specify the stress process and the relationships between different variables, and (c) Illuminate both the conditions and mechanisms of effective coping.

#### **1.5 The need for innovative approaches**

Clearly, innovative approaches are needed. First of all, we need to learn a great deal more about coping from various countries. The fact that China has survived more than 5000 thousand years of tumultuous times means that the Chinese must have learned



a great deal about coping. The top-down arm-chaired approach to developing theories and measures of coping, a preferred way of many researchers in North America, will not capture the real coping strategies people use in surviving wide-spread famines, chronic poverty, prolonged civil wars, catastrophic natural disasters or genocides like the Holocaust and the Nanjing massacre.

The implicit theories approach (Wong, 1998a) provides a bottom-up view and seems particularly suitable for cross-cultural research. Similarly, field research by indigenous psychologists in different countries can also expand our knowledge of coping. There is so much we can learn from those who have survived adversities that is unthinkable to psychologists in ivory towers.

Historical and archival records can be a goldmine to study how people coped with and survived major events, such as natural disasters, plagues, national tragedies, and personal traumas, in past centuries and foreign cultures. These studies can shed some light on the timeless and universal nature of the fundamental principles of coping.

Another innovative approach is to conceptualize the coping process in terms of complex patterns of reactions, which may include seemingly contradictory coping responses. For example, to ensure success in applying for a job, one may choose to depend on one's own track record and interview skills, but at the same time pray to God for help as well as ask some influential persons to pull some strings.

Wong and Sproule (1983) have argued that internal and external control can co-exist. Similarly, Wong and McDonald (2002) have pointed out that many lives hang in the balance between despair and hope; they provide a strong case for the co-existence between realistic pessimism and idealistic optimism as a necessary condition for

individuals to survive trauma. Carver and Scheier (1999) report that optimists tended to accept the reality of negative events, but also tried to see something positive in a bad situation. Folkman (1997) in a longitudinal study of the care-giving partners of men with AIDS found the co-occurrence of both positive and negative psychological states during the difficult circumstances of caring and grieving. These ideas have important implications for understanding the complex internal dynamics in the coping process.

## **2. COPING MEASURES BASED ON DEDUCTIVE TAXONOMIES**

Existing measures are either based on an empirical (deductive) or rational (inductive) approach. Sometimes, test development employs both deductive and inductive methodologies. We will evaluate the strengths and weaknesses of each approach before reviewing major coping measures.

### **2.1 Advantages of the deductive approach**

The deductive approach is very appealing, not only because the broad theoretical categories are conceptually clear, but also because they are derived from a theory or conceptual framework. Another advantage is that deductive taxonomies have achieved some level of generality, and can be applied to many stressful situations. As a result, they are more likely to be employed in research, either to test the theory or validate the coping measure.

The best known deductive taxonomy is problem-focused vs. emotion-focused coping (Folkman & Lazarus, 1980), which makes intuitive sense, and has been incorporated into most coping measures. Another widely accepted deductive taxonomy is approach vs. avoidance (Roth & Cohen, 1986), which parallels the natural instinctive fight-

flight tendencies; this too has been incorporated into many coping measures (e.g., Billings & Moos, 1984; Endler & Parker, 1990a,b; Moos & Billings, 1982).

## **2.2 Limitations of the deductive approach**

The most common problem is that theoretically generated items do not always belong to a priori conceptual categories. For example, the distinction between problem-focused coping and emotion-focused coping is not as simple as it seems. Wong and Reker (1983) found that judges often failed to agree whether a particular item was problem- or emotion-focused. Furthermore, there were differences between age-groups – the older one gets, the more likely one considers emotion-focused items as problem-focused, perhaps, to increase one's sense of control. Thus, deductive categories often fail to survive the empirical validation process (Amirkhan, 1990).

A related problem is that coping categories may lack conceptual clarity, because they may include items that logically do not belong together. For example, in one study (Folkman, Lazarus, Gruen, & DeLongis, 1986), an item relating to prayer was loaded on a factor labeled positive reappraisal along with items dealing with personal change and doing something creative. Another major problem is that a priori categories are often too broad or too vague to be relevant to specific stressful situations, let alone to predict coping behaviors. Finally, the coping categories measured are limited by both the theory and the coping items generated by the theory. As a result, coping strategies essential for survival are often omitted in deductive measures.

## **3. COPING MEASURES BASED ON INDUCTIVE TAXONOMIES**

Inductive taxonomies can be based on factor analysis of actual coping behaviors reported or observed in specific situations. As such, they seem to provide a more accurate picture of how individuals actually cope with specific situations.

However, in some cases, inductive taxonomies are based on factor analyses of items pooled from several existing coping scales (Amirkhan, 1990; Endler & Parker, 1990a,b). The resulting taxonomies tend to have more adequate psychometric properties than the original measures. For example, Endler & Parker's (1990a,b) multidimensional model has been cross-validated on different populations.

### **3.1 Advantages of the inductive approach**

Inductive taxonomies tend to contain more coping categories and are more predictive of coping in specific situations. "Inductive taxonomies have usually proven more exhaustive than deductive ones, containing a greater number and variety of categories" (Amirkhan, 1990, p. 1066).

When the coping measure is based on factor analysis of items from several measures, the resulting factors tend to be more stable and internally reliable. Therefore, it tends to show greater factorial invariance across samples (Endler & Parker, 1990a,b).

### **3.2 Limitations of the inductive approach**

There are also limitations inherent in inductive taxonomies. When the measure is based on factorial analysis of actually coping behaviors, the resulting coping categories tend to lack generality. In other words, coping measures derived from factor analysis of a specific sample in a specific stressor may not be generalized to other samples and different stressors. Factor analysis of the same coping measure used in different stressful situations tends to yield different results (Amirkhan, 1990).

When inductive taxonomies are based on factor analysis of items from existing scales, naturally they tend to report similar factors (e.g., Amirkhan, 1990; Endler & Parker, 1990a,b). Consequently, coping research tends to focus on the same old coping categories, and continues to ignore other coping strategies, such as relaxation or existential coping.

The most common criticism of factor analysis is that the number of factors identified is dependent on the number and nature of the items. With few exceptions, the initial item pool usually failed to include a broad range of different types of coping, thus, resulting in only a few coping categories. However, if large number of items is used, it tends to require a much larger sample size and yield a large number of factors. For example, McCrae (1984) factor analysed 118 items and obtained 28 coping factors; some of the factors were not very meaningful or reliable, because they only contained one or two items.

There is also a measurement problem with the inductive approach based on factor analytical procedures. "Because these procedures generate scales based on statistical rather than conceptual criteria, they are unlikely to yield adequate measures of the intended theoretical constructs" (Edwards & Baglioni, 1993, p. 28).

Finally, empirically derived scales tend to be linked to "theoretical principles only somewhat loosely and post hoc" (Carver, Scheier & Weintraub, 1989, p.268). Therefore, it is difficult to use empirically derived measures to determine how coping is related to other constructs, such as appraisal and outcome variables as specified by any general theories of coping.

#### **4. A CRITICAL REVIEW OF EXISTING COPING SCALES**

Recently, a number of papers have criticised existing coping scales (e.g., Carver, Scheier & Weintraub, 1989; Coyne & Gottlieb, 1996; Endler & Parker, 1990a,b; Parker & Endler, 1992; Stone & Neale, 1984).

The common critiques include weak psychometric properties, lack of empirical validation, unstable factorial structures, unrepresentative samples, inadequate links to theories, and the difficulty of generalizing from one stressful situation to another. We now review some of the more specific critiques directed to a few widely used coping scales.

##### **4.1 Folkman and Lazarus' Ways of Coping Questionnaire (WCQ)**

The WCQ (Folkman & Lazarus, 1980, 1985, 1988) is by far the most widely used coping measure. The current version consists of 66 items. Because of its popularity, the WCQ has also been subjected to the most scrutiny. Parker and Endler (1992) comment: "The continued use of scales, such as the WCQ, appears to be more a matter of convenience than anything else" (p. 336).

Parker and Endler (1992) have identified a number of psychometric weaknesses of the WCQ. First of all, the WCQ often yields different number of factors, depending on the sample. Factor analyses of the WCQ have resulted in anywhere between five to eight categories rather than two broad categories (Aldwin & Revenson, 1987; Folkman & Lazarus, 1985; Folkman, et al., 1986; Vitaliano, Russo, & Maiuro, 1985).

Secondly, the absence of test-retest reliability in the WCQ manual remains problematic, notwithstanding Folkman and Lazarus' (1985) claim that temporal stability is irrelevant because coping is a process which changes over time. Parker and Endler also question the practice by researchers of frequently adding or dropping coping items from

the WCQ, and even thought such practice was actually encouraged by Folkman and Lazarus (1988). This lack of standardization makes it difficult to compare results from different studies employing different versions of the WCQ. Their overall assessment is as follows:

"Ways of Coping measures are of considerable theoretical interest, and the authors have made important theoretical and empirical contributions to the coping area. However, their coping measures have probably been used more often than is justified by the psychometric properties of these scales" (p.334).

Carver, Scheier and Weintraub (1989) also criticize that some of the coping items are conceptually ambiguous. For example, the item "Took a big chance or did something risky" might mean different things, such as reckless driving, or gambling. Furthermore, they point out that the broad categories of problem and emotion-focused coping may obscure coping responses which may be distinct from each others, and may have different implication for coping effectiveness. For example, denial and positive reinterpretation both are considered as emotion-focused coping, but they may have very different psychological functions. Similarly, taking direct action and seeking assistance are very different problem-solving activities; the former is likely to be used in situations perceived as manageable by oneself, while the latter is more likely to be needed when the situation is perceived as beyond one's control.

Another criticism, which is common to many existing scales, is the limited range of coping responses measured by the WCQ. Although these may reflect the coping experiences of the professors and graduate students who generated the initial pool of

items (Folkman and Lazarus, 1980), they certainly do not reflect the life experiences of people living in a very different kind of world.

From our perspective, we think that the WCQ should be used to validate any new measure of coping, since a great deal of information is already available about its psychometric properties. However, researchers need to move beyond the WCQ to explore new ways of measuring new dimensions of coping. If we continue to stay within the comfort zone provided by Folkman and Lazarus, the field of stress and coping research will not move forward in any significant way.

#### **4.2 Moos' Coping Response Inventory (CRI)**

The CRI developed by Moos (1988, 1993) measures eight types of coping responses, each of which is measured by six items. These respondents select a recent (focal) stressor and rate their reliance on each of the 48 coping items on 4-point scales from *not at all* (0) to *fairly often* (3). The eight types of coping are: 1. Logical Analysis (LA), 2. Positive Reappraisal (PR), 3. Seeking Guidance and Support (SG), 4. Problem Solving (PS), 5. Cognitive Avoidance (CA), 6. Acceptance or Resignation (AR), 7. Seeking Alternative Rewards (SR), and 8. Emotional Discharge (ED).

These eight dimensions can be classified according to **approach vs. avoidance** orientations and **cognitive vs. behavioral** coping strategies. Approach coping is measured by the first four subscales; avoidance coping is measured by the second four subscales. Subscales 1, 2, 5, and 6 reflect cognitive coping strategies, while subscales 3, 4, 7, and 8 reflect behavioral coping strategies.

It has three parallel versions: Adult, Youth and Ideal. In the Ideal version of the CRI-Adult, the respondents are asked to indicate what they believe would be the best way to



cope with the stressor. The Ideal version seems a good instrument to study individuals' implicit theories about what coping responses work best for what stressor.

According to Moos, the approach-avoidance classification has to do with the **orientation** or focus of coping, whereas cognitive or behavioral coping has to do with the **methods** or ways of coping. Approach coping is similar to problem-focused coping, while avoidance coping is similar to emotion-focused coping. Almost all the available coping measures focus on cognitive and behavioral coping strategies (Billings & Moos, 1984; Folkman & Lazarus, 1985; Roth & Cohen, 1986).

By combining approach vs. avoidance with cognitive vs. behavioral methods, Moos not only generates and expands the taxonomy of coping, but also brings greater conceptual clarity to the different coping responses. The CRI has been employed with a variety of populations, such as alcoholic patients, depressed and medical patients, work stress, aging, etc. Reliability and validity for most of the subscales are good (Moos, 1988; 1993).

Our main criticism is that by forcing various coping responses within the confines of a classification system based on approach vs. avoidance and cognitive vs. behavioral coping, Moos also has to restrict the interpretation and meaning of various coping responses. For example, "seeking alternative rewards" cannot be simply limited to "behavioral attempts to get involved in substitute activities"; this coping strategy could also mean changing one's beliefs and values, which are more cognitive and spiritual than behavioral.

Similarly, "acceptance or resignation" cannot be limited to "cognitive attempts to react to the problem by accepting it", because it can also mean behavioral surrender to

situational demands without giving up hope. Acceptance can also mean to operate within one's financial or situational constraints.

Many psychologists can not resist the seductive appeal of a 2 X 2 contingency table: it is simple and elegant, and the factorial combination can yield very interesting categories. However, they often have to arbitrarily restrict the rich meanings of the constructs in order to neatly fit them into the tiny 2 x 2 table.

### **4.3 Stone and Neal's Measure of Daily Coping**

Initially, Stone & Neal (1984) intended to develop a checklist of coping responses for use in longitudinal studies with repeated assessments. Eventually they gave up attempts to develop a coping checklist based on rationally derived categories, because they were unable to obtain satisfactory internal consistency and inter-rater reliability. For example, in one of the studies reported, they asked participants to sort the checklist items into different categories, representing different types of coping. They discovered that often only a few items for a category were checked. Furthermore, subjects perceived the coping items differently; for example, there were several coping items that could be classified as belonging to either the relaxation or distraction category. Consequently, they chose to develop an open-ended questionnaire listing eight coping categories.

The open-ended assessment presents one-sentence descriptions of the eight different modes of coping strategies and asks them to check whether they "Did not use" or "Used" any of these coping responses in handling the problem or situation they have just described. Any "yes" response is followed by an open-ended question asking them to describe action(s) or thought(s). The eight coping strategies are described as follows:

<b>Category</b>	<b>Description printed on the form</b>
-----------------	--

- |                             |  |
|-----------------------------|--|
| 1. Distraction -            | Diverted attention away from the problem by thinking about other things or engaging in some activity.                |
| 2. Situation redefinition-  | Tried to see the problem in a different light that made it seem more bearable.                                       |
| 3. Direct Action -          | Thought about solutions to the problem, gathered information about it, or actually did something to try to solve it. |
| 4. Catharsis -              | Expressed emotions in response to the problem to reduce tension, anxiety, or frustration.                            |
| 5. Acceptance -             | Accepted that the problem had occurred, but that nothing could be done about it.                                     |
| 6. Seeking Social Support - | Sought or found emotional support from loved ones, friends, or professionals.  |
| 7. Relaxation -             | Did something with the implicit intention of relaxing.   |
| 8. Religion -               | Sought or found spiritual comfort and support.   |

This brief questionnaire was administered to 120 married individuals for 21 consecutive days. Sex of respondents was associated with the type of coping. For example, females were more likely to use distraction, relaxation, catharsis, seeking social support and religion, while males were more likely to use direct action. The type of coping was also associated with the level of appraisal. For example, acceptance was more associated with “no control” appraisal than with “Quite a lot/complete control”. Similarly, catharsis, seeking social support, relaxation and religion tended to be associated with “severe” appraisals (i.e., extremely undesirable, extremely changing). A moderate amount of within-subject consistency in coping with the same problem over time was also observed.

This type of questionnaire seems useful not only in determining which coping categories are used most frequently, but also providing information about the specific actions and thoughts associated with the coping strategy employed. However, the lack of evidence of validity and reliability, and the difficulty of quantifying the open-ended responses may discourage researchers from using it for quantitative studies.

Overall, we find this measure of the coping process promising. A combination of quantitative and qualitative measures can provide a more complete picture of the dynamic process of coping in different individuals. Another good thing is that this approach has also renewed a debate regarding the merits of measuring situation-specific coping (Folkman, 1992; Tennen, Affleck, Armeli, & Carney, 2000).

#### **4.4 Carver, Scheier and Weintraub' (1989) COPE**

The COPE is based on a deductive rather than an inductive approach to test-construction. This coping measure was guided by Lazarus and Folkman's cognitive-relational model as well as their own model of behavioral self-regulation (Carver & Scheier, 1981, 1983, 1985; Scheier & Carver, 1988). Their self-regulatory process of coping (Carver & Scheier, 1999) came from a control-process perspective (Carver, Lawrence, & Scheier, 1996).

The instrument consisted of 13 conceptually distinct scales. Five scales were based on functionally distinct aspects of problem-focused coping (active coping, planning, suppression of competing activities, restraint coping, seeking of instrumental social support). Another five scales measured different aspects of what might be viewed as emotional-focused coping (seeking of emotional social support, positive reinterpretation, acceptance, denial, turning to religion). The remaining three scales measured coping

responses that as they believed, are arguably less useful (focus on and venting of emotions, behavioral disengagement, mental disengagement).

The COPE is made up of the following scales:

1. Active coping: Taking action, exerting efforts, to remove or circumvent the stressor.
2. Planning: Thinking about how to confront the stressor, planning one's active coping efforts.
3. Seeking Instrumental Social Support: Seeking assistance, information, or advice about what to do.
4. Seeking Emotional Social Support: Getting sympathy or emotional support from someone.
5. Suppression of Competing Activities: Suppressing one's attention to other activities in which one might engage in order to concentrate more completely on dealing with the stressor.
6. Religion: Increased engagement in religious activities.
7. Positive Reinterpretation and Growth: Making the best of the situation by growing from it, or viewing it in a more favorable light.
8. Restraint Coping: Coping passively by holding back one's coping attempts until they can be of use.
9. Acceptance: Accepting the fact that the stressful event has occurred and is real.
10. Focus on and Venting of Emotions: An increased awareness of one's emotional distress, and a concomitant tendency to ventilate or discharge those feelings.
11. Denial: An attempt to reject the reality of the stressful event.

12. Mental Disengagement: Psychological disengagement *from the goal with which the stressor is interfering*, through daydreaming, sleep, or self-distraction.
13. Behavioral Disengagement: Giving up, or withdrawing effort from, the attempt to attain *the goal with which the stressor is interfering*.
14. [Alcohol/Drug Use]: Turning to the use of alcohol or other drugs as a way of disengaging from the stressor.]
15. [Humor]: Making jokes about the stressor.]

Although all social support items loaded on a single factor, they still believe that the theoretical distinction between instrumental social support and emotional support needs to be maintained. Similarly, Planning and Active Coping loaded on a single factor, but they saw some merit in treating them as separate scales because these two types of coping occupy different points in the temporal continuum of problem-focused coping. Two Scales, Alcohol/Drug Use and Humor were developed later and were not reported in the 1989 article.

Following the implicit logic of congruence, they predict that Scales 1, 2, 5, 7, and 8 would probably be adaptive in situations where active coping efforts yield good outcomes, while Scales 10, 11, and 12 would be maladaptive in such circumstances. However, they are less sure as to what coping responses would be adaptive in situations that are uncontrollable.

The scale items have been developed in three different formats: (a) a “trait” version in which respondents indicate the degree to which they typically do each of the things listed when under stress, (b) a time-limited version in which respondents indicate the degree to which they actually did use each of the coping strategies during a period in the

past, and (c) a time-limited version in which respondents indicate the degree to which they have been using each of the strategies during a period up to the present.

The COPE has clearly expanded the coping taxonomy as compared to the WOQ. We find the categories indeed representative of functional coping strategies. We also agree that it is beneficial to take a more theoretical approach to scale construction. Our only reservation is that Carver and Scheier's (1999) model of self-regulation may restrict their view of the coping process. After all, life cannot be viewed simply as a series of behavioral regulations to attain various goals. For example, for those who are confined in the hospice or palliative care unit, living out their last few days of earthly life, perhaps the best they can do is to cope by living one day at a time. We need to go beyond analyzing individual behavior to move into the realm of the philosophy of life and collaborative efforts in community building. These are challenges for all coping researchers.

#### **4.5 Ender and Parker's MCI and CISS**

In view of the psychometric weaknesses of existing coping measures (Parker & Endler, 1992), Endler and Parker (1990a) developed the Multidimensional Coping Inventory (MCI), which had 44 items, based on a 5-point frequency Likert-type of scale. Factor analysis yielded three basic coping styles: task-oriented, emotion-oriented, and avoidance-oriented coping. Construct validity was established by correlating the scale with depression, anxiety and personality measures.

The MCI was later revised and renamed as Coping Inventory for Stressful Situations (CISS) (Endler & Parker, 1990b, 1999). New items were added to strengthen the avoidance dimension and create equal number of items for the three dimensions, resulting in 48 items. Separate factor analyses of the avoidance items yielded two factors: an 8-item

distraction subscale and a 5-item social diversion subscale. Distraction is a task-oriented avoidance strategy, because it involves switching to a substitute task. Social diversion is a person-oriented avoidance strategy, because it involves seeking out other people. These two sub-scales help expand our understanding of the avoidance coping.

Endler and Parker (1990b) reported a stable factor structure and good test-retest reliability over a 6-week interval. Considerable research has been done employing the CISS (e.g., Endler & Parker, 1994; McWilliams, Cox, & Enns, 2003). There is good evidence of validity and reliability with different populations. For those interested in the functional properties of the three basic coping styles, CISS is clearly a better instrument than other existing coping measures. However, if one intends to investigate a broader range of coping behaviors, the CISS would not be the instrument of choice.

## **5. A RESOURCE-CONGRUENCE MODEL OF EFFECTIVE COPING**

### **5.1 What constitutes effective coping**

One of the persisting questions in stress and coping research is to determine what constitutes effective coping, and what constitutes maladaptive coping. Various attempts have been made to differentiate adaptive defence mechanisms from non-adaptive and pathological defence mechanisms (Haan, 1977; Vaillant, 1977). However, the long entrenched idea that some coping responses are inherently adaptive, and mature, whereas some are inherently maladaptive and primitive, has been challenged.

Epstein and Meier (1989) have identified the problem that "a particular mode of coping that is effective for a particular person in a particular setting may be ineffective when used by the same person in another situation or by a different person in the same situation" (p. 348). Litt (1988) concludes: "Interestingly, the nature of the coping strategy



per se does not appear to account for the generally beneficial effects of cognitive coping. That is, no single strategy appears to be superior for coping with stressful stimuli." (p. 242). Folkman (1984) clearly states that according to cognitive-relational theory, coping simply refers to efforts to transact with situational demands, regardless of the outcome of those efforts. In other words, coping effectiveness is not inherent in any given coping strategy (Folkman and Lazarus, 1985).

Wong, Wong and Scott (Chapter 1 of this volume) have pointed out that a great deal depends on cultural values. For example, if collectivistic values are cherished, then active coping to achieve personal success at the expense of group harmony would not be regarded as effective coping. We have also made the case that coping efficacy depends on whether the coping response is congruent with the nature of the stress and the cultural context in which the stress takes place (Wong, 1993; Peacock, Wong, & Reker, 1993).

## **5.2 A resource-congruence model of effective coping**

The model posits that sufficient resources and appropriate utilization of these resources are essential to effective coping. Conversely, deficient resources and/or gross deviations from congruence would lead to ineffectual coping and make the individual vulnerable to stress-related disorders. Figure 1 is a schematic presentation of the resources-congruence model of effective coping.

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Insert Figure 1 about here

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An important feature of this model is the emphasis on creative coping. If an individual constantly develops a variety of resources, he or she will reduce the likelihood of

stress encounters. By the same token, an individual can reduce or remove a stressful situation by transforming and developing existing resources. For example, the person can seek a religious conversion and transform his or her barren and broken spiritual resources. Interestingly, none of the existing coping scales explicitly measure creative coping.

Reactive coping begins as soon as a problematic condition is declared by primary appraisal. At this stage, two types of congruence are important for effective coping. First, appraisal should accurately reflect reality and be based on an objective, rational assessment of the demands and available resources. Secondly, the strategies selected need to be congruent with the nature of the stressor and the cultural context. Most of the coping measures are concerned with reactive coping without paying too much attention to issues of cultural congruence.

Adequate resources and congruent coping would eventually lead to a reduction of stress and enhancement of one's well-being. At the same time, one needs to employ protective coping to conserve personal resources, until one is able to invest further energy into creative coping. Thus, this cycle of positive coping may be repeated many times each day. When reactive coping is not successful because of lack of resources or congruence, then one will not have the luxury of enjoying a period of relaxation and recovery in order to conserve energy.

### **5.3 The importance of congruence**

Most of the time, people cope with daily routines in a habitual, mindless manner. The well-established patterns are carried out efficiently without conscious efforts of planning and decision-making. However, when the daily routines are disrupted or when

people are confronted with an unexpected difficulty or emergency, the attribution process (Wong & Weiner, 1981) as well as the coping process are activated.

According to Carver et al. (1989), coping often proceeds in a trial-and-error manner. However, we reason that it would be too time-consuming if this trial-and-error process was random. We propose that people do possess coping schemas about what works in what types of situations, based on past experience. Therefore, the trial-and-error search would be focused on certain types of coping responses. For example, if the situation is appraised as controllable, the search will be focused on active, instrumental coping responses.

It is difficult to achieve congruence by reacting to stress emotionally, impulsively, instinctively or habitually. The best way to achieve appropriate matching is through intellectualization: What would be the most logical solution to this problem? What kind of appropriate response would achieve the desired result? Rational analysis is most likely to yield the best results, because it would optimize the selection of coping schemas.

Recent research has provided some evidence suggesting that to be effective, a person's coping efforts should be congruent with the controllability of the event. Thus, active, problem-focused coping strategies are favored in situations appraised to be controllable, while emotion-focused coping strategies are more likely to be used in conditions appraised as of low controllability (Aldwin, 1991; Carver et al., 1989; Folkman & Lazarus, 1980; Terry, 1994).

We propose that the mechanism underlying congruence involves the activation of coping schemas by secondary appraisal. According to Lazarus and Folkman (1984), primary appraisal of the presence of a threat or challenge would lead to secondary appraisal of coping resources and options. Secondary appraisal would process such

relevant information as: What is troubling me? What kind of problem is it? What can be done about it? Is it within my control?

When the problem is brought on by oneself such as poor time management, or bad habits, then the obvious solution is to make certain changes in one's behaviors. Similarly, when a problematic situation cannot be changed, such as being trapped in an oppressive work situation, then one has to change one's attitude to regain a sense of control; this may include secondary control (Rothbaum, Weisz, & Snyder, 1982). Self-restructuring includes both behavioral and cognitive restructuring and personal transformation. Some evidence already exists regarding the hypothesized linkages between these three aspects of the person and appropriate coping strategies (Peacock, 1992; Peacock & Wong, 1996). More specifically, Wong and Reker (1983) have demonstrated that people are able to choose appropriate coping strategies in terms of appraised controllability as follows:

- Controllable situational stress ----- Task-oriented (instrumental) coping
- Situational stress beyond one's resources but controllable with help from others  
----- Seeking practical social support
- Situational stress uncontrollable by any human beings ----- Religious and existential coping.

The present schema-based model of congruent coping also has implications for multicultural psychology. When an individual is transplanted to a different culture, some coping schemas acquired in the home culture may no longer be adaptive. The same coping response that used to work well in a particular situation back home may no longer work in the new culture, because each culture has its own shared implicit rules of coping with difficulties.

#### **5.4 The duality of psychological resources**

Cultivating coping resources is perhaps the most neglected but most potent contributor to effective coping. Figure 1 indicates the various kinds of resources, which may be conceptualized as capital. Thus, spiritual resources can be considered as spiritual capital. As such, capital can be depleted, when one keeps on drawing without replenishing. Capital can also be built up continually.

Psychological resources are important for coping (Lazarus & Folkman, 1984; Scheier and Carver, 1996; Wong, 1993). It is instructive to keep in mind that psychological resources often co-exist with psychological deficiencies. For example, hope and despair may co-exist (Wong & McDonald, 2002). Courage and fear may be both evoked by a dangerous situation. The deficiencies tend to sap our energies, make us feel bad about ourselves and reduce our effectiveness in coping. Deficiencies represent a parallel cognitive-emotional system that counteracts psychological resources. Thus, optimism and self-doubt may be waging a constant tug-of-war, while one's sense of mastery is trying desperately to ward off feelings of powerlessness. The net psychological resources available to the person depend not on the amount of resources one possesses, but on the balance between resources and deficiencies.

In view of the above analysis, to enhance stress-resistance and improve mental health requires that we cultivate psychological resources and reduce deficiencies at the same time. To increase resources, we need to foster a sense of mastery while recognizing external constraints and internal limitations; we need to explore sources of personal meaning; we can also cultivate our capacity for dreaming and hoping. In dealing with the deficiencies, we need to work on personal life history and replace irrational beliefs with

more coping schemas; we need to identify the character flaw that frequently defeats the individual's best intentions and efforts.

### **5.5 Clarifying the relationship between appraisal and coping**

The present model extends cognitive relational theory not only by specifying the mechanisms for effective coping, but also by clarifying the relationship between appraisal and coping.

There is some empirical support of a positive association between appraisal and coping (Bjorck, Cuthbertson, Thurman & Yung, 2001; Folkman & Lazarus, 1980; Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986; Mikulincer & Victor, 1995). Chung, Langebucher, Labouvie, Pandina, & Moos (2001) study even suggested that cognitive appraisal of threat could predict avoidance coping at 6- and 12- month follow-ups. However, Forsythe and Compas (1987) found that perceived control of an event was associated with problem-focused coping for major life events but not for daily problems. In short, the linkage between control appraisals and coping strategies is neither clearly established nor well understood. Overall, there is only weak empirical support of the two fundamental propositions of cognitive-relational theory: the first is that appraisal influences coping and the second is that appraisal and coping mediate stress outcomes (Peacock & Wong, 1996).

There is also the problem of confound. For example, Lazarus and Folkman (1984) consider reappraisal as both a revised appraisal and a type of cognitive coping, which is variously called coping centered appraisal, defensive reappraisal, and cognitive reappraisal. They claim that the problem stems from the fact that these concepts '...are inherently fused' (p. 167). This argument is difficult to understand, because if appraisal

and coping are indeed separate constructs, as Lazarus and Folkman have maintained, then it must be possible to make clear conceptual distinctions between them and provide independent measures of these constructs. Close correspondence between appraisal and coping items in some of the coping scales (e.g., the WOQ) increases the probability that both sets of items are tapping the same underlying construct. A further problem is that subjective measures of appraisal and coping may simply reflect personality variables or prior mental health status (Watson, 1988).

To minimize the confound between appraisal and coping, we need to ensure that items used to measure these two constructs do not overlap in wording or conceptualization. The present resource-congruence model clarifies the conceptual relationship between appraisal and coping: appraisal provides the mechanism for activating the appropriate coping schemas, and is measured by items that are distinctly different from coping measures (Peacock & Wong, 1990). The congruence model also generates several specific predictions concerning appraisal-coping relations.

### **5.6 Advantages of the present model**

The resource-congruence model provides a novel and comprehensive approach to stress management. It goes beyond traditional concerns with reactive coping and emphasizes the genius of proactive measures. Effective stress management has to be better than merely putting out fires; it requires a new vision and a new approach to resource development that would minimize the need to put out fires.

Another contribution of the model is that it recognizes the vital role of cultural knowledge and rational analysis in achieving congruence. The ethnic background of the client and the cultural context of stress need to be taken into account in interventions.

Further, the cognitive skills of realistic appraisal and selecting appropriate strategies can be acquired.

Finally, the heuristic values of the model need to be mentioned. It has greatly expanded our vista of resilience research. Hardiness is no longer a limited set of personality traits but a long list of personal resources that can be cultivated and acquired. We can now systematically investigate how these resources operate singly and in different combinations to enhance resistance to various types of stressors. We can also study what kinds of resources are most importantly involved in resistance to reactive depression. The concept of parallel cognitive-emotive systems is also a fertile ground for research on the interactions of psychological resources and deficits and their effects on memory, affect and behavior.

The model also allows for continued expansion of both new kinds of stressors and appropriate types of coping. In other words, whenever we are confronted with a stressful situation, which has not been researched, we can decide what kind of coping should be more appropriate on the basis of personal experience, rational analysis, and cultural knowledge. This kind of expansion of the taxonomy of coping seems both natural and consistent with the resource-congruence model.

In sum, the resource-congruence model has made the following contributions to stress and coping research:

- (1) A broader spectrum of stressors
- (2) A broader spectrum of general life problems
- (3) Based on the coping schemas acquired by various peoples
- (4) Recognizing the importance of cultivating and conserving resources



- (5) Taking into account the importance of cultural context
- (6) Providing a comprehensive theoretical framework for predicting what works in what situation
- (7) Clarifying the general mechanisms for effective coping and resilience

From the perspective of the present model, effective coping is flexible, creative, and resourceful not only in the development and management of resources, but also in the wise use of appropriate coping strategies. The following are some indices of effective coping: efficiency in terms of expenditure of energy and resources; efficacy in achieving the desired goal of removing stress and restoring balance; personal growth in terms of enhanced competence, self-esteem, and well-being, and contributions to the group and humanity. Thus, successful coping yields both short-term and long-term benefits for both the self and others.

## **6. MAJOR SOURCES OF STRESS**

The most common source of stress is situational; it originates from the environment and is external to the person. It encompasses a wide array of stressors, from loud noise, high temperature to too much work. Given that the concept of stress originates from engineering, traditional research has focused on situational or environmental stressors (Wong, 1990, 1993). However, there are also internally generated stressors. There are at least three common types of stress, which originate from within the person -- emotional distress, existential concerns, and personality difficulties. Furthermore, we cannot conceptualize external stress merely in terms of discrete situational encounters. External stress can also be a pervasive, chronic oppressive or threatening environment that totally envelops individuals residing in a particular region from which there is little chance of

escape. The reinforcement-congruence model sheds some light on these under-researched stressors.

### **6.1 Emotional distress**

Emotional stress refers to an emotional tension or tumult triggered by catastrophising a rather harmless event. Emotional distress can also be initiated by a past trauma. Often, the emotional residue of a past trauma takes on a life of its own and becomes an internal source of stress in its own right (Wong, 1993). For example, in the case of post-traumatic stress disorders, one has to cope with the recurrent fear and tensions. Victims of childhood abuse may endure deep-seated emotional scars of humiliation, guilt and anger. In the case of pathological grief, one has to struggle with feelings of pain and sorrow even after many years of bereavement.

What would be the appropriate coping responses to emotional distress? From the perspective of the resource-congruence model, emotion-focused coping alone would not be adequate. Some meaning reconstruction is needed to transform the nature of past traumatic events so that they would no longer trigger emotional distress.

### **6.2 Existential crisis**

Existential crisis can be triggered by a personal tragedy or normal life transition (Frankl, 1988, 1992; Yalom, 1981). It refers to one's inner struggle with such existential issues as the meaning of human existence and suffering and the reconstruction of one's presumptive world (Janoff-Bulman, 1992). The present model predicts that an existential crisis calls for existential and religious ways of coping (Wong, 1993).

These two types of coping are similar in that they deal with ultimate concerns, but they involve different worldviews and belief systems. The philosophical or existential way

of coping typically includes acceptance of what cannot be changed and constructing positive meanings from negative, unchangeable situations. Religious coping, on the other hand, involves additional concepts and beliefs such as God and afterlife.

Frankl (1988) affirms “meaning can be found in life literally up to the last moment, up to the last breath, in the face of death” (51, p. 76). Such affirmation of meaning can transform despair into hope and triumph (Frankl 1988, 1992, Wong, 2005). Based on Frankl’s logotherapy, Breitbart and colleagues are able to apply meaning-centered psychotherapy to address existential and spiritual suffering in terminally ill patients (Breitbart, 2002; Breitbart & Heller, 2003; Breitbart, Gibson, Poppito, & Berg, 2004). Breitbart et al. (2004) point out the vital role of meaning as a resource in coping with emotional and existential suffering as one nears death.

The present model also emphasizes the need to build up one’s existential and spiritual resources to help overcome existential crises. Similarly, Lazarus and DeLongis (1983) also recognize the importance of the person’s central storyline or sources of personal meaning. Others (Coward, 2000; Reed, 1991) emphasize the human capacity for expanding self-transcendence to cope with end-of-life existential issues.

### **6.3 Personal disabilities and weaknesses**

Personal handicaps encompass all sorts of difficulties such as physical disabilities, maladaptive habits, and character defects. It is obvious that any kind of physical disability can create frustration and stress, because it hinders one’s ability to live independently and productively. What kinds of coping responses are most appropriate for physical disabilities? Seeking professional help and instrumental social support would be the most appropriate coping responses. In addition, existential and religious copings are also

appropriate in such situations because of the need for meaning-reconstruction and spiritual healing.

However, psychological disabilities, such as self-handicapping strategies or personality defects, are less visible, and often can go on undetected for a long time. For example, rigidity in personality can make adjusting to new situations very difficult and stressful. It has often been said that we are our worst enemies, but the coping literature seldom addresses stresses that are generated by one's personal issues. In such situations, neither problem-focused coping nor emotion-focused coping will be of much help. When the self is the problem, the only appropriate mode of coping is to engage in some kind of self-restructuring, such as attitude change.

#### **6.4 Societal stress or national disasters**

Societal stress refers to the stressful living condition that affects large segments of the population in a city, nation, or region. Such stress may be caused by natural disasters, terrorism, wars, pandemic, famine, or a brutal and oppressive government. What immediately comes to mind are images of survivors of the recent Asian tsunami, victims of AIDS in Africa, the mayhem caused by bombings in the Middle East, and starving children in various third world countries. Naji's chapter (Chapter 20) provides a glimpse of the suffering and agony of the people in the Middle East.

For those living in such hellish conditions, which adversely affect every aspect of one's life, how should one cope? The resource-congruence model predicts that given the multifaceted nature of the stress, one needs to muster all the coping skills. When one's instrumental efforts are not able to have any impact on harsh realities, existential and religious coping (Klaassen, McDonald & James, Chapter 6) would be appropriate in

dealing with unavoidable and uncontrollable problems. For example, Buddhist and Taoist ways of coping (Chen, Chapters 4 and 5) could help restore one's inner serenity and contentment in the midst of sufferings and frustrations.

However, both the resource-congruence model and common sense dictate that collective coping would be of primary importance in dealing with large-scale disasters. Community services offered by non-governmental organizations, such as the Red Cross and the Salvation Army, Government emergency relief efforts, and international aids are needed to ensure personal safety and meet basic survival needs of the victims. Individual efforts alone are simply not sufficient to meet the demands of extraordinary catastrophes.

## **7. MAJOR TYPES OF COPING**

Effective coping with a variety of stressors requires a large repertoire of coping strategies. The following major types of coping have been well-established by research:

- Problem-focused vs. emotion-focused coping (Lazarus & Folkman, 1984)
- Approach vs. avoidance (Roth & Cohen, 1986; Suls & Fletcher, 1985).
- Primary control vs. secondary control (Rothbaum, Weisz, & Snyder, 1982).
- Mastery vs. meaning coping (Taylor, 1983).
- Emotional vs. tangible social support (Schaefer, Coyne & Lazarus, 1981)

The present paper will focus on two major types of coping, which are considered important according to the resource-congruence mode: Creative (proactive) coping and existential coping. These two coping strategies have not received sufficient attention in both the theoretical and empirical literatures.

### **7.1. Creative coping**

Traditional research has almost exclusively focused on what we call reactive coping, because the coping process is triggered by a stressful encounter. In this chapter, we emphasize the importance of creative coping, which often takes place in the absence of any specific stressful encounter. The differences between reactive and creative coping are schematized in Figure 2.

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Insert Figure 2 about here

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The upper panel shows the typical process of reactive coping. An externally or internally generated stressor is appraised as demanding coping efforts. In the case of a controllable stressor, problem-focused coping may resolve the problem and reduce the stress. In the case of an uncontrollable stress, emotion-focused coping may achieve some success in reducing emotional distress.

The lower panel shows two different pathways of creative coping. Proactive or preventive coping means efforts devoted to developing resources in order to reduce the likelihood of stress and improve the general condition of life. For example, if you succeed in building up a sizable bank account, you will be less likely to encounter problems of not being able to pay your bills. The transformative pathway involves some kind of meaning reconstruction and attitude change. For example, you may attain the level of enlightenment of a Zen Buddhist to the point of becoming impervious to both negative and positive life events, regarding them as mere passing illusions (Chen, Chapter 4). In fact, even the mindful meditation can reduce stress and improve well-being outcomes (Brown & Ryan, 2003; Burrows, 2004; Kabat-Zinn, 2003).

### *7.1.1. Creative coping as positive coping*

Creative coping can also be conceptualised as positive coping. Schwarzer and Knoll (2003) consider proactive coping as the prototype of positive coping because the focus is on creating positive opportunities.

“Proactive coping reflects efforts to build up general resources that facilitate promotion toward challenging goals and personal growth. In proactive coping, people hold a vision. They see risks, demands, and opportunities in the distant future, but they do not appraise them as potential threat, harm, or loss. Rather, they perceive demanding situations as personal challenges. Coping becomes goal management instead of risk management. Individuals are not reactive, but proactive in the sense that they initiate a constructive path of action and create opportunities for growth. The proactive individual strives for life improvement and builds up resources that ensure progress and quality of functioning. Proactively creating better living conditions and higher performance levels is experienced as an opportunity to render life meaningful or to find purpose in life. Stress is interpreted as “eustress,” that is, productive arousal and vital energy.

Preventive and proactive coping are partly manifested in the same kinds of overt behaviors, such as skill development, resource accumulation, and long-term planning. It makes a difference, however, if the motivation emanates from threat or challenge appraisals because worry levels are higher in the former and lower in the latter. Proactive individuals are motivated to meet challenges, and they commit themselves to their own personal high-quality standards” (Schwarzer & Knoll, 2003).

Consistent with our analysis, Schwarzer (2003) also recognizes that another form of proactive coping is to build up personal resources, such as competencies, skills, self-efficacy and optimistic beliefs. These inner resources will reduce the likelihood of stress appraisals. However, Schwarzer has not considered the transformative pathway through meaning-reconstruction or mindful meditation as a form of proactive coping.

## **7.2 Meaning-focused coping and existential coping**

A number of coping researchers have recognized the important role of meaning in the stress process (Janoff-Bulman, 1992; Lazarus, 1991; Lazarus & Folkman, 1984; Folkman & Moskowitz, 2000; Park & Folkman, 1997; Taylor, 1983). The quest for meaning is particularly relevant in effective coping with aging (Wong, 1989), chronic or life-threatening illnesses (Carlisle, 2000; Greenstein & Breitbart, 2000; Wong & Stiller, 1999). However, there are different conceptualizations of meaning, and not all of them can be classified as existential coping. For example, according to Taylor's (1983) theory of cognitive adaptation to threatening events, the three main dimensions of adaptation are: search for meaning, sense of mastery, and self-enhancement. Taylor suggests that meaning "invokes a need to understand why a crisis occurred and what its impact has been" (1983, p. 112). Causal understanding of an event will increase one's sense of mastery in dealing with it. Here, the emphasis is on causal attribution as a form of cognitive meaning.

Park and Folkman (1997) review meaning in relation to coping with stress and traumatic events. They describe meaning as a general life orientation, as appraisal of personal significance, as attribution of causality, as a coping mechanism, and as a coping outcome. They differentiate between situational and global meaning. The former is



equated with stress appraisal, which precedes coping. The latter is concerned with more generalized meaning about one's life and existential assumptions. Global meaning can be conceptualized as the meaning of life. Searching for life meaning in the midst of adversities is important in reconstructing one assumptive world (Janoff-Bulman, 1992; Wortman, Silver, & Kessler, 1993). In a similar vein, Folkman and Moskowitz (2000) recognize three meaning-related coping strategies in the context of prolonged stress: positive reappraisal, problem-focused coping, and imbuing life events with positive meaning.

Meaning-seeking is particularly important in chronic or life-threatening situations. In studying 29 persons with spinal cord injuries, Bulman and Wortman (1977) found that their need to ascribe meaning to the event was an important part of coping. Dunbar, Mueller, Medina, & Wolf (1998) conducted a qualitative study to better understand women living with HIV. Thirty-four women living with various stages of HIV were interviewed. Five of them were identified to be important in their psychological and spiritual well-being: reckoning with death, life affirmation, creation of meaning, self-affirmation, and redefining relationships.

Acceptance is also adaptive for terminal patients. Mok (2001) conducted a qualitative study to understand Chinese cancer patients' conceptualization of empowerment. In-depth interviews of 12 Chinese patients with cancer revealed that empowerment is a process whereby patients develop a sense of inner strength through connection with families, friends, and health care professionals. Meaning-reconstruction also played an adaptive role -- they were able to transform their conditions through an

active process of developing new perspectives and reinterpreting their illness. The acceptance of illness was facilitated by their beliefs in Confucianism and Taoism.

Still another angle to meaning is conceptualized in terms of benefit-finding (Affleck & Tennen, 1996; Tennen & Affleck, 1999, 2003). They are primarily concerned with the issue of finding positive meaning in adversities. They further distinguish between benefit-finding and benefit reminding (Tennen & Affleck, 2003). The former refers to the adaptive benefit-related cognitions and beliefs **following a crisis**. We would consider such beliefs as affirmations in the potential for good outcomes or the goodness of life. The latter refers to active coping efforts in the form of recalling benefits **during difficult times** in order to ease the negative impact of the stressful encounter.

Davis, Nolen-Hoeksema, & Larson (1998) find evidence of a two-dimensional construal of meaning as “sense-making” and “benefit-finding”. Sense-making relates to finding an explanation for what happened in an attempt to integrate the negative event with an existing schema or belief/meaning system. Therefore, it is similar to Wong’s existential attribution (Wong 1991; Wong & Weiner, 1981). Benefit-finding, on the other hand, is related to finding positive meaning and positive implications in an adverse situation.

Space will not allow a thorough review of the different conceptions of meaning in the psychological literature. Here we will summarize the various adaptive functions of meaning-related coping.

1. **Cognitive function** – Causal attribution and stress appraisal increase one’s understanding of the nature and significance of negative events and enable one to cope with these events effectively.

2. **Instrumental function** – Cognitive understanding guides one's instrumental actions and increases one's sense of mastery and efficacy.
3. **Communicative function** – Expressing one's needs, intentions and affective states to other people.
4. **Affective function** – Meaning-affirmation and benefit-finding generate positive affects, such as feelings of happiness; experiences of happiness, hope and personal significance also feed into one's overall assessment that life is meaningful.
5. **Motivational function** – Affirmation of positive meaning and the attribution of positive purpose provide the motivation to persist in pursuing certain life goals.
6. **Spiritual function** – The quest for ultimate meaning invariably triggers a spiritual quest in the service of both survival and personal growth.
7. **Existential function** – Acceptance of unchangeable harsh realities coupled with the affirmation of meaning and purpose will enable one to transcend existential givens and retain meaning and hope in the midst of difficult conditions.

The first two functions are more related to the traditional cognitive/behavioral coping efforts. The last four functions are all related to the broader category of existential coping, because they increase one's capacity to cope with chronic or uncontrollable stressful situations through meaning-related functions. We differentiate between meaning-based cognitive/behavioral coping and existential coping, because the latter involves a holistic view of human beings and recognizes the importance of resolving existential issues in addition to the need for task-oriented and problem-focused coping strategies.

## **8. RATIONALE FOR THE PRESENT COPING MEASURES**

The above review of the stress and coping literature from the perspective of the resource-congruence model has recognized the following:

- A wider spectrum of stressors calls for additional categories of coping.
- The conceptual framework of resource-congruence provides a rational basis for predicting what works in what situation.
- Predictions based on the matching model call for finer functional differentiation of broad coping categories, such as problem-focused and emotion-focused coping.
- Comprehensive coping measures require both deductive and inductive approaches. It needs theory-guided research on major coping responses. But it can also need inductive methods to provide validation of coping components.

Edwards and Baglioni (1993) recommend: "Future efforts to develop coping measures will be greatly facilitated by clearly defining the relevant coping dimensions, generating multiple items that convincingly represent these dimensions, and evaluating the resulting measures using confirmatory procedures such as those illustrated here" (p. 28).

In view of the above considerations, we embarked on a systematic research program to develop a comprehensive coping measure in 1982. We adopted a four-pronged research strategy. Firstly, we interviewed people and learned from them how they coped with various life problems. This is the bottom-up approach. Secondly, we developed a resource-congruence model as a conceptual framework to systematically relate coping strategies to various stressors. Thirdly, we rationally deduced from this theory prototypical coping responses to various kinds of stressors and collect some pilot data to determine if people indeed possess the coping schema regarding what coping works with what kinds of problems. Finally, we revised and validated the coping measures through factor analysis

and correlational studies. The present chapter only presents the main findings of this research program.

### **8.1 Coping schemas**

Two constructs play a vital role in our efforts to develop a comprehensive coping measure: coping schema and prototypical coping. The concept of cognitive schema has gained wide acceptance in social cognition (Fiske & Taylor, 1984). To put it simply, schemas are cognitive structures based on abstraction and generalization of accumulated life experiences. Coping schemas are goal schemas in the sense that the objective of coping is to attain the goal of resolving problems and overcoming obstacles. It seems reasonable to assume that in their daily struggles for survival and pursuing life goals, individuals have acquired generalized knowledge of what coping strategies are effective in dealing with a given common life problem. In other words, survival and adjustments demand the acquisition of knowledge of what coping behaviors work in what situation.

In any given culture, most individuals have acquired certain skills in coping with the common, predictable life stresses. When faced with a stressful situation, individuals know how to utilize coping schemas to select appropriate coping strategies (Beck & Emery, 1985). Without such knowledge, individuals would have to cope with every demand on a trial-and-error basis, as if it we encounter it for the first time. This would lead to adjustment difficulties. Acculturation stress occurs to the extent that coping knowledge acquired in one's home land no longer applies to the host country.

### **8.2 Prototypical coping responses**

A prototype generally refers to members of a conceptual class that possess certain representative or defining characteristics. Prototypes are typical examples of a conceptual category. For example, “chairness” may be defined by a prototypical chair.

Prototypes provide a conceptual framework to generate and classify coping responses suitable to different types of stressors. For each coping response, we ask two questions: What is the unique function of this response in the stress process? In what kind of stressful situation will this coping response be most effective or appropriate? The first question allows us to group coping responses into various units of special functions. For example, the unit of behavior control consists of coping strategies that share the special function to changing a problematic situation through one’s own actions. The unit of practical social support consists of utilizing existential resources to change a stressful situation.

The second question allows us to determine the prototypical coping response in different stressful situations. Each special category of coping is, on the basis of rational analysis, conceptualized as a typical effective way of coping with a particular stressor. Thus, the unit of behavior control is considered a typical appropriate strategy to coping with stressful situations that are appraised as within one’s competence and control. The prototype concept makes it easier to generate representative items for different types of stressful situations.

The mechanism of coping schema is conceptualized as consisting of an adaptive prototypical (typical) coping response activated by cognitive appraisal of a particular stress encounter. Therefore, the construct of prototype is integral to the mechanism of coping schema.

## 9. RESEARCH STRATEGY AND METHODS

Based on our critical review of the research strategies of existing measures of coping, we have developed a research strategy that incorporates the advantages, while avoids the disadvantages of previous approaches. We have developed and employed a consistent research strategy to guide the different stages of our research project. The most unique feature of our research strategy is that it is open-ended, as it allows for inclusion of additional coping categories, when theoretical development and field research so demand. At different stages of development of the present coping project, different methods were used.

### 9.1 Research strategy

Our research strategy may be characterized by the following:

- It is **deductive**, because the generation of coping categories and responses is guided by the resource-congruence model, particularly its concepts of coping schemas and prototypes.
- It is also **inductive**, because the generation of coping categories and responses is also dictated by field research and existing coping measures.
- It is both **qualitative** and **quantitative**. Item-generation relies heavily on people's narrative on how they cope, but item-selection and scale-validation depend on quantitative analyses.
- It employs both **subjective** sorting and **objective** factor analysis.
- It is open-ended and **comprehensive**, because the measure can be expanded to accommodate new coping categories and responses.

- It has a **multicultural** orientation, because from item-generation to scale-validation, our samples included subjects from different ethnic backgrounds.

Throughout the entire research process, we attempted to identify major life stressors (Wong, 1993). We then tried to deduce the appropriate coping schemas and prototypical (typical) responses within each schema. This deductive process involved a rational analysis of the existing literature on stress and coping as well as personal coping experiences of the research team (the three authors of this chapter).

The inductive method involved extensive field research to discover how people coped with various kinds of stressors. It also involved reviewing all the major existing coping measures to identify the various coping responses that have been reported.

Three criteria were used to develop a comprehensive coping taxonomy: (1) It has to incorporate all the major findings on stress and coping in the literature. (2) It has to incorporate all the coping responses discovered in our own field research. (3) It has to pass a validation process.

The search for common life problems was systematic: We began with the external situational problems that are controllable and emotional problems that are uncontrollable, because these two were the most studied area. Then, we focused on future problems that could be avoided or prevented; existential crises that are inherent in the human condition; and finally, spiritual needs and struggles that are also common.

## **9.2 Research method**

Over a ten-year period, more than 600 subjects were recruited for generating coping categories and responses and for subjective validation purposes. In addition, more than 10 studies were completed, including theses and student research projects. Serious



attempts were made to include a range of age groups and ethnic minorities. For example, more than 100 Chinese participants were involved in various stages of the study.

Three methods were used to generate coping items: (1) We specified a certain type of stressor (e.g., a situational problem that is considered controllable by oneself, controllable by others, etc.) and asked participants what would be the typical or appropriate coping responses based on their experiences. (2) We specified a certain type of stressor and asked the participant to describe a specific event that fits that description, and then recall how he or she coped with that event. (3) We asked subjects to focus on certain major life domains, such as family, finance, and health, and indicate how they coped with problems in any one of these domains. We employed either the face-to-face interview format or a paper-and-pencil questionnaire format; the interview format was mainly used with seniors (age 65 years and above), because they might have difficulty understanding the written instructions without any explanations. During the interview, the verbal responses were taped and then transcribed for content-analysis.

Two methods were used for subjective validation by sorting: (1) We asked subjects to sort a group of coping items into the appropriate coping categories as described by the researchers. Each coping item was written on a 3x5 index card. Each coping category or prototype was described on a larger index card. Typically, we asked them to sort the cards into different piles according to broad categories, and then within each category, asked them to sort the cards according to prototypes. (2) We asked subjects to match individual coping responses with specific stressors on the basis of appropriateness or suitability. For both sorting tasks, we recruited subjects spanning different age groups. Coping items,

which met the criterion of 70% correct classification, were retained. Sometimes, the sorting task was repeated until all resulting items met the 70% criterion.

A three-step procedure was used in content-analysing open-ended narrative data. The first step was to group coping behaviors on the basis of semantic similarities. The second step was to reduce the number of coping behaviors according to their conceptual similarities. Finally, the resulting strategies were further classified on the basis of distinctive psychological functions in the coping process, such as instrumental coping, practical social support, etc.

### **9.3 Summary of the stages of research**

The present coping research project went through three stages of development as summarized below:

In **Stage 1**, the main objective was to generate items, develop the **57-item Coping Inventory** and test its validity. The Coping Inventory consisted of five coping categories: Problem-focused coping, Emotion-focused coping, Preventive/Proactive coping, Religious Coping and Existential coping. There were nine prototypes. Problem focused coping was further classified into Internal control, External control, and Secondary control. Emotion focused coping was subdivided into Denial/escape, Wishful thinking, Expressiveness, and Self-blame. Existential coping was further divided into Acceptance and Positive meaning.

In **Stage 2**, we revised and expanded The Coping Inventory into the **81-item Coping Orientation and Prototype** (The COAP). It consisted of six coping categories. Self-restructuring was added as a new coping category. Each of the six coping categories was further subdivided, resulting in a total 16 prototypes. The following seven new prototypes were added: Tension reduction, Self-improvement, External improvement, Religious beliefs, Religious practices, Cognitive restructuring, and Behavioral restructuring. Quantitative analyses were conducted to validate the COAP. The merit of this deductively based coping measure is that it measures coping at two levels: broad coping categories and specific coping prototypes. The variety of 16 prototypes makes the scale relevant for a broad range of stressors. Furthermore, additional categories and prototypes can be added without revamping the entire questionnaire.

In **Stage 3**, factor analyses were used to create the **65-item Coping Schema Inventory**. This reductive method resulted in nine coping schemas: Situational, Self-restructuring, Practical social support, Active emotion, Passive emotion, Relaxation, Acceptance, Positive Meaning and Religious coping. Several prototypes of the COAP did not survive the inductive validation process. Several items were added to Acceptance, Relaxation and Active Emotion sub-scales because of unsatisfactory reliability; this led to the creation of the **72-item Coping Schema Inventory Revised**. Numerous studies were conducted to validate the CSI.

## **10. THE FIRST STAGE: THE COPING INVENTORY**

Initially, we generated 132 items based on Wong and Reker (1982, 1985c), Folkman and Lazarus (1980), and our own explorative qualitative field research. Note that Wong and Reker (1985c) was a cross-cultural study comparing the coping behaviors of Chinese and Caucasian elderly. Thus, from the very outset, both item generation and coping classification included contributions from Chinese samples as well as P. T. P. Wong.

We resorted to the subjective sorting task to select coping items that belong to various coping categories. At the first level, items were classified into **Problem-focused coping, Emotion-focused coping, Preventive coping, Religious coping, and Existential Coping**. At the second level, problem-focused coping items were further classified into three prototypes: Internal control, External Control, and Secondary control. Emotion-focused items were subdivided into six prototypes: Acceptance, Denial/Escape, Optimism, Wishful thinking, Self blame, and Expressiveness. These finer differentiations are important as they represent functionally different coping strategies suitable for different

stressors. Furthermore, the prototypes provide a more complete and more realistic picture of the coping strategies that are actually employed by people. Only 57 items survived two rounds of subjective sorting task. Face validity was demonstrated in successful sorting of these items into appropriate categories and prototypes (Wong & Reker, 1983).

### **10.1 Age differences**

Construct validity was also provided by age differences. Wong and Reker (1983) provided 94 items pooled from Folkman and Lazarus' (1988) Ways of Coping Scale and their own Coping Inventory. They then asked 40 young adults (ages 18-29), 40 middle-aged and 40 elderly to classify these items as either problem-focused or emotion-focused. There was a significant interaction. Young and middle-aged subjects were more likely to classify coping items as emotion-focused, whereas older subjects tended to classify coping items as problem-focused. For example, "Maintain my pride and keep a stiff upper lip" was treated by 62.5% of the elderly as problem-focused, whereas less than 30% of the middle-aged and young samples classified it as instrumental. One reason might be that the elderly have fewer coping resources (Koenig, Kvale & Ferrel, 1988). Consequently, they may want to regain a sense of control by viewing emotion-focused coping as problem-focused coping. One important implication of this finding is the need to include older adults in the process of test-development.

### **10.2 Construct validity**

Wong and Reker (1983, 1985b) also presented some initial findings on construct validity. For example, when subjects were directed to think of either controllable or uncontrollable stress events, their problem-focused coping was more frequently employed for controllable than uncontrollable stress, but emotion-focused coping was more

frequently used for uncontrollable stress than for controllable stress. Similarly, participants used internal control more than external control for problems perceived as controllable by themselves, but the reverse was true for problems perceived as controllable by others.

A number of studies on Type A behavior have provided support for the validity of the Coping Inventory. For example, Type A individuals scored higher in problem-focused coping than Type B counterparts (Greenglass, 1988; Wong & Reker, 1985a). Furthermore, preventive and existential coping are negatively associated with burnout scores, but positively related to quality of life measures (Greenglass, Burke & Ondrack, 1990). This finding clearly demonstrates the adaptive value of preventive and existential coping.

### **10.3 Coping behavior of successful agers**

The construct validity of the Coping Inventory was further strengthened by Wong and Reker (1984) in a study of the coping behaviors of older adults (ages 65+). On the basis of a structured intensive interview, elderly subjects (ages 65+) were rated on three scales: mental health, physical health, and adjustment. A wellness score was derived from the summation of the three scales. Subjects were then divided into successful and unsuccessful groups according to a median split of wellness scores. The main purpose of the study was to determine the difference between the successful and unsuccessful agers in their ways of coping.

We also did some validity check on our Coping Inventory. The purpose was to determine whether the coping strategies extracted from the subjects' narratives matched the coping categories and prototypes of the Coping Inventory. The fact that most of their reported ways of coping can all be classified according to our Coping Inventory provides

some support of the validity of our taxonomy. Two trained judges were able to classify all coping strategies an inter-judge agreement that ranges between of 72 % to 95%.

Construct validity was provided by the finding that successful agers tended to use preventive strategies significantly more frequently than unsuccessful agers. It is also noteworthy that successful agers had a stronger tendency to use existential strategies than their unsuccessful counterparts. These two types of coping are of obvious importance in promoting wellness; unfortunately, they have not received much attention in coping research.

Preventive and existential strategies may be labeled creative coping in that these strategies help create an external/internal environment, that spawns positive events and at the same time reduces the likelihood of negative events. The positive external environment includes good interpersonal relationships, financial security, and pleasant living conditions. The positive internal environment includes a sound body and a sound mind, coupled with a positive attitude towards life. A schematic presentation of creative coping and reactive coping is shown in Figure 2. Preventive and existential strategies are treated as coping strategies, because apart from their ability to reshape the environment, they are effective in dealing with potential as well as philosophical problems, respectfully. Both types of problems, if unresolved, can become a significant source of stress.

Successful agers used more internal but fewer external strategies than the unsuccessful group, even though the two groups did not differ in overall problem-focused coping strategies. Similarly, the two groups did not differ in overall emotion-focused coping, but the successful agers employed denial, expressiveness, and wishful thinking less than unsuccessful ones. These findings further support the value of finer

differentiation of problem- and emotion-focused coping categories. To ensure that differences in strategies were not due to the possibility that the two groups experienced different kinds of problems, we compared their coping responses to three specific problems: health, finance, and family. It is interesting to note that the two groups still differed.

The main contributions of the first stage of research were: demonstrating the initial validity of the Coping Inventory and providing the empirical foundation for our resource-congruence model. Therefore, we were encouraged to further refine the coping inventory theoretically and empirically.

## **11. THE SECOND STAGE OF DEVELOPMENT: THE COAP**

During the second stage, we decided to expand the coping categories as well as the prototypes under each category. The broad categories were now renamed Orientations to indicate the initial cognitive search for appropriate coping schemas. We theorized that the coping schema actually involves two cognitive steps: Individuals initially focus or orient towards a certain broad conceptual categories before selecting prototypical responses appropriate for the situation. For example, when the problem is appraised as potentially solvable, the coping efforts will be at once oriented towards problem-focused coping strategies. A final appraisal of the nature of the stressor – whether it is controllable by self or by other people will activate the appropriate coping schema, which will select the appropriate coping prototype. Thus externally controllable situations will elicit external control strategies, while internally controllable situation will elicit internal control strategies (Wong & Reker, 1983).



Recall that a coping prototype refers to a group of coping behaviors that share a common psychological function. Prototypes of coping are conceptualized as what a rational person would typically do in a particular stressful situation. Thus, prototypes are assumed to be appropriate or effective coping behaviors. In other words, coping efficacy of individuals can be assessed by the extent they employ prototypical coping responses. A major assumption of the resource-congruence model was that generally, people attempt to match their coping behavior to perceived situational demands. Consequently, a broader range of coping prototypes was identified. In order to emphasize the importance of prototypes, the revised and enlarged Coping Inventory was renamed Coping Orientations and Prototypes (COAP) (Wong, Reker, & Peacock, 1987).

The coping prototypes were grouped into broad coping orientations on the basis of their common conceptual focus. For example, two prototypes were grouped together to form the Situational Orientation because both of these involve attempts to change an existing situation or problem; one of these prototypes involves one's own efforts to change the situation and the other involves relying on other individuals to change the situation. Specific items are intended to represent typical strategies used for a given prototype rather than an exhaustive list of all strategies representing that coping strategy.

### **11.1 A description of the COAP**

The 81-item COAP has six orientations or foci. Each orientation subsumes two or more prototypes (see Appendix A for a complete outline of each orientation and prototype).

The **Situational Orientation** involves strategies that focus on solving an existing problem by changing the situation, either by one's own efforts or by relying on the help of others. It includes the prototypes of instrumental behavior and practical social support.

The focus in the **Emotional Orientation** is on managing one's emotional reaction without changing the situation or solving the problem. This orientation encompasses six prototypes: distancing, wishful thinking, expressiveness, self-blame, emotional social support, and tension reduction.

The **Preventive Orientation** focuses on reducing the likelihood of anticipated problems. It includes the prototypes of self-improvement and external improvement.

The **Existential Orientation** involves strategies that are aimed at maintaining a sense of meaning or an attitude of acceptance. Acceptance and existential meaning are the two prototypes included in this orientation.

The **Religious Orientation** takes into account God or religion in dealing with anticipated or existing situations. The two prototypes within this orientation are religious beliefs and religious practices.

The focus in the **Self-Restructuring Orientation** is on changing one's own cognitions, behaviors and attitudes. It encompasses cognitive restructuring and behavioral restructuring prototypes.

Scale scores are obtained for each respondent by calculating the average score across the items comprising each scale; thus, scale scores can vary from 1 to 5. Scale means and standard deviations obtained in several studies of undergraduates' coping with anticipatory stress are shown in Table 1.

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Insert Table 1 about here.

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## 11.2 Internal consistency

Internal consistency estimates for the six orientations are good. Across three studies in which undergraduate students reported their coping behaviors associated with three different anticipatory stressors, the following median coefficient alphas were obtained: .83 (situational), .86 (emotional), .79 (preventive), .79 (existential), .97 (religious), and .85 (self-restructuring). Similarly, the alphas for the 16 prototypes were also satisfactory. See Table 2 for individual values obtained in each study.

In two subsequent studies, internal consistency estimates were of a similar, if not greater, magnitude. Median alphas ranged from .80 to .97 for the orientations and .68 to .96 for the prototypes (see Table 3).

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Insert Tables 2 & 3 about here

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### **11.3 Evidence of validity**

Previous coping measures have been criticized because of a lack of evidence of validity (Cohen, 1987). However, demonstrating the validity of a coping instrument is a difficult and on-going task. Because the COAP is a new instrument, validity data is still limited. Nevertheless, the process used to develop the COAP ensures a high degree of content validity; items were based on actual responses reported in the literature and by our respondents. These items are representative of a broad range of coping strategies that people actually use. In developing the initial Coping Inventory, judges sorted items into orientations and only those items for which there was a 70% or greater agreement rate were retained (Wong & Reker, 1983).

Data from three pilot studies with the COAP also support its validity. In one prospective study that investigated how undergraduates cope with a forthcoming examination, the nature of the relationships between coping orientations and residualized psychological symptoms and dysphoric mood (controlling for initial levels of symptoms and mood reported three weeks prior to the examination) were consistent with predictions. For example, greater use of emotional coping reported one week before the examination was associated with higher levels of residualized psychological symptoms and dysphoric mood, reported immediately before the examination. In another study, the COAP was able to distinguish differences in the coping used by undergraduates for two anticipatory stressors (unemployment and exposure to AIDS virus) that consensually were judged as requiring different coping strategies. Similarly, in another study, the COAP identified three different patterns of coping used to deal with three different anticipatory stressors (natural disaster, employment decisions, teacher bias). Thus, the initial evidence supports the validity of the COAP.

Concurrent construct evidence was further provided by two other studies which correlated the COAP with other psychological measures. Table 4 presents the correlations of the six orientations with the WOQ Scales. What was noteworthy was the relatively high correlations between WOQ's Positive Reappraisal with our Existential Coping and Religious coping, suggesting that Positive Reappraisal may be existentially and spiritually based rather than just cognitively based. Table 5 shows that Existential coping is positively correlated with Sense of Coherence (Antonovsky, 1979, 1987, 1992), the Life Orientation Test (Lot; Scheier & Carver, 1985, 1987), and Perceived Physical Well-being (Reker & Wong, 1984). These findings further suggest the adaptive value of existential coping.

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Insert Tables 4 and 5 about here

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The COAP has also been employed to study coping in old age. Van Rans and Marcoen (2000) found that the participants made maximum use of existential orientation in trying to accept what had already happened to them and could not be undone. In addition to active, instrumental coping, they also depended on religious beliefs and practices for comforts and support, thus confirming the important adaptive role of religious coping in old age (Koenig, 1994)

#### **11.4 Potential usefulness of the COAP**

The COAP is a promising instrument for measuring coping efforts. The classification of coping is based on a rational-empirical approach that combines the strengths of logical classification of coping with empirical support. The COAP also has the advantage of allowing coping to be investigated at two levels of analysis. Broad coping categories are obtained by examining coping at the level of the six coping orientations. These broad categories encompass a wider range of coping strategies than available in a number of previous coping measures. Preventive, Existential and Religious Orientations represent important coping categories frequently ignored or given inadequate representation in other coping instruments. Initial findings with the COAP provide evidence that these are important coping strategies. Further, strategies that involve restructuring of one's cognitions and behaviors are also included; such coping efforts have been emphasized by cognitive-behavioral psychologists as important for effective stress management (e.g. Meichenbaum, 1977).

Depending on the nature of the application, coping can be investigated at either the orientation level or the prototype level. For many applications, the orientation scores will provide the most appropriate summary information. However, for other applications, there will be a need to make finer differentiations than allowed by the orientations; in such instances, it will be necessary to examine coping in terms of the specific prototypes.

Another advantage of the COAP is that additional orientations and prototypes can be added as new stressful situations in other cultures demand research attention. These additions can be validated independently of existing orientations and prototypes. Furthermore, specific orientations and prototypes can be selected to study various types of stressors. Thus, the COAP approach provides a great deal of flexibility and expandability in coping research and promises a comprehensive coping measure.

## **12. THE THIRD STAGE OF DEVELOPMENT: THE CSI**

In the third and final stage of development, we attempted to develop a version of the new coping measure that passed the validating process of factor analyses. We wanted to find out to what extent the empirically determined factors corresponded to theoretically determined prototypes. This new version was called the Coping Schema Inventory (CSI) in order to differentiate it from the theoretically deduced COAP. We adopted the term schema to emphasize the role of coping schema in triggering various types of coping strategies.

Based on structural modeling (Peacock, 1992), the original 16 coping prototypes of the COAP were regrouped into eight coping schemas: **instrumental (situational), self-restructuring, preventive, active emotional, passive-emotional (avoidance/escape/denial, wishful thinking, self-blame), practical social support, existential (acceptance and meaning) , and religious/spiritual**. Validity data supporting

these coping schemas comes from moderate to high correlations of the schemas to various personality variables, outcome measures and other coping scales (Peacock, 1992; Wong, Reker, & Peacock, 1993). Cronbach's alphas for the eight coping schemas were: .88 (instrumental), .81 (preventive), .81 (passive-emotional), .80 (social support), .80 (active-emotional), .82 (existential), .84 (self-restructuring), and .97 (religious/spiritual) (Peacock & Wong, 1996). Existential coping and religious coping were significantly predicted by appraised uncontrollability, while emotion-focused coping was significantly predicted by appraised threat (Peacock, Wong, & Reker, 1993).

### **12.1 Study 1A: Factorial Structure of the CSI**

The purpose of the present study was to determine the factorial structure of the CSI. To overcome some of the methodological weaknesses mentioned earlier, the CSI was used to measure coping responses with a variety of life stressors in different samples; thus, the emerging factorial structure is not specific to a particular situation or sample. If our present conceptual analysis is correct, then the underlying dimensions of coping should match the eight coping schemas.

A large sample (N = 967) of university students from two Ontario universities took part in the study. To establish factorial invariance, the sample was evenly divided into two samples. The result of the factor analysis is shown in Table 6.

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Insert Table 6 about here

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After deleting items that loaded on two or three factors as well as items with a loading lower than .40, only 65 items remained. The Preventive factor did not emerge,

because some of the items related to improving external environment loaded on situational coping, while items related to internal improvement either went to Self-Restructuring or Relaxation. The two prototypes of Existential coping: Acceptance and Meaning appeared as two separate factors. Except for the dissolving of Preventive coping into other factors and the emerging of the Relaxation factor, the result of the factor analysis was very similar to the result from Peacock's (1992) results based on structural modeling. It was also significant that except for the Relaxation factor, all factors were the same as those in the COAP. In other words, there is a convergence of support from both deductive and inductive methods of test-construction.

Alpha coefficients, means, and standard deviations are shown in Table 7. Internal consistency as reflected by Cronbach's alpha coefficient was good. Except for the Acceptance factor with an alpha of .65, all other factors have satisfactory alphas, ranging from .78 to .97. In terms of means, the most frequently used coping schemas are situational (instrumental) and active emotional expression. Tying for third place are Meaning and Self-restructuring. Therefore, the existential coping of meaning making can no longer be ignored as a commonly used coping strategy.

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Insert Table 7 about here

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Gender differences as shown in Table 8 show that females consistently score higher almost on all coping schemas than males. This may reflect a gender bias in response style rather than an actual tendency to use these schemas to cope more frequently. The problem of response style remains a challenge in test construction.



Correlations among CSI scales are shown in Table 9. The highest correlation is between Situational coping and Self-restructuring (.79). This is expected because Self-restructuring contained many items, which used to belong to Secondary control, and Situational coping was previously labelled Internal Control; these two types of control are called Problem-focused Coping. It is also worth noting that Meaning Making and Religious coping are correlated at .51 level, higher than most other correlations, thus providing some empirical support that existential meaning and religious/spiritual coping are closely related.

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Insert Tables 8 and 9 about here

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### **12.2 Study 1B: Correlates of CSI with Stress Appraisal and Ways of Coping**

This study provides further evidence of the construct validity of the CSI. The correlations between the CSI and Stress Appraisal Measure (Peacock & Wong, 1990) are presented in Table 10. The results replicate our earlier findings (Peacock & Wong, 1996; Peacock, Wong, & Reker, 1993). As predicted, Challenge and Controllability are positively correlated with Situational coping and Self-restructuring. Stress appraised as controllable by others leads to seeking Social Support as well as Active Emotional coping of complaining about the problem to others.

The correlations between the CSI and WOQ are shown in Table 11, and they replicate our earlier findings on the COAP and WOQ. Again, it is worth pointing out that positive-reappraisal is correlated with Meaning making, Religious coping and Self-restructuring, suggesting that positive-reappraisal is more than cognitive reframing.

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Insert Tables 10 and 11 about here

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### **13. RELIABILITY AND VALIDITY OF THE REVISED CSI (R-CSI)**

Because we wanted to enhance the reliability for Active Emotional, Acceptance and Tension Reduction, we added three items to Acceptance, three items to Tension Reduction, and one item to Active Emotional, to create a **72-item CSI** and it is now called the **Revised CSI (R-CSI)**.

#### **13.1 Study 1: Evidence of reliability**

The internal reliability of the R-CSI is shown in Table 12. The alpha coefficients are now much improved over the previous CSI. The test-retest reliability over a 6-week period was also satisfactory. Thus the R-CSI has acceptable levels of reliability.

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Insert Tables 12 about here

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#### **13.2 Study 2A Revised CSI with CISS and COPE**

A sample of 35 students completed a battery of questionnaires including R-CSI, Endler and Parker's (1990b) CISS, and Carver, Scheier and Weintraub' (1989) COPE as part of a larger study on coping. They were asked to think of a critical incident of stressful encounter in recent months. A stressful event was critical if it was appraised as having a significant impact on their lives. The event could have taken place at the university or at home. The stressful event could also be primarily an inner crisis triggered by some experience. Participants were asked to describe this critical incident in as many details as

possible and then indicate how they coped with it by completing three coping questionnaires.

The correlations between R-CSI and CISS are shown in Table 13. The positive correlations between Situational coping, Self-restructuring, and Active Emotional coping simply confirm that all these coping strategies belong to the category of problem-focused coping. Active emotional coping is similar to other problem-focused strategies in that it is direct and confrontational and may have the effect of resolving a problem, so says the proverbial statement that the squeaky wheel gets the grease. Passive emotional coping is positively correlated with Emotional Orientation, because both are emotion-focused coping.

Meaning was negatively correlated with Task Orientation, suggesting that when problems are controllable and solvable by direct actions, people are less likely to resort to Meaning-making. The positive correlation between Seeking Social Support and Social Diversion are predicted because both involve reaching out to other people; but functionally, we do not see Social Diversion as helpful as Seeking Practical Social Support, because Social Diversion is an avoidance strategy. The overlapping construct between seeking Practical Social Support and seeking avoidance through Social Diversion needs to be clarified through further research. The positive correlation between Tension Reduction and Task Oriented Coping can only be understood in terms of the preventive and adaptive nature of relaxation. When one is gaining more self-composure and confidence through meditation and other relaxation practices, one is better able to take on the problems.

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Insert Table 13 about here

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The correlations between the R-CSI and the COPE are shown in Table 14. The positive correlations between Situational, Self-restructuring and Active Emotional coping strategies are predicted, because functionally they all have the capacity to solve problems. Self-restructuring is positively correlated with Active Coping, Positive Planning and Re-interpretation further clarifying the functional properties of the strategy of changing oneself. This is important, because in many difficult situations there is little we can do except changing ourselves – our behaviors, attitudes, and philosophies, etc. It is also important because of its anticipatory and preventive nature. For example, we can avoid many problems and improve our life conditions by adopting better attitudes towards people and life. Meaning is primarily associated with Reinterpretation, Behavioral disengagement, and humor, but negatively correlated with Active Coping; these findings clarify the functions of Meaning-making and shed some light on Behavioral disengagement. From the perspective of control theory, Carver et al. (1989) feel that Behavioral disengagement may not be a very positive coping response, because it reduces the likelihood of goal-attainment. However, from the perspective of Taoism, or wu-wei, disengagement can be very adaptive, because it conserves energy and replaces the futile behavioral striving with an attitude of acceptance and going with the flow; such behavioral disengagement will allow time for meaning-exploration. The positive relationships between Tension Reduction with Positive Planning and Reinterpretation further highlight the preventive function of Tension Reduction.

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Insert Table 14 about here

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### **13.3 Study 2B: Revised CSI and the CRI**

Similar to Study 2A, 55 subjects were asked to describe a recent stressful encounter and then indicate how they have coped with this event by completing the Revised CSI and the CRI.

It is interesting that Situational Coping, Self-restructuring and Tension Reduction appear to have similar adaptive functions by virtue of their positive associations with Logical Analysis, Positive Reappraisal, Seeking Guidance, and Problem-solving; all four are considered by Moos (1988, 1993) as representing approach strategies. Both Meaning and Religious Coping are positively correlated with Logical Analysis, Positive Reappraisal, and Seeking Guidance, implicating cognitive strategies in these two types of coping. As expected, Social Support was positively related with Seeking Guidance/Support, but different from prediction, Acceptance and Resignation/Acceptance were not correlated. Perhaps, according to our thinking, Acceptance simply means accepting the situation as unchangeable, but it does not imply resignation, because one can still engage in Meaning-making, Self-restructuring and Tension-reduction rather than giving up.

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Insert Table 15 about here

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## **14. GENERAL DISCUSSION AND CONCLUSIONS**

To live is to suffer. To survive is to cope. To succeed is to adapt effectively and creatively. For most people, the journey of life is continued education on coping and survival in the school of hard knocks. Through eons of time and the cumulative wisdoms of

human adaptation, a vast repertoire of coping strategies is now available to people. We no longer depend on the primitive brain and instinctive responses to cope with complex problems. In most situations, we also do not depend on the process of trial and error. More likely we can take advantage of the coping knowledge and wisdoms already stored in our memories in the form of coping schemas of what works in what situations. None of the existing coping measures even come close to capturing the variety of coping strategies available to people coping with the harsh realities of living. In this chapter, we have at least described the process to develop a comprehensive schema-based measure of coping.

Our biggest contribution is to follow the resource-congruence model by asking people what would be the appropriate, prototypical ways of coping with various types of stressors. We can then employ the subjective sorting task (Carver, Scheier, & Weintraub, 1989) to validate the prototypes. With each type of stressor, we can deduce and verify the prototypical coping responses. Therefore, this open-ended deductive approach allows researchers to add new modules to the COAP without having to start over again the elaborate validating process as required by the inductive approach. In Section 6, we have identified several major sources of stress, which have not received research attention. There are bound to be additional sources of stress and suffering for those living in other parts of the world, but unknown to denizens of North America. Eventually, the COAP can be extended to the point of encompassing the majority of coping strategies employed by people in different situations and cultures. Another advantage of the COAP is that researchers can choose the specific Orientations or Prototypes to study coping reactions to a specific stressor. Stone, Greenberg, Kennedy-Moore, & Newman (1991) have raised

the provocative question: What are self-report, situation-specific coping questionnaires measuring? The COAP provides a partial answer to this question – it measures the typical responses people adopt in a specific situation. Finally, the COAP provides a powerful research strategy to study the cross-cultural psychology of coping. For example, one can hold the stressor constant across cultures and ask equivalent samples what the most typical and appropriate way of coping with this kind of stressor would be. This would allow researchers to identify both universal and cultural-specific aspects of coping prototypes.

Our inductively developed R-CSI also has some advantages over most existing coping measures for three reasons. First, it is both theory-based (Carver et al., 1989; Lazarus, 1990) and empirically-based; it has survived both deductive and inductive validation processes. Second, it has very good psychometric properties in terms of reliability and validity and has overcome some of the weaknesses in other coping scales. Thirdly, it includes major coping strategies, such as Existential Meaning Coping, Self-restructuring and Tension Reduction, which have not been included in other coping measures. The adaptive functions of Existential coping remain largely unexplored, although it has been discovered that such strategies are used in coping with a wide range of stressful situations, such as cancer (Breitbart, 2002); AIDS (Carlisle, 2000), chronic illnesses (Mok, Lai, & Zhang, 2004; Taylor & Aspinwall, 1992), incest (Silver, Boon, & Stones, 1983), chronic disabilities (Stephenson & Murphy, 1986), combat deaths (Florian, 1989), and aging (Wong, 1998b). There are promising new theoretical and empirical developments in meaning research (Reker & Chamberlain, 2000; Thompson & Janigan, 1988; Wong & Fry, 1998); such research will further clarify the various functions of meaning in Existential coping.

Self-restructuring is another major coping strategy with important adaptive functions. When the source of stress is one's own bad habits, negative attitudes, or some other personal handicaps, clearly the most appropriate coping response is Self-restructuring. But when one lives in situations with chronic and pervasive problems, Self-restructuring can also be very effective. For example, both Buddhist coping (Chapter 4) and Taoist way of nature (Chapter 5) entail fundamental self-restructuring, which may be considered a kind of transformational coping. Tension Reduction also holds a great deal of promise as both a reactive and proactive coping strategy. Apart from reducing immediate stress, regular practices of tension reduction exercises, such as mindful meditation and Qigong can even prevent the development of tension. At present, there are already several mindfulness-based stress reduction programs (Chang et al, 2004) and psychological interventions (Kabat-Zinn, 1998, 2003).

#### **14.1 Contributions to research on effective coping**

Fleming, Baum, & Singer (1984) point out the difficulties of discovering methods of effective coping. They point out that while intellectualization may work for one person for a problem, another person may use denial and come to the same satisfactory solution. Similarly, a strategy may work for an individual in a specific situation at time I, but may not work that well in the same situation for time II. Of course, it will be extremely difficult to predict precisely which strategy works in what situation for which person. However, our theory and research provide several principles to serve as guidelines on effective coping and resourcefulness (Rosenbaum, 1990).

Congruence is one key factor. Congruence not only means that the coping response matches the nature of the stressor, but it also means that the coping response is



congruent with implicit cultural values and practices. Various chapters in this book (Chapters 1, 2, 3 and 7) have emphasized the importance of cultural values and beliefs in determining what constitute socially desirable coping responses and outcomes. Thus, congruence requires both coping knowledge and cultural knowledge. Lacking either knowledge, one has to rely on trial and error to discover congruence.

Another key factor is resource availability. The general principle is that the more external and internal resources one possesses, the more likely one is able to cope with the demands of life. The emphasis on coping resources thus shifts the focus from reacting to stressful encounters to preventive and transformative coping. When one is armed with adequate resources, one is less likely to appraise situations as threatening or harmful.

The third key factor is self-restructuring. The success or failure of coping depends not so much on skills as on the person. The same strategy works for one person but not for another in an identical situation, because of individual differences in terms of attitudes and personalities. A resilient person is not necessarily someone with a lot of coping skills, but must be someone with the right stuff, such as endurance, determination, optimism, flexibility, creativity, wisdom, humility, faith, integrity, and equanimity. The mediating roles of these positive attributes represent another new frontier for coping research.

## **14.2 Concluding remarks**

Since Lazarus' (1966) landmark publication, stress and coping has become a major research area for several sub-disciplines of psychology, such as social and personality, clinical and consulting, health psychology, organizational psychology, sports psychology, life-span development, and cross-cultural psychology. Such positive developments are not

unexpected, because effective coping is so essential not only for individuals' mental and physical health, but also for the well-being of community and society.

In musing over the future of coping research, Snyder (1999b) asks whether coping constructs are by-products of Western society and emphasizes the need of keeping an eye on the societal and cultural context in which our coping models are developed. Thus, he implicitly acknowledges the need for cross-cultural research if the psychology of coping is going to move forward. We need to move the frame of reference from individualistic achievements to broader considerations of how people in other cultures cope, and why community harmony and collective coping are just as important as personal success. Snyder's concluding statement in his book is prophetic: "Wherever coping goes, so too will our civilization...and vice versa" (p.333). We will even go further by stating that the survival of humanity depends on how we cope with such global problems of poverty, AIDS, inequality, discrimination, corruption, abuse of power, and clash of cultural values. As we look into the future, we need to venture out of our confines of neat coping models and paradigms and learn from history, the wisdom literature and the heroic stories of survival and resilience in different cultures. We believe that in the post 9/11 world, coping research will gain even more importance, if we are willing to get out of our comfort-zone and get into the uncharted areas alluded to throughout this chapter.

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Table 1

Means obtained for each COAP scale

COAP	TYPE OF ANTICIPATORY STRESS			
	AIDS	Employment		
	VIRUS (N=80)	Unemployment (N=75)	Examination (N=153)	Decisions (N=118)
<u>ORIENTATIONS</u>				
Situational	2.8	3.1	3.1	3.4
Emotional	2.3	2.6	2.5	2.4
Preventive	2.9	3.3	3.3	3.5
Religious	2.2	2.1	2.5	2.5
Existential	2.8	3.1	3.3	3.2
Self-Restructuring	2.7	3.0	3.2	3.3
<u>PROTOTYPES</u>				
Instrumental	2.9	3.5	3.5	3.7
Practical Social Support	2.7	2.8	2.5	2.9
Distancing	1.8	2.0	2.0	2.0
Wishful Thinking	2.6	2.7	2.6	2.4
Expressiveness	2.7	3.1	3.0	3.1

Table 1 cont'd

Means obtained for each COAP scale


---

COAP	TYPE OF ANTICIPATORY STRESS			
	AIDS		Employment	
	VIRUS	Unemployment	Examination	Decisions
	(N=80)	(N=75)	(N=153)	(N=118)

---

PROTOTYPES cont'd

Self-Blame	2.0	2.3	2.4	2.1
Emotional Social Support	2.9	3.5	3.3	3.4
Tension Reduction	1.9	1.8	2.0	1.9
Self-Improvement	2.9	3.3	3.3	3.4
External-Improvement	2.9	3.4	3.2	3.6
Religious Beliefs	2.3	2.2	2.7	2.6
Religious Practices	2.1	2.1	2.4	2.4
Acceptance	2.8	3.0	3.3	3.1
Existential Meaning	2.9	3.2	3.3	3.3
Cognitive Restructuring	2.6	3.0	3.0	3.1
Behavioural Restructuring	2.8	3.1	3.4	3.4

Table 2

Internal consistencies of COAP scales in three studies

---

COAP	STRESSOR		
	Psychology Examination (N=100)	AIDS VIRUS (N=73)	Unemployment (N=67)
<u>ORIENTATIONS</u>			
Situational	.83	.94	.82
Emotional	.82	.91	.86
Preventive	.79	.91	.72
Religious	.96	.97	.98
Existential	.79	.86	.64
Self-Restructuring	.85	.90	.70
<u>PROTOTYPES</u>			
Instrumental	.85	.92	.88
Practical Social Support	.75	.86	.66
Distancing	.74	.79	.73
Wishful Thinking	.71	.83	.72
Expressiveness	.71	.73	.57

---

Table 2 cont'd

Internal consistencies of COAP scales in three studies

---

COAP	STRESSOR		
	Psychology Examination (N=100)	AIDS VIRUS (N=73)	Unemployment (N=67)
<u>PROTOTYPES cont'd</u>			
Self-Blame	.78	.91	.87
Emotional Social Support	.91	.92	.93
Tension Reduction	.79	.85	.78
Self-Improvement	.76	.88	.62
External-Improvement	.59	.75	.55
Religious Beliefs	.92	.95	.96
Religious Practices	.94	.94	.94
Acceptance	.66	.77	.73
Existential Meaning	.83	.82	.66
Cognitive Restructuring	.73	.72	.49
Behavioural Restructuring	.84	.88	.70

Table 3

Internal consistencies for COAP scales in two other studies

STUDY 1

STUDY 2

	Academic Examination (N=153)	Employment Decisions (N=118)	Natural Disaster (N=119)	Teacher Bias (N=120)
<u>ORIENTATIONS</u>				
Situational	.78	.80	.88	.86
Emotional	.85	.88	.82	.86
Preventive	.73	.79	.81	.83
Religious	.97	.97	.97	.98
Existential	.78	.84	.83	.78
Self-Restructuring	.82	.85	.83	.85
<u>PROTOTYPES</u>				
Instrumental	.82	.87	.89	.88
Practical Social Support	.81	.76	.85	.80
Distancing	.77	.82	.72	.80
Wishful Thinking	.73	.76	.76	.80
Expressiveness	.66	.74	.67	.69

Table 3 cont'd

Internal consistencies for COAP scales in two other studies

	STUDY 1	STUDY 2

	Academic Examination (N=153)	Employment Decisions (N=118)	Natural Disaster (N=119)	Teacher Bias (N=120)
<hr/>				
<u>PROTOTYPES cont'd</u>				
Self-Blame	.80	.87	.86	.89
Emotional Social Support	.88	.91	.91	.89
Tension Reduction	.71	.82	.75	.79
Self-Improvement	.63	.69	.72	.74
External-Improvement	.57	.72	.69	.70
Religious Beliefs	.96	.96	.96	.97
Religious Practices	.95	.95	.95	.96
Acceptance	.64	.75	.77	.65
Existential Meaning	.76	.80	.78	.79
Cognitive Restructuring	.67	.68	.52	.69
Behavioural Restructuring	.80	.83	.88	.85

Table 4

Construct Validity Correlations between the COAP and WOQ


---

	THE COAP					
	<hr/>					
N = 79	SIT	PRV	RST	EMO	EXI	REL
CONFRONTIVE	.32**	.31**	.22	.20	.10	.04
DISTANCING	-.18	-.08	.10	.04	.26*	.11
SELF-CONTROL	.13	.29**	.10	.19	.23*	.22*
SOCIAL SUPPORT	.52***	.34**	.23*	.27*	.19	.09
ACCEPT RESPON.	.03	.12	-.02	.11	-.05	-.03
ESCAPE-AVOID.	-.09	.04	-.21	.48***	-.16	.20
PLANFUL PROB.	.39***	.34**	.38***	-.12	.30**	.15
POSITIVE REAP.	.31**	.43***	.43***	.17	.50***	.49***

Note: SIT = Situational

PRV = Preventive

RST = Self-Restructuring

EMO = Emotional

EXI = Existential

REL = Religious

\*\*\*  $p < .001$     \*\*  $p < .001$     \*  $p < .05$

Table 5

Concurrent Validity Correlations of the COAP


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THE COAP

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	SIT	PRV	RST	EMO	EXI	REL
SOC	.27**	.24*	.30**	-.37**	.28**	.17
(N=84) LOT	.18	.20*	.23*	-.31**	.20*	.03
(N=119) LOC						
(N=119)	-.12	-.15	-.22*	.29**	-.08	.10
(N=142) BSI	-.16	-.14	-.19*	-.18*	-.01	.02
(N=142) Phy. Well-being	.15	.19*	.11	.49***	-.06	.05
(N=84) Psy. Well-being	.21	.17	.17	-.23*	.28**	.10
(N=84)	.01	.10	.10	-.31**	.18	-.06

Note: SIT = Situational

PRV = Preventive

RST = Self-Restructuring

EMO = Emotional

EXI = Existential

REL = Religious

SOC = Sense of Coherence Scale

LOT = Life of Orientation Test

LOC = Rotter Locus of control (Scored in direction of externality)

BSI = Brief Symptom Inventory

Phy. Well-being = Perceived Physical Well-Being

Psy. Well-being = Perceived Psychological Well-Being

\*\*\*  $p < .001$       \*\*  $p < .001$       \*  $p < .05$

Table 6

Study 1A: Varimax rotated principal components factor loadings for CSI across two independent samples

	Sample 1 (N=484)	Sample 2 (N=483)
Scale name and items	Loading	
<u>Situational</u>		
Be determined and persistent in attacking the problem.	.76	.73
Confront the problem by taking appropriate action.	.68	.70
Make a plan of action and follow it.	.67	.66
Double my efforts to change the situation.	.66	.67
Do something about the situation.	.64	.57
Actively seek out information on my own.	.63	.61
Break down the problem into smaller steps and work on it one at a time.	.55	.57
Take the problem into my own hands by fighting back.	.52	.56

Table 6 cont'd

Study 1A: Varimax rotated principal components factor loadings for CSI across two independent samples

	Sample 1 (N=484)	Sample 2 (N=483)
Scale name and items	Loading	
<u>Self-restructuring</u>		
Change my pace to suit the situation.	.68	.63
Restructure my own actions in light of the problem.	.64	.62
Do what is necessary to fulfil the requirements of the situation.	.63	.65
Rearrange my activities to accommodate the situation.	.59	.60
Develop better time management skills so that I will be more efficient in the future.	.53	.55
Change my attitude in view of this problem.	.49	.47
Change my negative attitude toward this problem into a more positive one.	.47	.51
Try to look at the problem from a new perspective.	.46	.37

Table 6 cont'd

Study 1A: Varimax rotated principal components factor loadings for CSI across two independent samples

	Sample 1 (N=484)	Sample 2 (N=483)
Scale name and items	Loading	
<u>Active Emotional</u>		
Seek emotional support from others.	.77	.69
Depend on friends for emotional/moral support.	.74	.69
Look to others for moral support.	.71	.67
Share my feelings with a confidant.	.67	.74
Express my feelings and thoughts.	.65	.69
Air my complaints and frustrations.	.59	.65
Release my pent-up emotions.	.50	.53
<u>Passive Emotional</u>		
Blame myself for what has happened.	.78	.73
Feel guilty for what has happened.	.76	.76
Feel sorry for what I have done.	.75	.73
Feel ashamed for my inadequacies.	.73	.68
Wish that I were a different person.	.71	.58

Table 6 cont'd

Study 1A: Varimax rotated principal components factor loadings for CSI across two independent samples

	Sample 1 (N=484)	Sample 2 (N=483)
Scale name and items	Loading	
<u>Passive Emotional cont'd</u>		
Wish that I could undo the past.	.67	.63
Wish that a miracle or something fantastic would happen.	.57	.46
Put off doing something about the problem.	.55	.63
Wish that the situation were different.	.53	.46
Run away for the problem or situation.	.50	.53
Suppress or avoid facing my own emotions.	.47	.45
Ignore the problem and pretend it doesn't exist.	.45	.54
<u>Meaning</u>		
Believe that valuable lessons can be learned from undesirable experiences.	.67	.55

Table 6 cont'd

Study 1A: Varimax rotated principal components factor loadings for CSI across two independent samples

	Sample 1 (N=484)	Sample 2 (N=483)
Scale name and items	Loading	
<u>Meaning cont'd</u>		
Believe that there must be a purpose in the suffering I experience.	.60	.48
Derive meaning from my past.	.58	.59
Believe that there is meaning and purpose to the things that happen to me.	.53	.56
<u>Acceptance</u>		
Accept/tolerate life as it is and make the best of it.	.72	.64
Accept what has happened because eventually things will work out as well as can be expected.	.60	.66
Accept the present situation because no matter how bad things are they could always be worse.	.60	.67

Table 6 cont'd

Study 1A: Varimax rotated principal components factor loadings for CSI across two independent samples

	Sample 1 (N=484)	Sample 2 (N=483)
Scale name and items	Loading	
<u>Acceptance cont'd</u>		
Don't worry about the past or the future, accept each day as it comes.	.49	.52
Look at the humorous side of this problem.	.48	.40
Avoid thinking about the problem or things that are upsetting.	.47	.16
<u>Religious</u>		
Believe that God will answer prayers.	.93	.91
Believe that God watches over me.	.92	.92
Pray to God.	.92	.91
Seek help and direction from God.	.92	.91
Believe in an almighty God.	.91	.90
Believe that I can communicate with God.	.90	.90

Table 6 cont'd



Study 1A: Varimax rotated principal components factor loadings for CSI across two independent samples

	Sample 1 (N=484)	Sample 2 (N=483)
Scale name and items	Loading	
<u>Religious cont'd</u>		
Do what is necessary to maintain a personal relationship with God.	.90	.90
Follow religious principles.	.87	.87
Believe that God will execute final justice.	.84	.89
<u>Social Support</u>		
Rely on people who have successfully coped with the problem.	.66	.70
Depend on opinions of people who have experienced similar problems.	.64	.71
Depend on the experts and follow their advice.	.63	.68
Rely on available connections to solve the problem.	.58	.64
Rely on others to do what I cannot do myself.	.54	.51

Table 6 cont'd

Study 1A: Varimax rotated principal components factor loadings for CSI across two independent samples

	Sample 1 (N=484)	Sample 2 (N=483)
Scale name and items	Loading	
<u>Social Support cont'd</u>		
Receive practical help from friends.	.47	.54
<u>Tension Reduction</u>		
Practise muscle relaxation techniques.	.82	.78
Practise meditation techniques to reduce tension.	.82	.77
Practise controlled breathing techniques.	.76	.77
Engage in mental exercise (such as imagery) to reduce tension.	.61	.62

Note. Items are ranked in order of strength of loadings for Sample 1.

Table 7

Study 1A: Alpha coefficients, means, and standard deviations among a large sample  
(N=967) of university students for the CSI scales

CSI scales	Alpha	Mean	SD
Situational	.84	3.35	.76
Self-restructuring	.82	3.18	.72
Active Emotional	.86	3.36	.86
Passive Emotional	.87	2.30	.80
Meaning	.78	3.18	.90
Acceptance	.65	2.95	.71
Religious	.97	2.40	1.39
Social Support	.81	2.71	.84
Tension Reduction	.78	1.75	.87

Table 8

Study 1A: Gender differences in frequency of use, rank, and pattern of coping on the CSI

CSI scales	Female (N=506)			Male (N=162)			
	Mean	SD	Rank	Mean	SD	Rank	t
Situational	3.37	.77	2	3.21	.83	1	2.29*
Self-restructuring	3.20	.72	4	2.91	.83	2	4.25***
Active Emotional	3.54	.79	1	2.77	.89	5	0.48***
Passive Emotional	2.33	.83	8	2.01	.80	7	4.26***
Meaning	3.21	.91	3	2.83	.93	3	4.65***
Acceptance	2.92	.72	5	2.83	.81	4	1.33
Religious	2.48	1.43	7	1.80	1.24	8	5.47***
Social Support	2.87	.86	6	2.47	.93	6	5.02***
Tension Reduction	1.71	.85	9	1.54	.91	9	2.11*

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 9

Study 1A: Correlations among CSI scales (N=967)


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CSI scales	1	2	3	4	5	6	7	8	9
1. Situational	--	.76	.42	-.10	.32	.23	.18	.35	.30
2. Self-restructuring		--	.44	.07	.46	.40	.29	.47	.39
3. Active Emotional			--	.20	.36	.18	.25	.59	.24
4. Passive Emotional				--	.27	.26	.23	.32	.18
5. Meaning					--	.40	.51	.34	.26
6. Acceptance						--	.25	.23	.23
7. Religious							--	.33	.18
8. Social Support								--	.28
9. Tension Reduction									--

---

Note. All correlations are significant at the .01 level.

Table 10

Study 1B: CSI and Stress Appraisal

CSI scales	Stress Appraisal Measure (SAM)			
	Threat (n=97)	Challenge (n=98)	Centrality (n=98)	Stressfulness (n=98)
Situational	-.10	.26**	.09	.05
Self-restructuring	-.17	.35***	.08	-.10
Active Emotional	.01	.19	.19	.18
Passive Emotional	.36***	.00	.20	.36***
Meaning	-.05	.28**	.14	.17
Acceptance	-.27**	.00	-.28**	-.19
Religious	.01	.00	.08	.01
Social Support	.15	.02	.17	.16
Tension Reduction	-.16	.18	-.03	-.18

Table 10 cont'd

Study 1B: CSI and Stress Appraisal

CIS scales	Stress Appraisal Measure (SAM)		
	Controllable	Controllable	Uncontrollable
	by self (n=96)	by others (n=97)	by anyone (n=98)
Situational	.33***	.10	-.19
Self-restructuring	.32**	.10	-.15
Active Emotional	.18	.44***	.00
Passive Emotional	-.44***	-.12	.17
Meaning	.05	.11	.01
Acceptance	.26**	-.01	.01
Religious	-.04	.14	.10
Social Support	.00	.36***	.09
Tension Reduction	.11	.17	.05

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 11

Study 1B: CSI and Ways of Coping (WOC)


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	Ways of Coping (WOC)			
	Confrontive Coping (n=93)	Planful Problem Solving (n=92)	Positive Reappraisal (n=92)	Seeking Social Support (n=95)
Situational	.29**	.53***	.23*	.22
Self-restructuring	.17	.42***	.41***	.16
Active Emotional	.24*	.28**	.22*	.65***
Passive Emotional	.00	-.40***	-.14	-.15
Meaning	.18	.28**	.41***	.23*
Acceptance	.00	.06	.17	-.05
Religious	.06	.16	.47***	.09
Social Support	.15	.05	.30**	.64***
Tension Reduction	.03	.27**	.43***	.15

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Table 11 cont'd

Study 1B: CSI and Ways of Coping (WOC)


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CSI scales	Ways of Coping (WOC)			
	Distancing (n=93)	Accepting Responsibility (n=95)	Escape- Avoidance (n=95)	Self- Controlling (n=95)
Situational	-.18	.06	-.29**	.12
Self-restructuring	-.05	.04	-.22*	.02
Active Emotional	-.22*	-.04	.03	.02
Passive Emotional	.16	.22*	.54***	.14
Meaning	.08	.01	.10	.28**
Acceptance	.51***	-.09	-.18	.11
Religious	.20*	-.03	.20*	.27**
Social Support	-.08	-.03	.16	.08
Tension Reduction	-.01	-.13	-.04	.01

---

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 12

Study 1: Alpha coefficients and 5-week stability coefficients for the R-CSI

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	Alpha	Test-rest
R-CSI Scales	(N=63)	(N=60)
Situational	.88	.74
Self-restructuring	.85	.69
Active Emotional	.92	.67
Passive Emotional	.87	.68
Meaning	.77	.81
Acceptance	.85	.70
Religious	.98	.94
Social Support	.72	.74
Tension Reduction	.87	.78

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Table 13

Study 2A: Revised CSI and the CISS


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Coping Inventory for Stressful Situations

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R-CSI scales	Avoidance			
	Task Oriented	Emotion Oriented	Distraction	Social Diversion
Situational	.84***	-.10	-.01	-.03
Self-restructuring	.66***	-.22	.01	-.10
Active Emotional	.42*	.22	.26	.41*
Passive Emotional	-.38*	.78***	.24	.15
Meaning	-.45*	-.22	-.10	-.12
Acceptance	.15	-.01	.14	-.06
Religious	.04	.05	-.18	-.15
Social Support	.27	.06	.06	.47**
Tension Reduction	.50**	-.40*	-.24	-.43**

N=35.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 14

Study 2A: Revised CSI and the COPE scale

R-CSI scales	COPE scale			
	Active Coping	Positive Planning	Reinterpretation	Social Support-Emotional
Situational	.75***	.79***	.43**	.04
Self-restructuring	.51**	.64***	.77***	.00
Active Emotional	.28	.25	-.04	.71***
Passive Emotional	-.33*	-.21	-.41*	.08
Meaning	.30	.40*	.63***	-.04
Acceptance	-.13	-.03	.25	-.07
Religious	-.01	-.02	.22	.12
Social Support	.31	.13	.06	.54***
Tension Reduction	.39*	.51**	.68***	-.22

Table 14 cont'd

Study 2A: Revised CSI and the COPE scale

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R-CSI scales	COPE scale			
	Social	Suppressing	Religion	Denial
	Support	Competing		
	Instrumental	Activities		
Situational	.18	.49**	-.11	-.10
Self-restructuring	.12	.21	.18	.04
Active Emotional	.70***	.17	-.06	.00
Passive Emotional	-.08	-.12	-.04	.35*
Meaning	.04	.08	.40*	.24
Acceptance	.12	-.12	.20	-.07
Religious	-.02	-.24	.93***	.19
Social Support	.51**	.02	.18	.01
Tension Reduction	-.18	.15	.04	.10

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Table 14 cont'd

Study 2A: Revised CSI and the COPE scale

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COPE scale

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R-CSI scales	Mental		Behavioral	Venting
	Acceptance	Disengagement	Disengagement	Emotion
Situational	-.05	-.36*	-.21	.17
Self-restructuring	.23	-.14	.09	-.13
Active Emotional	.07	-.03	.07	.63***
Passive Emotional	-.03	.44**	.16	.37*
Meaning	.20	-.18	.38*	-.32
Acceptance	.59***	.18	.11	-.16
Religious	.19	.05	.23	-.07
Social Support	.27	.00	.24	.30
Tension Reduction	.09	-.14	.00	-.35*

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Table 14 cont'd

Study 2A: Revised CSI and the COPE scale

R-CSI scales	COPE scale		
	Restraint Coping	Alcohol/ Drug Use	Humour
Situational	-.05	-.12	.12
Self-restructuring	.14	-.24	.31
Active Emotional	-.23	.04	.11
Passive Emotional	-.20	.15	.08
Meaning	.10	-.04	.43*
Acceptance	.18	-.14	.15
Religious	.01	-.10	-.02
Social Support	-.18	-.09	-.08
Tension Reduction	.30	.08	-.03

N=35.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 15

Study 2B: Revised CSI and the CRI


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Coping Responses Inventory (CRI)

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R-CSI scales	Logical	Positive	Seeking	Problem
	Analysis	Reappraisal	Guidance/ Support	Solving
Situational	.57***	.54***	.40**	.73***
Self-restructuring	.49***	.49***	.41**	.67***
Active Emotional	.24	.25	.48***	.32*
Passive Emotional	-.17	-.12	-.04	-.41**
Meaning	.42***	.51***	.39**	.18
Acceptance	.11	.22	.17	.03
Religious	.37**	.48***	.51***	.09
Social Support	.10	.21	.50***	-.13
Tension Reduction	.37**	.48***	.50***	.28*

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Table 15 cont'd



Study 2B: Revised CSI and the CRI

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Coping Responses Inventory (CRI)

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	Cognitive	Acceptance/ Resignation	Alternate Rewards	Seeking Emotional Discharge
R-CSI scales	Avoidance			
<hr/>				
Situational	-.33*	-.32*	.18	.03
Self-restructuring	-.21	-.17	.11	-.04
Active Emotional	-.10	-.06	.21	.21
Passive Emotional	.63***	.55***	.05	.40**
Meaning	.11	.16	.17	.24
Acceptance	.15	.20	.09	-.01
Religious	.05	.07	.17	.12
Social Support	.21	.28*	.30*	.19
Tension Reduction	-.05	.03	.22	.16

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N=55.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Figure 1: A schematic presentation of the resource-congruence model of effective coping.

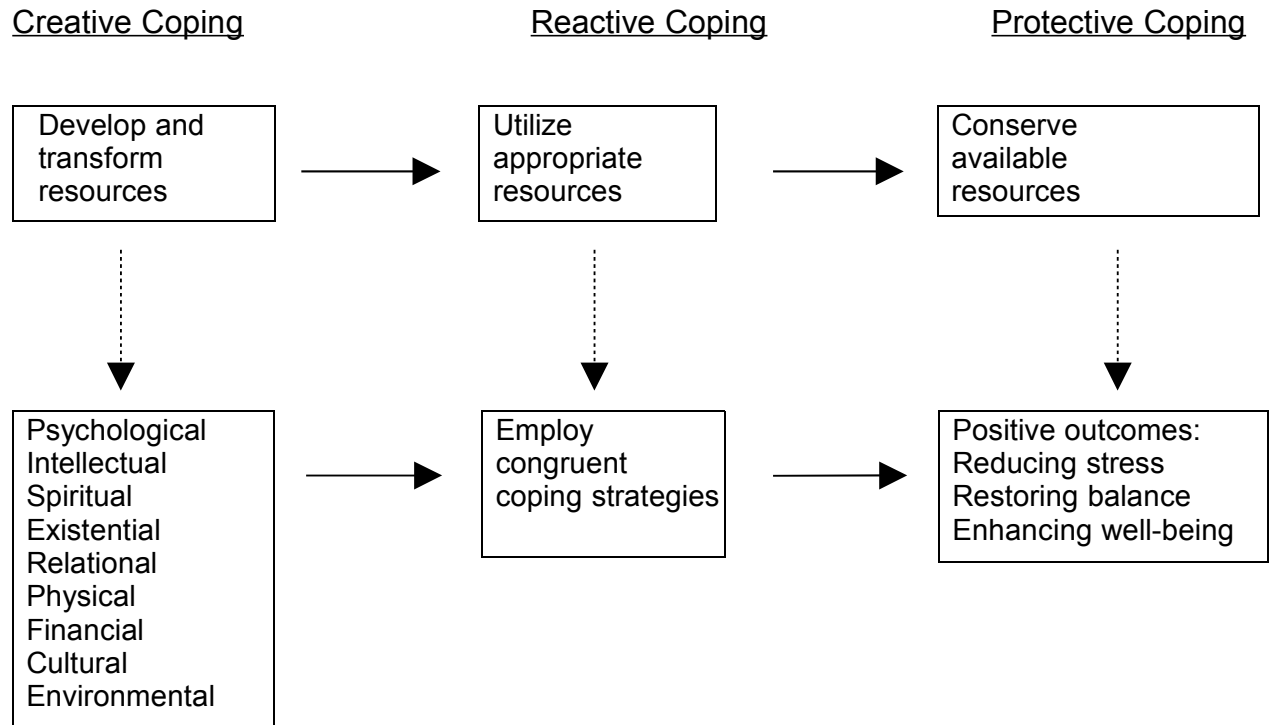
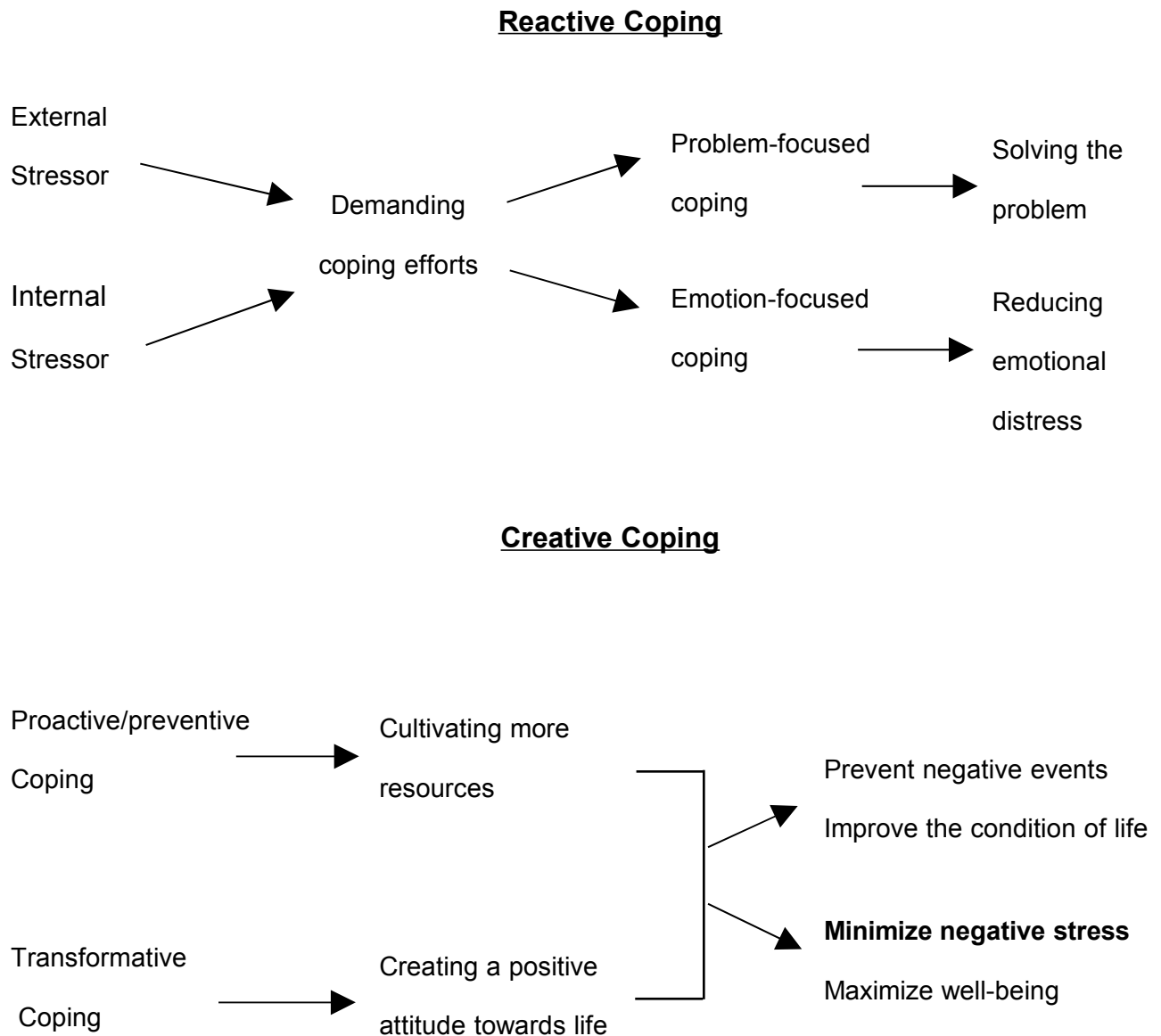


Figure 2. A schematic presentation of reactive and creative coping strategies and their effects.



## Appendix A

**Coping Orientations and Prototypes (COAP)**

P.T.P. Wong, G.T. Reker, &amp; E.J. Peacock

Definitions and Classifications of Coping Strategies

1. Situational Orientation (Focus is on efforts to change an existing situation.)
  - (a) Instrumental (Depends on one's direct actions to change the situation or solve the problem.)
    - \*2. Do something about the situation.
    5. Confront the problem by taking appropriate actions.
    15. Break down the problem into smaller steps and work on one at a time.
    26. Take the problem into my own hands by fighting back.
    30. Actively seek out information on my own.
    40. Make a plan of action and follow it.
    56. Be determined and persistent in attacking the problem.
    68. Double my effort to change the situation.
  - (b) Practical Social Support (Depends on others to change the situation or solve the problem. It involves receiving practical social support.)
    1. Rely on others to do what I cannot do myself.
    25. Rely on people who have successfully coped with the problem.
    49. Rely on available connections to solve the problem.
    58. Receive practical help from friends.
      61. Depend on the experts and follow their advice.
      80. Depend on opinions of people who have experienced similar problems.

2. Emotional Orientation (Focus is on regulation of one's emotional reactions without changing the situation or solving the problem.)

(a) Distancing (Distancing oneself from an existing problem by denial, avoidance, escape or procrastination.)

8. Run away from the problem or situation.

17. Suppress or avoid facing my own emotions.

34. Put off doing something about the problem.

42. Ignore the problem and pretend that it doesn't exist.

43. Avoid thinking about the problem or things that are upsetting.

(b) Wishful thinking (Entertains unrealistic wishes or fantasies.)

3. Wish that I could undo the past.

31. Wish that I were a different person.

36. Wish that a miracle or something fantastic would happen.

45. Wish that the situation were different.

(c) Expressiveness (Expresses one's feelings to release tension.)

4. Express my feelings and thoughts.

18. Air my complaints and frustrations.

44. Do something physical to let off my anger.

67. Release my pent-up emotions.

(d) Self-blame (Blames one's own behavior or character for the problem.)

21. Feel guilty for what has happened.

32. Feel ashamed for my inadequacies.

55. Feel sorry for what I have done.

72. Blame myself for what has happened.

(e) Emotional social support (Seeks emotional/verbal support from others.)

28. Share my feelings with a confidant.

41. Look to others for moral support.

57. Seek emotional support from others.

75. Depend on friends for emotional/moral support.

(f) Tension reduction (Engages in some activity/exercise to achieve immediate reduction of tension.)

12. Talk to myself to reduce tension.

22. Practise controlled breathing techniques.

27. Engage in mental exercise (such as imagery, etc.) to reduce tension.

52. Practise muscle relaxation techniques.

79. Practise meditation techniques to reduce tension.

3. Preventive Orientation (The focus is on anticipated or potential problems.)

(a) Self-improvement (Attempts to improve self to be better prepared for the future)

10. Pursue a health promoting lifestyle (exercise, diet, mental stimulation or activities, etc.) to prepare myself for the future.

20. Develop mental toughness so that I will be better prepared for future difficulties.

33. Rehearse the anticipated situation in my mind.

38. Try to develop a positive self concept or self image so that I can better face future uncertainties.

65. Know my limits so that I will not get into difficulties later on.

70. Develop better time management skills so that I will be more efficient in the future.

78. Rehearse the planned action in my mind.

(b) External improvement (Attempts to improve one's conditions or network to be better prepared for the future.)

14. Try to improve my situation in anticipation of future needs.

19. Develop/maintain good interpersonal relationships with family/others to prevent conflicts.

46. Develop connections/contacts that one day may be useful.

71. Develop/maintain relationships with people who are likely to contribute to my personal goals.

4. Religious Orientation (Focus is on God or religion in dealing with both existing and anticipated problems.)

(a) Religious beliefs (Relies on religious beliefs and convictions.)

7. Believe that I can communicate with God.

37. Believe that God will answer prayers.

47. Believe that God watches over me.

73. Believe in an almighty God.

76. Believe that God will execute final justice.

(b) Religious practices (Relies on religious practices.)

6. Do what is necessary to maintain a personal relationship with God.

29. Seek help and direction from God.

51. Follow religious principles.

60. Pray to God.

5. Existential Orientation (Focus is on philosophical issues of human existence, such as suffering, meaning, etc.)

(a) Acceptance (Accepts the inevitable or givens in life in a rational and philosophical manner.)

11. Accept what has happened because eventually things will work out as well as can be expected.

16. Accept/tolerate life as it is and make the best of it.

35. Accept the present situation because no matter how bad things are they could always be worse.

69. Don't worry about the past or the future, accept each day as it comes.

(b) Existential meaning (Discovers or creates a sense of meaning or purpose.)

39. Believe that there must be a purpose in the suffering I experience.

53. Maintain a sense of purpose, optimism and zest for life.

62. Try to maintain a sense of contentment or fulfillment in life.

66. Believe that there is meaning and purpose to the things that happen to me.

74. Believe that valuable lessons can be learned from undesirable experiences.

77. Derive meaning from my past.

6. Self-Structuring Orientation (Focus is on changing one's own cognitions and behaviors.)



(a) Cognitive Restructuring (Changes in one's attention, and attitudes in response to a present problem/situation that cannot be changed or that mainly exists in one's mind.)

23. Change my negative attitude toward this problem into a positive one.

48. Mentally transform the situation into something less threatening.

54. Change my attitude in view of this problem.

63. Try to look at the problem from a new perspective.

81. Look at the humorous side of this problem.

(b) Behavioral Restructuring (Changes in one's behavior in response to a present problem or situation which cannot be changed or is brought on by one's own behaviors.)

9. Do what is necessary to fulfill the requirements of the situation.

13. Change my habit(s) in view of the problem.

24. Change my pace to suit the situation.

50. Change my behavior to better fit the situation.

59. Restructure my actions in light of the problem.

64. Rearrange my activities to accommodate the situation.

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\* The number for each item represent the number on the COAP Questionnaire, on which all the different items of coping were randomized.

Appendix B

**Coping Schemas Inventory-Revised**

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To what extent do you usually use each of the following strategies to cope with \_\_\_\_\_?

**In making your rating, use the following scale:**

1	2	3	4	5
<b>Not At All</b>	<b>A Little Bit</b>	<b>A Moderate Amount</b>	<b>A Considerable Amount</b>	<b>A Great Deal</b>
<b>(Never)</b>	<b>(Rarely)</b>	<b>(Occasionally)</b>	<b>(Often)</b>	<b>Always)</b>

**Please circle the appropriate number for each coping strategy.**

- 
1. Rely on others to do what I cannot do myself..... 1 2 3 4 5
  2. Do something about the situation..... 1 2 3 4 5
  3. Wish that I could undo the past..... 1 2 3 4 5
  4. Express my feelings and thoughts..... 1 2 3 4 5
  5. Confront the problem by taking appropriate actions..... 1 2 3 4 5
  6. Do what is necessary to maintain a personal relationship with  
God..... 1 2 3 4 5
  7. Believe that I can communicate with God..... 1 2 3 4 5
  8. Run away from the problem or situation..... 1 2 3 4 5
  9. Do what is necessary to fulfill the requirements of the situation... 1 2 3 4 5

10. Accept what has happened because eventually things will work out as well as can be expected..... 1 2 3 4 5
11. Break down the problem into smaller steps and work on one at a time..... 1 2 3 4 5
12. Learn to live with the problem, because nothing much can be done about it..... 1 2 3 4 5
13. Confront and understand my own feelings..... 1 2 3 4 5
14. Accept/tolerate life as it is and make the best of it..... 1 2 3 4 5
15. Learn to accept the negative realities of life..... 1 2 3 4 5
16. Suppress or avoid facing my own emotions..... 1 2 3 4 5
17. Air my complaints and frustrations..... 1 2 3 4 5
18. Feel guilty for what has happened..... 1 2 3 4 5
19. Practice controlled breathing techniques..... 1 2 3 4 5
20. Change my negative attitude toward this problem into a positive one..... 1 2 3 4 5
21. Change my pace to suit the situation..... 1 2 3 4 5
22. Rely on people who have successfully coped with the problem... 1 2 3 4 5
23. Take the problem into my own hands by fighting back..... 1 2 3 4 5
24. Look at unavoidable life events as part of my lot in life..... 1 2 3 4 5
25. Engage in mental exercise (such as imagery) to reduce tension.. 1 2 3 4 5
26. Share my feelings with a confidant..... 1 2 3 4 5
27. Try to reduce my anxious thoughts..... 1 2 3 4 5
28. Seek help and direction from God..... 1 2 3 4 5

29. Actively seek out information on my own..... 1 2 3 4 5
30. Wish that I were a different person..... 1 2 3 4 5
31. Feel ashamed for my inadequacies..... 1 2 3 4 5
32. Put off doing something about the problem..... 1 2 3 4 5
33. Accept the present situation because no matter how bad things are  
they could always be worse..... 1 2 3 4 5
34. Wish that a miracle or something fantastic would happen..... 1 2 3 4 5
35. Believe that God will answer prayers..... 1 2 3 4 5
36. Believe that there must be a purpose in the suffering  
I experience..... 1 2 3 4 5
37. Make a plan of action and follow it..... 1 2 3 4 5
38. Look to others for moral support..... 1 2 3 4 5
39. Ignore the problem and pretend that it doesn't exist..... 1 2 3 4 5
40. Avoid thinking about the problem or things that are upsetting..... 1 2 3 4 5
41. Wish that the situation were different..... 1 2 3 4 5
42. Believe that God watches over me..... 1 2 3 4 5
43. Mentally transform the situation into something less  
threatening..... 1 2 3 4 5
44. Rely on available connections to solve the problem..... 1 2 3 4 5
45. Follow religious principles..... 1 2 3 4 5
46. Try not to focus on likely negative outcomes..... 1 2 3 4 5
47. Practice muscle relaxation techniques..... 1 2 3 4 5
48. Change my attitude in view of this problem..... 1 2 3 4 5

49. Feel sorry for what I have done..... 1 2 3 4 5
50. Be determined and persistent in attacking the problem..... 1 2 3 4 5
51. Seek emotional support from others..... 1 2 3 4 5
52. Receive practical help from friends..... 1 2 3 4 5
53. Restructure my actions in light of the problem..... 1 2 3 4 5
54. Pray to God..... 1 2 3 4 5
55. Depend on the experts and follow their advice..... 1 2 3 4 5
56. Look at the humorous side of this problem..... 1 2 3 4 5
57. Try to look at the problem from a new perspective..... 1 2 3 4 5
58. Rearrange my activities to accommodate the situation..... 1 2 3 4 5
59. Believe that there is meaning and purpose to the things that  
happen to me..... 1 2 3 4 5
60. Release my pent-up emotions..... 1 2 3 4 5
61. Double my effort to change the situation..... 1 2 3 4 5
62. Don't worry about the past or the future, accept each day  
as it comes..... 1 2 3 4 5
63. Develop better time management skills so that I will be more efficient  
in the future..... 1 2 3 4 5
64. Blame myself for what has happened..... 1 2 3 4 5
65. Believe in an almighty God..... 1 2 3 4 5
66. Believe that valuable lessons can be learned from undesirable  
experiences..... 1 2 3 4 5
67. Depend on friends for emotional/moral support..... 1 2 3 4 5

- 68. Believe that God will execute final justice..... 1 2 3 4 5
- 69. Derive meaning from my past..... 1 2 3 4 5
- 70. Remind myself that worrying will not accomplish anything.....1 2 3 4 5
- 71. Practice meditation techniques to reduce tension..... 1 2 3 4 5
- 72. Depend on opinions of people who have experienced similar  
problems..... 1 2 3 4 5

Items of the Coping Schemas Inventory-Revised

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<u>Situational (8 items):</u>	Items 2, 5, 11, 23, 29, 37, 50, and 61
<u>Self-Restructuring (8 items):</u>	Items 9, 20, 21, 48, 53, 57, 58, and 63
<u>Active Emotional (8 items):</u>	Items 4, 13, 17, 26, 38, 51, 60, and 67
<u>Passive Emotional (12 items):</u>	Items 3, 8, 16, 18, 30, 31, 32, 34, 39, 41, 49, and 64
<u>Meaning (4 items):</u>	Items 36, 59, 66, and 69
<u>Acceptance (9 items):</u>	Items 10, 12, 14, 15, 24, 33, 40, 56, and 62
<u>Religious (9 items):</u>	Items 6, 7, 28, 35, 42, 45, 54, 65, and 68
<u>Social Support (6 items):</u>	Items 1, 22, 44, 52, 55, and 72
<u>Tension Reduction (8 items):</u>	Items 19, 25, 27, 43, 46, 47, 70, and 71