CHILDREN'S COPING QUESTIONNAIRE (CCQ): DEVELOPMENT AND FACTOR STRUCTURE

by

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Children's Coping Questionnaire (CCQ): Development and Factor Structure

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Abstract

The Children's Coping Questionnaire (CCQ) was developed to address some of the limitations of existing measures of children's coping. It consists of 81 items, comprising 14 conceptually distinct coping subscales derived from the children's coping literature. This study focused on the factorial validation of the CCQ. Participants were 525 children, aged 8 to 11 years. Internal consistencies of the coping subscales ranged from .56 to .85. Confirmatory factor analyses performed on the individual subscales indicated that the items within each subscale loaded onto a unitary latent factor. An exploratory factor analysis performed on the 14 subscales of the CCQ revealed a three-factor solution. These factors were conceptualized as representing the coping constructs of monitoring, blunting, and venting. The results of this study suggest that the CCQ is a promising measure for use in studies of children's coping.

To my Grandma

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Children's Coping Questionnaire (CCQ): Development and Factor Structure

Stressful life events, ranging from daily hassles to major life crises, have been repeatedly shown to have a strong impact on the mental and physical health of adults and children (Compas, 1987a; Lazarus & Folkman, 1987). A number of factors, however, have been shown to moderate the relationship between stress and mental health. Coping efforts, in particular, have been identified as important moderators of the relationship between stress and well-being (Compas, 1987b; Lazarus & Folkman, 1984). In fact, it has been argued that coping efforts are key mechanisms in the development of resiliency (Rutter, 1981).

Considering the potential impact coping efforts may have on mental health, it is not surprising that a preponderance of research has emerged on the topic of coping; however, most research has been focused on investigating coping in adult populations. Given this, the adult coping literature has far surpassed the child coping literature in the development of theories of coping (e.g., problem-focused coping vs. emotion-focused coping; Lazarus & Folkman, 1984) and in the development of measures of coping (e.g., Ways of Coping Questionnaire; Folkman & Lazarus, 1988). Although attempts have been made to develop theories of children's coping (e.g., Altshuler & Ruble, 1989; Curry & Russ, 1985) and measures of children's coping (eg., Causey & Dubow, 1992; Patterson & McCubbin, 1987), a number of concerns have been raised regarding the limitations of the work that has been done to date (Knapp, Stark, Kurkjian, & Spirito, 1991).

The purpose of this study was to develop a self-report measure of children's coping which would address many of the limitations of existing

measures of children's coping. In the following sections, a brief overview of the concept of coping will be provided, followed by a review of the limitations of existing measures of children's coping. Subsequently, the development and hypothesized factor structure of the CCQ will be described.

What is Coping?

Before the concept of coping can be defined, the concept of stress must be explained. Lazarus and Folkman (1984) have suggested that stress can be defined as a reciprocal transaction "between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). Central to this definition is the process of cognitive appraisal. According to Lazarus, when individuals encounter a problem, they engage in primary appraisal, mentally evaluating whether a situation is irrelevant, benign/positive, or stressful. Stressful situations are further evaluated as to whether they have caused harm or loss (damage has occurred), whether they pose a threat (damage is anticipated), or whether they offer a challenge (an opportunity for growth). If a situation is appraised as stressful, individuals subsequently engage in secondary cognitive appraisal. Individuals must assess whether they possess the resources to cope with the stressor. Perceived stress and emotional distress occur when there is an imbalance between the demands of the problem and one's ability to cope with the problem. Hence, from this definition it is evident that stress is relative, in that an individual's appraisal of an event will personally determine whether that event is stressful. In other words, what may be stressful for one individual may be irrelevant for another individual, due to differences in the ways they appraise events.

Coping is defined as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141). According to this definition, coping is limited to effortful responses, that is what the person actually thinks and does. Unconscious responses or instinctual reflexes, for example, are excluded from this definition. By limiting coping to effortful responses, this definition avoids using coping as an all-encompassing term, which would limit its utility (Lazarus & Folkman, 1984). Further, by defining coping as an effortful response, it allows for the objective measurement of the construct. Finally, this definition also underscores the fact that coping strategies can be used to manage both external demands (the problem) and internal demands (one's emotions). In sum, the assessment of coping requires two questions to be asked: 1) what is an individual's appraisal of an event; and 2) how did the individual cope with the event?

Theories of Coping

A number of researchers have demonstrated that children's coping strategies can be understood according to theories of coping developed in the adult coping literature (Compas, Malcarne, & Banez, 1992; Moos, 1993). One of these theories makes a distinction between coping which is problem-focused or emotion-focused (Lazarus & Folkman, 1984), whereas the other makes a distinction between approach coping or avoidance coping (Ebata & Moos, 1991; Moos, 1993). However, these classification systems of coping have been criticized for being too simplistic (Aldwin, 1994). In particular, within the children's coping literature, these classification systems have not accounted for those coping strategies which may be considered non-

constructive. Thus, in addition to the aforementioned categories of coping, non-constructive coping may also be considered a viable coping category (e.g., Causey & Dubow, 1992; Dise-Lewis, 1988; Patterson & McCubbin, 1987; Rossman, 1992; Spirito, Stark, Grace, & Stamoulis, 1991).

Problem-focused coping versus emotion-focused coping. Lazarus and Folkman (1984) make a theoretical distinction between problem-focused and emotion-focused coping strategies. Problem-focused coping refers to coping efforts that are directed at managing or changing a situation that is causing distress. For example, cognitive decision-making, or thinking about one's choices and planning a way to resolve a problem, may be considered a problem-focused strategy. Emotion-focused coping refers to coping efforts directed towards the regulation of emotions or distress. An example of an emotion-focused coping strategy is positive cognitive restructuring, or thinking about a situation in a more positive way. Lazarus and Folkman (1984) would also classify non-constructive coping strategies such as self-blame or self-punishment as emotion-focused, as they are coping strategies which are directed inwards, rather than externally at the problem.

In essence, Lazarus and Folkman (1984) distinguish coping on the basis of function (i.e., coping efforts which function to change the situation or an individual's reaction to the situation). This theoretical distinction has withstood empirical testing in the child coping literature. For example, while examining children's coping with interpersonal and academic stressors, Compas, Malcarne, and Fondacaro (1988) classified the coping strategies of children and adolescents according to the distinction between emotion-focused coping and problem-focused coping. They found that problem-focused coping was negatively related to both mothers' reports and children's own

reports of their behavioral and emotional problems, and that emotion-focused coping was positively related to children's maladjustment. In addition, they found that children and adolescents utilized more problem-focused coping when they perceived the stressor as controllable, rather than uncontrollable. The robustness of the distinction between emotion-focused coping and problem-focused coping has been demonstrated in several studies of school-aged children (Band & Weisz, 1988; Compas, Banez, Malcarne, & Worsham, 1991; Forsythe & Compas, 1987).

Approach coping versus avoidance coping. In contrast to Lazarus and Folkman (1984), Moos and his colleagues distinguish coping strategies on the basis of their focus, rather than their function (Billings & Moos, 1981; Ebata & Moos, 1991; Moos, 1993). The focus of approach coping is towards a stressor, whereas the focus of avoidant coping is away from a stressor (Ebata & Moos, 1991). Approach coping can be defined as the use of cognitive strategies to change the way one thinks about a problem, and the use of behavioral strategies to resolve a problem directly. For example, seeking social support and positive cognitive restructuring would be considered forms of approach coping because they focus an individual's attention on the stressor (Ebata & Moos, 1991; Moos, 1993). Avoidance coping refers to the use of cognitive strategies to deny or minimize a problem, and to the use of behavioral strategies to avoid a problem or to relieve tension by expressing one's emotions. For example, cognitive avoidance (i.e., attempts to avoid thinking about a stressor) or emotional discharge (i.e., expressing negative feelings) would both be considered forms of avoidant coping, because they focus an individual's attention away from a stressor (Ebata & Moos, 1991; Moos, 1993).

The theoretical distinction between approach and avoidance coping has also been found to be empirically viable in the child and adolescent coping literature. For example, Ebata and Moos (1991) asked healthy, rheumatic, depressed, and conduct disordered adolescents to identify the most important problem they had to cope with in the past year. After controlling for age, stressor severity, and challenge appraisal of the stressor, they found that healthy and rheumatic adolescents used more approach coping, whereas adolescents with conduct disorder and depression used more avoidance coping. Overall, they found that the use of more approach coping and less avoidance coping was associated with better adjustment. In addition, Hubert, Jay, Saltoun, and Hayes (1988) found that children using approach coping during the preparatory stage of bone marrow aspirations showed less distress during the aspiration procedure, as well as during hospitalization. These findings are consistent with Roth and Cohen's (1986) review of the approach-avoidance coping literature. They found that, except for situations that were very extreme and personally threatening, approach oriented coping strategies were more effective in resolving interpersonal difficulties and were associated with less long term psychological distress.

Non-constructive coping. Critics have stated that the existing coping classification systems that differentiate problem-focused coping from emotion-focused coping (Lazarus & Folkman, 1984) and approach coping from avoidance coping (Moos, 1993) are too simplistic to capture the diversity and complexity of coping (Aldwin, 1994). Specifically, researchers have found that some coping strategies identified by children are non-constructive (e.g., Causey & Dubow, 1992; Dise-Lewis, 1988; Patterson & McCubbin, 1987; Rossman, 1992; Spirito et al., 1991). Non-constructive

coping refers to coping strategies that one may use in an attempt to relieve distress or to alter a problem, but that may actually be harmful in the long run. For example, coping strategies such as aggressive actions and worrying/rumination could be considered non-constructive.

Empirically, the categorization of coping strategies as non-constructive has been found to be viable. For example, Causey and Dubow (1992) found that negative cognition or worrying was positively related to self-reported anxiety in children coping with a bad grade or with peer conflicts. Dise-Lewis (1988) found that the use of aggression was positively related to self-reported anxiety, depression, and psychosomatic symptoms in a sample of adolescents. Thus, it appears that certain coping strategies do not fit the categories of problem-focused/emotion-focused coping or approach/avoidance coping, and may in fact be categorized as non-constructive coping strategies.

Limitations of Existing Self-Report Measures of Children's Coping

In the last few years, a number of attempts have been made to develop coping measures for children. Researchers have designed projective measures, interviews, questionnaires, and observational scales of children's coping. Nevertheless, a number of concerns have been raised regarding the limitations of these existing measures (Compas 1987b; Knapp et al., 1991). This study focused on the development of a self-report measure of children's coping, as self-report measures are easy to administer and use objective scoring; hence, the following critique will largely focus on the limitations of self-report measures of children's coping.

Child coping measures are based on adult models of coping. One of the most frequently cited concerns expressed in the child coping literature is

that most measures of children's coping have been derived from conceptualizations of adult coping (Ryan-Wenger, 1992). This is problematic for several reasons. First, the kinds of stressors that children are likely to encounter are not the same kinds of stressors that adults encounter. For example, although many childhood stressors may be controllable (e.g., peer conflict), a number of childhood stressors are not amenable to change by children themselves (e.g., living in poverty or having problems with teachers). Therefore, because children do not encounter the same types of stressors as adults do, children may not use the same types of coping strategies as adults. In fact, Band and Weisz (1988) found that 40% of children's spontaneously-generated coping strategies could not be categorized using coping categories derived from the adult coping literature.

Because of developmental differences in children's cognitive and social skills, it is also unreasonable to assume that adult coping strategies will be available to children (Ryan-Wenger, 1992; Ayers, 1991). In general, researchers have found that although problem-focused coping strategies are available to children as young as six years of age, the use of emotion-focused coping strategies generally increases with age (Band & Weisz, 1988; Compas, Malcarne, & Fondacaro, 1988; Compas, Worsham, & Ey, 1992; Curry & Russ, 1985; Wertlieb, Weigel, & Feldstein, 1987). For example, cognitive distraction, which refers to attempts to defer one's attention from a problem by using distracting stimuli, wishful thinking, or by fantasizing, is a coping strategy readily accessible to adults. However, Altshuler and Ruble (1989) found that children 6 to 7 years of age may not be able to use this coping strategy due to the cognitive sophistication that

this strategy requires.

Children's coping measures are not comprehensive. Existing measures of children's coping are not comprehensive, in that they only assess a limited range of coping strategies which are accessible to children (Ryan-Wenger, 1992). For example, the Schoolager's Coping Strategies Inventory (SCSI; Ryan-Wenger, 1990) only measures one broad-based coping factor, but is actually composed of a mixture of 13 different coping categories. The Life Events Coping Inventory (LECI; Dise-Lewis, 1988) only assesses five coping strategies (viz., aggression, stress-recognition, distraction, self-destruction, and endurance), and the Coping Scale for Children and Youth (CSCY; Brodzinsky et al., 1992) only assesses four coping strategies (viz., assistance-seeking, cognitive-behaviourial problem-solving, cognitive avoidance, and behaviourial avoidance). A more broad and fine-grained analysis of children's coping may enable researchers to better understand the impact of different coping strategies on children's adjustment (Compas, 1987b; Ryan-Wenger, 1992).

Coping categories are not mutually exclusive. Existing measures of children's coping have also been criticized because of the overlap between coping categories which are intended to be conceptually distinct (Ayers, 1991; Ryan-Wenger, 1992). Overlap between categories may occur when questionnaire items have not been written clearly, and thus there is ambiguity about the category under which an item should be placed (Reynolds, 1971). For example, the Children's Coping Strategies Checklist (CCSC; Program for Prevention Research, 1992) includes an item which states "I thought about why it happened". This item was written to reflect the coping strategy of seeking understanding (i.e., searching for the higher meaning of

a stressful event; Ayers, 1991), yet it could be classified as either information-seeking or cognitive decision making. In essence, both the definitions of coping categories and the coping items themselves must be clear enough so that no ambiguity about item placement exists.

Limitations of a theoretical/rational approach. A theoretical/rational approach to test construction uses logic and/or intuition to select items representative of the concept under investigation. In other words, items are selected on the basis of face validity to represent conceptually distinct and/or theoretically derived constructs. Although measures constructed in this manner have considerable conceptual and theoretical clarity, Parker and Endler (1992) assert that such measures may prove to be unreliable. In fact, they recommend that since the "coping area has focused on the development of scales that assess basic and stable coping dimensions" (p. 326), coping measures should be constructed using factor analysis. Consequently, Kaplan and Sacuzzo (1993) explain that, ideally, psychological tests should be constructed using both the theoretical/rational approach and the empirical approach (viz., factor analysis and/or contrasted/criterion-groups method). Nevertheless, a number of coping measures have been based solely on the theoretical/rational approach. For example, items for the Coping Response Inventory-Youth Form (CRI-Y; Moos, 1993) were selected on the basis of face validity to represent both cognitive and behaviourial strategies of approach and avoidance coping. The only empirical means used for item-selection were internal consistencies and item-subscale correlations. The rationally derived coping subscales of the CRI-Y have internal consistencies ranging from a low of .59 to a high of .79. Although, this is evidence of moderate reliability, a more rigorous empirical method, such as factor analysis, may

have been used to demonstrate that the coping subscales of the CRI-Y reflect the unidimensional constructs of approach and avoidance coping.

Limitations of an empirical approach. Whereas measures based on a theoretical/rational approach may lack empirical validation, measures based solely on an empirical approach may lack conceptual integrity (Parker & Endler, 1992). Most of the empirically derived coping measures have been created using exploratory factor analysis (e.g., Causey & Dubow, 1992; Dise-Lewis, 1988; Patterson & McCubbin, 1987; Rossman, 1992; Wills, 1986). Exploratory factor analysis is used to identify the underlying factor structure of a measure when no a priori hypotheses exist regarding the measure's factor structure (Mulaik, 1988). A weakness of exploratory factor analysis, however, is that depending on the method of factor extraction used, the method used for determining the number of factors to retain, and the method of factor rotation used, a number of very different factor structures may emerge (West & Finch, in press, cited in Ayers, 1991). Essentially, the factor structure which is chosen depends on what is most interpretable to the researcher conducting the factor analysis. Thus, it is not uncommon for different researchers to derive different factor structures. For example, the Behavior-Based Coping Inventory (BBCI; Wills, 1986) was originally shown to have 11 factors; however, when it was re-factor analyzed by Glyshaw, Cohen, and Towbes (1989), the BBCI was found to only have five factors.

Another problem with the use of exploratory factor analysis is that the emergent factors often tend to lack conceptual cohesiveness. For example, the Child Perceived Coping Questionnaire (CPCQ; Rossman, 1992) has a factor labelled support-seeking, however, some of the items in this factor

do not appear to reflect support-seeking. For example, "Try to get right in there and fix things or solve the problem" is more suggestive of direct problem-solving. It is important to develop coping subscales that are conceptually cohesive as research has demonstrated that different coping strategies have different implications for children's adjustment. For example, whereas direct problem-solving is more useful in controllable situations (Compas et al., 1988), support-seeking is useful in both controllable and uncontrollable situations (Lazarus & Folkman, 1984). Hence, coping measures should be designed with conceptually cohesive subscales.

Consequently, by using confirmatory factor analysis, rather than exploratory factor analysis, it may be possible to derive factors which have greater conceptual clarity. While the initial development of a measure can be based on face validity in order to create subscales that have conceptual and theoretical clarity, the structure of this conceptually cohesive measure can be empirically tested using confirmatory factor analysis. A factor analysis conducted in this manner will increase the likelihood that the derived factors will show conceptual clarity.

Validity of hypothetical situations versus actual situations. When assessing children's coping strategies, researchers can ask children to respond to real-life situations or hypothetical situations. A number of researchers have chosen the latter option (Asarnow, Carlson, & Guthrie, 1987; Hoffner, 1993). For example, Hoffner (1993) asked children how they would cope if they were on a turbulent airplane flight and feared the plane might crash. The advantage of asking children how they would cope with a hypothetical situation is that all the children in the study respond to the same event (Ayers, 1991); however, there are problems with the accuracy,

honesty, and external validity of children's reports to hypothetical situations (Ayers, 1991; Knapp et al., 1991). Specifically, given that an individual has no personal stake in a hypothetical situation, the accuracy of his/her coping responses could be called into question. Further, it is not known whether a child would actually use those coping strategies if he/she encountered the hypothetical situation in real life (Ayers, 1991). Lastly, Knapp and her colleagues (1991) have asserted that it may be difficult for young children to imagine a situation they have never encountered due to their limited abstract reasoning skills. Considering these problems, it may be advantageous to ask children what they actually did to cope with real-life problems which are personally relevant to them (Compas, 1987a).

Low internal consistencies. A number of the existing measures of children's coping show low internal consistencies within their coping subscales. For example, the internal consistencies of the subscales of Rossman's (1992) CPCQ range from a low of .29 to a high of .72. Nunnally (1978) indicates that low internal consistencies may arise for two reasons: (a) the coping subscales may contain few items (e.g., Kidcope; Spirito et al., 1991), or (b) the coping subscales may lack homogeneity (e.g., CPCQ; Rossman, 1992). Given this, it is important to address these two points so as to design a measure with high internal consistency. As Kaplan and Sacuzzo (1993) state, internal consistencies should reach $\alpha = .70$ in order for a measure to be considered moderately reliable.

Individual appraisals of stressors. Knapp and her colleagues (1991) suggest that a comprehensive measure of children's coping should also assess children's appraisals of a stressor. In particular, research has identified

the following appraisals as predictive of coping strategies and psychological adjustment in children: a) the perceived threat or severity of a stressor (Cummings, Davies, & Simpson, 1994; Fearnow, Nicholson, & Kliewer, 1995); b) children's feelings regarding a stressor (Grych & Fincham, 1993); c) children's perceived responsibility or self-blame for a stressor (Cummings et al., 1994; Grych & Fincham, 1993); d) the perceived controllability over a stressor (Compas et al., 1988), and e) children's perceived coping efficacy (i.e., the extent to which an individual perceives his/her coping efforts as successful; Aldwin & Revenson, 1987; Cummings et al., 1994). To this author's knowledge only the CRI-Y (1993) includes questions regarding the respondents' appraisals of a stressor; however, this measure has been developed for use with adolescents 12 to 18 years of age. No measure for younger children includes a detailed assessment of children's appraisals of a stressor. Nevertheless, since individual appraisals of a stressor will impact how one copes (Lazarus & Folkman, 1984), it is important to include this assessment in a comprehensive measure of children's coping.

Children's Coping Questionnaire (CCQ)

In an attempt to address some of the above-stated limitations of the existing measures of children's coping, a new self-report measure of children's coping was developed, entitled the Children's Coping Questionnaire (CCQ). The development of the CCQ will be summarized, followed by a description of its hypothesized factor structure.

Development of the CCQ. The CCQ is an 81-item comprehensive self-report measure of children's coping which assesses 14 conceptually distinct coping categories, which have been derived from the child coping literature

(in particular the Program for Prevention Research, 1992) or through semi-structured interviews with children (Kerig, 1994). The 14 coping categories the CCQ assesses are: (a) cognitive decision making, (b) direct problem solving, (c) positive cognitive restructuring, (d) expressing feelings, (e) distracting actions, (f) avoidant actions, (g) cognitive avoidance, (h) support-seeking, (i) negative cognitions/worrying, (j) aggressive actions, (k) no coping, (l) withholding feelings, (m) wishful thinking, and (n) self-calming/affect regulation. Table 1 provides a brief definition and example of each coping category (see Appendix A for a complete list of items).

Items for the CCQ were either selected from previously developed measures of children's coping or written by the author and her colleagues. All the items were worded to be developmentally appropriate for children aged 7 to 11 years of age. Pilot work has shown that children as young as 7 years of age have no difficulty understanding the items on the CCQ.

This measure was designed specifically for school-age children for several reasons. Foremost, no psychometrically sound measure of coping exists for this population. In contrast, the CRI-Y (Moos, 1993), a relatively reliable and valid measure of adolescent coping, can be used with children 12 to 18 years of age. No adequate measure of coping exists for use with preschoolers due to a number of developmental constraints. Specifically, preschoolers may not be capable of using cognitive coping strategies (e.g., cognitive avoidance, wishful thinking, etc.) because of limitations in their ability to use abstract reasoning. Hence, a coping measure for pre-school children could only assess behaviourial coping strategies, rather than the full range of cognitive and behaviourial coping strategies. In addition, it would be necessary to administer measures orally

to pre-school children, possibly with the aid of pictorial stimuli. Further, it is unknown how valid children's self-reports of coping would be given their young age, hence, parental reports of pre-school children's coping may be more useful. Given these considerations, the CCQ was designed for school-age children. Previous research suggests that 7 to 11-year old children are able to use both cognitive and behaviourial coping strategies, and they are able to complete self-report measures with relatively little assistance.

Each coping category within the CCQ contains between five to seven items, in order to meet the criteria for confirmatory factor analysis and internal consistency. With regards to the former criterion, Mulaik (1988) suggests that at least four items per subscale are required to perform a confirmatory factor analysis. With regards to the latter criterion, internal consistency tends to increase as the number of items per subscale increases (Kaplan & Sacuzzo, 1993). Consequently, data from a pilot study of 44 children from the Burnaby school system indicated that the internal consistencies for the 14 coping subscales of the CCQ ranged from .63 to .91. Based on these analyses, some of the items on the CCQ were reworded or modified in order to increase the clarity of items and the conceptual cohesiveness of the coping subscales.

Preliminary analyses have also confirmed that the coping items on the CCQ are conceptually distinct. Three research assistants familiar with the coping categorization system (see Table 1) were asked to classify the coping items according to the 14 coping categories. Cohen's kappa statistic was calculated as an index of inter-rater agreement. Kappas ranged from .94 to .99, demonstrating that the coping items can be reliably classified into the coping categorization system.

In addition, the CCQ asks children to respond to real-life situations they have coped with, rather than hypothetical situations. Specifically, children are asked to identify the most upsetting or bothersome situation which they have recently had to cope with, out of three possible stressors (see Appendix B, question 1): (a) problems with schoolwork, (b) problems getting along with other kids, or (c) problems with family members. These three stressors were chosen because they have been consistently identified by children as commonly occurring stressful events in their lives (Compas, 1987a; Lewis, Siegel, & Lewis, 1984; Spirito et al., 1991; Yamamoto & Byrnes, 1984). The CCQ was constructed this way so as to avoid the disadvantages inherent in asking children to respond to hypothetical situations (i.e., problems with accuracy, honesty, and external validity); yet, by restricting children's choices to three stressors, a certain amount of control was retained over the range of possible responses.

The CCQ also includes questions regarding children's appraisals of the identified stressor. As Knapp and her colleagues (1991) have indicated, an individual's appraisals of a stressor will undoubtedly influence the way the individual copes. Specifically, children are asked about (a) the severity or perceived threat of the stressor (see Appendix B, question 2), (b) how they felt when faced with the stressor (see Appendix B, question 3), (c) their perceived responsibility or self-blame for the stressor (see Appendix B, question 4), (d) their perceived control over the stressor (see Appendix B, question 5), and (e) their perceived coping efficacy (see Appendix C). Each of these appraisals have been identified as useful in predicting which coping strategies may be adopted in certain situations and/or in predicting psychological adjustment (Compas et al., 1988; Cummings et al., 1994; Grych

& Fincham, 1993; Lazarus & Folkman, 1984; Knapp et al., 1991).

Hypothesized factor structure of the CCQ. In the present study, confirmatory factor analysis was used to analyze the factor structure of the CCQ in order to empirically validate the measure and to provide a theoretical basis for it. Confirmatory factor analysis was used because it allows one to test a theoretical basis for a measure since one can specify the number of factors anticipated, and the relationship of each item to each hypothesized factor (Byrne, 1989). These specifications may be theoretically based and/or empirically based (Byrne, 1989). In addition, by using a confirmatory factor analysis, it was more likely that the derived factors would be conceptually cohesive. In contrast, previous self-report measures of children's coping have suffered from the problem of non-cohesive factors because they have been largely based on exploratory factor analyses (e.g., CPCQ; Rossman, 1992)

It was hypothesized that the CCQ had a higher-order factor structure, meaning that both a primary and secondary factor structure was expected. It was expected that 14 primary factors would emerge representing the 14 conceptually distinct coping subscales of the CCQ (see Table 1). The coping items which were expected to load onto each primary coping factor are listed in Appendix A.

The higher-order structure of the CCQ was tested using two models: (a) problem-focused coping vs. emotion-focused coping vs. non-constructive coping, and (b) approach coping vs. avoidance coping vs. non-constructive coping. Within the former model, problem-focused coping and emotion-focused coping represent the distinction Lazarus and Folkman (1984) make about coping; however, considering that this distinction does not capture some of

the intricacies of children's coping, the non-constructive category of coping was also included in this model. As indicated previously, non-constructive coping has been found to be an empirically viable coping category in the children's coping literature (e.g., Causey & Dubow, 1992).

According to Lazarus' and Folkman's (1984) model, the hypothesized primary factors of direct problem solving and cognitive decision making were expected to load onto the hypothesized secondary factor of problem-focused coping (see Figure 1). This structure was based on both theoretical and empirical evidence (Folkman & Lazarus, 1980; Lazarus & Folkman; 1984). Support-seeking was expected to load onto either the problem-focused factor or the emotion-focused factor, as contradictory empirical evidence has emerged regarding which broad dimension of coping this strategy would represent (Folkman & Lazarus, 1980; Aldwin & Revenson, 1987).

According to theoretical and/or empirical evidence (Folkman & Lazarus, 1980; Lazarus & Folkman, 1984), positive cognitive restructuring, cognitive avoidance, avoidant actions, distracting actions, expressing feelings, withholding feelings, wishful thinking, and self-calming were expected to load onto the hypothesized secondary factor of emotion-focused coping. Negative cognitions/worrying was expected to load onto either the emotion-focused coping factor or the non-constructive coping factor. Lazarus and Folkman (1984) conceptualize this as an emotion-focused coping strategy; however, empirical evidence has shown that negative cognitions/worrying may be a non-constructive coping strategy (Causey & Dubow, 1992). Based on empirical evidence, the strategy of aggressive actions was expected to load onto the non-constructive coping factor (Dise-Lewis, 1985). Finally, non-coping, defined as a lack of coping or resignation, was expected to load

onto the hypothesized non-constructive coping factor. In other words, since using this coping strategy does nothing to ameliorate a stressful situation, this coping strategy may be ineffective (i.e., non-constructive coping).

The second model to be tested concerned the distinction between approach coping and avoidance coping made by Moos and his colleagues (Billings & Moos, 1981; Ebata & Moos, 1991; Moos, 1993). Non-constructive coping was also included in this model. Using Moos's (1993) model, cognitive decision making, direct problem solving, positive cognitive restructuring, wishful thinking, and support-seeking were expected to form a factor of approach coping (see Figure 2). On the basis of this theory, negative cognitions/worrying and aggressive actions were also considered forms of approach coping (Ebata & Moos, 1991), however, empirically these coping strategies have been shown to be non-constructive (Causey & Dubow, 1992; Dise-Lewis, 1988). The strategy of no coping effort was considered a form of avoidant coping in accordance with Ebata and Moos (1991), however, conceptually this strategy was also considered to be non-constructive. Expressing feelings, distracting actions, avoidant actions, cognitive avoidance, withholding feelings, and self-calming were all expected to load onto the hypothesized secondary factor of avoidance coping (Moos, 1993).

Project Rationale and Hypotheses

The Children's Coping Questionnaire was factor analyzed using confirmatory factor analysis with the purpose of empirically validating the theoretical structure of the CCQ. It was hypothesized that:

1. Fourteen primary factors would emerge representing the 14 conceptually distinct coping subscales of the CCQ.
2. One of two higher-order coping models would be validated:

(a) Problem-focused coping vs. emotion-focused coping vs. non-constructive coping, OR

(b) Approach coping vs. avoidance coping vs. non-constructive coping.

Method

Participants

The participants in this study were 545 8 to 11 year old boys (n = 282, 52%) and girls[1] (n = 263, 48%) recruited from five schools in the Surrey school district of British Columbia. Of these children, 183 were third-graders (34%), 180 were fourth-graders (33%), and 182 were fifth-graders (33%). Permission to conduct the study was received from the Surrey School District, and all materials and procedures were approved by the Simon Fraser University Research Ethics Review Committee. Parents were provided with information forms outlining the requirements of the study. At the school district's request, parents not wishing their children to participate in the study were asked to return a form indicating a refusal to participate. After completing the study, all the children in each class (regardless of their participation or non-participation) were offered a gift certificate for an ice-cream cone or soft drink at a local fast-food restaurant. Parents were offered feedback about the results of the study upon request.

Measures

Questions About You. This measure was used to obtain demographic information (see Appendix D). It ascertained the age and gender of participants in the study.

Children's Coping Questionnaire (CCQ). As described above, the CCQ is an 81-item self-report measure of children's coping designed for the purpose

of this study (see Appendix A). In filling out the questionnaire, children were asked to identify the most upsetting or bothersome situation they recently had to cope with, out of three stressors (see Appendix B). Children were then asked to identify the perceived threat, causality, and controllability of the stressor, on a 4-point Likert scale ranging from *not at all* (1) to *a lot* (4). Children were also asked to identify whether the stressor made them feel mad, sad, worried, or, happy.

Following this, children were asked to recall the stressful event they identified, and to rate the extent to which they used each of the 81 coping strategies to deal with that event using a 4-point Likert scale (see Appendix E). Children were reminded to think of their identified stressor after approximately every 10 questions. Finally, children were asked to rate their perceived coping efficacy with respect to the identified stressful event on a 4-point Likert scale (see Appendix C).

Procedure

Children were tested in class during the school day by two or three graduate students or research assistants in psychology. Before beginning each testing session, the nature of the study was described to the children; namely, that we were interested in learning what children do in order to feel better when something is bothering them. Children were also told that even though their parents had consented to their participation in this study, they had the option of not participating, or stopping their participation at any time they chose, without penalty. Finally, children were informed that their questionnaires would be kept confidential and anonymous. Testing proceeded with one graduate student reading questions aloud to children, as they followed on questionnaires of their own. The

other research assistants monitored the class for children who required assistance. Children who did not obtain informed consent were provided with a package of mazes and puzzles to occupy themselves with during the testing session, unless otherwise requested by their teacher. In total, the procedure lasted 20 to 30 minutes.

Results

Data Screening

Although data were collected on 545 children, 20 spoiled questionnaires were eliminated from any analyses. Questionnaires were considered spoiled when children copied from each other, created unique response categories, or had special needs that interfered with their ability to fill out the questionnaire. Data were also examined for missing values[2]. Less than 1% of the data were missing. Missing data were replaced by means rounded to the nearest whole number; means were derived from the particular coping subscale and child for which missing values existed.

Using normal and detrended quantile-quantile plots, coping subscales were examined for univariate outliers and normality (Tabachnick & Fidell, 1989). Normal quantile-quantile plots are:

> obtained by ranking the observed values of a variable from smallest to largest and then pairing each value with an expected normal value for a sample of that size from a standard normal distribution ... If the observed scores are from a normal distribution, the plot should be approximately in a straight line. (Norusis, 1990, p. B-67)

Detrended quantile-quantile plots are obtained by calculating:

> the difference between the observed point and the expected point under the assumption of normality and plot[ing] this difference for each

> case. If the observed sample is from a normal distribution, these differences should be fairly close to 0 and be randomly distributed. (Norusis, 1990, p. B-68)

These analyses showed no evidence of univariate outliers, and the data appeared to be normally distributed. The data were also examined for multivariate outliers using Mahalanobis distance, with no multivariate outliers being detected[3]. The data were not examined for multivariate normality as there are no methods readily available to test this assumption (Tabachnick & Fidell, 1989)[4].

Internal Consistency

Cronbach's alpha was computed for each coping subscale as an index of the internal consistency, or reliability, of each subscale (see Table 2). All the coping subscales were at acceptable levels of internal consistency (i.e., $\alpha > .70$; Kaplan & Sacuzzo, 1993) except for Expressing Feelings, Avoidant Actions, and No Coping Effort.

Confirmatory Factor Analysis on the 81 Items of the CCQ

A confirmatory factor analysis was conducted on the 81 items of the CCQ using LISREL-8 (Joreskog & Sorbom, 1993). This model specified that the 81 items of the CCQ would load onto their respective coping subscales (see Appendix A for item loading specifications). The confirmatory factor analysis was completed using a polychoric correlation matrix of the 81 items of the CCQ and an unweighted least squares solution. Polychoric correlations were used as they are appropriate for use with ordinally-scaled data (Joreskog & Sorbom, 1993). The fit between the hypothesized model and the sample data was examined using the chi-square goodness of fit test (χ^2), the adjusted goodness of fit index (AGFI), and the root mean square residual

(RMR). The results of this analysis indicated that the data did not fit the hypothesized model, χ^2 (3068, $\underline{N}$=525) = 9836.53, $\underline{p}$ < .00, AGFI = .90, RMR = .08.

In retrospect, a few reasons may account for the lack of fit of this model. These reasons pertain to the limitations of polychoric correlations, while using an unweighted least squares solution (Bock, Gibbons, & Muraki, 1988). Specifically, polychoric correlations require the assumption of underlying bivariate normality for every pair of items (Joreskog & Sorbom, 1993). Even if this assumption is satisfied, Bock and his colleagues assert that the matrix of sample polychoric correlation coefficients is "almost never positive definite, so the common factor model does not strictly apply" (p. 261; a matrix is positive definite if all its eigenvalues are positive). Consequently, this is more likely to occur when there are many items in the analysis (as in this study), rather than a small number of items (i.e., 6 to 8 items). Furthermore, if the matrix of polychoric correlations is not positive definite, the probability of Heywood cases (the communality of some variables being greater than 1; Harman, 1967) increases resulting in an improper solution for the factor analysis. Hence, a confirmatory factor analysis performed on a polychoric correlation matrix using an unweighted least squares solution is less than ideal.

It would have been preferable to use a weighted least squares solution with the weights derived from the asymptotic covariance matrix of the polychoric correlation matrix (Bock et al., 1988; Joreskog & Sorbom, 1993; West, Finch, & Curran, 1995). The advantage of this type of analysis is that the weight matrix is optimal in that it provides estimates with the smallest standard errors in the polychoric situation (West et al., 1995).

Unfortunately, in order to generate stable estimates of the asymptotic covariance matrix, large sample sizes are needed (Joreskog & Sorbom, 1993). For a model based on 81 observed variables, as in this analysis, over 6,000 subjects would have been needed to compute the asymptotic covariance matrix with adequate reliability. Given the limited sample size in this study, the model was fitted from the polychoric correlation matrix using an unweighted least squares solution, as recommended by Joreskog and Sorbom (1993).

Analysis of Unidimensional Factors

Although the confirmatory factor analysis at the item level did not fit the hypothesized model, the reasons presented above suggested that it would be premature to abandon the hypothesis that the CCQ was made up of 14 unitary constructs. Hence, a confirmatory factor analysis was conducted at the subscale level to assess whether the items within each coping subscale would load onto a unidimensional factor. In these analyses, the asymptotic covariance matrix with a weighted least squares solution could be utilized as Joreskog and Sorbom (1993) have indicated that a sample size of 200 is required when there are less than 10 observed variables. In the CCQ, all 14 coping subscales are composed of 5 to 7 items or observed variables.

As the data reported in Table 3 indicate, all the coping subscales fit the unidimensional factor model; however, for 10 out of the 14 coping subscales the error terms for different pairs of items were allowed to correlate based on the modification indices provided by LISREL-8 (see Appendix G for a list of items to which error covariances were added). Although the use of such modification indices has been questioned, researchers have indicated that post-hoc model fitting is permissible so long as there is a substantive theoretical rationale behind it (Byrne, 1995;

Hoyle, 1995; Hoyle & Panter, 1995).

The fact that the fit of the unitary factor models improved upon allowing certain pairs of error terms to correlate suggests that another undetected variable (coping strategy) was contributing to the variance accounted for by the error terms within the different models (Ayers, 1991). For example, within the coping subscale Wishful Thinking, the error terms for items 28 and 46 were allowed to correlate, thus improving the fit of the model. These two items distinguish themselves from the other items within this subscale as they also reflect praying, which may be considered a separate coping strategy in itself. Another example is found within the Support-Seeking Category (see Appendix G for added error covariances). It appears that this subscale may be separated into items focused on support-seeking from friends versus support-seeking from family members. Overall, it appears that the initial lack of fit in most of the coping subscales reflected minor distinctions in the coping subscales as presented above. This author did not believe that such minor distinctions warranted breaking down the coping subscales into even finer distinctions of coping, hence error covariances were added to capture this excess variance within the error terms. Further, it was apparent that the factor loadings did not decrease substantially after adding these error covariances, providing further rationale for retaining the modified solutions. The factor loadings and communalities of the modified solutions are provided within Table 4. In conclusion, given that the coping subscales of the CCQ appeared to reflect unidimensional constructs, the subscales of the CCQ were used in the next set of analyses designed to test the hierarchical structure of the CCQ.

Hierarchical Models of Coping

The hierarchical models of coping presented in Figures 1 and 2 were tested using confirmatory factor analysis with a maximum-likelihood solution. Analyses were based on the Pearson product-moment correlation matrix of mean coping subscale scores[5]. Analysis of the emotion-focused vs. problem-focused vs. non-constructive coping model presented in Figure 1 revealed a lack of fit between the hypothesized model and the data, χ^2 (72, N=525) = 847.07, $p < .00$, AGFI = .71, RMR = .11. Analysis of the approach vs. avoidance vs. non-constructive coping model presented in Figure 2 also revealed a lack of fit between the hypothesized model and the data, χ^2 (71, N=525) = 817.40, $p < .00$, AGFI = .72, RMR = .11. Hence, both hierarchical models of coping were rejected.

Exploratory Factor Analysis of the CCQ

Given the lack of fit shown by the hypothesized hierarchical models of coping, an exploratory factor analysis was performed on the coping subscales of the CCQ. Analyses were conducted using SPSS/PC+ with a maximum-likelihood solution. Based on the eigenvalues[6] derived from the observed correlation matrix, a four-factor solution appeared to be most appropriate (Eigenvalues = 4.68, 2.23, 1.41, 1.06, 0.77, 0.62, 0.55, 0.50, 0.43, 0.42, 0.40, 0.35, 0.32, 0.26). The scree test indicated that either a three or four factor solution would be appropriate. Subsequently, an oblique rotation (Direct Quartimin) was applied to the data, using both a three and four factor solution.

The three factor solution accounted for 49% of the variance in the data (RMR = .04); factor loadings and communalities are presented in Table 5. These factors may be conceptualized as Monitoring (Factor 1), Blunting

(Factor 2), and Venting (Factor 3), as will be described more fully in the Discussion section. The four factor solution presented in Table 6 accounted for 54% of the variance in the data (RMR = .03). These factors may be conceptualized as Constructive Monitoring (Factor 1), Non-Constructive Monitoring (Factor 2), Blunting (Factor 3), and Venting (Factor 4). The intercorrelations between the factors for the three-factor and four-factor solutions are presented in Tables 7 and 8 respectively.

The RMR shows that the 4-factor solution does not improve the fit of the data greatly, as compared to the 3-factor solution. Further, it appears that the factors in the 4-factor solution are splitting into doublets. Doublets are factors that only have two large factor loadings, with all other factor loadings being relatively small (Mulaik, 1972). McDonald (1985) explains that doublets are unacceptable in factor analysis because they have a number of negative consequences on the factor solution. For example, they produce solutions that are not unique, or indeterminate, meaning that many different factor loadings may be derived from the observed correlation matrix which could generate the same reproduced correlation matrix. In factor analysis it is assumed that the solution should be unique, hence factor loadings should stay the same. In addition, doublets may affect the communalities of the other variables in the solution, altering the amount of variance that is accounted for in a variable by the common factors. Hence, researchers have repeatedly argued that it is unacceptable to retain doublets as factors; rather, a factor should be comprised of at least three observed variables (McDonald, 1985; Streiner, 1994).

Therefore, the three factor solution was accepted over the four factor solution for several reasons. Statistically, the three factor solution is

more acceptable because the RMR for the 3-factor solution is only .01 greater than the RMR for the 4-factor solution. Further, the 4-factor solution is troubled by doublets which brings its validity into question. In addition, the three-factor solution is more parsimonious, and it is conceptually sound as it corresponds to the theoretical distinction between Blunting and Monitoring (Miller, 1987) proposed in the adult coping literature.

Exploratory Analyses

Although no hypotheses were posed regarding children's appraisals as assessed by the CCQ, descriptive analyses were performed on these questions (see Table 9). Some interesting findings were uncovered in these analyses. For example, with regards to children's responses to the perceived coping efficacy questions, between 64.7% and 74.2% of the children reported that they did not believe that their coping efforts helped ("doesn't help"), or that their coping efforts made things worse ("make it worse"). With regards to the question on perceived control, over 56% of the children reported that they had little or no control over the stressors in their lives. These results are disturbing and point to the importance of understanding children's appraisals in the study of coping.

Discussion

This study focused on the development of a self-report measure of children's coping which would address many of the limitations of existing measures of children's coping. Specifically, the goals of this study were to develop a theoretically and empirically grounded measure which was comprehensive, reliable, and valid, and which was based on the child coping literature, rather than concepts derived from the study of adult coping. The

results of this study indicate that these goals were met. Specifically, the internal consistencies of the subscales of the CCQ were at an acceptable level, indicating the reliability of the coping subscales. Further, the confirmatory factor analysis of the unidimensional factors demonstrated that the subscales of the CCQ comprised unidimensional constructs, providing preliminary evidence of construct validity. In addition, although the two hierarchical models in this study were rejected, the exploratory factor analysis revealed that the data may fit the coping distinction of blunting, monitoring, and venting, a theoretical model not considered in this study. Finally, the exploratory analyses based on the questions of children's appraisals illustrated the importance of examining children's appraisals, as recommended by Knapp and her colleagues (1991). Each of these findings will be discussed in turn below.

Coping Subscales of the CCQ

As hypothesized, this study demonstrated that the CCQ is comprised of 14 unidimensional constructs or coping subscales. Initially, this model seemed questionable given that the 81 items did not fit a 14 factor structure. However, as discussed in the Results section, the 14-factor model may have not fit because of the analysis of the 81-item polychoric correlation matrix with an unweighted least squares solution. Ideally, it would have been preferable to use the asymptotic covariance matrix of the polychoric correlation matrix with a weighted least squares solution (Bock et al., 1988; Joreskog & Sorbom, 1993; West et al., 1995).

Nevertheless, analyses performed at the subscale level using the asymptotic covariance matrix of the polychoric correlations demonstrated that the items within each coping subscale loaded onto unidimensional

factors. As used here, unidimensionality refers to the fact that "various items measure the same ability, achievement, attitude, etc." (Hattie, 1984, p. 49). Hattie (1984, 1985) indicates that factor analysis and its corresponding tests of goodness of fit may be used to test the unidimensionality of a set of items. Further, it may also be used as partial evidence of the construct validity of a measure. In this study, it could be tentatively asserted that the coping subscales of the CCQ comprise unidimensional constructs. However, given that many of the subscales were modified by adding error covariances to various pairs of items, cross-validation of the factor structure of this measure is required (Byrne, 1995).

The internal consistencies of the subscales of this measure are comparable to other measures of children's coping, and in some cases are higher (see Table 2). For example, Causey and Dubow's (1992) Self Report Coping Measure (SRCM) has three coping subscales with internal consistencies below .70, and two coping subscales with internal consistencies above .80. The CPCQ (Rossman, 1992) consists of 6 coping subscales, with four out of six having internal consistencies below .70. Finally, the CCSC (Program for Prevention Research, 1992) contains 11 coping subscales, with internal consistencies ranging from a low of .34 to a high of .72; eight of these subscales fall below α = .70.

In comparison, this study found that the internal consistency of only 3 out of 14 coping subscales fell below α = .70 (Expressing Feelings = .65; Avoidant Actions = .61; No Coping Effort = .56). In retrospect, the items within the coping subscales of Expressing Feelings and Avoidant Actions appear to lack the clarity and resemblance necessary for high internal

consistency. For example, the item "Cry by myself" within Expressing Feelings could also be considered an Avoidant Action. The items within Avoidant Actions appear disjointed as they encompass items reflecting seclusion from the problem, people, and "things". On the other hand, the lower internal consistency of No Coping Effort may be attributable to the content of this scale, namely, resignation or lack of coping. In essence, it is difficult to capture the idea of "doing nothing" succinctly.

In conclusion, the subscales of the CCQ appear to demonstrate adequate reliability. Further, there is preliminary support for the construct validity of the coping subscales. In addition, in comparison to other measures of children's coping, this measure is a comprehensive one which captures a wide range of the coping strategies available to children.

Hierarchical Models of Coping

Two hierarchical models of coping were tested in this study: (a) problem-focused vs. emotion-focused vs. non-constructive coping (based on Lazarus and Folkman, 1984), and (b) approach vs. avoidance vs. non-constructive coping (based on Moos, 1993). Contrary to the hypotheses, both models were rejected due to a lack of fit of the hypothesized models to the actual data. Interestingly, Ayers (1991) found similar results in testing the higher-order structure of the CCSC (Program for Prevention Research, 1992). He found that the CCSC fit neither the distinction of emotion-focused vs. problem-focused coping or approach vs. avoidance coping. The correspondence in the findings of these two studies suggest that these models of coping, which are derived from the adult literature, may not be appropriate for conceptualizing children's coping. Nevertheless, Compas and his colleagues have had success using the emotion-focused vs. problem-

focused coping distinction in research on children using open-ended interviews of coping, rather than questionnaires (Compas, Banez, Malcarne, & Worsham, 1991; Compas, Malcarne & Fondacaro, 1988; Forsythe & Compas, 1987). Further, some researchers have also demonstrated the validity of the approach vs. avoidance coping distinction in studies with children using semi-structured interviews or observational scales of coping (e.g., Altshuler & Ruble, 1989; Hubert et al., 1988). Given these findings, it is premature to conclude that these coping models are not valid for research with children; rather, it may be that the CCQ does not capture these distinctions in coping.

Further analyses suggested that the CCQ fits another model of coping previously not considered. Using exploratory factor analysis, it was shown that the CCQ fits a three-factor solution. These factors may be conceptualized as representing Monitoring, Blunting, and Venting. The monitoring-blunting distinction of coping was first proposed by Miller (1980). Monitoring involves attending to or focusing on stressors, whereas blunting refers to the avoidance or transformation of stressors (Miller, 1990). Referring to the data presented in Table 5, it is evident that all the coping strategies loading onto the Monitoring factor involve cognitively or behaviorally attending to a stressor. For example, with Cognitive Decision Making one cognitively focuses on a stressor in order to decide the most appropriate way to handle the problem. With Direct Problem Solving, one behaviorally attends to a stressor by attempting to change the situation. On the other hand, the coping strategies loading onto the Blunting factor involve cognitively or behaviorally avoiding a stressor. For example, the items that comprise the No Coping subscale reflect resignation, or a lack of

coping, hence, one is passively avoiding the problem. With Avoidant Actions, one behaviorally removes oneself from a stressful situation.

The clarity with which these coping strategies are captured by the Monitoring-Blunting distinction is intriguing, given that this distinction has rarely been applied to the study of child coping. This author is aware of only a few studies which have utilized this distinction in research on children's coping. For example, using an interview format, Hoffner (1993) found that children were more likely to use blunting strategies when they dealt with an uncontrollable stressor. Further, she found an increase in children's use of blunting strategies with age. Kliewer (1993), on the other hand, has attempted to map children's coping strategies onto the broader theoretical distinctions of blunting and monitoring with relative success. Finally, Lepore and Kliewer (1989) developed a measure which assesses the extent to which children can be globally classified as "monitors" and "blunters". The measure requires children to identify if they would use a series of blunting or monitoring strategies, in response to four stressors. Preliminary results indicated that the measure was reliable and valid. Consequently, they also found that the dimensions of blunting and monitoring were orthogonal, which is consistent with research in adult populations (Miller, 1987). Consistent with these findings, the present study also demonstrated that there was a low correlation between Blunting and Monitoring (see Table 7). In summary, the monitoring-blunting distinction of coping appears to be a promising one to pursue in the study of child coping.

The last factor in the factor analysis presented in Table 5 may be conceptualized as Venting. The coping strategies of Aggressive Actions, Expressing Feelings, and Negative Cognitions/Worrying load onto this factor.

Venting may be defined as the expression of emotions, whether through aggression, catharsis, or brooding. Some researchers might argue that items such as these are sampling another conceptual domain, namely symptomatology (Ayers, 1991). However, Lazarus and Folkman (1984) have argued that coping strategies should not be confounded with outcome. Specifically, they indicate that coping should not be equated with efficacy or adaptation. Hence, whether a coping strategy is effective or ineffective should not determine whether it is considered a form of coping. For example, Lazarus (1993) states that

> in arguments between spouses, husbands and wives are likely to ***cope*** [italics added] by attacking the other marital partner in an effort to repair their wounded self-esteem. Escalation of anger serves the purpose of self-promotion and defensiveness (protecting one's self-image). (p. 245)

In another example, Dise-Lewis (1988) found that children tended to not only use "constructive" coping strategies, such as direct problem-solving, but that they also used "non-constructive" coping strategies such as aggression and drug use. In other words, the perceived ineffectiveness of a coping strategy does not preclude it from being used by an individual to respond to a stressor. Hence, this author believes that the factor of Venting derived from this study should be conceptualized as a form of coping, rather than symptomatology.

In conclusion, the CCQ can be adequately described using a three-factor solution conceptualized by Blunting, Monitoring, and Venting. Research utilizing this distinction in coping has yielded promising results, indicating that this distinction in coping is useful and valid in the study

of child coping.

Children's Appraisals

In this study, only descriptive statistics were presented on children's appraisals, however, a full examination of the relationships between children's appraisals and their coping strategies is warranted on the basis of some of the unexpected findings presented in Table 9. For example, the majority of children believed that their coping efforts did not help or made things worse. These findings may be explained by the fact that over half of the children perceived that they had relatively little control or no control over the stressors they encountered. In essence, if individuals perceive a stressor to be uncontrollable, it is unlikely that they will perceive their coping efforts to be successful. As Knapp and her colleagues (1991) have argued, individuals' appraisals of a stressor will undoubtedly influence their coping efforts and their psychological health. In fact, a number of studies have demonstrated the validity of this argument (e.g., Compas et al., 1988, Fearnow, Nicholson, & Kliewer, 1995). As the first self-report measure of children's coping to assess children's appraisals, the CCQ can be used to investigate appraisals of stressors concurrently with coping.

Directions for Future Research

Although the CCQ appears to be a promising measure with adequate reliability and validity, more research is required to investigate the psychometric integrity of this measure. Of foremost importance is the examination of the factorial invariance of the CCQ across gender, stressors, and samples. Further, more research is required to examine the construct validity of the CCQ.

Firstly, gender differences have been found in the ways that children cope with various stressors (e.g., Causey & Dubow, 1992), hence, it is possible that the factor structure of the CCQ may vary by gender. Nevertheless, Ayers (1991) found that the factor structure of the CCSC was invariant across boys and girls. Given this finding, it is unclear whether the factor structure of the CCQ will vary across gender; therefore, this question warrants investigation.

It is also necessary to examine whether the factor structure of the CCQ is invariant across situations. The CCQ was designed as a general measure of children's coping, thus, children were allowed to identify the most stressful event with which they recently had to cope, rather than responding to a specific (and possibly irrelevant) situation. Hence, analyses of the factor structure of the CCQ were conducted without reference to the particular situation children selected. Nevertheless, a debate exists in the coping literature regarding the generalizability or specificity of coping measures (Aldwin, 1994).

At one extreme, some researchers advocate the use of general measures of coping to assess stable coping styles. In other words, these researchers assume that individuals cope consistently across stressors without regard to situational differences (e.g., approach coping style vs. avoidance coping style; Endler & Parker, 1990a). This is the approach recommended by Endler and Parker (1990a), the developers of the Coping Inventory for Stressful Situations (CISS). They ask individuals how they *usually* cope with problems without regard to situational variability. Using this approach, these researchers have derived a relatively stable and invariant factor structure for the CISS. Nevertheless, it is not clear whether these coping styles

translate into behaviour in specific situations, or whether individuals really cope consistently across situations (Aldwin, 1994). In fact, both these assertions have been empirically disputed (Lazarus & Folkman, 1984). Coping styles do not always translate into behaviour, and individuals tend to cope differently across situations.

On the other hand, other measures of coping require individuals to respond to a particular situation (e.g., chronic illness). These measures focus on the fact that there are inevitable differences in coping across situations, and hence they are situation-specific. However, the problem with these measures is that they are not generalizable across situations, and thus cannot be used to compare coping across situations.

In an attempt to reconcile these two positions, Lazarus (1990, cited in Aldwin, 1994) has recommended the use of a general coping measure across specific situations. Further, depending on the nature of the stressor, he has also suggested slight modifications in general coping measures in order to make them more applicable to each situationally-specific stressor. This approach has been criticized on the grounds that item modification could interfere with the stability of the factor structure of a measure (Endler & Parker, 1990b), but, this criticism may not be justified. For example, the factor structure of the Ways of Coping Scale (WOCS; Folkman & Lazarus, 1988), a general measure of coping, appears to be robust across a multitude of situations and populations (Aldwin, 1994). In numerous exploratory factor analyses, the same factors emerge with only slight variations in item loadings.

For these reasons, the CCQ was constructed as a general measure of coping which could be generalized across situations. However, in order to

make a statistical claim regarding the generalizability of the factor structure of the CCQ, the factorial invariance of this measure across stressors will have to be empirically tested.

In addition, in the process of validating the CCQ, future research should focus on the convergent and predictive validity of this measure. Ideally, the convergence of the CCQ with other measures of children's coping (e.g., KIDCOPE; Spirito et. al, 1991) and to parental reports of children's coping should be assessed. In addition, the factor structure of the CCQ should be cross-validated across samples to demonstrate the reliability of the factor structure of the measure (Cudeck & Browne, 1983). This is especially important given that error covariances were added between pairs of items to increase the fit of the unidimensional factors, and because the 3-factor hierarchical model accepted in this study was based on exploratory, rather than confirmatory, factor analysis.

One of the shortcomings of the CCQ is that it is a long measure, and hence may be tedious for children. If this is the case, children's responses at the beginning of the questionnaire may be more valid and reliable than those given towards the end of the questionnaire. Hence, it would be beneficial to develop a short form of the CCQ.

Preliminary evidence of the reliability and validity of the CCQ shown in this study, suggest that this measure is appropriate for use in research on children's coping. For example, the CCQ may be used to assess resiliency in children from disadvantaged backgrounds (e.g., family violence, poverty, chronic illness, etc.). This measure may also be used to assess the efficacy of stress-management programs for children, which are currently in place in schools throughout the Vancouver Lower Mainland. This is especially

important as a number of stress-management programs have been criticized for failing to teach children stressor-specific coping strategies, and in not teaching children developmentally appropriate coping strategies (Compas, Phares, & Ledoux, 1989). Finally, the CCQ may also be used in clinical settings to assess how children are coping with stress. Based on this evaluation, treatment programs could be devised to teach children how to cope effectively with the stressors in their lives.

In conclusion, this study has documented the development of a comprehensive self-report measure of children's coping, which appears to be both reliable and valid based on preliminary results. Although further work is required to fully establish the psychometric integrity of this measure, the CCQ appears to be a promising step in the study of children's coping.

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Appendix A

Children's Coping Questionnaire (CCQ): Item categorization

COGNITIVE DECISION MAKING

1 - Think about what I could do before I do anything.

26 - Think about what would be the best thing to do.

39 - Go over in my mind different things I could do.

66 - Try to find out more about what the problem is.

72 - Think about what I should do.

75 - Try to come up with a plan before I do anything.

DIRECT PROBLEM SOLVING

7 - Do something to make things better.

20 - Try to make things better by changing what I do.

29 - Do something so that it will work out.

33 - Do something to solve the problem.

67 - Change something, to make it better.

71 - Do something to fix the problem.

POSITIVE COGNITIVE RESTRUCTURING

2 - Try to see the good side of things.

8 - Tell myself it will all work out OK.

15 - Tell myself it will be over in a short time.

27 - Tell myself that things could be worse.

40 - Tell myself that things aren't that bad.

78 - Try to think only happy thoughts.

EXPRESSING FEELINGS

9 - Let all my feelings out.

22 - Cry by myself.

35 - Let out my feelings to my pet or stuffed animal.

42 - Yell to let off steam.

48 - Let off steam by hitting my pillow or bed.

73 - Yell to let my feelings out.

DISTRACTING ACTIONS

4 - Go ride my bike, skateboard, or roller blade.

11 - Listen to music or watch T.V.

17 - Play some games.

23 - Go somewhere and play.

36 - Read a book or a magazine.

44 - Play video games or a hobby.

AVOIDANT ACTIONS

5 - Try to stay away from the problem.

18 - Try to stay away from things that make me feel upset.

30 - Avoid the people that make me feel bad.

43 - Avoid it by going to my room.

81 - Go off by myself.

COGNITIVE AVOIDANCE

12 - Try to put it out of my mind.

24 - Pretend the problem never happened.

50 - Try not to think about it.

52 - Try really hard to forget about it.

63 - Refuse to think about it.

SUPPORT-SEEKING

3 - Talk about the problem with someone in my family.

16 - Talk about my feelings with someone.

32 - Get help from a friend.

38 - Get help from someone in my family.

41 - Talk about the problem with one of my friends.

45 - Talk to someone who could help me.

65 - Ask someone what I should do.

NEGATIVE COGNITIONS/WORRYING

13 - Worry about all the bad things that could happen.

25 - Think about how bad things are.

51 - Get scared that something bad might happen to me.

55 - Just worry about how bad things are.

56 - Think it might be my fault.

61 - Feel bad about myself.

AGGRESSIVE ACTIONS

6 - Get into a fight with someone.

19 - Do something bad or cause trouble.

31 - Get mad or yell at someone.

58 - Say mean things to people.

64 - Pick on someone.

69 - Hit someone, or hurt someone.

NO COPING EFFORT

10 - Just let it happen.

37 - I just wait.

47 - Just stand there.

57 - I don't do anything.

59 - I can't think of anything to do.

77 - I don't know what to do.

WITHHOLDING FEELINGS

34 - Act like its no big deal.

53 - Do not tell anyone how I am feeling.

54 - Act as if I don't care.

70 - Act like it doesn't bother me.

74 - Keep all my feelings inside.

79 - Don't let anyone know that it bothers me.

SELF-CALMING/ AFFECT REGULATION

21 - Remind myself to relax.

62 - Tell myself to stay calm.

68 - Count to ten.

76 - Take a deep breath.

80 - Try to calm myself down.

WISHFUL THINKING

14 - Wish really hard that it would end.

28 - Pray that things will change.

46 - Pray to make things better.

49 - Wish a miracle would happen.

60 - Wish with all my might that it would stop.

Appendix B

#_____

Children's Coping Questionnaire (CCQ): Appraisal Questions

All kids get upset or bothered by different things. There are a lot of things kids do when they are upset. This is what we're trying to learn about - What do kids do when they're upset that helps them feel better?

So we'd like to know about you, and the things that help you, when you are upset or bothered by something.

1. All kids have times when they are upset or bothered by things. What bothers you or makes you upset the most? (Pick one)

☐ - Problems with my school-work.
☐ - Problems getting along with other kids.
☐ - Problems at home with people in my family.

2. How much does this problem bother you or make you feel upset?

☐	☐	☐	☐
not at all	a little	pretty much	a lot

3. How do you feel when this problem happens? (Pick one)

☐	☐	☐	☐
mad	sad	worried	happy

4. How much do you think you cause this problem to happen?

☐	☐	☐	☐
not at all	a little	pretty much	a lot

5. Can you do something to solve this problem when it happens?

☐	☐	☐	☐
not at all	a little	pretty much	a lot

WAIT UNTIL IT'S TIME TO TURN THE PAGE!

Appendix C

Children's Perceived Coping Efficacy

Think about the problem you picked that bothered or upset you the most. Was it:

☐ - Problems with your school-work
☐ - Problems getting along with other kids
☐ - Problems at home with people in your family

If you don't remember the problem you picked, you can go back and check.

Think about that problem, and let's answer the following questions.

1) Think about **all the things you do** when this problem happens. How much do they help?

☐ helps a lot ☐ helps a little ☐ doesn't help ☐ makes it worse

2) Think about the things you do to **change the situation** when this problem happens. How much do they help?

☐ helps a lot ☐ helps a little ☐ doesn't help ☐ makes it worse

3) Think about all the things you do **change the way you feel** when this problem happens. How much do they help?

☐ helps a lot ☐ helps a little ☐ doesn't help ☐ makes it worse

WAIT UNTIL IT'S TIME TO TURN THE PAGE!

Appendix D

#_____

Questions About You

1. What is your birth date? _____ _____ _____
   DAY MONTH YEAR

2. How old are you? (Circle one)

   8 9 10 11

3. Are you a girl or a boy? (Circle one)

   Girl Boy

WAIT UNTIL IT'S TIME TO TURN THE PAGE!

Appendix E

Children's Coping Questionnaire

Think about the problem you just picked that bothered or upset you the most. Was it:

☐ - Problems with your school-work

☐ - Problems getting along with other kids

☐ - Problems at home with people in your family.

If you don't remember the problem you picked, you can go back to the other page and check.

When things happen that bother or upset kids, there are lots of things kids do to solve the problem, or to make themselves feel better. Here is a list of all kinds of different things kids do when something bothers them or upsets them. Let's read each one, and you can pick the answer that best describes what you do when that problem happens to you.

Remember, there are no right or wrong answers. We just want to know what you really do.

WHEN THIS HAPPENS I ...

	never	**a little**	**pretty much**	**a lot**
1. Think about what I could do before I do anything.	☐	☐	☐	☐
2. Try to see the good side of things.	☐	☐	☐	☐
3. Talk about the problem with someone in my family.	☐	☐	☐	☐
4. Go ride my bike, skateboard, or roller blades.	☐	☐	☐	☐
5. Try to stay away from the problem.	☐	☐	☐	☐
6. Get into a fight with someone.	☐	☐	☐	☐
7. Do something to make things better.	☐	☐	☐	☐
8. Tell myself it will all work out OK.	☐	☐	☐	☐
9. Let all my feelings out.	☐	☐	☐	☐

WAIT UNTIL IT'S TIME TO TURN THE PAGE!

WHEN THIS HAPPENS I ...

	never	a little	pretty much	a lot
10. Just let it happen.	☐	☐	☐	■
11. Listen to music or watch T.V.	☐	■	☐	☐
12. Try to put it out of my mind.	☐	☐	■	☐
13. Worry about all the bad things that could happen.	☐	■	☐	☐
14. Wish really hard that it would end.	☐	☐	☐	☐
15. Tell myself it will be over in a short time.	☐	☐	■	☐
16. Talk about my feelings with someone.	☐	■	☐	☐
17. Play some games.	☐	☐	■	☐
18. Try to stay away from things that upset me.	☐	☐	☐	☐
19. Do something bad or cause trouble.	☐	☐	☐	■
20. Try to make things better by changing what I do.	■	☐	☐	☐
21. Remind myself to relax.	☐	☐	☐	☐
22. Cry by myself.	☐	☐	☐	☐
23. Go somewhere and play.	☐	☐	☐	☐
24. Pretend the problem never happened.	☐	☐	☐	☐
25. Think about how bad things are.	☐	☐	☐	☐
26. Think about what would be the best thing to do.	☐	☐	☐	☐
27. Tell myself that things could be worse.	☐	☐	☐	☐
28. Pray that things will change.	☐	☐	☐	☐
29. Do something so that it will work out.	☐	☐	☐	☐

WAIT UNTIL IT'S TIME TO TURN THE PAGE!

WHEN THIS HAPPENS I ...

	never	a little	pretty much	a lot
30. Avoid the people who make me feel bad.	☐	☐	☐	☐
31. Get mad or yell at someone.	☐	☐	☐	☐
32. Get help from a friend.	☐	☐	☐	☐
33. Do something to solve the problem.	☐	☐	☐	☐
34. Act like its no big deal.	☐	☐	☐	☐
35. Let out my feelings to my pet or stuffed animal.	☐	☐	☐	☐
36. Read a book or a magazine.	☐	☐	☐	☐
37. I just wait.	☐	☐	☐	☐
38. Get help from someone in my family.	☐	☐	☐	☐
39. Go over in my mind different things I could do.	☐	☐	☐	☐
40. Tell myself that things aren't that bad.	☐	☐	☐	☐
41. Talk about the problem with one of my friends.	☐	☐	☐	☐
42. Yell to let off steam.	☐	☐	☐	☐
43. Avoid it by going to my room.	☐	☐	☐	☐
44. Play video games or a hobby.	☐	☐	☐	☐
45. Talk to someone who could help me.	☐	☐	☐	☐
46. Pray to make things better.	☐	☐	☐	☐
47. Just stand there.	☐	☐	☐	☐
48. Let off steam by hitting my pillow or bed.	☐	☐	☐	☐
49. Wish a miracle would happen.	☐	☐	☐	☐

WAIT UNTIL IT'S TIME TO TURN THE PAGE!

WHEN THIS HAPPENS I ...

	never	a little	pretty much	a lot
50. Try not to think about it.	☐	☐	☐	☐
51. Get scared that something bad might happen.	☐	☐	☐	☐
52. Try really hard to forget about it.	☐	☐	☐	☐
53. Don't tell anyone how I am feeling.	☐	☐	☐	☐
54. Act as if I don't care.	☐	☐	☐	☐
55. Just worry about how bad things are.	☐	☐	☐	☐
56. Think it might be my fault.	☐	☐	☐	☐
57. I don't do anything.	☐	☐	☐	☐
58. Say mean things to people.	☐	☐	☐	☐
59. I can't think of anything to do.	☐	☐	☐	☐
60. Wish with all my might that it would stop.	☐	☐	☐	☐
61. Feel bad about myself.	☐	☐	☐	☐
62. Tell myself to stay calm.	☐	☐	☐	☐
63. Refuse to think about it.	☐	☐	☐	☐
64. Pick on someone.	☐	☐	☐	☐
65. Ask someone what I should do.	☐	☐	☐	☐
66. Try to find out more about what the problem is.	☐	☐	☐	☐
67. Change something to make it better.	☐	☐	☐	☐
68. Count to ten.	☐	☐	☐	☐
69. Hit someone or hurt someone.	☐	☐	☐	☐

WAIT UNTIL IT'S TIME TO TURN THE PAGE!

WHEN THIS HAPPENS I ...

	never	a little	pretty much	a lot
70. Act like it doesn't bother me.	☐	☐	☐	☐
71. Do something to fix the problem.	☐	☐	☐	☐
72. Think about what I should do.	☐	☐	☐	☐
73. Yell to let my feelings out.	☐	☐	☐	☐
74. Keep all my feelings inside.	☐	☐	☐	☐
75. Try to come up with a plan before I do anything.	☐	☐	☐	☐
76. Take a deep breath.	☐	☐	☐	☐
77. I don't know what to do.	☐	☐	☐	☐
78. Try to think only happy thoughts.	☐	☐	☐	☐
79. Don't let anyone know that it bothers me.	☐	☐	☐	☐
80. Try to calm myself down.	☐	☐	☐	☐
81. Go off by myself.	☐	☐	☐	☐

WAIT UNTIL IT'S TIME TO TURN THE PAGE!

Appendix F

Consent Form

SIMON FRASER UNIVERSITY

DR. PATRICIA KERIG
Family Relations Project
Department of Psychology
Telephone: (604) 291-4099

BURNABY, BRITISH COLUMBIA
CANADA, V5A 1S6
Fax: (604) 291-3427
E-mail: p_kerig@sfu.ca

How do children cope with life's daily hassles?

Dear Parents:

Stress is an unavoidable part of modern life. Just like their parents, children need to find ways to cope with life's daily hassles. Although much has been learned about the strategies that help adults to cope with various situations, little is known about how children develop their own strategies for coping.

Your child's classroom has been selected to participate in a project designed to help us better understand kids' stress and coping. Children will be asked to fill out a brief questionnaire identifying a problem they have had to deal with in the past year (for example, conflicts with friends), and how they coped with that problem. Children generally find this experience to be interesting and enjoyable. This will take place in your child's classroom under the supervision of his or her teacher. All responses will be confidential and anonymous, and children will be free to decline to participate at any time.

As a thank-you for your child's participation, upon completion of the project we will be pleased to offer a presentation at your school on what we have learned about how parents and teachers might help children cope better with stress. Please feel free to contact us directly at the phone number above to ask any questions you may have, or to obtain feedback about the results of the study.

If you would prefer that your child **not participate** in this project, please sign the attached form and return it to your child's school.

We look forward to the opportunity of learning from you, and with you.

Sincerely,

Patricia Kerig, Ph.D., R.Psych.

PLEASE RETURN THIS FORM IF YOU **DO NOT** WANT
YOUR CHILD TO PARTICIPATE IN THE PROJECT

After considering the information provided to me, I have decided **not to allow** my child to participate in the project on children's coping.

As parent of (Child's name)_____,
I **do not consent** to my child participating in this project.

PARENT'S NAME (Please print):_____

ADDRESS: _____

_____

SIGNATURE:_____

DATE:_____

Appendix G

Error Covariances Added in the Unitary Factor Models

Cognitive Decision Making

No error covariances added.

Direct Problem Solving

No error covariances added.

Positive Cognitive Restructuring

No error covariances added.

Expressing Feelings

Error covariance added between items:

a) 35 and 22 b) 35 and 42 c)42 and 73 d) 73 and 9

Distracting Actions

No error covariances added.

Avoidant Actions

Error covariance added between items:

a) 81 and 43

Cognitive Avoidance

Error covariance added between items:

a) 50 and 24

Support-Seeking

Error covariance added between items:

a) 41 and 32 b) 16 and 3 c) 38 and 3 d) 41 and 3

Negative Cognitions/Worrying

Error covariance added between items:

a) 61 and 56 b) 13 and 25

Aggressive Actions

Error covariance added between items:

a) 64 and 31

No Coping Effort

Error covariance added between items:

a) 77 and 59

Withholding Feelings

Error covariance added between items:

a) 53 and 34 b) 53 and 79 c) 79 and 74 d) 74 and 53

Self-Calming

Error covariance added between items:

a) 76 and 68 b) 76 and 62

Wishful Thinking

Error covariance added between items:

a) 46 and 28

Footnotes

[1]According to Baggaley (1982), 446 subjects are the minimum number of participants required to perform a confirmatory factor analysis on an 81 item questionnaire. This sample size is based on the fact that 5.5 subjects are required per item. In this study, analyses were run on 525 subjects.

[2]All analyses were computed using SPSS/PC+, except for the confirmatory factor analyses which were computed using LISREL 8 (Joreskog & Sorbom, 1993).

[3]Mahalanobis distance is the "distance of a case from the centroid of the remaining cases where the centroid is the point created by the means of all variables" (Tabachnick & Fidell, 1989, p. 68). Computations of Mahalanobis distance were obtained using a multiple regression analysis with a dummy variable (e.g., age) being regressed onto the 81 coping items (Tabachnick & Fidell, 1989).

[4]According to Tabachnick and Fidell (1989), multivariate normality is not readily testable because "it is impractical to test an infinite number of linear combinations of variables for normality" (p. 70).

[5]Joreskog and Sorbom (1993) define continuously-scaled data as data with more than 15 categories. Hence, mean coping subscale scores were treated as continuous data, with the Pearson product-moment correlation matrix being most appropriate for these analyses (Joreskog & Sorbom, 1993).

[6]The initial estimates of eigen values are derived from the observed correlation matrix using Principal Components Analysis (Norusis, 1990). These initial eigen value estimates are used to determine how many factors to retain in the solution.

Table 1

Definitions and Examples of Coping Categories from the Children's Coping Questionnaire (CCQ)

Coping Category	Definition and Example
Cognitive Decision Making	Thinking about choices and future consequences; Planning ways to solve the problem. "Think about what I should do."
Direct Problem Solving	Efforts to solve the problem by taking action to change the situation. "Do something to fix the problem."
Positive Cognitive Restructuring	Efforts to think about the situation in a more positive way or to disbelieve the negative aspects of it. "Try to think only happy thoughts."
Expressing Feelings	Overt ventilation of feelings for cathartic purposes. "Cry by myself."
Distracting Actions	Efforts that will allow one to avoid thinking about or dealing with the problem situation by using distracting stimuli or activities; Entertaining oneself. "Watch T.V."

(table continues)

Coping Category	Definition and Example
Avoidant Actions	Active efforts to leave the stressful situation in order to avoid the problem. "Go off by myself."
Cognitive Avoidance	Efforts to avoid thinking about the problem; Trying to ignore it. Includes wishful thinking and fantasizing. "Wish that things were better."
Support-Seeking	Involving others as resources to assist in solving the problem, for providing advice or information, for listening to feelings, for providing understanding or emotional support, or for eliciting affection. "Get help from a friend."
Negative Cognitions/Worrying	Efforts to think about the problem which do not result in positive cognitions, problem-solving solutions, or decision making; Worrying, fretting, and awfulizing. "Get mad at myself."

(table continues)

Coping Category	Definition and Example
Aggressive Actions	Cognitive, verbal, or physical actions intending to implicitly or explicitly hurt or threaten. Actions that are harmful, blaming, and non-constructive. "Say mean things to people."
No Coping	Resignation; Lack of any action or coping strategy. "I don't do anything."
Withholding Feelings	Intentional withholding or non-expression of feelings. Includes acting brave and stoic; Deciding not to let others know what one is thinking and feeling. "Act as if I don't care."
Self-Calming/Affect Regulation	Efforts to reduce own's level of distress through self-calming or relaxation strategies. "Take a deep breath."
Wishful Thinking	Efforts to make things better through wishing, praying, and/or hoping. "Wish a miracle would happen."

Note: Definitions of coping categories are derived from Kerig's (1994) content codes for child coping strategies.

Table 2

Internal Consistencies, Means, and Standard Deviations of the Coping Subscales

Coping Subscale	Cronbach's Alpha	M	SD
Cognitive Decision Making	.75	2.5	.65
Direct Problem Solving	.81	2.6	.71
Positive Cognitive Restructuring	.73	2.4	.67
Expressing Feelings	.65	2.1	.67
Distracting Actions	.73	2.6	.74
Avoidant Actions	.61	2.7	.67
Cognitive Avoidance	.76	2.5	.77
Support-Seeking	.84	2.3	.77
Negative Cognitions/Worrying	.80	2.2	.73
Aggressive Actions	.85	1.8	.74
No Coping Effort	.56	2.0	.54
Withholding Feelings	.73	2.2	.72
Self-Calming	.76	2.3	.74
Wishful Thinking	.79	2.6	.83

Table 3

Fit of the Unidimensional Factor Models

Coping Subscale	χ^2 (df), (p level)	AGFI	RMR
Cognitive Decision Making	4.76 (9), $p < .86$	.99	.02
Direct Problem Solving	14.58 (9), $p < .10$	.98	.03
Positive Cognitive Restructuring	10.85 (9), $p < .29$	.99	.03
Expressing Feelings	9.32 (5), $p < .10$	.98	.04
Distracting Actions	9.33 (9), $p < .41$	.99	.03
Avoidant Actions	7.91 (4), $p < .10$	.98	.03
Cognitive Avoidance	.36 (4), $p < .99$	1.00	.00
Support-Seeking	13.18 (10), $p < .21$	.99	.03
Negative Cognitions/Worrying	3.77 (7), $p < .81$	.99	.01
Aggressive Actions	14.77 (8), $p < .07$	.99	.04
No Coping Effort	3.90 (8), $p < .87$	.99	.02
Withholding Feelings	2.19 (5), $p < .82$	1.00	.01
Self-Calming	2.32 (3), $p < .51$	.99	.02
Wishful Thinking	7.00 (4), $p < .14$	.99	.02

Note. N = 525; RMR = Root Mean Square Residual; AGFI = Adjusted Goodness of Fix Index.

Table 4
Factor Loadings and Communalities for Unitary Factor Models

Coping Subscale	Factor Loading	Communality
Cognitive Decision Making		
CCQ1	.40	.16
CCQ26	.70	.49
CCQ39	.69	.47
CCQ66	.62	.38
CCQ72	.77	.59
CCQ75	.55	.30
Direct Problem Solving		
CCQ7	.67	.45
CCQ20	.61	.38
CCQ29	.78	.62
CCQ33	.78	.61
CCQ67	.62	.39
CCQ71	.77	.59
Positive Cognitive Restructuring		
CCQ2	.52	.27
CCQ8	.71	.50
CCQ15	.69	.48
CCQ27	.40	.16
CCQ40	.68	.46
CCQ78	.67	.45
Expressing Feelings		
CCQ9	.26	.07
CCQ22	.40	.16
CCQ35	.32	.10
CCQ42	.74	.55
CCQ48	.68	.46
CCQ73	.65	.42

(table continues)

Coping Subscale	Factor Loading	Communality
Distracting Actions		
CCQ4	.56	.31
CCQ11	.54	.29
CCQ17	.79	.62
CCQ23	.64	.41
CCQ36	.51	.26
CCQ44	.69	.47
Avoidant Actions		
CCQ5	.65	.43
CCQ18	.72	.52
CCQ30	.60	.36
CCQ43	.38	.14
CCQ81	.29	.08
Cognitive Avoidance		
CCQ12	.68	.46
CCQ24	.61	.37
CCQ50	.77	.59
CCQ52	.84	.71
CCQ63	.53	.28
Support-Seeking		
CCQ3	.62	.39
CCQ16	.75	.56
CCQ32	.50	.25
CCQ38	.83	.68
CCQ41	.49	.24
CCQ45	.86	.73
CCQ65	.81	.65

(table continues)

Coping Subscale	Factor Loading	Communality
Negative Cognitions/Worrying		
CCQ13	.67	.45
CCQ25	.54	.30
CCQ51	.83	.68
CCQ55	.76	.58
CCQ56	.57	.33
CCQ61	.66	.43
Aggressive Actions		
CCQ6	.65	.42
CCQ19	.70	.49
CCQ31	.76	.58
CCQ58	.85	.72
CCQ64	.89	.79
CCQ69	.91	.83
No Coping Effort		
CCQ10	.38	.14
CCQ37	.49	.24
CCQ47	.63	.40
CCQ57	.46	.21
CCQ59	.41	.17
CCQ77	.41	.17
Withholding Feelings		
CCQ34	.42	.42
CCQ53	.44	.19
CCQ54	.77	.59
CCQ70	.74	.54
CCQ74	.32	.10
CCQ79	.56	.31

(table continues)

Coping Subscale	Factor Loading	Communality
Self-Calming		
CCQ21	.65	.42
CCQ62	.82	.68
CCQ68	.49	.24
CCQ76	.77	.60
CCQ80	.71	.51
Wishful Thinking		
CCQ14	.71	.51
CCQ28	.60	.35
CCQ46	.59	.34
CCQ49	.76	.57
CCQ60	.80	.64

Table 5

Communalities and Factor Loadings for the Three-Factor Solution

Coping Subscale	Communality	1[a]	2[b]	3[c]
Cognitive Decision Making	.70	.84	.00	-.02
Direct Problem Solving	.67	.82	.01	-.08
Self-Calming	.58	.70	.14	.07
Positive Cognitive Restructuring	.59	.69	.26	-.11
Support-Seeking	.52	.69	-.29	.22
Wishful Thinking	.40	.45	.15	.30
Withholding Feelings	.52	-.09	.75	-.07
Cognitive Avoidance	.62	.40	.62	-.07
No Coping Effort	.30	-.16	.43	.25
Avoidant Actions	.43	.28	.37	.31
Distracting Actions	.19	.19	.32	.09
Expressing Feelings	.55	.07	-.07	.74
Aggressive Actions	.44	-.45	.09	.53
Negative Cognitions/Worrying	.32	.22	.11	.45

Note. Loadings have been underlined to shown the factors for which they were used as markers.

[a]Factor 1 can be described as Monitoring. [b]Factor 2 can be described as Blunting. [c]Factor 3 can be described as Venting.

Table 6

Communalities and Factor Loadings for the Four-Factor Solution

Coping Subscale	Communality	1[a]	2[b]	3[c]	4[d]
Cognitive Decision Making	.69	.82	.08	-.01	-.07
Direct Problem Solving	.67	.82	-.02	-.00	-.07
Self-Calming	.61	.73	-.03	.13	.11
Positive Cognitive Restructuring	.59	.68	.05	.24	-.12
Support-Seeking	.51	.67	.14	-.30	.12
Negative Cognitions/Worrying	.76	.08	.83	.01	.06
Wishful Thinking	.48	.39	.44	.09	.06
Withholding Feelings	.52	-.07	.05	.73	-.04
Cognitive Avoidance	.62	.41	.06	.60	-.06
No Coping Effort	.34	-.19	.31	.40	.01
Distracting Actions	.27	.25	-.17	.33	.24
Avoidant Actions	.43	.30	.13	.33	.27
Expressing Feelings	.60	.13	.13	-.11	.74
Aggressive Actions	.50	-.40	.02	.07	.59

Note. Loadings have been underlined to show the factors for which they were used as markers.

[a]Factor 1 can be described as Constructive Monitoring. [b]Factor 2 can be described as Non-Constructive Monitoring. [c]Factor 3 can be described as Blunting. [d] Factor 4 can be described as Venting.

Table 7

Intercorrelations Between Factors for the Three-Factor Solution

Factor	1	2	3
1. Monitoring	1.00		
2. Blunting	.21	1.00	
3. Venting	.13	.29	1.00

Table 8
Intercorrelations Between Factors for the Four-Factor Solution

Factor	1	2	3	4
1. Constructive Monitoring	1.00			
2. Non-Constructive Monitoring	.20	1.00		
3. Blunting	.19	.18	1.00	
4. Venting	.06	.28	.25	1.00

Table 9

Descriptive Statistics on Children's Appraisals

Appraisal & Responses	M	SD	Percentage
Problem	--	--	
School			28.2
Friends			33.5
Family			38.3
Perceived Threat	2.6	.91	
Not At All			9.7
A Little			44.5
Pretty Much			26.3
A Lot			19.5
Feelings	--	--	
Mad			50.6
Sad			17.8
Worried			25.9
Happy			5.7
Perceived Responsibility	2.0	.76	
Not At All			26.5
A Little			55.5
Pretty Much			13.4
A Lot			4.6
Perceived Control	2.4	.98	
Not At All			18.1
A Little			38.0
Pretty Much			26.5
A Lot			17.4

(table continues)

Appraisals & Responses	M	SD	Percentage
Perceived Coping Efficacy-Total	2.8	.88	
Helps A Lot			11.6
Helps A Little			14.9
Doesn't Help			53.6
Makes It Worse			19.8
Perceived Coping Efficacy-Emotions	2.7	.87	
Helps A Lot			10.2
Helps A Little			25.1
Doesn't Help			47.4
Makes It Worse			17.3
Perceived Coping Efficacy-Problem	2.9	.85	
Helps A Lot			7.1
Helps A Little			18.7
Doesn't Help			48.0
Makes It Worse			26.2

Note. Means and Standard Deviations are not reported for 'Feelings' and 'Problems' as these variables are nominal.

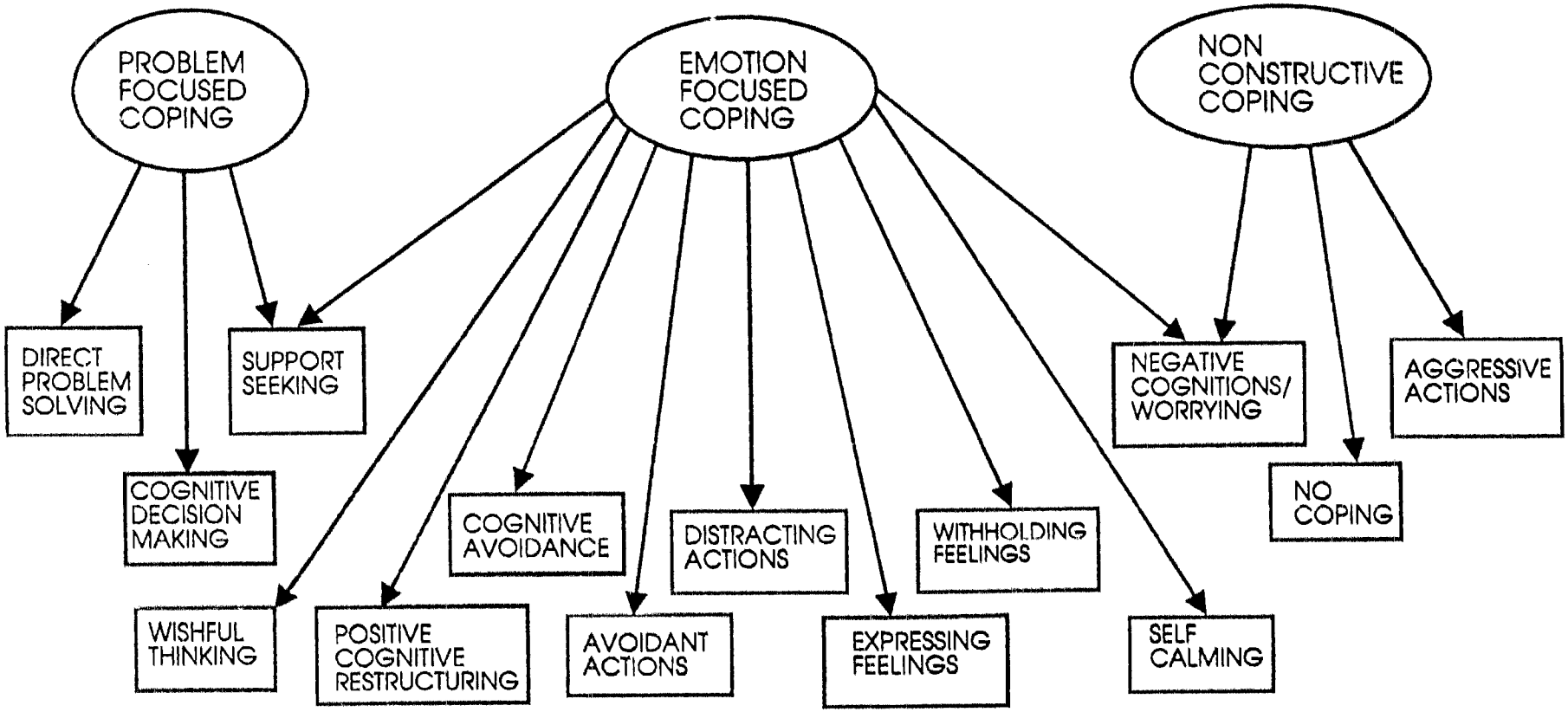

Figure 1 - Hypothesized Second-Order Factor Structure Based on Problem-Focused Coping, Emotion-Focused Coping, and Non-Constructive Coping.

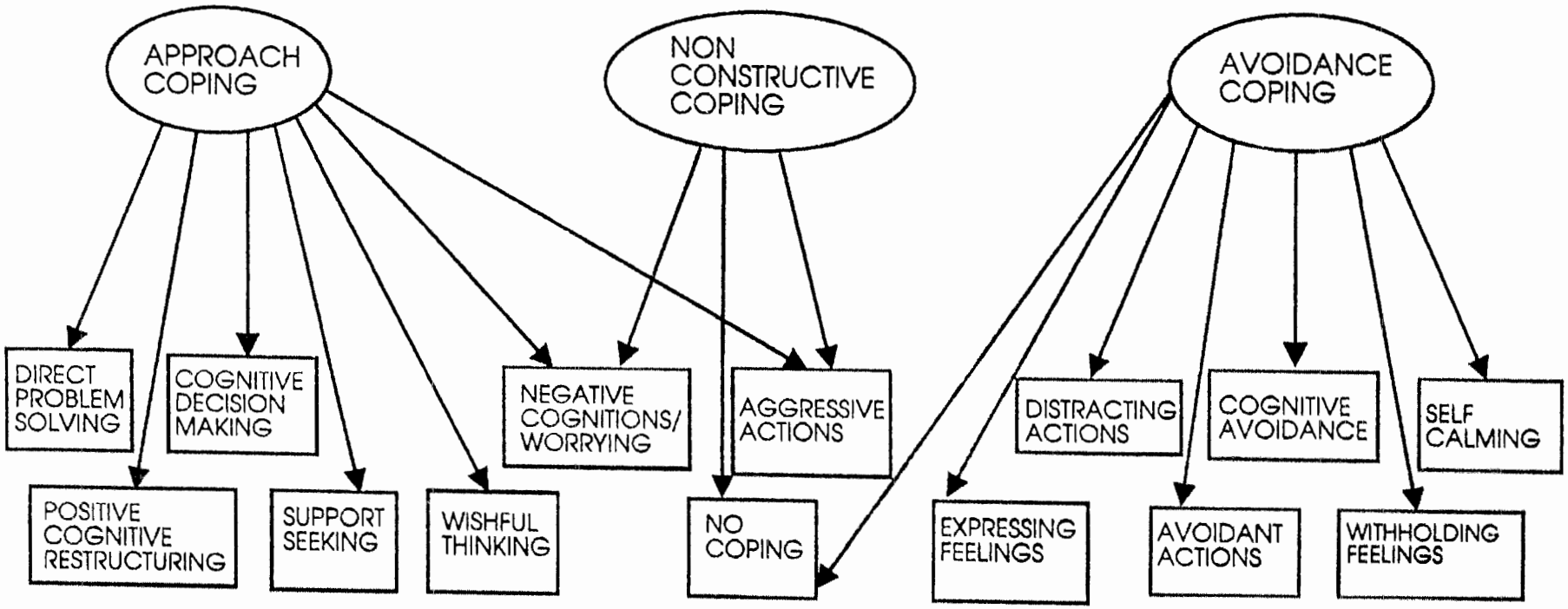

Figure 2 - Hypothesized Second-Order Factor Structure Based on Approach Coping, Avoidance Coping, and Non-Constructive Coping.