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Coping With Stress During Childhood and Adolescence: Problems, Progress, and Potential in Theory and Research

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Progress and issues in the study of coping with stress during childhood and adolescence are reviewed. Definitions of coping are considered, and the relationship between coping and other aspects of responses to stress (e.g., temperament and stress reactivity) is described. Questionnaire, interview, and observation measures of child and adolescent coping are evaluated with regard to reliability and validity. Studies of the association of coping with symptoms of psychopathology and social and academic competence are reviewed. Initial progress has been made in the conceptualization and measurement of coping, and substantial evidence has accumulated on the association between coping and adjustment. Problems still remain in the conceptualization and measurement of coping in young people, however, and aspects of the development and correlates of coping remain to be identified. An agenda for future research on child–adolescent coping is outlined.

The emergence of the ability to adapt to stress and adversity is a central facet of human development. Successful adaptation to stress includes the ways in which individuals manage their emotions, think constructively, regulate and direct their behavior, control their autonomic arousal, and act on the social and nonsocial environments to alter or decrease sources of stress. These processes have all been included to varying degrees within the construct of coping. Investigation of the ways that these various aspects of coping emerge and function during childhood and adolescence is critical in advancing our understanding of processes of adaptation to stress.

Research on the nature and function of coping processes in childhood and adolescence is of both basic and applied importance. From the perspective of basic research, coping represents an important aspect of the more general processes of self-regulation of emotion, cognition, behavior, physiology, and the environment (e.g., Eisenberg, Fabes, & Guthrie, 1997; Skinner, 1995). Findings from research on coping should provide valuable information on the nature and development of self-regulatory processes. From a more applied perspective, coping research is significant in two ways. First, psychosocial stress is a significant and pervasive risk factor for psychopathology in childhood and adolescence (Grant, Compas, Thurm, McMahon, & Ey, 2000), and the ways in which children and adolescents cope with stress are potentially important mediators and moderators of the impact of stress on current and future adjustment and psychopathology. The development of characteristic ways of coping in childhood may place individuals on more versus less adaptive developmental trajectories and may be a precursor of patterns of coping throughout adulthood. Second, a wide range of psychological interventions for the treatment and prevention of psychopathology are designed to enhance the coping skills of children and adolescents (e.g., Clarke et al., 1995; Kendall et al., 1997). Information about the basic nature and efficacy of coping in childhood and adolescence should help inform these interventions (Sandler, Wolchik, MacKinnon, Ayers, & Roosa, 1997), and intervention research should provide valuable data on the malleability of coping and the ways in which the social context can facilitate effective coping in children and youth.

A little more than a decade ago, research on coping in children and adolescents was in its earliest stages (Compas, 1987). Most conceptualizations of coping at that time were based on models of coping in adults and lacked a strong developmental component. Similarly, most measures of coping had been developed for adults and applied to children and adolescents with little or no modification. Empirical studies were few in number and examined relatively simple correlations between coping and measures of emotional distress. The landscape of this field has changed considerably in the past 10 to 15 years, as research on coping with stress during childhood and adolescence has burgeoned (e.g., Seiffge-Krenke, 1995; Wolchik & Sandler, 1997). In spite of the substantial progress that has been made, however, research on coping during childhood and adolescence has lagged behind similar research concerned with adaptation to stress during both infancy and adulthood (Compas, Connor, Saltzman, Thomsen, & Wadsworth, 1999).

Because of the rapid growth of this area of research, this is a critical juncture to evaluate advances and limitations in several areas of child and adolescent coping research. First, it is important to consider definitions and conceptualizations of the coping process, including the degree to which developmental factors are represented. The way in which coping is conceptualized influences methods of measurement and defines the scope of what is included within the rubric of coping. Many of the problems in the field have come from the lack of clarity and consensus regarding the nature of coping during childhood and adolescence. Second, the measurement of coping must be examined, including psychometric properties and the extent to which measures of coping adequately

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sample the characteristic ways that young people cope with stress. Limitations in measures of coping in childhood and adolescence represent another impediment to progress in this field. Specific attention needs to be given to the quality and characteristics of measures, including whether they have been developed for children as opposed to adolescents. Third, the association of coping with psychological adjustment, symptoms of psychopathology, and physical health–illness needs to be examined, with careful attention to the quality of research designs and the consistency of findings. Mental and physical health are aspects of functioning that are most strongly influenced by exposure to stress and may be most affected by the ways that children and adolescents cope with stress.[1] To explore these four issues, we conducted both electronic and manually based reviews of the literature between 1988 and 1999.[2] Our focus was on coping during childhood and adolescence; we did not include research on coping during infancy, because the conceptualization and measurement of coping in infancy are substantially different from research with children and adolescents.

Conceptualizing the Coping Process

An important first step in examining research on child–adolescent coping is to consider definitions of coping and conceptualizations of the coping process. Much of the research on child and adolescent coping has proceeded without an explicit definition of coping, and, as a consequence, characteristics of children's responses that have been included within the concept of coping in one investigation have been excluded from another. The lack of clarity and consensus in conceptualizing coping has had a number of far-reaching effects, including confusion in approaches to measurement, difficulties in comparing findings across studies, and difficulties in documenting fundamental differences in coping as a function of age, gender, and other individual-differences factors.

Definitions of Coping

Two challenges are foremost in generating a definition of coping to guide research with children and adolescents. The first is the need for a definition that reflects the nature of developmental processes. It is unlikely that the basic characteristics or the efficacy of coping are the same for a young child as for an adolescent, and any definition of coping should reflect such changes. Second, it is important to distinguish coping from other aspects of the ways that individuals respond to stress, because the utility of any definition of coping depends in part on the degree of specificity that is conveyed (Lazarus & Folkman, 1984).

In those instances in which coping has been defined in research with children and adolescents, investigators frequently have drawn on definitions from models of adult coping, as well as more recent conceptualizations of coping that are explicitly concerned with childhood and adolescence. The most widely cited definition is that of Lazarus and Folkman (1984), which was derived from their adult model of stress, cognitive appraisal, and coping. This conceptualization of coping has been the basis for numerous investigations of coping in childhood and adolescence (e.g., Compas, Malcarne, & Fondacaro, 1988; Lengua & Sandler, 1996; Steele, Forehand, & Armistead, 1997). Lazarus and Folkman (1984) defined coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). Coping is viewed as an ongoing dynamic process that changes in response to the changing demands of a stressful encounter or event. Furthermore, coping is conceptualized as purposeful responses that are directed toward resolving the stressful relationship between the self and the environment (problem-focused coping) or toward palliating negative emotions that arise as a result of stress (emotion-focused coping). This definition is part of a broader motivational model of psychological stress and emotion that emphasizes cognitive appraisals in determining what is stressful to the individual. Coping is a goal-directed process in which the individual orients thoughts and behaviors toward the goals of resolving the source of stress and managing emotional reactions to stress (Lazarus, 1993).

Perspectives on coping that are more explicitly concerned with childhood and adolescence include those outlined by Weisz and colleagues (Band & Weisz, 1988; McCarty et al., 1999; Rudolph, Dennig, & Weisz, 1995; Weisz, McCabe, & Dennig, 1994), Skinner (1995), Eisenberg and colleagues (e.g., Eisenberg, Fabes, & Guthrie, 1997), and Compas and colleagues (e.g., Compas, 1998; Compas, Connor, Osowiecki, & Welch, 1997; Compas et al., 1999). The model of Weisz and colleagues is similar to that of Lazarus and Folkman in that coping is viewed as goal directed and motivational in nature. However, within the Weisz model, coping efforts are directed at maintaining, augmenting, or altering control over the environment and the self. Primary control coping is defined as coping intended to influence objective events or conditions, secondary control coping refers to coping aimed at maximizing one's fit to current conditions, and relinquished control is defined as the absence of any coping attempt (Rothbaum, Weisz, & Snyder, 1982; Rudolph et al., 1995; Weisz, 1990). Drawing on the framework proposed by Lazarus and Folkman (1984), Weisz and colleagues also distinguished among coping responses, the goals that underlie these responses, and coping outcomes (Rudolph et al., 1995). Coping responses refer to intentional physical or mental actions in reaction to a stressor and directed toward the environment or an internal state. Coping goals are the objectives or

[1] Differences in coping as a function of age (or developmental level) are also important to consider. Similarities and differences in coping as a function of age should help to define the developmental course of coping. Individual-differences factors (e.g., gender, socioeconomic status) that may influence coping also need to be considered. However, in spite of the fundamental importance of understanding age effects and individual differences in coping, research in these areas has been disappointing, primarily as a result of problems in the conceptualization and measurement of coping. Because of the limitations of research in these areas, we have not addressed them in this review.

[2] We used PsycLIT to search for the keywords *coping, child, children, childhood, adolescent,* and *adolescence.* In addition, we searched the following journals from 1988 to 1999: *American Journal of Community Psychology, Child Development, Developmental Psychology, Development and Psychopathology, Health Psychology, Journal of Abnormal Psychology, Journal of Abnormal Child Psychology, Journal of the American Academy of Child and Adolescent Psychiatry, Journal of Child Psychology and Psychiatry, Journal of Clinical Child Psychology, Journal of Consulting and Clinical Psychology, Journal of Pediatric Psychology, Journal of Personality and Social Psychology, Journal of Research on Adolescence,* and *Journal of Youth and Adolescence.* This search did not access unpublished studies and therefore may not be an exhaustive review of research on coping during childhood and adolescence.

intents of coping responses and reflect the motivational nature of coping; coping outcomes are the specific consequences of volitional coping efforts.

Skinner and Wellborn (1994) defined coping as "how people regulate their behavior, emotion, and orientation under conditions of psychological stress" (p. 112). Coping directed at behavior regulation includes information seeking and problem solving, emotion regulation includes maintaining an optimistic outlook, and orientation regulation includes avoidance. Skinner and colleagues also placed coping within a motivational model of psychological control and coping that focuses on basic human motives or needs for competence, autonomy, and relatedness. Coping efforts can be directed toward achieving these needs, protecting against threats or challenges to these needs under stressful conditions, or repairing damage as a consequence of stress. Skinner's model differs from the Lazarus and Folkman (1984) model in that coping includes both volitional and involuntary or automatic responses to manage threats to competence, autonomy, and relatedness (Skinner, 1995).

Eisenberg and colleagues defined coping as a subset of the broader category of self-regulation (e.g., Eisenberg, Fabes, & Guthrie, 1997). That is, they acknowledged that individuals are involved in the regulation of their behavior and emotions on an ongoing basis, and coping refers specifically to self-regulation when one is faced with stress (Eisenberg, Fabes, Guthrie, et al., 1996). They distinguished among three aspects of self-regulation: "attempts to directly regulate emotion (e.g., emotion-focused coping, henceforth labeled emotion regulation), attempts to regulate the situation (e.g., problem-focused coping, including thinking about how to do so), and attempts to regulate emotionally driven behavior (e.g., behavior regulation)" (Eisenberg, Fabes, & Guthrie, 1997, p. 45). Eisenberg, Fabes, & Guthrie (1997) argued that although coping and emotional regulation are processes that typically involve effort, coping is not always conscious and intentional. Therefore, similar to the perspective of Skinner and colleagues, in this framework coping includes both volitional and automatic responses to stress.

We view coping as one aspect of a broader set of processes that are enacted in response to stress (Compas, 1998; Compas et al., 1997, 1999). We define coping as conscious volitional efforts to regulate emotion, cognition, behavior, physiology, and the environment in response to stressful events or circumstances. These regulatory processes both draw on and are constrained by the biological, cognitive, social and emotional development of the individual. An individual's developmental level both contributes to the resources that are available for coping and limits the types of coping responses the individual can enact. Coping is a subset of broader self-regulatory processes, referring to regulatory efforts that are volitionally and intentionally enacted specifically in response to stress (Compas et al., 1999). Regulation involves a broad array of responses, including efforts to initiate, terminate or delay, modify or change the form or content, or modulate the amount or intensity of a thought, emotion, behavior, or physiological reaction, or redirect thought or behavior toward a new target. Coping is a subset of self-regulatory processes; therefore, it is important to recognize that self-regulation includes responses in nonstressful circumstances that are not characterized as coping (Eisenberg, Fabes, & Guthrie, 1997).

We propose that stress responses can be distinguished along two broad dimensions: voluntary versus involuntary and engagement versus disengagement. The distinction between voluntary and involuntary responses is based on extensive research from cognitive, social, developmental, and clinical psychology (see later discussion). We propose that both voluntary and involuntary stress responses can be further distinguished as engaging with a stressor or one's responses to the stressor or disengaging from the stressor and one's responses. The origins of the engagement–disengagement dimension can be found in the concept of the fight (engagement) or flight (disengagement) response (e.g., Cannon, 1933, 1934; Gray, 1991) and in the contrast between approach and avoidance responses (Krohne, 1996). We hypothesize that voluntary responses (coping) that involve engagement are further distinguished by their goals, that is, oriented toward achieving primary control or secondary control. The goal of achieving either primary or secondary control is fundamental in motivational models of coping and self-regulation (e.g., Scheier & Carver, 1988; Weisz, 1990). However, such goals are pursued only as part of controlled efforts to engage with the stressor or one's thoughts, emotions, and physiological reactions to the stressor (Rudolph et al., 1995). Preliminary empirical support for this model comes from confirmatory factor analyses in three samples of adolescents reporting on their responses to three different domains of stress (interpersonal stress, economic strain, and family conflict; Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, in press). Standard goodness-of-fit indexes were all within acceptable limits and indicated significantly better fits than alternative theoretical models (Connor-Smith et al., in press). These definitions highlight several important issues: the relation between coping and other aspects of responses to stress; the relation of coping with broader constructs of self-regulation, stress reactivity, and temperament; the developmental course of coping; and the importance of considering dimensions and subtypes of coping.

Coping and Responses to Stress

Competence, resilience, and coping. Coping can be distinguished from the related concepts of competence and resilience. Although the terms *coping, competence,* and *resilience* are often used interchangeably, they reflect distinct aspects of successful development and adaptation (e.g., Compas & Harding Thomsen, 1998; Masten & Coatsworth, 1998). The primary distinction is that coping refers to processes of adaptation, competence refers to the characteristics and resources that are needed for successful adaptation, and resilience is reflected in outcomes for which competence and coping have been effectively put into action in response to stress and adversity. Therefore, coping can be viewed as efforts to enact or mobilize competence or personal resources, and resilience can be viewed as the successful outcome of these actions. Coping includes the behaviors and thoughts that are implemented by individuals when faced with stress without reference to their efficacy, whereas resilience refers to the results of the coping responses of competent individuals who have been faced with stress and have coped in an effective and adaptive manner. However, not all coping efforts represent the enactment of competence, and not all outcomes of coping are reflected in resilience; some coping efforts fail.

Volitional and involuntary stress responses. A fundamental issue in the conceptualization of coping has been the contrast between responses to stress that involve volition and conscious effort by the individual and responses that are automatized and not

under conscious control. Two basic positions have been presented. A first position posits that coping refers to all responses to stress, regardless of the degree of volition or control involved (e.g., Coyne & Gottlieb, 1996; Eisenberg, Fabes, & Guthrie, 1997; Skinner, 1995), whereas a second position posits that coping is limited to those responses to stress that involve volition, effort, and conscious control (e.g., Compas et al., 1997; Lazarus & Folkman, 1984; Rudolph et al., 1995). This distinction is to a certain degree one of semantics, in that both perspectives recognize the importance of the two broad categories of controlled or voluntary responses and automatic or involuntary responses to stress. However, the degree to which these two components of stress responses are conceptualized and measured as distinct processes, and the extent to which the relationship between them is understood, is of fundamental importance in understanding coping processes.

Regardless of how these concepts are mapped onto a definition of coping, it may be important to distinguish between volitional and involuntary responses to stress for several reasons. First, this distinction avoids an overly broad and imprecise definition of coping in which coping includes everything that individuals do in response to stress (Lazarus & Folkman, 1984). For example, Rudolph et al. (1995) distinguished between stress outcomes, which include immediate and automatic responses to a stressful event or circumstance, and coping outcomes, which are mediated by volitional, deliberate efforts to cope with stress. Second, volitional and involuntary processes are experienced as subjectively and qualitatively different; individuals can distinguish between those aspects of their thoughts and behavior that they experience as under their personal control and those that are beyond their control (Skinner, 1995). For example, the release of emotions can occur through an involuntary ventilation of emotions (crying) or through a controlled process such as writing, and the effects of these processes on emotions and physiology may be quite different (Pennebaker, 1997). Third, volitional and involuntary responses may emerge differently over the course of development, with involuntary responses present early in development (e.g., Barr, Young, Wright, Gravel, & Alkawaf, 1999; Blass & Ciaramitaro, 1994; Rothbart, 1991), followed by the emergence of volitional responses in early childhood. Fourth, volitional and involuntary processes may differ in the ways they respond to interventions. Psychological interventions are often designed to teach individuals skills in managing those aspects of cognition and behavior that are under personal control, but they can only indirectly increase or decrease responses that are experienced as uncontrollable.

Empirical support for the distinction between controlled or volitional responses and automatic or involuntary responses comes from a wide range of sources, including research on associative conditioning and learning (Shiffrin, 1997; Shiffrin & Schneider, 1977), experimental research on strategic–controlled and automatic cognitive processes in emotions and emotional disorders (Gotlib & Krasnoperova, 1998; Mathews & MacLeod, 1994; McNally, 1995), research distinguishing certain aspects of temperamental characteristics from intentional behavior and cognitive processes (Rothbart, 1991), and research on automaticity in social cognition (e.g., Bargh, 1997; Mischel, 1997). For example, responses to threatening cues in the environment, which are experienced as stressful and therefore may initiate coping behavior, are processed on both an automatic, uncontrolled level and a controlled, strategic level (see Mathews & MacLeod, 1994, for a review of research with adults). Research has recently begun to examine these two levels of processing in children as well (e.g., Daleiden & Vasey, 1997; Vasey, El-Hag, & Daleiden, 1996). For example, using an experimental task to test for automatic attentional biases to threatening cues, Vasey et al. (1996) found that children high in test anxiety selectively attend to threatening cues (in this case, words presented in a probe detection task) significantly more than children low in test anxiety.

Although volitional and involuntary responses to stress may be viewed as distinct, involuntary responses to stress may influence volitional responses, and voluntary responses affect involuntary reactions. For example, involuntary intrusive thoughts are a hallmark feature of a general pattern of response to stressful or traumatic events (Horowitz, 1993) or of posttraumatic stress disorder (PTSD; American Psychiatric Association, 1994). Cognitive and behavioral efforts to avoid uncontrollable intrusive thoughts are a second important feature of stress responses or PTSD. However, efforts to avoid intrusive thoughts can have the paradoxical effect of increasing the unwanted involuntary thoughts they are intended to avoid (e.g., Primo et al., 2000; see Wegner, 1994, for a review), demonstrating the influence of controlled cognitive processes on involuntary cognitive processes. The tendency of avoidance and thought suppression to increase uncontrollable thoughts is just one example of the ways in which coping efforts affect involuntary responses to stress.

Coping, Temperament, Reactivity, and Regulation

Coping is linked to but also distinct from several aspects of temperament, including the constructs of reactivity and self-regulation. Reactivity encompasses individual differences in physiological and emotional responses to stress. Physiological reactivity includes the threshold, dampening, and reactivation of autonomic arousal (e.g., Boyce, Barr, & Zeltzer, 1992; M. Lewis, 1989). Although the characteristics of reactivity may vary across different emotions (e.g., fear vs. anger), highly reactive individuals have a lower threshold of initial response, are slower in recovery or returning to baseline, and display greater reactivation of arousal with repeated exposure to stress. High reactivity is generally associated with inhibited temperament, whereas low reactivity is associated with uninhibited temperament. Individual differences in reactivity and temperament are expected to be related to coping, because they affect the individual's initial automatic response to stress and may constrain or facilitate certain types of coping responses (Compas, 1987). For example, the temperamental characteristics of behavioral inhibition (e.g., Kagan, 1989; Kagan, Reznick, & Snidman, 1987; Kagan & Snidman, 1991; Kagan, Snidman, & Arcus, 1992) and attentional control (e.g., Posner & Rothbart, 1994; Rothbart, Posner, & Hershey, 1995) play central roles in individual differences in level of reactivity to stress. Behavioral inhibition includes the tendency to experience high levels of arousal in novel, threatening, or stressful situations and may be related to the use of avoidance and withdrawal as coping methods, whereas uninhibited temperament is expected to be related to more active and approach-oriented coping responses. Individual differences in the capacity for attentional control (the ability to sustain attention and the ability to shift attention) may be related to the ability to use strategies such as distraction to cope with negative emotions.

As noted earlier, coping is also related to or is an aspect of self-regulation. From infancy, individuals are capable of regulating

aspects of their physiological arousal, behavior, and emotions (Gunnar, 1994; Rothbart, 1988, 1991). However, regulation is achieved initially through involuntary, biologically based processes (e.g., Blass & Ciaramitaro, 1994). These regulatory capacities are augmented early in development by responses that are acquired through learning and experience but are under the control of contextual cues that elicit and maintain behavior (Rothbart, 1991). Therefore, some important aspects of self-regulation precede the development of the capacity for the conscious volitional efforts that compose coping. Features of responses to stress in infancy that precede coping include individual differences in self-soothing behaviors (e.g., Gunnar, 1994). These behaviors develop before the skills needed for conscious volitional self-regulation, yet they are important aspects of the ways that infants regulate themselves in response to stress. Coping is influenced by the emergence of cognitive and behavioral capacities for regulation of the self and the environment, including the emergence of intentionality, representational thinking, language, metacognition, and the capacity for delay.

Eisenberg and colleagues have shown, in a series of studies, that the development of the capacity for emotional and behavioral regulation is related to the broader development of both prosocial behavior and behavior problems in young children (e.g., Eisenberg, Fabes, Guthrie, et al., 1996; Eisenberg, Fabes, Guthrie, & Reiser, 2000; Eisenberg, Fabes, Karbon, et al., 1996; Eisenberg, Guthrie, Fabes, Reiser, et al., 1997; Guthrie et al., 1997). These researchers have used parent, teacher, and peer reports in combination with direct observations of children's behavior to assess emotional regulation (e.g., processes of attentional shifting and focus) and behavioral regulation (e.g., ego control and resiliency). Children who were rated as higher in regulation skills were also higher in peer-rated social status, engaged in more socially appropriate behavior, were higher in the capacity for empathy, had fewer behavior problems, and exhibited less negative emotionality. These findings indicate that emotional and behavioral regulation skills involved in children's daily interactions in their social environment provide an important set of resources on which children can draw in attempting to cope with stress.

Coping and Development

Coping and other stress responses can be expected to follow a predictable developmental course; however, little theory or research has been directed toward the nature of this process (see Losoya, Eisenberg, & Fabes, 1998, for an exception). As noted earlier, some aspects of involuntary stress response processes are in place at birth and therefore precede the development of voluntary coping processes. For example, infants display an innate soothing response to sucrose that facilitates early self-regulation of emotion (Barr et al., 1999). Early voluntary coping efforts may be oriented toward palliating negative emotions through primarily behavioral means, including seeking support and soothing from others, behavioral withdrawal from threat, and use of tangible objects for soothing and security (Gunnar, 1994). More complex methods of achieving the goals of emotional palliation and problem solving emerge in early to middle childhood, with the development of more complex language and metacognitive capacities. These include cognitive reframing or restructuring a problem situation, cognitive representations of absent caregivers, using self-talk to calm negative emotions, and generating alternative solutions to solve problems (e.g., Moss, Gosselin, Parent, Rousseau, & Dumont, 1997; Normandeau & Gobeil, 1998). Greater diversity and flexibility in the range of coping responses available to the individual is expected to develop during middle childhood and adolescence. In addition, with increasing metacognitive skills in early adolescence, a greater ability to match coping efforts to the perceived or objective characteristics of stress is expected.

Coping processes are hypothesized to be responsive to changes in the immediate social context and longer term changes in individuals as a result of biological, cognitive, and social development. Although individuals may be characterized by some degree of consistency in coping style, both situational factors and developmental changes may contribute to changes in coping responses (e.g., Compas, Forsythe, & Wagner, 1988; Losoya et al., 1998). Furthermore, coping includes both overt behavioral and covert cognitive responses. The relative contributions of behavioral and cognitive responses will vary depending on the stressful context, the child's developmental level, and learned styles of responding to stress.

At least three questions are fundamental to further understanding coping from a developmental perspective. First, do the nature and structure of coping change with age or developmental level? Second, can coping be reliably and validly measured over the course of development during childhood and adolescence? And third, do the important correlates of coping, including symptoms of psychopathology, change with development? These questions will be important in both interpreting previous findings and guiding future research in this area.

Dimensions and Subtypes of Coping

Although a broad definition of coping is useful in distinguishing between coping and other stress response processes, it disguises the heterogeneity among different types of coping responses. In spite of the clear need to distinguish among the dimensions or subtypes of coping, there has been little consensus regarding the dimensions or categories that best discriminate among different coping strategies in childhood and adolescence. First, researchers have debated whether it is best to consider general dimensions on which coping responses vary as opposed to specific categories or subtypes of coping. Second, there has been debate regarding which dimensions and categories best represent the variability in coping.

Dimensions of coping. The most widely used dimensions of coping are problem- versus emotion-focused coping, primary versus secondary control coping, and engagement (approach) versus disengagement (avoidance) coping. Other dimensions that have been used relatively less often include self-focus and external focus of coping, cognitive and behavioral coping, and active and passive coping (see Compas et al., 1999; Rudolph et al., 1995), reflecting somewhat different theoretical perspectives on coping. All of these dimensions are represented in research on child and adolescent coping, contributing to confusion about the basic structure of coping and making it difficult to integrate findings across studies.

The problem- and emotion-focused dimension reflects the function of coping responses to either act on the source of stress in the environment or palliate negative emotions that arise from a stressful encounter or event (Lazarus & Folkman, 1984). Lazarus and Folkman (1984) defined problem-focused coping as including responses such as seeking information, generating possible solu-

tions to a problem, and taking actions to change the circumstances that are creating stress. They argued that emotion-focused coping involves such responses as expressing one's emotions, seeking solace and support from others, and trying to avoid the source of stress. This dimension has been widely used in research on coping in childhood and adolescence (e.g., Compas, Worsham, Ey, & Howell, 1996; Hart, 1991). However, criticism of this dimension is also widespread, because it is overly broad and places many disparate types of coping into these two general categories (e.g., Coyne & Gottlieb, 1996). For example, emotion-focused coping has included such varied strategies as relaxation, seeking emotional support from others, writing about one's deepest emotions, wishing that the problem would go away, emotional suppression, and self-criticism. Furthermore, a single coping strategy may be directed toward both problem- and emotion-focused goals simultaneously (Compas, Worsham, et al., 1996). For example, walking away from a conflict with a peer may serve the emotion-focused goal of calming oneself down and the problem-focused goal of taking time to generate alternative solutions to the conflict.

An alternative dimension refers to the orientation of the individual to either enhance a sense of personal control over the environment and his or her reactions (primary control) or adapt to the environment (secondary control; Rudolph et al., 1995; Weisz et al., 1994). Primary control refers to coping attempts that are directed toward influencing objective events or conditions (e.g., problem solving) or directly regulating one's emotions (e.g., regulated emotional expression). Secondary control coping involves efforts to fit with or adapt to the environment and typically may include acceptance or cognitive restructuring. Similarly, Brandtstaedter and Renner (1990) and Heckhausen (1997) referred to assimilative coping, which parallels primary control coping, and accommodative coping, which parallels secondary control coping. The primary–secondary control dimension has been used to describe both the nature of coping responses themselves and the goals underlying the responses. For example, in their analysis of children's coping in medical settings, Rudolph et al. (1995) noted that a primary control response during a painful medical procedure ("hold my mother's hand") may reflect a secondary control goal ("so I know that she's with me"). However, the distinction between primary and secondary control coping does not include various forms of disengagement coping (e.g., avoidance, denial, and wishful thinking).

The distinction between engagement and disengagement coping has also received considerable attention in research with children, adolescents, and adults (e.g., Ebata & Moos, 1991; Tobin, Holroyd, Reynolds, & Wigal, 1989). Engagement coping includes responses that are oriented either toward the source of stress or toward one's emotions or thoughts (e.g., problem solving or seeking social support); disengagement coping refers to responses that are oriented away from the stressor or one's emotions or thoughts (e.g., withdrawal or denial). Although the dimension of engagement–disengagement coping is related to the dimension of approach and avoidance, the engagement–disengagement distinction is broader, in that avoidance represents only one way in which an individual can disengage. Responses such as cognitive distraction also involve disengagement but are not purely avoidant, because they include redirecting attention toward an alternative target and reflect awareness and acknowledgment of the stressor (Ayers, Sandler, & Twohey, 1998; Compas et al., 1999). Similar to the problem- and emotion-focused distinction, the engagement–disengagement dimension is overly broad and fails to distinguish among more distinct subtypes of coping.

Broad dimensions of coping serve as organizing principles that represent the overarching characteristics of responses to stress. These various dimensions of coping may represent complementary rather than orthogonal aspects of the coping process. For example, Rudolph et al. (1995) noted that the cognitive–behavioral dimension is concerned with coping responses, the problem- versus emotion-focused dimension is concerned with coping goals, and the primary versus secondary control dimension represents both coping responses and goals. However, they mask the complexity of different subtypes of coping that may differ significantly in their intentions and their effects. For example, as noted earlier, the dimension of emotion-focused coping has been criticized because it includes very different types of coping, ranging from rumination, wishful thinking, and social withdrawal to emotional regulation through methods such as relaxation and cognitive or behavioral distraction. Therefore, it is necessary to consider the specific subtypes of responses that compose these broader dimensions.

Categories or subtypes of coping. A wide variety of specific subtypes of child and adolescent coping have been proposed. These include problem solving, information seeking, cognitive restructuring, seeking understanding, catastrophizing, emotional release or ventilation, physical activities, acceptance, distraction, distancing, avoidance, self-criticism, blaming others, wishful thinking, humor, suppression, social withdrawal, resigned acceptance, denial, alcohol or drug use, seeking social support, seeking informational support, and use of religion. Items on measures of coping have been grouped into these categories on the basis of factor analyses, conceptual groupings of items, or a combination of these two methods. There has been little consistency in the application of these various subtypes of coping across different measures and studies, however, leading to considerable difficulty developing a cohesive picture of the structure of coping in childhood and adolescence.

These disparate types of coping have been grouped into subtypes of the broader dimensions of coping described earlier, both conceptually based on a priori assumptions about these categories and empirically through factor analyses. Factor analyses of coping responses have yielded primary and secondary factors that reflect the difference between broad and narrow subtypes of coping. Most factor structures have been based on exploratory factor analyses and have been inconsistent across studies using different measures and different samples (see later discussion). Three recent studies have used confirmatory factor analyses to test conceptual models of the structure of coping. Ayers, Sandler, West, and Roosa (1996) factor analyzed 10 coping scales and found that they were subsumed under four factors: *active coping* (cognitive decision making, direct problem solving, seeking understanding, and positive cognitive restructuring), *social support* (emotion-focused support and problem-focused support), *distraction* (distracting action and physical release of energy), and *avoidance* (cognitive avoidance and avoidant action). This four-factor model provided a good fit with the data, whereas two-factor models representing problem- and emotion-focused coping and approach and avoidance coping did not provide an adequate fit. Walker, Smith, Garber, and Van Slyke (1997) identified three factors (with several scales that cross loaded on more than one factor) in their development of a measure of coping with pediatric pain: *active coping* (e.g., problem solving, seeking social support, and self-isolation), *passive coping* (e.g.,

self-isolation, behavioral disengagement, and acceptance), and *accommodative coping* (e.g., acceptance, distract–ignore, and self-encouragement). Connor-Smith et al. (in press) conducted confirmatory factor analyses with a sample of more than 400 older adolescents (18 to 19 years old) and a second sample of more than 300 early to middle adolescents (12 to 18 years old). Volitional coping responses were distinguished into three factors: *primary control engagement coping* (problem solving, emotional expression, and emotional modulation), *secondary control engagement coping* (cognitive restructuring, positive thinking, acceptance, and distraction), and *disengagement coping* (wishful thinking and denial). Similar to the findings of Ayers et al. (1996), alternative models that included only two factors (problem- and emotion-focused coping and engagement–disengagement coping) did not achieve an adequate fit with the data (Connor-Smith et al., in press).

The studies by Ayers et al. (1996), Walker et al. (1997), and Connor-Smith et al. (in press) suggest that the distinctions between problem- and emotion-focused coping or between approach and avoidance coping do not adequately reflect the structure of coping in young people. Ayers et al. (1996) found that their active coping factor was composed of both problem- and emotion-focused scales, and Connor-Smith et al. (in press) found that problem solving loaded together with two forms of emotion-focused coping (emotional expression and emotional modulation) on the primary control engagement coping factor. Furthermore, both of these studies revealed that distraction and avoidance coping loaded on separate factors, indicating that distraction is not simply a subtype of avoidance coping as it is represented in some models. The findings of these studies suggest that confirmatory factor-analytic methods provide a promising avenue for testing theory-driven models of the dimensions and subtypes of coping in childhood and adolescence.

Measurement of Coping

The goals of this section are to describe the most commonly used and thoroughly developed measures of coping, review their psychometric characteristics, and discuss the next steps in improving both the quality and application of measures. Because previous reviews have primarily addressed measures developed more than a decade ago (Ayers et al., 1998; Compas, 1987; Fields & Prinz, 1997), this review focuses primarily on measures developed since 1988, with the exception of older measures that have been used frequently in the past 10 years.

Four approaches have been used to assess the ways in which children and adolescents cope with stress: self-report questionnaires, semistructured interviews, observations of behavior, and, to a lesser extent, the reports of significant others (parents, teachers, and peers). Current measures have differed in the specific coping responses and dimensions represented and in the breadth of assessment, with some targeting responses to specific stressors and others measuring general coping style (Ayers et al., 1998). The degree to which psychometric properties have been evaluated varies widely, ranging from questionnaires used in only one study with no reliability and validity data to measures with established reliability and factor structures confirmed across multiple samples. The large number of measures makes it difficult to integrate findings across studies and to discuss the merits and drawbacks of each measure individually. Although specific examples of items and scales are presented, these examples are not intended to single out any one measure but to illustrate issues common to the majority of measures.

Questionnaires

The most widely used questionnaires are summarized in Table 1. Measures were initially selected for inclusion in Table 1 on the basis of several criteria: broad applicability, presence of reliability data, and use in at least one study with a substantial sample size ($\geq$100). In addition, because much of the coping literature has focused on coping with health-related stress, several measures assessing coping with pain or illness were included as examples of stressor-specific measures (e.g., Gil, Williams, Thompson, & Kinney, 1991) in spite of the use of small samples ($<$100). Although shortened or modified versions of many measures have been developed (e.g., Hastings, Anderson, & Kelly, 1996; Thurber & Weisz, 1997), this review focuses on the original versions of scales. Within Table 1, measures are arranged according to author name, because the diversity among measures made it impractical to group them conceptually or developmentally (e.g., by model of coping or child vs. adolescent measures).

Quality of coping items. Current measures represent a broad array of potential coping responses, with items either selected to represent theoretical constructs (e.g., Causey & Dubow, 1992; Connor-Smith et al., in press; Ebata & Moos, 1991) or drawn from children's interviews or open-ended reports (Ayers et al., 1996; Patterson & McCubbin, 1987). However, problems remain with the clarity and specificity of items, recognition of differences between coping goals and coping strategies, and overlap between coping and measures of psychopathology.

First, the clarity of items is often compromised by scales that combine more than one strategy into a single item. For example, a single item from the Kidcope (Spirito, Stark, & Williams, 1988), "I stayed away from other people, kept my feelings to myself, and just handled the situation on my own," represents behavioral avoidance or withdrawal (kept away from others), emotion regulation (kept my feelings to myself), and problem solving (handled the situation on my own). Thus, a child might endorse this item for any of several reasons or fail to endorse it because his or her behavior matched only one aspect of the item (e.g., I kept my feelings private but remained around others and asked for help).

Second, within a measure, items often differ in whether they assess the goal of the response, the strategy used to reach that goal, or both, making responses difficult to interpret. For example, the goal-focused item "Do something to make things better" (Ayers et al., 1996) could be endorsed by children whose methods of attaining that goal range from relaxation to the use of instrumental problem solving or seeking emotional support. Similarly, items based on specific behavioral strategies can also represent multiple goals. For example, the strategy "Go shopping; buy things you like" from the A-COPE (Patterson & McCubbin, 1987) could be implemented for vastly different reasons, such as buying clothes to feel more attractive versus distracting oneself from an impending stressor. Highly behaviorally specific items will not be endorsed by respondents who accomplished the same underlying goal via a different method. For example, whereas adolescents might distract themselves by shopping, they could also exercise, read, watch TV, or go out with friends to accomplish the same goal. Greater clarity

(text continues on page 100)

Table 1
Questionnaire Measures of Child and Adolescent Coping

Author(s) and measure	Informant/population	Stressor	Format	Derivation of scales	Coping scales/internal consistency	Test–retest reliability	Validity
Austin, Patterson, & Huberty (1991): Coping Health Inventory for Children	Parent report N = 372 parents Children with epilepsy or asthma 8–12 years of age	Chronic illness	45 items Frequency rated on 5-point scale	Pilot items selected based on interviews and theory, arranged into five a priori scales Items with poor internal consistency dropped Confirmatory factor analysis demonstrated moderately good fit	Develops Competence and Optimism/.77 Feels Different and Withdrawn/.82 Is Irritable, Moody, and Acts Out/.85 Complies with Treatment/.74 Seeks Support/.82	2–3 weeks: .57–.91 N = 74	None reported
Ayers, Sandler, West, & Roosa (1996); Sandler, Tein, & West (1994): Children's Coping Strategies Checklist (CCSC) and How I Coped Under Pressure Scale (HICUPS)	Self-report 1994 Study 1 N = 217 Age 9–13 years (M = 10.4) 60% female 57% non-White Participants in prevention program for children of problem drinkers 1996 Study 2 N = 303 Age 9–13 years (M = 10.5) 50% female 47% non-White Oversampled for children of problem drinkers (1994) N = 258 Age 7–13 years (M = 10) 44% female 86% Caucasian	General coping style (CCSC) Child-selected stressor (HICUPS)	45 items Frequency rated on 4-point scale	Items selected from interviews, literature, or theoretically generated and combined into 11 primary scales, 4 secondary scales Confirmatory factor analysis demonstrated adequate fit of four-factor model	Alphas for CCSC/HICUPS Active Coping Strategies/.89 Cognitive Decision Making/.72/.71 Direct Problem Solving/.68/.71 Seeking Understanding/.72/.74 Positive Cognitive Restructuring/.68/.62 Avoidance Strategies/.73 Cognitive Avoidance/.72/.61 Avoidant Action/.64/.64 Distraction Strategies/.80 Distracting Actions/.60/.65 Physical Release of Emotions/.64/.65 Support Seeking Strategies/.78 Emotion-Focused Support/.50/.60 Problem-Focused Support/.46/.57	Not reported	For both CCSC and HICUPS, construct validity was demonstrated by superior fit of hypothesized model in comparison with problem–emotion-focused model and active–passive model Factor structure was invariant across sex, age, sample, and stressor
Brodzinsky et al. (1992): Coping Scale for Children and Youth	Self-report N = 498 Age 10–15 years (M = 13) 50% female	Student-selected stressor from past few months	29 items Frequency rated on 4-point scale	Factor analysis of 44 items from literature to represent cognitive and behavioral approach, cognitive and behavioral avoidance, or acceptance	Assistance Seeking/.72 Cognitive–Behavioral Problem Solving/.81 Cognitive Avoidance/.80 Behavioral Avoidance/.70	1 week: .70–.82	Expected correlations found with Kidcope
Causey & Dubow (1992): Self-Report Coping Scale	Self-report N = 81 4th–6th grade 48% girls 15% non-White N = 215 for test–retest reliability	One social and one academic	34 items Frequency rated on 5-point scale	Theoretical selection of items verified with factor analysis	Seeking Social Support/.84 Self-Reliance/Problem Solving/.84 Distancing/.69 Internalizing/.66 Externalizing/.68	2 weeks: .58–.78 N = 215	Self-report scales moderately correlated (.22 to .53) with abbreviated peer reports

Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman (in press): Responses to Stress Questionnaire	Self-report and parent report Sample 1 N = 450 Age 16–19 years (M = 18.2) 69% girls Sample 2 N = 364 Age 12–18 years (M = 14.7) 56% girls Sample 3 N = 82 Age 11–17 years (M = 13.4) 70% girls	Sample 1: peer stressors Sample 2: economic strain or family conflict Sample 3: recurrent abdominal pain	57 items Frequency rated on 4-point scale	Items selected to create 19 subscales falling within a three-tiered theoretical model: Volitional/Involuntary, Engagement/Disengagement, Primary/Secondary Control Factor analysis of subscales supported theoretical model	Sample 1/Sample 2/Sample 3 Volitional Primary Control/.82/.84/.72 Problem Solving/.63/.67/.48 Emotional Regulation/.48/.60/.48 Emotional Expression/.70/.76/.61 Secondary Control/.80/.84/.79 Cognitive Restructuring/.52/.58/.54 Positive Thinking/.67/.67/.60 Acceptance/.50/.60/.52 Distraction/.45/.59/.54 Effortful Disengagement/.73/.88/.67 Denial/.49/.60/.53 Avoidance/.51/.68/.32 Wishful Thinking/.64/.73/.48 Involuntary Engagement/.88/.92/.88 Rumination/.76/.78/.69 Intrusive Thoughts/.68/.78/.72 Emotional Arousal/.65/.70/.72 Physiological Arousal/.65/.71/.63 Impulsive Action/.72/.80/.79 Involuntary Disengagement/.81/.88/.85 Emotional Numbing/.37/.63/.59 Cognitive Interference/.65/.74/.57 Escape/.52/.67/.51 Inaction/.64/.63/.68	Sample 1: 1–2 weeks: .69–.81 for factors; .49–.76 for scales	Strong convergent and discriminant validity with the COPE in Sample 1 Exploratory factor structure invariant across age, sex, and stressor Confirmatory factor analysis demonstrated superiority of theoretical model to other theoretically plausible models Significant correlations between parent and adolescent reports for Samples 2 and 3
Dise-Lewis (1988): Life Events Coping Inventory	Self-report N = 681 (502 for factor analysis) Age 11–14 years (M = 12.6) 6% non-White	Responses to a list of 125 stressful events	42 items Likelihood of strategy use rated on 9-point scale	Items generated through student interviews PCA resulted in 5-factor solution	Aggression/.86 Stress Recognition/.79 Distraction/.81 Self-Destruction/.76 Endurance/.62	Not reported (stability over 11 weeks: mean of .32)	Not reported
Ebata & Moos (1991): Coping Responses Inventory—Youth Form (CRI-Y)	Self-report N = 190 Age 12–18 years (M = 15) 47% female Control, n = 38 Rheumatic, n = 45 Conduct disordered, n = 58 Depressed, n = 49	Most important problem in previous year	48 items Frequency rated on 4-point scale	Items selected from literature to represent approach or avoidance coping Pilot interviews, reading expert used to determine clarity Items placed into theoretical domains Overlapping items and items with low intercorrelation dropped	Approach/.51 Cognitive Logical Analysis/.72 Positive Reappraisal/.79 Behavioral Guidance/Support/.71 Problem Solving/.73 Avoidance/.36 Cognitive Cognitive Avoidance/.70 Resigned Acceptance/.55 Behavioral Alternative Rewards/.71 Emotional Discharge/.69 (alphas are aggregated across samples)	Not reported	Not reported

(*table continues*)

Table 1 (*continued*)

Author(s) and measure	Informant/population	Stressor	Format	Derivation of scales	Coping scales/internal consistency	Test–retest reliability	Validity
Frydenberg & Lewis (1991): Adolescent Coping Scale	Self-report N = 673 Age 12–16 years 51% girls Australian	General	88 items Frequency of use rated on 5-point scale	Developed based on open-ended responses, items arranged into 18 scales Scales grouped into three categories	Solving the Problem/.87 Relax/.54 Work and Achieve/.68 Solve the Problem/.72 Physical Recreation/.64 Friends/.74 Focus on Positive/.68 Belong/.67 Social Support/.80 Reference to Others/.89 Social Support/.80 Spiritual Support/.85 Professional Help/.84 Social Action/.70 Nonproductive Coping/.87 Friends/.74 Worry/.73 Belong/.67 Keep to Self/.70 Self-Blame/.76 Ignore the Problem/.68 Tension Reduction/.69 Not Coping/.58	Not reported (stability over unspecified time frame: .44–.81)	Not reported
Gamble (1994): Children's and Adolescent's Problem Solving Inventory	Self-report N = 146 4th–8th grade Age: M = 11.4 years 54% female 19% non-White	Three stressors: conflict with mother, conflict with friend, academic or athletic failure	33 coping items Measure also contains scales assessing stressor, causality, concerns	PCA of items selected based on literature review and theory revealed five factors	Emoting or aggressing/.69 Avoid problem or do nothing/.88 Direct problem solve/.78 Independent attempts to solve the problem/.62 Seeking social support/.74 (alphas represent mean across three stressors)	Not reported (stability over 6 weeks: .16–.36, stressor not constant across administrations)	Not reported
Gil, Williams, Thompson, & Kinney (1991): Coping Strategies Questionnaire for Sickle Cell Disease	Self-report N = 72 Age 7–17 years (M = 11) 51% female Sickle cell disease (SCD) patients	SCD pain	80 items from Coping Strategies Questionnaire plus SCD-specific items Frequency rated on 7-point scale	PCA with promax rotation yielded 3 factor scores	Coping Attempts Diverting Attention/.72 Reinterpret Pain/.67 Ignoring Pain Sensations/.70 Calming Self-Statements/.72 Increased Behavior Activity/.55 Negative Thinking Catastrophizing/.76 Fear Self-Statements/.70 Anger Self-Statements/.67 Isolation/.69 Passive Adherence Resting/.72 Taking Fluids/.89 Praying and Hoping/.67 Heat/Cold/Massage/.66	Not reported	Not reported
Halstead, Johnson, & Cunningham (1993): Modified Ways of Coping Checklist (WCCL)	Self-report N = 306 M age = 14.8 years 50% female 41% non-White	Most stressful event in past month selected by participant	68 items Frequency rated on 4-point scale Wording changes on 13 items from adult version	Confirmatory factor analysis of adult factor structure of WCCL from Folkman & Lazarus, 1985	Problem Focused/.83 Seeks Social Support/.79 Wishful Thinking/.82 Avoidance/.55	Not reported	Not reported

O'Brien, Bahadur, Gee, Balto, & Erber (1997): Marital Conflict Stimulus and Postconflict Questionnaire	Self-report $N = 43$ Age 8–13 years ($M = 10$) 47% female 40% non-White	Videotape of adult conflict about household chores	39 items Likelihood of behaviors and thoughts rated on 4-point Likert scales	Items selected on the basis of literature review and grouped on the basis of face validity	Avoid/.84 Self-Involve/.78 Predict Negative Outcome/.74 Blame Self/.71 Criticize Parents/.66 Loss of Love/.68 Efficacy/.62	Not reported	Self-Involve scale loads on same factor as interview measures of self-involved coping
Patterson & McCubbin (1987): A-COPE	Self-report $N = 467$ Age: $M = 15.6$ years 52% female	General coping style	54 items Frequency rated on 5-point scale	Performed PCA on 98 items selected from open-ended reports of high school students Items failing to load on factor dropped	Ventilating Feelings/.75 Seeking Diversions/.75 Developing Self-Reliance and Optimism/.69 Developing Social Support/.75 Solving Family Problems/.75 Avoiding Problems/.71 Seeking Spiritual Support/.72 Investing in Close Friends/.76 Seeking Professional Support/.50 Engaging in Demanding Activity/.67 Being Humorous/.72 Relaxing/.60	Not reported	Not reported
Phelps & Jarvis (1994): COPE	Self-report $N = 484$ Age 14–18 years 45% female	Student-selected stressor from last 2 months	60 items from adult COPE Frequency rated on 4-point scale	Calculated internal consistency for adult subscales Separate norms for boys and girls Conducted exploratory PCA on subscales leading to four factors plus two independent scales	Active Strategies Active Coping/.66 Planning/.78 Suppression of Competing Activities/.69 Seeking Instrumental Social Support/.72 Avoidant Strategies Denial/.76 Behavioral Disengagement/.66 Alcohol-Drug Disengagement/.75 Emotion-Focused Strategies Seeking Emotional Social Support/.72 Focus on and Venting of Emotions/.80 Acceptance Strategies Restraint/.69 Positive Re-Interpretation and Growth/.68 Acceptance/.74 Mental Disengagement/.51 Humor/.82 Religion/.87	Not reported	Not reported
Ryan-Wegner (1990): Schoolagers' Coping Strategies Inventory	Self-report $N = 250$ Age 8–12 years ($M = 11.0$) 46% female	General	25 items rated on 4-point scale for frequency of use and helpfulness	Items generated through group discussions, sorted into 13 categories Two or three most common strategies from each category retained	Frequency Scale/.76 Efficacy Scale/.77 Total Scale/.79	2 weeks ($N = 64$): .73–.82	Nonsignificant correlation ($r = .03$) with teacher reports of coping style; good discriminant validity with self-esteem measures

(*table continues*)

Table 1 (*continued*)

Author(s) and measure	Informant/population	Stressor	Format	Derivation of scales	Coping scales/internal consistency	Test–retest reliability	Validity
Seiffge-Krenke (1993): Coping Across Situations Questionnaire	Self-report N = 548 Age 15–27 years 54% female Finnish adolescents	Eight age-specific problem areas such as studies, peers, parents	20 items assessing responses to several situations	Factor analysis yielded 3 factors	Active Coping/.80 Internal Coping/.77 Withdrawal/.76	Not reported	Confirmatory factor analysis replicated findings in samples from Israel and Finland In an American sample, a two-factor model (Approach-Oriented and Avoidant Coping) produced a better fit (Herman-Stahl, Stemmler, & Petersen, 1995)
Spirito, Stark, & Williams (1988); Spirito, Stark, Gil, & Tyc (1995): Kidcope	Self-report N = 437 Age 12–18 years (M = 15) 49% female Various school samples: n = 365 Pediatric patients referred for psychological evaluation: n = 38 Diabetics: n = 34	Specific areas selected by participant or experimenter Disease related for pediatric and diabetic sample	10-item adolescent version Frequency rated on 4-point scale, efficacy on 5-point scale Child version has 15 yes–no items that collapse to same 10 categories	Selected coping strategies commonly reported in literature	No specific scales derived Individual coping items: problem solving, distraction, social support, social withdrawal, cognitive restructuring, self-criticism, blaming others, emotional regulation, wishful thinking, resignation	Item reliability: less than 1 week −.41–.83 (Stability over 10 weeks: .15–.43)	Item correlations with other coping scales highest between conceptually similar items and scales for Coping Strategies Inventory (range .33 to .77) and A-COPE (range −.08 to .62)
Varni et al. (1996): Waldron/Varni Pediatric Pain Coping Inventory	Self-report N = 187 Age 5–16 years (M = 11.5) 71% girls 34% non-White Children with rheumatologic diseases	Chronic pain of rheumatic disease	41 items Frequency rated on 3-point scale Child and adolescent wording	Items selected through literature review, arranged into 5 a priori scales; 5 similar scales derived through PCA	Theoretical scales Cognitive Self Instruction Seek Social Support Catastrophizing/Helplessness Distraction Problem-Solving (alphas not reported) Empirically derived scales Cognitive Self Instruction/.77 Seek Social Support/.74 Strive to Rest & Be Alone/.73 Cognitive Refocusing/.68 Problem-Solving/.67	Not reported	Not reported
Walker, Smith, Garber, & Van Slyke (1997): Pain Response Inventory for Children	Self-report N = 895 Age 8–22 years (M = 12) 58% female 30% non-White School sample: n = 688 Gastroenterology clinic patients: n = 158 Former clinic patients: n = 49	Abdominal pain	60 items Frequency of use reported on 5-point scale	Items selected to represent active, passive, and accommodative coping Confirmatory factor analysis on subset of school sample confirmed model, model modification used to improve fit	School/former clinic/clinic sample Active Coping/.76/.68/.71 Problem-Solving/.78/.77/.74 Social Support/.87/.88/.87 Rest/.67/.70/.69 Massage/Guard/.71/.78/.68 Condition-Specific/not available Catastrophizing/.77/.77/.84 Self-Isolation/.76/.91/.89 Passive Coping/.64/.66/.78 Catastrophizing/.77/.77/.84 Self-Isolation/.76/.91/.89 Disengagement/.66/.76/.83 Stoicism/.75/.86/.85 Acceptance/.74/.80/.72 Accommodative Coping/.80/.82/.77 Stoicism/.75/.86/.85 Acceptance/.74/.80/.72 Minimizing Pain/.66/.75/.81 Self-Encouragement/.67/.65/.71 Distract/Ignore/.77/.85/.76	1 week: school sample, .46 to .71; 6 months: clinic sample, .34 to .46	Model cross validated in two school sample subgroups, both clinic groups

Whitesell, Robinson, & Harter (1993)	Self-report N = 355 Age 11–15 years (M = 12.5) 50% girls 5% non-White	Hypothetical situation about being hit by a peer or having rumors spread by a friend	9 items; for each, youth select between two opposite strategies, rate selected strategy as sort of or very true for them Additional items assess effectiveness	Factor analysis confirmed three hypothetical factors	Expressive Avoidant Approach	Not reported (stability over 2 months: .62 to .90)	Not reported
Wills (1986): Behavior Based Inventory	Self-report N = 675 (1st cohort); N = 901 (2nd cohort) 7th and 8th grade 56% non-White	General problems at school or at home	35 items (1st cohort); 54 items (2nd cohort) Frequency rated along 5-point scale	Based on the Response Profile of the Coping Assessment Battery Factor analysis found structure similar to original	1st cohort Behavioral Coping Cognitive Coping General Social Support Physical Exercise Relaxation Distraction 2nd cohort Physical Exercise Cognitive Coping Decision Making Adult Social Support Peer Social Support Parental Support Substance Use Aggression Social Entertainment Individual Relaxation Prayer	Not reported	Factor structure stable over time Exploratory factor analysis in separate sample similar to 1st cohort structure (Glyshaw, Cohen, & Twobes, 1989)
Windle & Windle (1996): Coping Inventory for Stressful Situations	Self-report N = 733 11th and 12th graders Age: M = 16.9 years 52% girls 1% non-White	General	48 items Frequency rated along 5-point scale	Based on factor analytically derived undergraduate version	Task Coping/.93 Emotion Coping/.89 Avoidance Coping/.85	Not reported	Not reported

Note. PCA = principal-components analysis; A-COPE = adolescent coping; COPE = coping.

and specificity has been achieved in measures focused specifically on a single stressor, such as the Waldron/Varni Pediatric Pain Coping Inventory (Varni et al., 1996), which includes the items, "Put ice or heat on the sore spots" and "Ask someone to tell me that the pain or hurt will go away and I will feel better." However, whereas this measure provides a strong assessment of children's specific behavioral strategies for coping with pain, the use of highly focused measures prohibits comparisons of coping across stressors.

A third important issue is the problem of overlap between coping strategies representing emotion-focused coping and symptoms of psychological distress. For example, the Self-Report Coping Scale (SCS; Causey & Dubow, 1992) contains items such as "Become so upset that I can't talk to anyone," "Cry about it," and "Worry about it." Items on the Life Events Coping Inventory (LECI; Dise-Lewis, 1988) include "Wreck someone's things or do some vandalism," "Cry," "Scream," and "Throw things or break things." Similar items are included in many scales (e.g., A-COPE, SCS, and Kidcope). Not surprisingly, as a result of content overlap, these emotion-focused items are positively correlated with measures of emotional–behavioral problems. The quality of emotion-focused items in adult coping questionnaires has been addressed in more detail. For example, Stanton, Danoff-Burg, Cameron, and Ellis (1994) rated the degree to which emotion-focused coping items were confounded with psychopathology. In a sample of college students, confounded items demonstrated weak discriminant validity with adjustment measures, whereas unconfounded emotion-focused coping items predicted improved adjustment for women (Stanton et al., 1994). The issue of confounds between coping and psychological disorders is also evident in the assessment of substance use as a coping strategy. Use of drugs and alcohol could be a symptom of abuse or addiction, a purposeful disengagement coping strategy, or both. Furthermore, even if it is ascertained that substance use is a coping strategy, it could still be driven by several possible goals, including seeking peer approval, distraction, or blunting emotions. Future coping measures should both reduce overlap between coping and distress items and ensure broader representation of positive emotional regulation items.

Some recent advances have been made in the measurement of coping in adolescence. Connor-Smith et al. (in press) have taken several steps to address problems with item quality in the development of the Responses to Stress Questionnaire (RSQ). First, volitional coping items were selected with careful attention to reducing the degree of confounding with symptoms of distress and psychopathology. Second, items were selected to better represent positive strategies for emotional regulation and modulation, as opposed to uncontrolled release or ventilation of emotions. Third, items were worded in reference to the specific stressor or domain of stress being studied (i.e., slightly different forms of the items are written for different stressors, whereas the basic content of the items remains the same). And fourth, respondents are asked to describe in an open-ended format the particular strategies that they used to accomplish goals (e.g., an item representing problem solving asks respondents to describe the solutions generated). As a result, both primary control coping (including the regulated expression of emotion and emotional modulation) and secondary control coping (including acceptance and distraction) were negatively correlated with internalizing and externalizing behavior problems, suggesting that the use of these coping strategies is related to fewer problems (Connor-Smith et al., in press; Thomsen, Compas, Colletti, & Stanger, 2000; Wadsworth & Compas, 2000).

Derivation of coping scales. Current measures include both theoretically and empirically derived scales. The majority of scales have been empirically derived, based on interviews with children–adolescents or culled from the preexisting literature. Most measures group items on the basis of face validity, although more recent studies have relied on exploratory factor analysis to create subscales. Theoretically based measures generally begin with subscales written to represent specific types of coping responses. Factors are identified through confirmatory factor analyses of these subscales, with most measures including three to five secondary factors. In comparing measures, it is important to note that scales with similar names on different measures often differ greatly in the items composing those scales. Thus, it is important to carefully examine individual items on questionnaires when attempting to compare findings from different measures.

Exploratory factor analyses have often generated different results across samples. For example, three studies of general population samples of adolescents using items from the A-COPE have resulted in three different sets of scales. The developers of the scale originally performed principal-components analysis on a set of 98 items, retaining 54 that were grouped into 12 factors (Patterson & McCubbin, 1987). Subsequent principal-components analysis with the 54-item version of the A-COPE yielded a 6-factor solution, with minimal overlap with the original 12 scales (Feldman, Fisher, Ransom, & Dimiceli, 1995). A secondary factor analysis of A-COPE scales performed by different authors yielded three broad factors: problem-focused, emotion-focused, and cognitive coping (Dusek & Danko, 1994). Similarly, factor analysis of the Kidcope has yielded different structures with different stressors, highlighting the problems of trying to separate coping responses from the stressful event (Spirito, 1996). In contrast, studies using confirmatory factor analysis to test theoretical models of coping have revealed structures that reflect some consistency across samples, stressors, age, and gender for the different measures used in these studies (e.g., Ayers et al., 1996; Connor-Smith et al., in press; Walker et al., 1997).

In addition to the technique used to create scales, it is also important to consider the specificity and representativeness of scales and factors. In spite of achieving adequate internal consistency, many scales appear to lack specificity, placing disparate coping strategies into single categories. For example, the LECI (Dise-Lewis, 1988) stress-recognition scale ($\alpha = .79$) includes the items "Talk to a teacher or psychologist," "Clean my room or rearrange it," and "Scream." A single empirically derived factor on the Waldron/Varni Pediatric Pain Coping Inventory termed "seeks social support" combines social support items such as "Have my mother, father, or a friend sit with me" with the conceptually unrelated items "Cry or yell" and "Think it will just get worse." These items appear to reflect very different types of coping, making it difficult to interpret the meaning of scores on these factors.

Similarly, most existing scales fail to discriminate between types of disengagement coping, combining items assessing avoidance–denial with items assessing distraction, despite evidence that these strategies are likely to lead to very different outcomes. For example, experimental studies have demonstrated that active attempts to deny or avoid thoughts have the paradoxical effect of increasing negative, unwanted thoughts and increasing

distress (see Wegner, 1994, 1997, for reviews). Distraction, on the other hand, is associated with lower levels of distress and fewer intrusive thoughts (Nolen-Hoeksema, Morrow, & Fredrickson, 1993; Salkovskis & Campbell, 1994). Similarly, recent studies using the RSQ have shown that distraction, as part of a broader secondary control engagement coping factor (acceptance, positive thinking, and cognitive restructuring), was related to lower levels of internalizing and externalizing behavior problems in adolescents, whereas a disengagement coping factor comprising avoidance, denial, and wishful thinking was related to higher levels of both types of problems (Connor-Smith et al., in press; Thomsen et al., 2000; Wadsworth & Compas, 2000). The Kidcope (Spirito, Stark, Gil, & Tyc, 1995) is unique among the commonly used coping measures in that each coping strategy is assessed by a single item, in part to avoid difficulties in scale construction. Unfortunately, this raises a separate issue of assessing coping strategies using a single item and limits the ability to assess reliability.

An additional issue is the content validity of coping scales, with many scales failing to address the full range of potential responses. The representativeness of scales assessing emotion-focused coping responses has been particularly problematic. As discussed earlier, scales assessing emotion-focused coping have often been poorly conceptualized, emphasizing primarily negative responses that are frequently confounded with symptoms of distress. In addition, errors of omission are common; very few scales include items to assess potentially adaptive emotion-focused strategies that involve the regulation or modulation of emotions, such as writing about feelings or using deep breathing to relax. Understanding links between emotion-focused coping and adjustment will be impossible without increased attention to the measurement of emotion regulation and ventilation.

Psychometrics. In light of problems with both items and scales, it is not surprising that the basic reliability and validity of measures of child and adolescent coping have been mixed. All of the coping measures included in Table 2 provide internal consistency reliability data. Alpha coefficients have ranged widely, from as low as .45 to as high as .91 for primary scales and from .36 to .89 for secondary scales, with most falling in the range from .60 to .85. As a direct result of including more items, internal consistencies are higher for broader scales (e.g., scales for problem- and emotion-focused coping) than for scales with fewer items that assess a specific aspect of coping (e.g., problem solving or cognitive restructuring). Test–retest reliability data over periods of 1 to 3 weeks have been provided for only 7 of 22 scales, ranging from .41 to .83 over 1 week and from .57 to .91 over 2 to 3 weeks. Stability data over longer periods of time (6 weeks to 6 months) have been reported for six measures, but these data do not reflect the reliability of the measures. Test–retest reliability is not clearly related to other factors, such as age of informant, type of stressor, or use of empirically versus theoretically derived scales. Overall, these data indicate that coping can be assessed in a manner that meets at least minimal criteria for reliability; however, it is highly problematic that reliability data are not available for the majority of measures.

In spite of the importance of establishing the reliability of child–adolescent coping measures, the criteria to be applied have been the subject of debate, in that traditional psychometric criteria may be difficult to apply to some aspects of the measurement of coping (e.g., Stone & Kennedy-Moore, 1992). First, because individual items on coping scales are often highly specific, both internal consistency reliability of scales and item loadings found in factor analyses to derive scales may be low. For example, the A-COPE includes multiple items assessing talking to father, mother, friends, and siblings (Patterson & McCubbin, 1987). If one source of support was helpful, then it may be unnecessary to seek additional support, leading to low intercorrelation of items on a scale. Internal consistency is likely to be a more reliable indicator of scale quality for measures of general coping style than for measures assessing coping with a discrete stressor, where fewer opportunities are available to use a full range of similar responses. Second, because studies have demonstrated differences in the ways in which individuals cope across stressors and with the same stressor over time (e.g., Causey & Dubow, 1992; Compas, Forsythe, & Wagner, 1988; Compas, Malcarne, & Fondacaro, 1988), the test–retest reliability of a measure is an appropriate index only when the same stressor is considered over relatively brief periods of time. Unfortunately, there is no clear alternative to the use of test–retest reliability and internal consistency as indexes of psychometric quality. However, it is necessary to evaluate test–retest reliability and internal consistency cautiously, with the understanding that low values may be a reflection of the coping process rather than a failure of the measure.

Tests of construct validity data have been provided for 10 of 22 measures. Construct validity has been demonstrated through confirmatory factor analyses supporting the hypothesized structure of coping. Ayers et al. (1996) and Connor-Smith et al. (in press) have provided the strongest evidence of construct validity, comparing the goodness of fit of other theoretically viable coping models to confirm a theoretically based model, as well as confirming the theoretical model across independent samples. These models are similar in that they derived three somewhat comparable sets of factors: primary control coping or active coping, secondary control coping or distraction, and disengagement coping or avoidance. They differ, however, in that Ayers et al. (1996) identified a social support factor as well. Construct validity also has been tested through comparison of self-reports with reports of significant others (e.g., Causey & Dubow, 1992; Connor-Smith et al., in press; Glyshaw, Cohen, & Twobes, 1989) and through the comparison of self-reports on different coping measures (Connor-Smith et al., in press), demonstrating both the discriminant and convergent validity of self-report scales. For example, Connor-Smith et al. (in press) found that coping scales on the RSQ were significantly correlated with conceptually similar scales (convergent validity) on the COPE (Carver, Scheier, & Weintraub, 1989) but were unrelated to scales that assessed different aspects of coping (discriminant validity). Furthermore, Connor-Smith et al. (in press) found significant convergent validity correlations between adolescent and parent reports of adolescents' coping (mean *r*s for two samples were .23 and .33) that were significantly higher than cross-informant discriminant validity correlations. Table 1 does not include citations of correlations between coping and emotional–behavioral problems as evidence of validity, although some authors have presented these analyses in this way. Construct and criterion validity of coping measures need to be established independent of the association with symptoms; it is circular to report these associations as evidence of validity while also using them to test the relationship between coping and adjustment (the association of coping with emotional–behavioral problems is reviewed later).

Table 2
Interview Measures of Child Coping

Author(s) and measure	Population	Stressor	Format	Derivation of scales	Coping scales	Reliability/validity
Altshuler & Ruble (1989)	$N = 72$ Age 5–11 years ($M = 8$) 50% girls Recruited at school or doctor's office	Hypothetical situation about anticipation of desirable (party) or feared (injection) events	Two 30–45-min interviews about hypothetical situations Open-ended prompt for possible responses followed by specific prompts for problem- and emotion-focused strategies	29 coping tactics coded by raters ($\kappa = .87$ for coding) Adult raters sorted tactics into four categories: approach ($\kappa = .84$), avoidance ($\kappa = .80$), emotional manipulation ($\kappa = .57$), and other Avoidance responses further categorized as behavioral distraction (.57), cognitive distraction (.67), escape (.87), and denial (.73)	Approach (3 items) Direct Emotion Manipulation (7 items) Partial Avoidance Behavioral Distraction (4 items) Cognitive Distraction (2 items) Complete Avoidance Escape (4 items) Denial (2 items) Maladaptive Strategies	Not reported
Band (1990); Band & Weisz (1990)	$N = 64$ Preformal operations, $n = 32$ Age: $M = 8.8$ years 41% girls Formal operations, $n = 32$ Age: $M = 14.6$ years 56% girls	Diabetes-related stressors Broad: staying well, staying happy, having diabetes Specific: diet, insulin injections, insulin reactions, daily glucose testing, hemoglobin A1 tests	Open-ended prompt for up to three things children do or think to help themselves and the goals of those responses Efficacy of each response rated on a Likert scale	Six coping scales Responses first coded as primary–secondary or relinquished control (coded based on goal) Responses rated on 5-point scale ranging from fully primary to secondary control, mean score across strategies reflects relative use of primary vs. secondary control Each response also coded for ways of coping (based on descriptive content): instrumental, cognitive, or emotional for a total of six categories	Two raters judged 37 responses from 3 children for primary–secondary coding ($\kappa = .95$) Two raters assessed 41 responses from 3 children for 6 ways-of-coping scales ($\kappa = .93$) Primary–Secondary ($\alpha = .75$) Perceived Efficacy ($\alpha = .70$)	Not reported
Bernzweig, Eisenberg, & Fabes (1993): Child Interview	$N = 105$ Age 5–8 years ($M = 7$) 49% girls 27% non-White	Self-relevant: being teased–rejected and scared at night Other relevant: peer upset about a broken toy, peer crying because of peer rejection, peer hurt by falling from bike	Interviewed children about what they would do in self- and other-relevant stressful situations; interviewer helped children to remember a similar event, asked them to describe what they thought and did, and how they thought those responses would make things better	For each story, children given a score of 1 if they used a strategy, 0 if not; multiple responses for stories were coded proportionally (for 2 responses, each weighted as .5); responses summed across self-relevant and across other-relevant stories	Direct Problem Solving Adult-Mediated ($\kappa = .68$) Prosocial/Help Providing ($\kappa = .52$) Distracting and Avoidant Actions ($\kappa = .70$) Expressing Feelings (67%) Problem-Focused Support ($\kappa = .77$) Emotion-Focused Support ($\kappa = .63$) Cognitive Decision Making (84%) Cognitive Avoidance ($\kappa = .72$) Do Nothing (80%)	Mothers rated on 7-point scale likelihood that child would use these coping strategies in hypothetical situations, correlations between child report and mother report nonsignificant
Compas, Malcarne, & Fondacaro (1988)	$N = 130$ Age 10–14 years ($M = 12$) 56% female 2% non-White	Student-selected interpersonal and academic events	Students describe stressor, rate degree of control on 5-point scale; students write list of all possible responses to the event, check those they actually used	Researchers classify responses as problem- or emotion-focused coping	Problem-Focused Emotion-Focused All responses double coded, $\kappa = .88$ for academic stressors, $\kappa = .87$ for social	Not reported

Compas, Worsham, Ey, & Howell (1996)	N = 134 Preadolescent, n = 32, age 6–10 years (M = 8), 47% female Adolescent, n = 59, age 11–18 years (M = 15), 54% female Young adult, n = 43, age 19–32 years (M = 23), 63% female Parent recently diagnosed with cancer	Parental cancer	Interviewer asks participant to explain "everything you have done, thought, or felt to make things better or easier for yourself"	Emotion-, problem-, and dual-focused coping defined, participant asked to rate the intention behind the response Number of responses in each category totaled to form three coping variables	Problem-Focused Emotion-Focused Dual-Focused	Categorization of responses by external raters correlated with child ratings
O'Brien, Margolin, & John (1995): Children's Marital Conflict Coping Strategies Interview	N = 83 Age 8–11 years (M = 10) 51% female 35% non-White	Verbal and physical parental conflict	Children asked to describe verbal and physical arguments between parents; open-ended probes maximized number of responses	10 coping codes based on literature and review of child's responses; codes combined to create three coping scales based on theoretical similarity	Avoid/Self-Rely (avoid, self-rely) Seek Social Support (seek peers/siblings, seek authority) Self-Involve (verbal intervention, self-blame, physical intervention) Other Coping (question parent, express feelings, helpless) All responses double coded (κ = .85)	Not reported
Weisz, McCabe, & Dennig (1994)	N = 33 Age 5–12 years (M = 8) 39% girls 18% non-White Children with leukemia	Leukemia-specific stressors: staying in the hospital overnight, bone marrow aspiration, lumbar puncture, vomiting, hair loss	Up to three coping strategies and goals obtained through open-ended prompts Frequency of use rated on 5-point scale; for more than one strategy per stressor, children asked to identify the best	"Best" coping strategies and goals for each stressor coded separately as primary, secondary, or relinquished control	Reliability assessed by double coding of 80 responses from 20 children Strategies Primary (κ = .95) Secondary (κ = .86) Relinquished (κ = .97) Goals Primary (κ = .81) Secondary (κ = .73) Relinquished (κ = .99)	Not reported

Validity is dependent on the inclusion of items that are developmentally appropriate and written at a level that children and adolescents can easily comprehend. Several measures commonly used with children and adolescents were originally developed for adults and applied to younger age groups without modification or any information about reliability or validity in younger samples (e.g., Hart, 1991; Kupst et al., 1995; Stern & Zevon, 1990). This is potentially problematic, because it ignores developmental changes in stressors and types of coping responses, as well as the possibility that the structure of coping may differ for children, adolescents, and adults. For example, in one study, scales derived from the adult version of the Ways of Coping Checklist (WCCL; Folkman & Lazarus, 1985) were used to assess the coping of adolescents (Irion, Coon, & Blanchard-Fields, 1988). The alpha coefficients for these scales ranged from .40 to .73, lower than coefficients for subscales based on factor analysis of the WCCL for adolescents (e.g., Chan, 1995; Halstead, Johnson, & Cunningham, 1993).

Although the majority of measures have been developed for adolescents, there is evidence that older children can provide reliable and valid reports on their coping responses. For example, using a sample of 9- to 13-year-olds, Ayers et al. (1996) reported internal consistency reliabilities of .73 to .89 and established construct validity of their measure with this age group using confirmatory factor analysis. Causey and Dubow (1992) reported on a sample of fourth to sixth graders and found internal consistencies of .66 to .84 and test–retest reliabilities of .58 to .78. In a sample of 8- to 12-year-olds, Ryan-Wegner (1990) reported internal consistencies of .76 to .79 and test–retest reliabilities of .73 to .82. These data suggest that preadolescent children can provide reliable and valid reports; however, these samples all included some younger adolescents, and analyses were not broken down by age. The youngest age at which children are likely to be capable of accurately completing coping questionnaires is not clear. Although young children may be able to accurately report the use of behavioral strategies (seeking out adult help or walking away from a peer), they may have difficulty with cognitively based strategies (cognitive restructuring or distraction) that require the use of metacognitive skills to report. Furthermore, evidence from the use of interviews in the assessment of psychopathology suggests that children younger than 10 years of age are less reliable informants than are adolescents (Edelbrock & Costello, 1988; Fallon & Schwab-Stone, 1994). Problems are likely to be greater on questionnaires than in interviews, because interviews allow greater opportunity to ascertain the degree to which children understand the questions. One promising avenue for the assessment of coping in younger children involves the use of parent-report versions of checklists. Connor-Smith et al. (in press), Thomsen et al. (2000), and Langrock, Compas, Keller, and Merchant (2000) have reported adequate internal consistency reliabilities of parents' reports of their children's coping (alpha coefficients ranging from .65 to .85) and adequate convergent and discriminant validity with reports by adolescents.

Interview Measures of Coping

A relatively small number of semistructured interviews have been developed for assessing child and adolescent coping (see Table 2). Criteria for inclusion of interview measures were less strict than for questionnaires (e.g., it was necessary to include studies that involved much smaller samples), given that there were far fewer measures of this nature available. Multiple versions of these interviews exist but are not discussed independently, because most draw heavily on work by either Weisz and colleagues or Compas and colleagues (e.g., Band & Weisz, 1990; Compas et al., 1996).

The categories used in coding interview responses have typically been theoretically based, often focusing on broad dimensions of coping rather than specific categories. For example, Compas et al. (1996) coded responses as problem-focused, emotion-focused, or combination responses (both problem and emotion focused), whereas Band and Weisz (1990) focused on primary or secondary control coping. Neither of these studies, however, coded responses into subtypes within these broad dimensions. Reliability of coding into broad dimensions (i.e., interrater reliability) has generally been adequate, with kappa values ranging from .52 to 1.0. Test–retest reliability and validity data (e.g., correspondence between interviews and questionnaires) have not been reported. The interview used by Bernzweig, Eisenberg, and Fabes (1993) is an exception; these authors compared child and parent reports on interviews and found that they were not significantly correlated.

Interviews are particularly well suited to provide a richer understanding of the context in which coping takes place, the sequence in which coping responses are executed, and the ways in which different coping responses are combined. Although interview measures show great promise, a major concern with current interviews is that children and adolescents may significantly underreport their coping responses because interviews rely on respondents' ability to remember or generate coping responses in a semistructured or structured format. In most instances, the mean number of coping responses provided by children and adolescents in interviews has ranged from one to three (e.g., Compas et al., 1996), a number substantially lower than the mean number of responses typically endorsed on questionnaires or checklists. Therefore, in their current forms, interviews may significantly underestimate the diversity and complexity of coping in children and adolescents. However, more structured interviews in which respondents are provided with sufficient prompts may increase responses and allow for descriptions of goals.

Observational Methods

A small number of instruments for the observation of coping behaviors and for obtaining the reports of significant others have been reported in the literature (see Table 3). Observational methods possess adequate reliability and appear to be a promising approach to assessing microlevel responses in specific situations. Thus far, they have been used most extensively to assess children's coping with medical procedures. These procedures are administered under standard circumstances in a physician's office or hospital in which observers can be present without having a highly reactive effect on children's behavior (Altshuler, Genevro, Ruble, & Bornstein, 1995; Bachanas & Blount, 1996; Manne, Bakeman, Jacobsen, & Redd, 1993). Furthermore, children's behavior is relatively constrained in these situations, limiting the range of coping responses that can be enacted and therefore reducing the range of behaviors that need to be observed and coded. Observation of children's coping behavior in home or school situations does not offer the same opportunities. Observations are a useful method to validate self-reports obtained through questionnaires or

Table 3
Observational Measures of Child Coping

Author(s) and measure	Population	Stressor	Format	Derivation of scales	Coping scales	Reliability/validity
Altshuler, Genevro, Ruble, & Bornstein (1995): Modification of Procedure Behavior Rating Scale	$N = 44$ Age 5–11 years ($M = 7.8$) 43% girls 89% non-White Children undergoing elective surgery	Anticipation of surgery	Children's behaviors observed during the 15- to 30-min waiting period outside the operating room	Rated intensity and duration of eight coping behaviors on 4-point scale	Behavioral Distraction (plays, reads) Escape (stalls, aggresses, refuses, requires restraint, requests termination) Adaptive Approach (information seeking) Interrater reliability during training ranged from $\kappa = .83$ to 1.0	Not reported
Bachanas & Blount (1996): Behavioral Approach-Avoidance and Distress Scale	$N = 60$ Age 3–7 years 47% girls 57% non-White Preschool children receiving immunizations Half in control group, half in coping treatment group	Receiving an immunization	Videotaped responses rated for approach–avoidance and distress on 5-point scales during five phases (entry into room, explanation of procedure, preparation, injection, recovery)	Approach–avoidance distinction based on literature	Approach–Avoidance ($\kappa = .78$, $\alpha = .52$–$.78$) Distress ($\kappa = .77$, $\alpha = .63$–$.78$) Scales inversely correlated ($-.30$ to $-.57$)	Approach–Avoidance correlated with Child–Adult Medical Procedure Interaction Scale—Revised (CAMPIS–R) coping ($r = .51$ to $.55$) and negatively related to parent-, teacher-, and nurse-reported fear ($r = -.18$ to $-.52$) and to distress on Observational Scale of Behavioral Distress (OSBD) and CAMPIS–R ($r = -.17$ to $-.45$) Distress related to CAMPIS–R and OSBD distress scores ($r = .68$ to $.88$) and to self-, parent-, and nurse-reported fear and pain ($r = .36$ to $.74$)
Manne, Bakeman, Jacobsen, & Redd (1993)	$N = 45$ Age 3–9 years ($M = 5$) 47% female 27% non-White Pediatric cancer patients	Venipuncture	Videotapes coded for onset and duration of coping behaviors and distress for three phases: preparation, needle insertion, completion		Reliability Information Seeking ($\kappa = .99$); Assertive Procedural Vocalizations ($\kappa = .96$); Non-procedure Related Statements/ Behaviors ($\kappa = .92$) Distress: Momentary Distress ($\kappa = .96$); Cry/Scream ($\kappa = .88$)	Not reported

interviews but are limited by their inability to access covert cognitive coping processes.

In the development of interview and observation methods, it is essential that greater attention be given to the test–retest reliability and validity of these assessment tools. Although reliability of interrater agreement of observations has been demonstrated, it is unclear how these measures relate to more established coping measures. A notable exception is work by Eisenberg and colleagues exploring relations between maternal reports of coping and observations of children's behavior in stressful situations. For example, relations have been demonstrated between the amount of time children spend trying to comfort a crying infant and maternal reports of coping (Fabes, Eisenberg, Karbon, Troyer, & Switzer, 1994).

Methodological Issues in Coping Assessment

In other areas of research, such as the study of child–adolescent psychopathology, it has been shown that the broadest perspective is provided by multiple informants through a combination of interview and questionnaire techniques in longitudinal studies. Thus far, coping research has not reached this level of sophistication, relying primarily on self-report questionnaires in cross-sectional research designs. Five methodological issues are important to address in the continued development of the assessment of child–adolescent coping: the method of assessment (questionnaire, interview, or observation), the source of information (child–adolescent, parent, peer, or observer), the dimensions in which coping is rated, the type of research design, and the breadth versus specificity of coping assessed (response to a single stressful event vs. coping style).

Method of assessment is one of the most controversial topics in the field of coping research. Coping questionnaires have been criticized for lacking a theoretical basis, using overly broad or confusing items, and inadequately assessing cognitive strategies. In addition, questionnaires have been criticized for failing to assess coping from a transactional perspective and neglecting anticipatory coping (Coyne & Gottlieb, 1996). However, these criticisms apply equally well to both current questionnaire and interview measures and could be resolved through improvements in either method. Checklists clearly have an advantage in being faster to administer to large samples, easier to standardize than coping interviews, and less subject to the influence of children's verbal skills and rapport with the investigator. Interview measures may be more appropriate for young children with limited reading ability and offer the opportunity to ensure comprehension and to probe for details about the nature and goals of coping responses. Despite the active debate about whether coping is best measured through interview or checklist techniques, no published studies have been designed to compare the two approaches. In one study in which both interview and checklist data were provided (O'Brien, Bahadur, Gee, Balto, & Erber, 1997), correspondence was minimal, with a significant correlation on only one of seven scales. Therefore, an important avenue for future research involves the comparison of interviews and questionnaires to determine the relative merits of each approach.

A larger problem involves overreliance on self-report data, with none of the commonly used coping measures having a parallel form for other informants (e.g., parents, teachers, or peers; see Causey & Dubow, 1992; Connor-Smith et al., in press; and Glyshaw et al., 1989, for exceptions). Although self-report measures are an important way to measure cognitive responses that are unobservable by others, there are several limitations to self-report measures. First, research with adults has demonstrated that retrospective measures of coping are biased by the degree of problem resolution at the time of questionnaire completion and by poor recall, even when coping is assessed within a few days of the stressor (e.g., Ptacek, Smith, Espe, & Rafferty, 1994; Stone, Kennedy-Moore, & Neale, 1995). These problems may be even greater in children than adults. Second, self-report measures are limited by the willingness of individuals to report the use of unsuccessful coping strategies or items low in social desirability, such as denial or wishful thinking. Thus, observational techniques and reports from multiple informants are likely to provide a more detailed picture of coping. Although the question arises of how to integrate discrepancies between informants, coping researchers can take their cue from studies of child psychopathology. Research on emotional–behavioral problems has demonstrated that correlations between child and adult reports tend to fall in the .2 to .4 range (Achenbach, McConaughy, & Howell, 1987). Rather than considering one informant "correct" and the second to be a poor informant, it is recognized that both provide valid information from different perspectives, with ratings from all informants useful in predicting outcomes. Observational measures can be combined with self-reports and reports of others to provide information on the degree of correspondence between outward behaviors and perceived coping. Connor-Smith et al. (in press) have reported promising data in this area. When they used parent and adolescent versions of the RSQ that contained identical items and focused on a specified stressor or domain of stress, 8 of 10 convergent validity correlations of parent–adolescent reports of adolescents' coping in two samples were significant, with a mean correlation of .28. Langrock et al. (2000) reported comparable findings in a study of parent and adolescent reports of coping with parental depression (mean cross-informant convergent validity correlation of .35). These findings suggest the both self-reports and parent reports of child–adolescent coping will be important perspectives to obtain.

A third problem is the limited consideration given to children's interpretation of directions to rate "how much" they engaged in a given coping strategy. This is an important question given that college students interviewed after completing a coping questionnaire indicated that their responses were based on multiple dimensions, including the frequency, duration, and efficacy of each strategy, as well as effort expended (Stone & Kennedy-Moore, 1992). Overall, 68% of students made ratings based on all four dimensions, with the dimension considered differently depending on the individual items (Stone & Kennedy-Moore, 1992). Part of the complexity stems from the reality that some coping responses can be used more than once, such as cognitive restructuring or seeking social support, whereas many problem-solving responses are discrete events. More careful attention needs to be given to the dimensions that children and adolescents use in responding to coping checklists and interviews. At the very least, measures need to be clear and explicit in the dimensions respondents should use to describe coping responses.

Greater attention to study design is also essential. Cross-sectional studies represent the bulk of child and adolescent data but may be misleading because individuals coping with extreme stressors are likely to be highly distressed and thus likely to use multiple coping techniques. In a cross-sectional design, this leads

to a potentially misleading correlation between the use of multiple coping strategies and poor psychological adjustment. In addition, although some types of emotional expression, such as writing about negative feelings, are associated with short-term increases in distress, over longer periods of time they are linked to lower distress and better health outcomes (Pennebaker, 1997). Several studies focusing on adult responses to stress have taken an intensive approach to measuring coping through the use of daily ratings of coping and mood (e.g., Affleck, Tennen, Urrows, & Higgins, 1994; Stone et al., 1995), leading to more detailed and time-sensitive analyses of the coping–distress relationship than can be achieved in cross-sectional, retrospective studies.

Consideration should also be given to whether measures are used to assess general coping style or coping with a specific stressor (Ayers et al., 1998). The majority of previous research has either assessed general coping style or asked participants to report on any recent stressor, leading to samples in which stressors could vary from academic problems to domestic violence at home. It remains unclear whether adults or children and adolescents are capable of aggregating responses across diverse situations to accurately report their general coping profile. In addition, there are few coping strategies likely to be either universally helpful or universally detrimental, making it important to avoid combining responses of individuals coping with different events.

Thorough understanding of the stressor is also important, because many stressful events or circumstances do not have clear beginnings or endings or may be multifaceted. Currently, limited information is available about how children define a coping episode. For some children coping with a difficult test may involve the entire process of preparation for the test, taking the test, and emotional regulation during the posttest period, whereas for others the event may be defined from the moment of entering the classroom to the moment the exam is turned in. Further complicating the situation, process-oriented models predict that the effectiveness of any given strategy depends on the timing of its use. Differences such as these in the ways individuals define the stressful event were confirmed in a sample of college students. Although the vast majority of students acknowledged with direct questioning after completion of a coping questionnaire that the stressful event had preparatory, acute, and recovery stages, only 44% of students had actually considered all relevant stages while completing the questionnaire (Stone, Greenberg, Kennedy-Moore, & Newman, 1991). Ideally, assessment of coping with a given stressor should also take place with reference to the broader context of an individual's life and the importance of the selected event to the individual. For example, a child whose mother has been diagnosed with cancer may find the problem of dealing with a difficult math test either wholly irrelevant or overwhelming, whereas a child facing no major stressors may interpret the math test quite differently.

Summary

The number of measures designed specifically for the measurement of coping in children and adolescents has grown significantly in the last 10 years. Available questionnaires represent both empirically and theoretically derived models of coping and have been used with children and adolescents facing a diverse array of real and hypothetical stressors. Interviews and observational measures are promising but are less well developed at this time. For all forms of coping assessment, increased attention to reliability and validity is a crucial direction for future work. Although several of the checklists reviewed here have established at least minimum levels of internal consistency, insufficient data have been reported regarding test–retest reliability and validity for observation, interview, and checklist measures. Finally, an overriding issue in the assessment of coping concerns is reliance on retrospective self-reports without other sources of data. Although it is unlikely that the reports of children and adolescents will achieve high levels of correspondence with reports from parents or observers, it is critical that other data sources be pursued.

Coping, Psychological Adjustment, and Symptoms of Psychopathology

Perhaps the most active area of coping research is concerned with the association of coping with psychological adjustment, psychological symptoms of psychopathology, and social and academic competence. We identified 63 such studies conducted since 1988 (see Table 4). Studies were generally excluded from this review if they reported on very small samples or used measures of coping that lacked basic reliability or validity data. However, studies with smaller samples were included if they involved samples of underrepresented youth (e.g., ethnic minorities), stressors that were of probable clinical significance (e.g., sickle cell disease), or the use of multiple informants to assess coping. Several features of these studies warrant consideration: sample characteristics, type of stressor with which participants were coping, measurement of coping and psychological correlates, research design (cross sectional vs. prospective), informant (child, parent, teacher, or peer), and the findings. Although these studies have been concerned with the "effectiveness" of coping (i.e., the degree to which coping efforts are effective in reducing emotional distress and enhancing positive adjustment), we have avoided using this term here. Coping effectiveness cannot be determined in cross-sectional studies, because the direction of the relationship between coping and emotional distress or adjustment cannot be resolved. It is plausible that coping efforts lead to reductions in emotional distress, but it is equally possible that higher or lower levels of emotional distress lead to the use of certain types of coping responses (as described later). Therefore, with the exception of a few prospective studies, we view these investigations as studies of the correlates of coping rather than the efficacy of coping.

Samples

The samples that have been included in these studies have varied widely in age and have typically included both boys and girls, but they have been less varied with regard to ethnicity and socioeconomic status. Several studies have been limited by relatively small sample sizes, limiting statistical power in testing the association between coping and adjustment. For example, Band and Weisz (1988); Creasy, Mitts, & Cantanzaro (1995); Eisenberg, Fabes, Bernzweig, et al. (1993); Eisenberg, Fabes, Minore, et al. (1994); Eisenberg, Fabes, Shepard, et al. (1997); Fabes and Eisenberg (1992); Fabes et al. (1994); Frank, Blount, and Brown (1997); Gamble and McHale (1989); Gil et al. (1991, 1993); Hart (1991); Johnson and Kenkel (1991); Langrock et al. (2000); H. Lewis and Kliewer (1996); Manne et al. (1993); O'Brien et al. (1997, O'Brien, Margolin, & John, 1995); Ried, Dubow, and Carey

(*text continues on page 116*)

Table 4
Studies of the Association Between Coping and Psychological Adjustment and Symptoms of Psychopathology

Author(s)	Sample	Stressor	Coping measure	Psychological correlates	Significant findings
Allen & Hiebert (1991)	N = 285 Age 14–20 years 60% female	General	Coping Resources Inventory for Stress	Internalizing: STAI, Symptoms of Stress Inventory Competence: GPA	Total coping resources: Better adjustment. More coping resources, fewer internalizing symptoms (r = −.62 to −.73), and higher competence (3 of 4 effects significant)
Ayers, Sandler, West, & Roosa (1990)	N = 740 Age 9–13 years (M = 11) 49% female 41% non-White	General	WBBCI (modified)	Internalizing: CDI (child); Externalizing: YSR (child), CBCL (parent); Competence: SPPC (child)	Engagement: Better adjustment. Cognitive decision making, direct problem solving, positive cognitive restructuring, & physical release of emotions: fewer internalizing symptoms (r = −.09 to −.22), less externalizing (r = −.11 to −.21), and higher competence (r = .11 to .20) Disengagement: Better adjustment. Avoidant actions: less internalizing (r = −.13), less externalizing (r = −.09), and higher competence (r = .07). Cognitive avoidance: less internalizing (r = −.06) (15 of 21 effects significant)
Band & Weisz (1990)	N = 64 Preformal operations, n = 32, M age = 8.8 years; 41% female Formal operations, n = 32, M age = 14.6 years, 56% female	Diabetes	Open-ended interview	Internalizing: CPQ (parent); Externalizing: CPQ (parent); Competence: SBAS (parent)	More emotion focused than problem focused: Poorer adjustment. Preformal operations: *ns* (none of 5 effects significant). Formal operations: more emotion focused, lower competence (r^2 = .25). (3 of 5 effects significant; only one significant after Bonferroni correction)
Causey & Dubow (1992)	N = 481 4th to 6th grade 48% girls 15% non-White	One social & one academic stressor	SRCS	Internalizing: RCMAS (child); Competence: SPPC (child), GPA	Engagement: Better adjustment. Problem solving: higher competence (r = .19 to .64) across social and academic stress Disengagement: Poorer adjustment. Distancing: lower competence (r = −.25 to −.28) (11 of 32 effects significant)
Chaffin, Wherry, & Dykman (1997)	N = 84 Age 5–12 years 75% female	Sexual abuse	Kidcope	Internalizing: Children's Impact of Traumatic Events—Revised, CBCL (parent), TRF (teacher) Externalizing: CBCL (parent), TRF (teacher)	Engagement: *ns* Disengagement: Mixed. Avoidant coping: more CITES-R internalizing symptoms (r = .40) and less CBCL externalizing (r = −.35 to −.45)
Chan (1995)	N = 161 Age 15–18 years (M = 16) 77% female 100% Chinese	Not specified	WOCC	Internalizing: Beck Depression Inventory (BDI; child) Competence: Self-Esteem Inventory (child)	Engagement: *ns* Disengagement: Poorer adjustment. Avoidant coping: more internalizing symptoms (r^2 = .12) (1 of 8 coping scales significant in regression equation)
Compas, Malcarne, & Fondacaro (1988)	N = 130 Age 10–14 years (M = 12) 56% female 2% non-White	One interpersonal and one academic stressor	Open-ended interview	Internalizing: YSR (child), CBCL (parent) Externalizing: YSR (child), CBCL (parent)	Problem focused: Better adjustment. For girls, problem focused: less YSR internalizing (r = −.23), less YSR externalizing (r = −.23), & less CBCL internalizing (r = −.32) (4 of 13 significant in self-reports; 5 of 14 significant in cross-informant effects) Emotion focused: Poorer adjustment. For boys, emotion focused: more CBCL internalizing (r = .31). For girls, more YSR internalizing (r = .24) and YSR externalizing (r = .24) (effects significant for interpersonal, not academic, stress after Bonferroni correction)
Compas, Worsham, Ey, & Howell (1996)	N = 134 Preadolescent, n = 32, age 6–10 years (M = 8), 47% female Adolescent, n = 59, age 11–18 years (M = 15), 54% female Young adult, n = 43, age 19–32 years (M = 23), 63% female Parent recently diagnosed with cancer	Parental cancer	Open-ended interview	Internalizing: CDI (child), RCMAS (child), YSR (adolescent), BSI (young adult)	Problem focused: *ns* Emotion focused: Poorer adjustment. Emotion focused correlated with more internalizing symptoms (r = .32) (Bonferroni corrected; 2 of 6 effects significant after correction)

Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman (in press)	N = 450 Age 16–19 years (M = 18.2) 69% female	Interpersonal stressor	RSQ (adolescent report)	Internalizing: YASR (adolescent) Externalizing: YASR (adolescent)	Engagement: Better adjustment. Primary and secondary control engagement coping correlated with lower internalizing (r = −.39 to −.52) and lower externalizing problems (r = −.27 to −.37) Disengagement: Poorer adjustment. More disengagement coping correlated with higher internalizing and externalizing problems (r = .18 to .29) (9 of 14 effects significant in self-report; 1 of 8 in cross-informant analyses) More engagement than disengagement: Poorer adjustment. More active than avoidant coping: more CBCL internalizing (β = −.40), more CBCL externalizing (β = −.42), and more TRF externalizing (β = −.17). More active than avoidant coping: more TRF externalizing (β = −.26) (4 of 8 effects significant)
Creasy, Mitts, & Catanzaro (1995)	N = 74 Age 5–6 years 58% female	Hypothetical situations: parental bickering; theft accusation from teacher	Open-ended interview in response to vignettes	Internalizing & Externalizing: CBCL (parents), TRF (teacher)	
Dumont & Provost (1999)	N = 141 8th graders Age: M = 14 years N = 156 11th graders Age: M = 16 years Caucasian French-speaking from Quebec	General	WOCC (21-item shortened French version)	Internalizing: BDI Competence: SPPC	Engagement coping: Mixed. Social support seeking related to higher depressive symptoms (r = .16); problem solving related to higher self-esteem (r = .19) Disengagement coping: Poorer adjustment. Avoidance coping related to more depressive symptoms (r = .48) and lower self-esteem (r = −.40) (4 of 6 effects significant)
Ebata & Moos (1991)	N = 190 Age 12–18 years (M = 15) 47% female Control: n = 38 Rheumatic: n = 45 Conduct disorder: n = 58 Depressed: n = 49	General	CRI-Y	Internalizing: WAI, SSAI Externalizing: DBS, YHDLF Competence: SPPA, WAI	Engagement: Mixed. Logical analysis: more internalizing (β = .25) and lower competence (β = −.26). Positive reappraisal: less internalizing (β = −.19), less externalizing (β = −.17), and higher competence (β = .21). Problem solving: less internalizing (β = −.29) and higher competence (β = .33) Disengagement: Poorer adjustment. Cognitive avoidance: more internalizing (β = .18). Resigned acceptance: more internalizing (β = −.19). Emotional discharge: more externalizing (β = .26) (11 of 24 effects significant)
Eisenberg, Fabes, Bernzweig, et al. (1993)	N = 93 Age 4.3–6.3 years (M = 5.2) 48% female 88% Caucasian	General	Ratings by mothers and teachers	Competence: sociometric status, popularity, social skills	Engagement: Better adjustment. Constructive coping related to higher social skills and sociometric status for boys (r = .30 to .36) Disengagement: Better adjustment. Acting out versus avoidant coping related to higher social skills and sociometric status (r = −.39 to −.65) (8 of 16 effects significant)
Eisenberg, Fabes, Karbon, et al. (1996)	N = 151 Age: M = 10 years 3rd to 6th grade 44% female 89% Caucasian	General	CCSC	Competence: SPPC (parent), peer acceptance	Engagement: Better adjustment. Engagement related to higher nominations of prosocial behavior (r = .43 to .45) (2 of 2 effects significant)
Eisenberg, Fabes, Minore, et al. (1994)	N = 76 Age 4.3 to 6.3 years (M = 5.2) 46% female 88% Caucasian	Peer interactions	Behavioral observation	Internalizing: emotionality, negative affect; Competence: SPPC (teacher)	Engagement: Better adjustment. Instrumental coping related to more friendliness (r = .30), less aggression (r = −.23 to −.30), and more assertiveness for girls (r = .45) Disengagement: Poorer adjustment. Avoidance coping related to less friendliness (r = −.24) and less assertiveness (r = −.25) (13 of 21 effects significant)
Eisenberg, Fabes, Nyman, Bernzweig, & Pinnuelas (1994)	N = 93 Age 4.3 to 6.3 years (M = 5.1) 48% female 89% Caucasian (note: sample is same as Eisenberg, Fabes, Bernzweig, et al., 1993)	General and social conflict	Ratings by mothers and teachers	Internalizing: emotionality, negative affect; Externalizing: anger, reactions; Competence: SPPC (teacher), sociometric ratings (peers)	Engagement: Better adjustment. Constructive coping associated with less escape and defensive behaviors (r = −.22 to −.28) Disengagement: Better adjustment. Acting out versus avoidant coping related to less venting and physical retaliation (r = .22 to .28) (19 of 58 effects significant)

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Table 4 (*continued*)

Author(s)	Sample	Stressor	Coping measure	Psychological correlates	Significant findings
Eisenberg, Fabes, Shepard, et al. (1997)	$N = 77$ Age 8.1 to 10.0 years ($M = 8.9$) 47% female 91% Caucasian	General	Ratings by mothers and teachers	Externalizing: Child Behavior Problem Checklist; Competence: SPPC (parent), teacher ratings	Engagement: Mixed. Constructive coping related to parent and teacher ratings of higher social competence ($r = .21$ to $.40$); constructive coping related to more behavior problems for girls ($r = .34$ to $.38$) (17 of 44 effects significant)
Fabes, Eisenberg, Karbon, Troyer, & Switzer (1994)	$N = 49$ Kindergartners Age 5–7 years ($M = 6$) 45% female $N = 54$ Second graders Age 7–9 years ($M = 8$) 53% female 74% Caucasian 8% Hispanic 8% Native American	Audiotapes and videotapes of child accident and child crying	Maternal report of child coping and direct observation	Observation of response and heart rate	Engagement: Better adjustment. Instrumental coping and emotional regulation related to lower distress and more empathic behavior (2 of 6 effects significant)
Fabes & Eisenberg (1992)	$N = 69$ Age 3.5 to 5.9 years ($M = 4.8$) 52% female 90% Caucasian	Peer interactions	Behavioral observation	Competence: SPPC (parent), sociometric status (peer)	Engagement: Mixed. Active resistance to anger related to higher social status for boys ($r = .40$); adult seeking related to lower competence ($r = -.40$) and lower social status ($r = -.47$) for boys; disapproval of provocateur related to higher social status ($r = .35$ to $.37$) Disengagement: Avoidance not related to competence or social status (8 of 24 effects significant)
Feldman, Fisher, Ransom, & Dimiceli (1995)	Time 1 $N = 242$; Time 2 $N = 166$ Age Time 1 $M = 15$ years Time 2 $M = 22$ years 51% female 18% non-White	Family stress	A-COPE (modified)	Internalizing: Ware et al. (1984) Externalizing: Ware et al. (1984); Competence: Rosenberg Self Esteem (Ware et al., 1984)	Engagement: Better adjustment. Stay connected at Time 1 predicted higher competence at Time 2 (.19 to .21); turning to religion at Time 1 predicted higher competence, less internalizing, and less externalizing at Time 2 (2 of 16 effects significant)
Frank, Blount, & Brown (1997)	$N = 86$ Age 7–18 years ($M = 11.2$) 28% African American 59% Caucasian 13% other ethnicity Pediatric cancer patients	Pediatric cancer	Kidcope	Internalizing: CDI (child), RCMAS (child); Externalizing: CBCL (parent)	Engagement: *ns* Disengagement: Poorer adjustment. Avoidance coping related to higher symptoms of depression ($\beta = .47$) and higher symptoms of anxiety ($\beta = .29$) (None of 10 effects significant; 2 of 30 coping scales significant in regression analyses)
Gamble & McHale (1989)	$N = 62$ Developmentally disabled (DD) sibling, $n = 31$ Non-DD sibling, $n = 31$ Age 7–14 years ($M = 12$) 45% girls	Stress in sibling relationship	SSCI	Internalizing: CDI (child), RCMAS (child); Competence: SPPC (child)	Engagement: *ns* Disengagement: *ns* Mixed: Poorer adjustment. Self-cognition coping: more internalizing symptoms ($\beta = -.29$) (3 of 12 effects significant)
Garber & Little (1999)	$N = 51$ children of depressed mothers Age: $M = 11.9$ years 82% Caucasian 15% African American	Academic stressor and social stressor	CCQ	Total behavior problems: CBCL (parent), TRF (teacher); Competence: Global Assessment Scale	Engagement: Better adjustment. High competence group reported more positive coping than decreasing competence group Disengagement: Poorer adjustment. Decreasing competence group reported more denial coping than high competence group (2 of 3 effects significant)
Gil, Williams, Thompson, & Kinney (1991)	$N = 72$ Age 7–17 years ($M = 11$) 51% female Sickle cell disease patients	Pain	Coping Strategies Questionnaire (CSQ)	Internalizing: Missouri Children's Behavior Checklist (parent), Child Assessment Schedule (child), SCL-90-R (child); Externalizing: MCBC (parent), CAS (child); Pain (child); Health behaviors	Engagement: Better adjustment. Coping attempts related to fewer emergency room (ER) visits ($\beta = -.02$) and less reduction in activity ($\beta = -.36$) Disengagement: Poorer adjustment. Negative thinking related to greater activity reduction ($\beta = .35$) and more psychopathology on CAS ($\beta = .36$). Passive adherence related to more emergency room visits ($\beta = .03$) and greater activity reduction ($\beta = .56$) (8 of 33 coping scales significant in regression analyses)

Gil, Thompson, Keith, Tota-Faucett, Noll, & Kinney (1993)	N = 70 Age 7–18 years (M = 12) 47% female Sickle cell disease patients (follow-up of Gil et al., 1991)	Pain	CSQ	Pain (child); Health behaviors	Engagement: Better adjustment. Coping attempts related to less activity reduction (β = −.31 to −.55) and more "uptime" (β = .06) Disengagement: Poorer adjustment. Passive adherence related to more physician visits (β = .05) (5 of 21 coping scales significant in regression analyses)
Hart (1991)	N = 63 Age 16–19 years (M = 17) 57% female 20% African American 44% Hispanic 34% Caucasian	Academic and social stressors	WOCC	Anger Reactivity Scale	Engagement: Mixed. Social support related to more anger (r = .35); focus on the positive related to less anger (r = −.32 to −.36) Disengagement: Poorer adjustment. Wishful thinking related to more anger (r = .35) (4 of 11 effects significant)
Herman & McHale (1993)	N = 458 Students in Grades 6–7 Age: M = 10 years 55% girls	Hypothetical negative parental situation	Interview with child	Internalizing: CDI (child), RCMAS (child), Revised Conners' Parent Rating Scale (parent)	Engagement: Better adjustment. Problem solving negatively related to anxiety symptoms (r = −.22 to −.38) and depressive symptoms (r = −.22 to −.25) in both child and parent reports Disengagement: Poorer adjustment. Forgetting coping positively related to anxiety symptoms (r = .23 to .26) in child and parent reports (13 of 24 effects significant)
Herman-Stahl & Petersen (1996)	N = 458 M age = 12 years Grades 6–7 49% female 11% non-White Groups based on median splits of depression index and negative life events	General	Self-Image Questionnaire for Young Adolescents Mastery and Coping Scale	Internalizing: CDI (child)	Engagement: Better adjustment. Positively adjusted group higher in approach coping than negatively adjusted and vulnerable groups. Resilient group higher in approach coping than vulnerable and negatively adjusted groups Disengagement: Poorer adjustment. Positively adjusted group lower in avoidant coping than negatively adjusted and vulnerable groups. Resilient group lower in avoidant coping than vulnerable group (2 of 2 comparisons significant in ANOVAs)
Herman-Stahl, Stemmler, & Petersen (1995)	N = 603 Grades 6–12 51% female 16% non-White	General	SKS (modified)	Internalizing: CDI (child)	Engagement: Better adjustment. "Approachers" fewer CDI depressive symptoms than "avoiders" Disengagement: Poorer adjustment. Those who changed over time from approach to avoidance: more CDI depressive symptoms
Hoffman, Levy-Shiff, Sohlberg, & Zarizki (1991)	N = 119 Adolescent, n = 68, age 12–13 years Preadolescent, n = 51, age 10–11 years 100% male 100% Israeli	General	Jakoby's Adolescent Coping Questionnaire	Behavior problems: TRF (teacher, short Hebrew version)	Problem focused: Preadolescents poorer adjustment; adolescents better adjustment. More cognitive and practical coping: more behavior problems (β = .32 to .38) for preadolescents. More practical coping: less behavior problems (β = −.42) for adolescents Emotion focused: Poorer adjustment. More emotional coping: more behavior problems for preadolescents (β = .47) and adolescents (β = .39) (4 of 6 effects significant)
Jeney-Gammon, Daugherty, Finch, Belter, & Foster (1993)	N = 257 Students in Grades 3–5 51% girls	Hurricane Hugo	Kidcope (child)	Internalizing: CDI (child)	Engagement: Better adjustment. Cognitive restructuring and social support related to lower levels of depressive symptoms Disengagement: Poorer adjustment. Social withdrawal, self-blame, and emotional regulation related to higher levels of depression (5 of 10 effects significant with CDI)
Johnson & Kenkel (1991)	N = 45 Age 13–18 years 100% female 38% non-White	Sexual abuse	Ways of Coping Checklist—Revised	Internalizing & Externalizing: BSI, SCL-90-R (therapist); Competence: LSI	Engagement: Poorer adjustment. Tension reduction: more BSI symptoms (β = .05) Disengagement: Poorer adjustment. Wishful thinking: more BSI symptoms (β = .10). Detachment/distance more SCL-90-R symptoms (β = 2.48) (3 of 14 effects significant)

(*table continues*)

Table 4 (*continued*)

Author(s)	Sample	Stressor	Coping measure	Psychological correlates	Significant findings
Kliewer (1991)	$N = 100$ 2nd grade ($n = 48$), age $M = 7.5$ years, 56% girls 5th grade ($n = 52$), age $M = 10.7$ years, 46% girls 20% non-White	General 3 "worst" stressful events	Interview version of Kidcope and additional four items	Externalizing: Matthews Youth Test for Health; Competence: SMSC	Disengagement: Better adjustment. Avoidant actions and cognitive avoidance: higher competence (2 of 2 effects significant in ANOVA)
Kliewer & Sandler (1993)	$N = 225$ Age 7–13 years ($M = 11$) 44% female 15% non-White	Parental divorce	CCSC (child and teacher form)	Internalizing: CDI (child); Competence: SPPC (child), SMSC-R	Engagement: Better adjustment. Teacher report of active coping: higher competence ($\beta = .39$) (stronger for older children and girls) Disengagement: Better adjustment. Child report of avoidance coping: higher competence ($\beta = .44$) (2 of 4 effects significant in regression)
Langrock, Compas, Keller, & Merchant (2000)	$N = 94$ Age 9–17 years ($M = 11.5$) 50% female 98% Caucasian Children of depressed parents	Parental depression	RSQ (parent report)	Internalizing: CBCL; Externalizing: CBCL	Engagement: Better adjustment. Secondary control coping related to lower symptoms of anxiety/depression ($\beta = -.41$ to $-.43$) and aggressive behavior problems ($\beta = -.19$ to $-.43$). Primary control coping related to lower aggressive behavior problems ($\beta = -.16$ to $-.19$) (3 of 4 effects significant) Disengagement: No effects. Disengagement coping was unrelated to either anxiety/depression symptoms or aggressive behavior problems (neither of 2 effects significant)
H. B. Lee, Chan, & Yik (1992)	$N = 832$ Age 14–19 years ($M = 16$) 54% female 100% Chinese	Academic Conflict with elders Conflict with peers Future concerns	ACS	Internalizing: GHQ	Engagement: *ns* Disengagement: Poorer adjustment. Avoidance/blaming: more internalizing across 4 stressors ($\beta = .21$ to $.32$) (4 of 16 effects significant)
M. Lee & Larson (1996)	$N = 358$ Korean students in 12th grade Age 17–19 years ($M = 18$) 40% female	University entrance exam	CRI (child)	Internalizing: CDI (child)	Engagement: Better adjustment. More problem solving related to lower depressive symptoms for boys ($\beta = -.29$) and girls ($\beta = -.26$) (13 of 32 effects significant; 2 of 18 coping scales significant in regression analyses)
Lengua & Sandler (1996)	$N = 202$ Age 8–12 years ($M = 10$) 43% female 87% Caucasian (subsample of Sandler et al., 1994) Children of divorce	General	CCSC	Internalizing: CDI (child), RCMAS (child), CBCL (parent); Externalizing: CBCL (parent), Youth Hostility Scale (child)	Engagement: Better adjustment. Active coping related to child reports of fewer conduct problems ($\beta = -.18$) and fewer depressive symptoms ($\beta = -.16$) Disengagement: Poorer adjustment. Avoidant coping related to child reports of more depressive symptoms ($\beta = .25$), more anxiety symptoms ($\beta = .28$), and more conduct problems ($\beta = .32$) (6 of 15 effects significant)
Lengua, Sandler, West, Wolchik, & Curran (1999)	$N = 223$ Age 9–12 years ($M = 10.3$) 89% Caucasian 8% Hispanic 50% female (children of divorce; mean of 1 year since divorce)	General	CCSC	Internalizing: CDI (child), CBCL (parent); Externalizing: YSR (child), CBCL (parent)	Engagement coping: Better adjustment. Active coping predicted lower maternal-reported depressive symptoms ($\beta = -.08$), maternal-reported conduct problems ($\beta = -.04$), child-reported depressive symptoms ($\beta = -.11$), and child-reported conduct problems ($\beta = -.06$) Disengagement coping: Mixed adjustment. Avoidant coping predicted higher maternal-reported depressive symptoms ($\beta = .06$), maternal-reported conduct problems ($\beta = .06$), and child-reported depressive symptoms ($\beta = .04$) but lower child-reported conduct problems ($\beta = -.02$)
Lewis & Kleiwer (1996)	$N = 39$ Age 7–16 years ($M = 11$) 64% female Sickle cell disease patients	General	CCSC	Internalizing: CDI (child), RCMAS (child)	Engagement: Better adjustment. Active coping and hope predict lower anxiety ($\beta = -.31$); support coping and hope predict lower anxiety ($\beta = -.37$) Disengagement: Poorer adjustment. Distraction ($\beta = .41$) predicted higher anxiety (5 of 28 effects significant)

Lopez & Little (1996)	N = 314 Grades 2–6 56% female 44% Caucasian 35% African American 13% Hispanic	General	Behavioral Inventory of Strategic Control	Internalizing: STAI (child)	Engagement: Better adjustment. Social cooperation and emotional support correlated with lower anxiety (r = −.20 to −.31) Disengagement: *ns* (7 of 20 effects significant)
Manne, Bakeman, Jacobsen, & Redd (1993)	N = 45 Age 3–9 years (M = 5) 47% female 27% non-White Pediatric cancer patients	Painful medical procedure	Coded videotape	Distress coding from videotape	No significant findings after Bonferroni correction (3 of 18 significant before correction)
O'Brien, Bahadur, Gee, Balto, & Erber (1997)	N = 43 Age 8–13 years (M = 10) 47% girls 40% non-White	Parental marital conflict	CMCCSI (parent questionnaire)	Internalizing: CDI (child), CBCL (parent), TRF (teacher); Externalizing: CBCL (parent), TRF (teacher); Competence: SPPC (child)	Engagement: Mixed. Self-involved: more CDI depressive symptoms (β = .72). Threatened/critical: more CDI depressive symptoms (β = .82), less TRF internalizing (β = −3.25), and less TRF externalizing (β = −5.39) Disengagement: Mixed. Worried avoidance: more CDI depressive symptoms (β = .56) and fewer TRF externalizing symptoms (β = −3.07) (6 of 24 effects significant)
O'Brien, Margolin, & John (1995)	N = 83 Age 8–11 years (M = 10) 51% female 35% non-White	Parental marital conflict	CMCCSI	Internalizing: CDI (child), STAI (child), CBCL (parent); Externalizing: CHI (child & parent), CBCL (parent); Competence: SPPC (child)	Engagement: Poorer adjustment. Self-involvement: more STAIC anxiety symptoms (β = .34) and lower competence (β = −.41) Disengagement: Better adjustment. Avoid/self-rely: less STAIC anxiety symptoms (β = −.25) (4 of 16 effects significant)
Plancherel & Bolognini (1995)	N = 276 6th grade Age: M = 13 years 50% female 100% Swiss	General	French A-COPE	Internalizing	Problem focused: Mixed. Solving family problems: more anxiety (r = .16) and fewer depressive symptoms (r = −.28), less anxiety (r = −.26), and less depressed mood (r = −.28) for boys Emotion focused: Poorer adjustment. Ventilation of feelings: more internalizing (r = .19) for girls and for boys (r = .19 to .25) Longitudinal: ventilating negative feelings: less internalizing (β = .10) for girls (7 of 8 effects significant)
Radovanovic (1993)	N = 52 Age 7–12 years (M = 9) 52% girls Involved in custody dispute	General (child-identified stressor)	Semistructured interview	Behavior problems: CBCL (mom), CBCL (dad), TRF (teacher); Competence: SPPC (child)	Engagement: Better adjustment. Cognitive coping: fewer behavior problems (CBCL, dad) (β = −.43) Disengagement: *ns* (1 of 8 effects significant)
Ried, Dubow, Carey, & Dura (1994)	N = 56 Age 8–18 years (M = 13.0) 50% female 95% Caucasian Children with diabetes	Three stressors related to diabetes	SCRS	Health: Metabolic control, diabetes management	Engagement: Better adjustment. Approach coping related to better adherence to diet (β = .28) Disengagement: Poorer adjustment. Avoidance coping related to poorer metabolic control (β = .29) and poorer adherence (β = −.38) (4 of 10 effects significant)
Ried, Dubow, & Carey (1995)	Sample same as Ried et al., 1994	Four stressors (three diabetes related and one peer)	SCRS	Internalizing: CDI (child); Competence: Social Skills Rating System (teacher), GPA	Engagement: Better adjustment. Approach coping correlated with lower depressive symptoms (r = −.28) and higher GPA (r = .33) (effects not significant in multiple regression) Disengagement: Poorer adjustment. Avoidance related to lower GPA (β = −.37) and higher depressive symptoms (β = .48) in multiple regression
Sandler, Tein, & West (1994)	N = 258 Age 7–13 years (M = 10) 44% female 86% Caucasian Children of divorce	General	CCSC	Internalizing: CDI (child), RCMAS (child), CBCL (parent); Externalizing: CBCL (parent), Youth Hostility Scale (child)	Engagement: Mixed. Active coping related to less depressive symptoms (β = −.12); social support related to more depressive symptoms (β = .20) Disengagement: Mixed. Avoidance related to more depressive symptoms (β = .26) and more anxiety symptoms (β = .20) (2 of 12 effects significant at Time 1; 1 of 12 effects significant at Time 2; 2 of 12 significant from Time 1 to Time 2)

(*table continues*)

Table 4 (*continued*)

Author(s)	Sample	Stressor	Coping measure	Psychological correlates	Significant findings
Sharpe, Brown, Thompson, & Eckman (1994)	$N = 55$ Age 3–16 years ($M = 8$) 53% female African American children with sickle cell disease	Sickle cell disease pain episode	Coping Strategies Inventory (CSI)	Internalizing & Externalizing: CBCL (parent); Competence: Vineland (parent)	No significant effects (0 of 4) between child coping and child psychological variables
Sharpe, Brown, Thompson, & Eckman (1994)	$N = 34$ Age 3–16 years ($M = 9$) 50% female African American children with sickle cell disease	Pain associated with sickle cell disease	CSI	Internalizing & Externalizing: CBCL (parent)	No significant effects (0 of 4) between coping and behavior problems
Smith & Brodzinsky (1994)	$N = 85$ $n = 23$, age 6–9 years $n = 20$, age 10–13 years $n = 32$, age 14–17 years 52% female 47% non-White Adopted children	Adoption	Coping Scale for Children and Youth	Internalizing: Thoughts and Feelings Scale, Emotional Reaction Scale (ERS); Competence: ERS	Engagement: Poorer adjustment. Problem solving: more ERS internalizing ($r = .33$) and more TFS internalizing ($r = .68$). Assistance seeking: more TFS internalizing ($r = .38$) Disengagement: Poorer adjustment. Cognitive avoidance: more ERS internalizing ($r = .50$). Behavioral avoidance: more ERS internalizing ($r = .45$) and more TFS internalizing ($r = .31$). Cognitive avoidance: lower competence ($r = -.36$). Behavioral avoidance: lower competence ($r = -.26$) (7 of 12 effects significant)
Spirito, Francis, Overholser, & Frank (1996)	$N = 258$ Age 11–17 years 64% female Suicide attempters in general hospital, $n = 40$ Suicide attempters in psychiatric hospital, $n = 108$ Suicide ideators in psychiatric hospital, $n = 32$ Nonsuicidal in psychiatric hospital, $n = 22$ Nonpsychiatric controls, $n = 56$	Hypothetical conflict with parents	Kidcope (child)	Internalizing: BDI (child administered; psychiatric hospitalized only)	Engagement: Better adjustment. Cognitive restructuring: nondepressed children used more than depressed Disengagement: Poorer adjustment. Social withdrawal: psychiatrically hospitalized children used more than medical or control groups; depressed children used more than nondepressed. Blaming: depressed children used more than nondepressed (3 of 10 coping scales differed significantly in MANOVA comparing depressed and nondepressed groups; 1 of 10 scales differed significantly in MANOVA comparing all 5 groups)
Spirito, Overholser, & Stark (1989)	$N = 262$ Suicide attempt $n = 76$, age 12–17 years ($M = 15$), 78% girls Controls, $n = 186$, age 12–17 years ($M = 14$), 55% girls	General	Kidcope	Internalizing: History of suicide attempt	Engagement: *ns* Disengagement: Poorer adjustment. Social withdrawal used more by suicide attempters than distressed and nondistressed controls (1 of 10 coping scales differed in MANOVA)
Spirito, Stark, & Tyc (1994)	$N = 54$ Age 7–17 years 41% female Chronic illness $N = 71$ Age 7–17 years 38% female	Hospital, pain, or illness stressor	Kidcope	Internalizing and Externalizing: Single-item measures of anxiety, sadness, and anger	Engagement: Poorer adjustment. Problem solving associated with more anxiety ($\beta = .36$); social support associated with more sadness ($\beta = .19$) Disengagement: Mixed. Wishful thinking associated with more sadness ($\beta = .23$) and more anger ($\beta = .23$). Social withdrawal ($\beta = -.26$) and self-blame ($\beta = -.18$) associated with more anger (6 of 30 significant effects in regression analyses)
Steele, Forehand, & Armistead (1997)	$N = 69$ Age: $M = 12.7$ years 56% female 84% Caucasian	Parental illness (hemophilia and HIV)	Coping Responses Inventory	Internalizing: CBCL (parent), CDI (child); Externalizing: CBCL (parent)	Engagement: *ns* (0 of 2 effects significant in path analyses) Disengagement: Poorer adjustment. Avoidant coping related to more internalizing symptoms ($\beta = .29$ to $.34$) (2 of 2 effects significant in path analyses)
Steele et al. (1999)	$N = 82$ Age 6–11 years 100% African American	General	Schoolagers' Coping Strategies Inventory	Internalizing: CDI (child), CBCL (parent); Externalizing: YSR (child), CBCL (parent)	Engagement: Poorer adjustment. Emotion-focused coping predicted more behavior problems in both parent and child reports
Stern & Alvarez (1992)	$n = 39$ parenting adolescents Age: $M = 18.1$ years $n = 45$ pregnant adolescents Age: $M = 16.2$ years	General	WOCC	Internalizing and Competence: Offer Self-Image Questionnaire	Disengagement: Poorer adjustment. Distancing, self-blame, and escape/avoid correlated with lower competence and poorer adjustment ($r = -.28$ to $-.45$) (8 of 24 effects significant)

Tapert, Brown, Myers, & Granholm (1999)	N = 79 Age 14–18 years (M = 17) 41% female 72% Caucasian Consecutive admissions to inpatient drug and alcohol treatment centers	Hypothetical alcohol or drug relapse situation	Adolescent Relapse Coping Questionnaire (derived from WOCC)	Externalizing: Drinking and Drug Use Record	Engagement coping: Mixed. Engagement coping (combination of cognitive and behavioral problem solving) and abstinence-focused coping not correlated with alcohol or drug use in simple effects Engagement coping significantly interacted with IQ in regression analyses to predict lower alcohol–drug use (β = .28)
Thomsen, Compas, Colletti, & Stanger (2000)	N = 135 Age 7–18 years (M = 11.5) 70% female 94% Caucasian Abdominal pain patients	Recurrent abdominal pain	RSQ (parent report)	Internalizing (Anxiety/Depression & Somatic Complaints): CBCL	Engagement coping: Better adjustment. Primary control coping related to lower symptoms of anxiety–depression (β = −.22) and somatic symptoms (β = −.22); secondary control coping related to lower symptoms of anxiety–depression (β = −.30) and somatic symptoms (β = −.27) (4 of 6 effects significant) Disengagement coping: No effect. Disengagement unrelated to anxiety–depression or somatic symptoms (0 of 3 effects significant)
Wadsworth & Compas (2000)	N = 364 Age 11–17 years (M = 14.7) 58% female 97% Caucasian	Economic strain and family conflict	RSQ (adolescent report)	Internalizing: YSR; Externalizing: YSR	Engagement: Better adjustment. Primary and secondary control coping related to lower symptoms of anxiety–depression (βs from −.19 to −.30) and aggressive behavior problems (βs from −.18 to −.29) Disengagement: Poorer adjustment. Disengagement coping related to lower symptoms of anxiety–depression (β = −.12) and aggressive behavior problems (β = −.13) (12 of 12 effects significant; 12 of 18 effects in path analyses)
Walker, Smith, Garber, & Van Slyke (1997)	N = 1021 School sample, n = 688, age 9–16 years (M = 11.8), 59% female Abdominal pain patients, n = 158, age 8–18 years (M = 11.9), 56% female Former abdominal pain patients, n = 175, age 11–23 years (M = 15.5), 62% female	Abdominal pain	Pain Response Inventory for Children	Internalizing: Abdominal Pain Index (child), Children's Somatization Inventory (child), functional disability (child), CDI (child), CES-D (adolescent)	Engagement: Mixed. Active coping correlated with fewer depressive symptoms on CDI (r = −.10) but poorer functioning (r = .24) Disengagement: Poorer adjustment. Passive coping correlated with more pain, more somatic symptoms, poorer functioning, and more depressive symptoms (r = .20 to .56) (21 of 33 effects significant)
Weisenberg, Schwarzwald, Waysman, Soloman, & Klingman (1993)	N = 492 Grades 5, 7, 10 54% girls 74% Middle Eastern origin	SCUD missile bombardment	CB	Internalizing: posttraumatic stress disorder (PTSD) criteria, SRQ, GSS	Engagement: Poorer adjustment. Checking used more by those with PTSD and more internalizing problems Disengagement: Mixed. Reassurance and request used more by those with PTSD and more internalizing problems; verbal distraction used less by those with PTSD. Interpersonal distraction used less by those with more symptoms (4 of 5 comparisons significant in MANOVA)
Windle & Windle (1996)	N = 733 Age: M = 17 years 52% female 1% non-White	General	CLSS	Internalizing: CES-D; Externalizing: alcohol use, delinquent activities; Competence: GPA	Problem focused: Better adjustment. Talk oriented: less internalizing symptoms (r = −.22), less externalizing (r = −.14), and higher competence (r = .23) Emotional focused: Poorer adjustment. Emotion oriented: more internalizing (r = .52) and more externalizing (r = .08) (10 of 15 effects significant)

Note. A-COPE = Adolescent Coping; ACS = Adolescent Coping Scale; BDI = Beck Depression Inventory; CCQ = Children's Coping Questionnaire; CCSC = Children's Coping Strategies Checklist; CISS = Coping Inventory for Stressful Situations; CMCCSI = Children's Marital Conflict Coping Strategies Interview; CRI-Y = Coping Response Inventory—Youth; RSQ = Responses to Stress Questionnaire; SKS = Seiffge-Krenke and Schulman Scale; SRCS = Self Report Coping Scale; SSCI = Sibling Stress and Coping Inventory; WOCC = Ways of Coping Checklist. Measures of psychological correlates: CAS = Child Assessment Schedule; BSI = Brief Symptom Inventory; CBCL = Child Behavior Checklist; CDI = Children's Depression Inventory; CES-D = Center for Epidemiologic Studies Depression Scale; CHI = Children's Hostility Inventory; CPQ = Connor's Parent Questionnaire; DBS = Deviant Behavior Scale; GHQ = General Health Questionnaire; GPA = grade point average; GSS = Global Symptom Score; LSI = Life Satisfaction Index; RCMAS = Revised Children's Manifest Anxiety Inventory; SBAS = Socio-Behavioral Adjustment Scale; SCL-90-R = Symptom Checklist 90—Revised; SMSC-R = Revised Social Maturity Rating Scale for Children; SPPA = Self Perception Profile for Adolescents; SPPC = Self Perception Profile for Children; SRQ = Stress Reaction Questionnaire; SSAI = Speilberger State Anxiety Inventory; STAI = Spielberger Trait Anxiety Inventory for Children; TRF = Teacher Report Form; WAI = Weinberger Adjustment Inventory; WBBCI = Wills Behavior Based Coping Inventory; YASR = Young Adult Self-Report; YHDLF = Youth Health and Daily Living Form; YSR = Youth Self Report. ANOVA = analysis of variance; MANOVA = multivariate analysis of variance.

(1995); Ried, Dubow, Carey, and Dura (1994); Sharpe, Brown, Thompson, and Eckman (1994); Smith and Brodzinsky (1994); Spirito, Stark, and Tyc (1994); Steele et al. (1997, 1999); Stern and Alvarez (1992); Tapert, Brown, Myers, and Granholm (1999); and Thomsen et al. (2000) all reported on samples of fewer than 100 participants. With a sample of 100, a correlation of .22 or greater will achieve significance at the .05 level. With samples of less than 100, small to medium correlations will not reach statistical significance. In many cases, sample sizes were small because they involved special populations of children and adolescents, such as those diagnosed with a serious illness, who are difficult to recruit in large numbers. However, the small samples in these studies limit the ability to detect all but the largest of effects.

Although the age range included in these studies is broad when they are considered in total, individual studies have been more limited in regard to age. For example, most studies have examined a limited age range within childhood (e.g., Causey & Dubow, 1992; O'Brien et al., 1995) or within adolescence (e.g., Compas, Malcarne, & Fondacaro, 1988; Lee & Larson, 1996). Those studies that have included a wider age range have often been restricted by relatively small sample sizes that preclude analyses as a function of age (e.g., Gil et al., 1991; H. Lewis & Kliewer, 1996) or have failed to test age differences. Therefore, the relationship between coping and psychological adjustment has rarely been considered as a function of age or developmental level (see Chaffin, Wherry, & Dykman, 1997, for an exception). Many of these studies have included good representation of boys and girls, in some cases allowing for analyses of the correlates of coping as a function of gender. Samples have been limited with regard to ethnic or socioeconomic diversity, both within and across studies; the majority of studies have reported on samples that are exclusively or primarily Caucasian and of middle to upper socioeconomic status. Therefore, little is known about psychological correlates of coping as a function of ethnicity or socioeconomic status.

Type of Stressor

The association of psychological adjustment and coping has been examined in reference to a wide range of stressors. This includes actual stressors that children and adolescents have experienced, such as personal illness (Band & Weisz, 1990; Frank et al., 1997; Ried et al., 1994, 1995), pain (Gil et al., 1991, 1993; Manne et al., 1993; Sharpe et al., 1994; Spirito et al., 1994; Thomsen et al., 2000; Walker et al., 1997), parental or family conflict (O'Brien et al., 1995, 1997; Wadsworth & Compas, 2000), family economic strain (Wadsworth & Compas, 2000), parental divorce (Kliewer & Sandler, 1993), parental illness (Compas et al., 1996; Steele et al., 1997), peer stress (e.g., Causey & Dubow, 1992; Compas, Malcarne, & Fondacaro, 1988; Connor-Smith et al., in press), adoption (Smith & Brodzinsky, 1994), academic stress (e.g., Causey & Dubow, 1992; Compas, Malcarne, & Fondacaro, 1988), sexual abuse (Chaffin et al., 1997), natural disaster (Jeney-Gammon, Daugherty, Finch, Belter, & Foster, 1993), and missile bombardment (Weisenberg, Schwarzwald, Waysman, Solomon, & Klingman, 1993). Several studies also asked children to report their likely responses to hypothetical situations. In 20 studies, children or adolescents reported on their coping with an unspecified, self-selected stressor or reported how they cope "in general." The latter method is problematic, because it does not take into account contextual factors related to the stressor that may have affected how children coped or contextual effects on the association of their coping responses with psychological adjustment.

Relatively few studies have sampled the ways that children or adolescents cope with different types of stress to compare the association of coping with psychological adjustment across types of stress. For example, Causey and Dubow (1992) and Compas, Malcarne, & Fondacaro (1988) compared the association between internalizing and externalizing behavior problems and coping with academic stress and coping with interpersonal stress. Compas, Malcarne, & Fondacaro (1988) found stronger associations between behavior problems and coping with interpersonal stress than coping with academic stress, suggesting that the resolution of interpersonal stress may be more important in relation to behavioral adjustment. Causey and Dubow (1992) did not find consistent differences in correlations with adjustment as a function of coping with these two types of stress. More recently, Wadsworth and Compas (2000) examined the association of adolescents' coping with family conflict and family economic strain in relation to internalizing and externalizing problems. Primary control coping and secondary control coping were generally associated with lower levels of aggressive behavior problems and anxiety–depression symptoms in response to both types of stress. However, disengagement coping was related to more symptoms of aggression and anxiety–depression, but only for boys. Coping interacted with gender and type of stressor, in that for economic strain, primary control coping was negatively related to aggressive behavior problems for boys only and to anxiety–depression symptoms for girls only.

Research Designs and Data Analyses

As noted earlier, the majority of these studies have used cross-sectional research designs in which measures of coping and psychological correlates have been obtained at the same point in time. Many studies have reported simple bivariate correlations between scores on a measure of coping and scores on an index of psychological adjustment. In many instances, the number of correlations is large, with no control for familywise error rates; more rarely, a Bonferroni correction has been included to control for multiple analyses. Table 4 reports results as presented in the original paper; unless the use of a Bonferroni correction is noted, error rate was not controlled. Therefore, the significance level of the correlations reported in many studies may overestimate the number of significant associations between coping and psychological adjustment. Several studies have included multivariate analyses (typically linear multiple regression) in which several aspects of coping, along with other relevant variables such as age and gender, are examined as predictors of psychological adjustment. In some instances, these analyses have included interaction terms of coping and other variables that may moderate the association between coping and psychological adjustment. Multivariate analyses represent more stringent tests of the association of coping with adjustment, because they control for other important variables and test multiple main effects and their interactions.

Psychological Correlates

The psychological correlates that have been measured in these studies can be divided into the broad categories of internalizing and externalizing behavior–emotional problems and social or ac-

ademic competence. Our intention was to also include measures of physical health as correlates of coping (Seiffge-Krenke, 1990). However, we could not identify a sufficient body of research on coping and health status in children and adolescents. Illness and pain are frequently studied as the targets of coping efforts but rarely as correlates or "outcomes." Measures of psychological correlates have been obtained almost exclusively from self-reports of children and adolescents and from parental reports, and less often from direct observations of behavior and other sources. Because coping and psychological adjustment are often both assessed with self-report measures, the role of method variance must be considered in accounting for the association between these variables. Studies in which coping and adjustment are assessed through the reports of different informants (e.g., correlation of self-reports of coping with parental reports of adjustment) provide a more stringent test of the association between coping and psychological adjustment. Furthermore, some of the subtypes of coping that are reported (e.g., internalizing coping, externalizing coping, and aggressive coping) are potentially confounded with measures of internalizing and externalizing symptoms. Because of limitations in the factors described earlier, research in this area does not warrant a meta-analysis at this time. We provide a descriptive analysis of the research to date and suggest directions for further research that could lead to a more quantitative analysis in the future.

Findings

Because of the complexity of integrating findings from studies using different coping measures, we have grouped studies based on the broad categories of problem- and emotion-focused coping and engagement–disengagement coping. Three raters classified the scales in each of the studies as either problem focused or emotion focused and as representing either engagement coping or disengagement coping. Problem-focused coping strategies included problem solving, information seeking, and problem-focused support; emotion-focused coping included emotional expression, denial, and wishful thinking. Engagement coping included problem solving, emotional expression, and support seeking; disengagement coping included problem avoidance, cognitive avoidance, and social withdrawal. Interrater agreement rates exceeded 90%. This does not necessarily reflect the conceptualization of coping that was used by the authors of these studies, because in many cases coping strategies were presented only in terms of specific coping scales. We have organized the results of these studies on the basis of three primary broadband dependent variables: internalizing symptoms (e.g., symptoms of depression, anxiety, and somatic symptoms), externalizing problems (e.g., aggression and conduct problems), and competence (social and academic). These broadband categories were used because, similar to the variations in the subtypes of coping, there were too many specific types of internalizing and externalizing problems and of competence to examine these variables separately.

Internalizing Problems

Engagement coping. Twenty-five studies have reported associations between engagement coping and lower internalizing symptoms (Ayers, Sandler, West, & Roosa, 1990; Connor-Smith et al., in press; Ebata & Moos, 1991; Eisenberg et al., 1994; Gil et al., 1991, 1993; Hart, 1991; Herman & McHale, 1993; Herman-Stahl & Petersen, 1996; Herman-Stahl, Stemmler, & Petersen, 1995; Jeney-Gammon et al., 1993; Langrock et al., 2000; M. Lee & Larson, 1996; Lengua & Sandler, 1996; Lengua, Sandler, West, Wolchik, & Curran, 1999; Lewis & Kliewer, 1996; Lopez & Little, 1996; O'Brien et al., 1997; Ried et al., 1994, 1995; Sandler, Tein, & West, 1994; Spirito, Francis, Overholser, & Frank, 1996; Thomsen et al., 2000; Wadsworth & Compas, 2000; Walker et al., 1997). In contrast, 9 studies have reported an association between engagement coping and more internalizing symptoms (Creasy et al., 1995; Dumont & Provost, 1999; Ebata & Moos, 1991; Hart, 1991; Johnson & Kenkel, 1991; O'Brien et al., 1997; Sandler et al., 1994; Smith & Brodzinsky, 1994; Spirito et al., 1994). Eighty-four significant effects were reported in these studies for engagement coping and internalizing, and 149 nonsignificant effects were reported.

Problem-focused coping. Fewer studies could be clearly classified as measuring problem-focused coping. Of these, four studies reported an association between problem-focused coping and fewer internalizing symptoms (Compas, Malcarne, & Fodacaro, 1988; Hoffman, Levy-Shiff, Sohlberg, & Zarizki, 1991; Plancherel & Bolognini, 1995; Windle & Windle, 1996), and two studies reported an association between problem-focused coping and more symptoms (Hoffman et al., 1991; Plancherel & Bolognini, 1995). Eight significant effects could be calculated for problem-focused coping and internalizing problems, and 12 nonsignificant effects could be calculated.

Disengagement coping. Twenty-eight studies reported an association between disengagement coping and more internalizing symptoms (Chaffin et al., 1997; Chan, 1995; Connor-Smith et al., in press; Dumont & Provost, 1999; Ebata & Moos, 1991; Frank et al., 1997; Gil et al., 1991, 1993; Hart, 1991; Herman & McHale, 1993; Herman-Stahl & Petersen, 1996; Herman-Stahl et al., 1995; Jeney-Gammon et al., 1993; Johnson & Kenkel, 1991; H. B. Lee, Chan, & Yik, 1992; Lengua & Sandler, 1996; Lengua et al., 1999; H. Lewis & Kliewer, 1996; O'Brien et al., 1997; Ried et al., 1994, 1995; Sandler et al., 1994; Smith & Brodzinsky, 1994; Spirito et al., 1994, 1996; Steele et al., 1997; Wadsworth & Compas, 2000; Walker et al., 1997). Only two studies reported a relationship between disengagement coping and fewer problems (Ayers et al., 1990; O'Brien et al., 1995). Eighty-three significant effects were reported for disengagement coping and internalizing problems, and 101 nonsignificant effects were reported.

Emotion-focused coping. Similar to studies of problem-focused coping, relatively fewer studies were found that clearly measured emotion-focused coping. In all five studies, an association was found between the use of emotion-focused coping and more internalizing symptoms (Compas, Malcarne, & Fondacaro, 1988; Compas et al., 1996; Hoffman et al., 1991; Plancherel & Bolognini, 1995; Windle & Windle, 1996). Ten significant effects could be calculated between emotion-focused coping and internalizing problems, and 14 nonsignificant effects could be calculated.

Externalizing Problems

Engagement coping. Relatively fewer studies examined externalizing as compared with internalizing symptoms. Of those that measured engagement coping, 13 studies reported an association of engagement coping with fewer externalizing symptoms (Ayers et al., 1990; Connor-Smith et al., in press; Ebata & Moos, 1991;

Langrock et al., 2000; Lengua & Sandler, 1996; Lengua et al., 1999; O'Brien et al., 1997; Radovanovic, 1993; Wadsworth & Compas, 2000), whereas 2 studies reported an association with more symptoms (Creasey et al., 1995; Eisenberg, Fabes, Shepard, et al., 1997). In one study, the association between engagement coping and behavior problems differed in cross-sectional and time-lagged analyses, suggesting a more complex association than can be observed in cross-sectional analyses (Eisenberg, Fabes, Shepard, et al., 1997). Forty-three significant effects were reported between engagement coping and externalizing problems, and 42 nonsignificant effects were reported.

Problem-focused coping. Two studies reported an association of problem-focused coping with fewer externalizing symptoms (Compas, Malcarne, & Fondacaro, 1988; Windle & Windle, 1996), and one study reported an association with more symptoms (Hoffman et al., 1991). Seven significant effects could be calculated between problem-focused coping and externalizing problems, and nine nonsignificant effects could be calculated.

Disengagement coping. Findings were mixed with regard to the association of disengagement coping with externalizing problems. Three studies reported an association of disengagement coping with fewer externalizing symptoms (Ayers et al., 1990; Chaffin et al., 1997; O'Brien et al., 1997), and three studies reported a relationship with more problems (Connor-Smith et al., in press; Lengua & Sandler, 1996; Wadsworth & Compas, 2000). Lengua et al. (1999) found that avoidance coping predicted fewer child-reported conduct problems but more mother-reported conduct problems. Twenty-two significant effects could be calculated for disengagement coping, and 39 nonsignificant effects could be calculated.

Emotion-focused coping. Only three studies examined the association of emotion-focused coping with externalizing problems, and all reported a relationship of coping with more problems (Compas, Malcarne, & Fondacaro, 1988; Steele et al., 1999; Windle & Windle, 1996). Thirteen significant effects could be calculated for emotion-focused coping and externalizing problems, and nine nonsignificant effects could be calculated.

Social and Academic Competence

Engagement coping. Thirteen studies reported an association of engagement coping with higher competence (Ayers et al., 1990; Dumont & Provost, 1999; Ebata & Moos, 1991; Eisenberg et al., 1993; Eisenberg, Fabes, Minore, et al., 1994; Eisenberg, Fabes, Karbon, et al., 1996; Eisenberg, Fabes, Shepard, et al., 1997; Fabes & Eisenberg, 1992; Feldman et al., 1995; Kliewer & Sandler, 1993; Lengua et al., 1999; Ried et al., 1994, 1995). In contrast, only three studies reported an association of engagement coping with lower competence (Ebata & Moos, 1991; Fabes & Eisenberg, 1992; O'Brien et al., 1995). Fifty-four significant effects could be calculated between engagement coping and competence, and 88 nonsignificant effects could be calculated.

Problem-focused coping. Four studies examined the association of problem-focused coping with competence, and all reported a positive association between coping and higher competence (Causey & Dubow, 1992; Dumont & Provost, 1999; Garber & Little, 1999; Windle & Windle, 1996). Six significant effects could be calculated between problem-focused coping and competence, and eight nonsignificant effects could be calculated.

Disengagement coping. Eight studies reported an association of disengagement with lower competence (Causey & Dubow, 1992; Dumont & Provost, 1999; Eisenberg et al., 1993; Garber & Little, 1999; Ried et al., 1994, 1995; Smith & Brodzinsky, 1994; Stern & Alvarez, 1992); whereas three studies reported an association of disengagement with higher competence (Eisenberg et al., 1993; Eisenberg, Fabes, Minore, et al., 1994; Kliewer & Sandler, 1993). Thirty-one significant effects could be calculated between disengagement coping and competence, and 50 nonsignificant effects could be calculated.

Emotion-focused coping. Only one study reported on the relationship between emotion-focused coping and competence, and an association was found between more coping and poorer competence (Band & Weisz, 1990). Two significant and two nonsignificant effects could be calculated between emotion-focused coping and competence.

Integration and Analysis of Findings

Several consistent patterns of findings are reflected in Table 4. First, for those effects that were statistically significant, the majority of studies that examined engagement coping and problem-focused coping reported them to be associated with better psychological adjustment. This association was found both in simple correlations between engagement coping and symptoms or competence and in multiple regression analyses in which other types of coping and control variables were entered. Furthermore, this association was found in samples of children as well as adolescents and was significant both for internalizing and externalizing behavior problems and for measures of social competence. A small number of studies suggest that this association is independent of the effects of method variance; that is, the association holds in cross-informant analyses in which child–adolescent self-reports are used to assess coping and psychological adjustment is measured through another informant, most often parents (e.g., Compas et al., 1988; Connor-Smith et al., in press; O'Brien et al., 1997).

The specific subtypes of engagement and problem-focused coping that have been most consistently associated with better adjustment include problem solving, cognitive restructuring, and positive reappraisal of the stressor. These coping strategies are characterized by a careful analysis of the stressful situation, selective attention to positive aspects of the situation, and generating alternative thoughts that are positive and hopeful. Unfortunately, a number of studies failed to provide more detailed breakdowns of these broader dimensions of coping and only reported an association between "active" coping or problem-focused coping and better adjustment (e.g., Compas, Malcarne, & Fondacaro, 1988). The specific strategies used by children–adolescents in these studies are unclear.

Although it is tempting to infer that the use of engagement or problem-focused coping strategies leads to more successful adaptation to stress, this interpretation is tautological to a certain extent. That is, these findings may simply indicate that children and adolescents who are more socially competent, who are less anxious and depressed, and who exhibit fewer conduct and disruptive behavior problems are better able to generate solutions to problems and to maintain a positive outlook when faced with stress. Prospective research in which the association of coping with psychological adjustment is tested after controlling for prior adjustment would provide clearer data on this association. Similarly, studies in

which the use of engagement or problem-focused coping is experimentally increased or decreased under controlled conditions would offer the strongest test of this association.

There are a number of significant findings that run counter to this general pattern, however. Nine studies of engagement coping and two studies of problem-focused coping reported an association with more internalizing symptoms; two studies of engagement coping and one of problem-focused coping reported associations with more externalizing problems; and three studies reported an association between engagement coping and lower competence. The association of engagement or problem-focused coping with poorer adjustment appears to be related to stressful events or circumstances that are subjectively or objectively uncontrollable. For example, O'Brien and colleagues (1995, 1997) found that problem-focused coping was associated with poorer adjustment for children and adolescents coping with parental conflict, a stressor over which they have relatively little objective control. These findings highlight the importance of taking the context of coping into account, because they suggest that coping that is oriented toward engagement with the stressor or efforts to resolve the source of stress may be ineffective in circumstances that are objectively or subjectively beyond the child or adolescent's control.

A significant association of both disengagement coping and emotion-focused coping with poorer psychological adjustment was reported in the majority of studies. This association was significant for children and adolescents and across internalizing and externalizing problems and social competence. Evidence for this effect across informants is also strong (Chaffin et al., 1997; Compas, Malcarne, & Fondacaro, 1988; Connor-Smith et al., in press; Creasey et al., 1995; Hoffman et al., 1991; O'Brien et al., 1997). Coping strategies that are associated with poorer adjustment include cognitive and behavioral avoidance, social withdrawal, resigned acceptance, emotional ventilation or discharge, wishful thinking, and self-blame or self-criticism. Although it is frequently reported that emotion-focused coping is related to poorer adjustment, these findings suggest that focusing on one's emotions is not the problematic element in these coping strategies. Rather, coping responses that involve disengagement with the stressor or one's emotions, negative cognitions about the self and the situation, and unregulated release or ventilation of emotions are most consistently associated with more symptoms and lower competence. These responses may reflect inadequate skills in modulating and regulating the experience and release of negative emotions rather than focusing on emotions per se. However, these responses also blur the distinction between coping and symptoms of psychopathology, and their association with higher symptom levels may be the result of confounds in measures of emotion-focused coping and symptoms. In contrast, Connor-Smith et al. (in press) found that emotional modulation (e.g., I keep my feelings under control when I have to, then let them out when they won't make things worse) and emotional expression (e.g., I let someone or something know how I feel: parent, teacher, friend, God, brother/sister, stuffed animal, pet) scales loaded on the primary control coping factor of the RSQ (along with problem solving). This factor was related to fewer internalizing and externalizing symptoms in four studies (Connor-Smith et al., in press; Langrock et al., 2000; Thomsen et al., 2000; Wadsworth & Compas, 2000), indicating that efforts to manage one's emotions can be associated with fewer symptoms of psychopathology.

Eight studies reported significant associations between disengagement coping and better adjustment. In four of these studies, children and adolescents were reporting on coping with relatively uncontrollable stressors: parental conflict and discord (O'Brien et al., 1995, 1997; Weisenberg et al., 1993) and sexual abuse (Chaffin et al., 1997). These patterns complement the finding that problem-focused coping is associated with better adjustment in response to controllable stressors, and they are supportive of the hypothesis that coping responses are most efficacious if they match the controllability of the stressor (e.g., Compas, Malcarne, & Fondacaro, 1988; Forsythe & Compas, 1987; Osowiecki & Compas, 1998, 1999).

The size of the effects in these studies varied widely, both in the magnitude of simple correlations between coping and symptoms or adjustment and in the magnitude of regression coefficients in multivariate analyses in which coping was used along with other variables as a predictor of symptoms or adjustment. Correlation coefficients were generally small to medium in magnitude, with most falling in the range from .10 to .40. Similarly, standardized regression coefficients typically ranged from .10 to .60. Because of many of the problems highlighted in the earlier sections on the conceptualization and measurement of coping, it is not appropriate to undertake a meta-analysis of the findings on coping and symptoms or adjustment at this time. That is, variabilities in measures, age of samples, and types of stressors all contribute to heterogeneity of the findings. However, in general, the association between coping and symptoms of psychopathology is small to moderate in magnitude for all of the subtypes of coping that have been examined. Moreover, nonsignificant effects (i.e., correlation coefficients, regression weights, and between-groups comparisons) outnumber significant effects for almost every category of comparison. Therefore, not only are the effects that reached significance typically small in magnitude, they are tempered by a large number of nonsignificant effects. The large number of nonsignificant effects is attributable to a great degree to the relatively small sample sizes in many studies (i.e., samples of less than 100). As noted earlier, in these studies small effects (e.g., correlation coefficients less than .22) will not reach significance at the .05 level.

In spite of the accumulation of a large number of studies, research on the association of coping and adjustment has been limited by several factors. First, most studies have been cross sectional and limited to their ability to determine the direction of the association between coping and adjustment. Prospective studies are sorely needed in which initial symptoms are controlled and coping is used to account for changes in symptoms or competence over time (see Eisenberg, Fabes, Shepard, et al., 1997, for a recent example). However, the time frame used in prospective studies will be important to consider; the effects of coping with a single stressful episode may be relatively short lived unless the stressor is chronic or recurrent. Second, most studies have relied on the self-reports of children and adolescents in terms of both coping and adjustment, raising the possibility that common method variance accounts for at least part of this association. Although several studies have shown that the association of coping and adjustment holds across informants (e.g., Connor-Smith et al., in press; Eisenberg, Fabes, Guthrie, et al., 1996), more research involving multiple informants is needed. Third, in many studies only a small portion of correlations achieved statistical significance out of the relatively large number of correlations that were calculated. Familywise error rates in multiple correlations were adjusted in a small

portion of studies. Fourth, many of the studies have used children's or adolescents' reports of hypothetical stressors or the ways that they cope with stress in general, prohibiting researchers from evaluating the role of contextual factors in the correlates of coping. Clear specification of the nature of the stressor or domain of stress is important in understanding the context in which coping efforts are enacted. Fifth, previous studies have been limited to primarily Caucasian samples of middle socioeconomic status and have not provided information on coping and adjustment in more diverse populations. Sixth, all of the studies have relied on measures of symptoms of internalizing and externalizing symptoms; no studies have reported on coping among children and adolescents who have received a diagnosis based on criteria of the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM–IV;* American Psychiatric Association, 1994). Increased emphasis on the use of *DSM–IV* criteria in research on child and adolescent psychopathology would suggest that, in addition to studying the relationship between coping and quantitative measures of symptoms, it will be important in the future to examine the relationship between coping and specific diagnoses.

Conclusion and Future Directions

A large body of theory and research has accumulated on the nature, characteristics, and correlates of coping during childhood and adolescence. Progress has been made in the conceptualization of coping, measures have been developed that are suited to children and adolescents, and a large body of findings on the correlates of coping is now available. Several general impressions can be drawn from this literature, and a number of important issues now require further research.

Current Findings

Coping is multidimensional. Recent advances in the conceptualization of coping in childhood and adolescence have emphasized the complex, multidimensional structure of coping. Numerous studies have demonstrated that relatively simple, one-dimensional models of coping do not adequately differentiate among the various types and functions of coping responses (e.g., Ayers et al., 1996; Connor-Smith et al., in press; Walker et al., 1997). Specifically, models that have included only the distinction between problem- and emotion-focused coping and those that have included only approach and avoidance coping do not reflect the structure of coping in young people. These widely used dimensions are at best insufficient to capture the diversity and complexity of the ways that children and adolescents cope with stress, and at worst these dimensions can disguise important differences in the nature and function of coping in young people. Both the conceptualization and measurement of coping in children and adolescents have now advanced to the point at which studies that distinguish coping responses only on one of these broad dimensions or fail to place coping subtypes within a theoretical framework are unlikely to make a significant contribution to the literature. Theoretical models of coping have highlighted the importance of multiple broad dimensions and specific categories or subtypes of coping that differ in their form as well as their function.

Recent findings suggest that coping can be conceptualized within a hierarchical model of responses to stress that includes both first-order and higher order dimensions (e.g., Connor-Smith et al., in press). Some convergence has been achieved in the identification of the dimensions that provide the most widely representative and applicable model of coping during late childhood and adolescence; however, the dimensions that are most appropriate to reflect coping in early childhood are still undetermined. We have proposed and described preliminary support for a model in which stress responses are distinguished as voluntary coping or involuntary responses, and both voluntary coping and involuntary responses are further distinguished on the dimension of engagement versus disengagement (Connor-Smith et al., in press). Furthermore, results of confirmatory factor analyses suggest that three categories may warrant additional analysis (Ayers et al., 1996; Connor-Smith et al., in press; Walker et al., 1997). The first involves active coping efforts that are intended to achieve some degree of personal control over the stressful aspects of the environment and one's emotions. This factor has been labeled active coping by Ayers et al. (1996) and Walker et al. (1997), and we have used the label of primary control coping (Connor-Smith et al., in press). The second dimension involves coping efforts to adapt to the situation, primarily through cognitive methods of reframing, acceptance, or distraction through positive thoughts or activities. This factor has been labeled accommodative coping (Walker et al., 1997), distraction (Ayers et al., 1996), or secondary control coping (Connor-Smith et al., in press). A third dimension involves coping responses that attempt to avoid or disengage from the stressor or one's emotions, and this has been labeled avoidance (Ayers et al., 1996), passive coping (Walker et al., 1997), or disengagement coping (Connor-Smith et al., in press). Although there is some degree of similarity across these three studies, there are also notable differences in the specific subscales that loaded onto these factors, in part because the subscales on the three measures used in these studies were different. Further work on identifying robust and theoretically meaningful dimensions that characterize coping during childhood and adolescence is needed.

Progress has been made in establishing the initial reliability and validity of some measures of coping in older children and adolescents. Some initial progress has been made in the assessment of the ways that older children and adolescents cope with stress; however, progress in the measurement of coping in younger children has lagged behind. Several self-report checklists have been developed that possess adequate reliability, and some initial data suggest that adolescents', and perhaps children's, self-reports are valid representations of the ways that they cope with stress. Reliability is clearly stronger for broader scales that include larger numbers of items than for specific scales that are composed of relatively few items. Validity has been established through examination of the convergent validity of some scales with other measures and through comparison of parent and child–adolescent reports.

Less progress has been made in the development and evaluation of structured and semistructured interviews to assess coping in young people. Similarly, relatively little effort has gone into the development of measures of coping that involve reports of other informants (parents, teachers, or peers) or direct observations made by trained observers (see Eisenberg, Fabes, Nyman, et al., 1994, for an example of the use of multiple sources of information). It is essential that measurement expand beyond the use of self-reports to provide other perspectives on children's coping efforts. Progress in measurement development will depend on the use of comprehensive theoretical models of coping to guide the

structure and validation of measures. As a first step, it will be important to examine the reports of parents, teachers, observers, and children separately, because each informant may have unique information to provide on the characteristics of child–adolescent coping. Combining multiple informants into a single index may cloud important differences attributable to cross-situational differences in coping or in the samples of coping responses to which different informants have access. Once cross-informant reports are better understood, it will be important for subsequent research to test latent variable models of child and adolescent coping involving the integration of multiple informants.

Coping is associated with concurrent psychological adjustment and psychological symptoms. Evidence from more than 60 studies suggests that coping matters in the psychological adjustment of children and adolescents exposed to stress. The way that children and adolescents cope with stress in their lives is an important correlate of psychological adjustment and symptoms of both internalizing and externalizing syndromes of psychopathology. At the most general level, problem-focused and engagement coping have been found to be associated with better adjustment, whereas emotion-focused coping and disengagement coping have been found to be related to poorer adjustment. These general patterns have been qualified, however, by differences as a function of the characteristics of stress and the specific types of coping used. Once again, it appears that the broad categories of coping lack sufficient specificity. This is particularly important with regard to subtypes of coping that have been included in the general category of emotion-focused coping, in which some types of emotional regulation are clearly associated with better adjustment and others are associated with poorer adjustment. Furthermore, the large number of nonsignificant effects, particularly in studies with small samples, suggests that the association between coping and symptoms–competence is small in magnitude.

Although there is evidence of an association between coping and concurrent symptoms of distress and psychopathology, the causal role of coping in adjustment is much less clear. Prospective studies have been rare, and intervention studies have typically failed to analyze the role of changes in coping as a mediator of changes in symptoms of distress and psychopathology. Therefore, much of the important research on the association between coping and psychological adjustment and psychopathology is yet to be done.

Directions for Future Research

In spite of the progress that has been achieved in our understanding of coping in young people, a number of issues require continued investigation. These are reflected in several goals for future research.

There is a need to increase consensus in the conceptualization of coping in childhood and adolescence. Although there are clear benefits from the divergent thinking that comes from the comparison of different perspectives on any psychological phenomenon, research on coping during childhood and adolescence would benefit greatly from consensus on some of the fundamental aspects of how coping in young people is conceptualized and defined. A number of recent efforts have moved the field in that direction (Eisenberg, Fabes, & Guthrie, 1997; Rudolph et al., 1995; Skinner, 1995). We have offered a conceptualization that draws on these other definitions and places coping in the broader context of stress responses. The continued integration of these perspectives will contribute to greater clarity in how researchers approach the study of coping in childhood and adolescence.

There is a need for increased standardization in the measurement of coping in childhood and adolescence. A natural consequence of increased consensus regarding the nature of coping in young people should be greater standardization in measurement. Research in the field will now benefit greatly from standardization in the measurement of coping across studies. The increasingly large number of idiosyncratic measures developed for specific studies has interfered with comparison and generalizability across studies and the integration and synthesis of findings. These problems were evident in attempts to draw clear conclusions regarding basic issues concerning age and coping. The use of similar measures with different populations of children and youth who have been exposed to different types of stress will increase our understanding of the ways that individual differences and contextual factors influence how children and adolescents cope and the effectiveness of their coping efforts. We have highlighted three measures that show promise, both in terms of their conceptual foundations and in terms of their psychometric properties (Ayers et al., 1996; Connor-Smith et al., in press; Walker et al., 1997). Future research would do well to avoid open-ended explorations of measures in coping that have not been developed from a clear theoretical base.

Researchers need to take development seriously. Continued testing of theory-based models of coping is needed. These models need to be sensitive to developmental changes in cognitive processes, social relationships, and development in brain, central nervous system, and neuroendocrine function. With a few rare exceptions (e.g., Band & Weisz, 1988), these basic developmental processes have not been measured carefully in research on coping. Examples of areas of research that are needed include acquisition of skills to regulate emotions in early childhood, emergence of metacognitive skills in late childhood, changes in parent–child and peer relationships during late childhood and adolescence, and changes in hormonal processes in adolescence. These developmental changes may affect the resources that are available for coping and the types of coping responses that are socially sanctioned, and they may alter the effects of the same coping response emitted at different points in development. Chronological age is simply inadequate as a marker of these complex processes.

Coping research needs to be integrated with research on the biological bases of stress reactivity and recovery. Research on temperament and stress reactivity has established clear and pronounced differences in patterns of automatized and involuntary responses to stress. Individual differences in inhibition, attentional focus, and other aspects of temperamental style have significant implications for how children and adolescents learn to cope and the efficacy of the coping strategies that they use. For example, the challenges in coping with stress that face a child with a highly inhibited temperament may be very different from those facing an uninhibited child. Furthermore, the effectiveness of certain coping strategies may be modified by a child's temperamental style such that a strategy that is effective for one child may not be effective for a child with a different temperament. That is, just as Thomas, Chess, and Birch (1968) described a goodness of fit between a child's temperament and the caregiving environment, there may be a goodness of fit between temperament and coping responses as well (Compas, 1987). The relationship between coping and tem-

perament needs to be examined at different points in development, because these associations may change as other aspects of development unfold. Similarly, coping research needs to be integrated with research on reactivity and recovery from stress that is influenced by the sympathetic and parasympathetic arms of the autonomic nervous system (e.g., Eisenberg et al., 1995).

Researchers need to take social context seriously. The need to better understand individual-differences factors that can influence coping is balanced by the need to pay closer attention to the social context in which children encounter and try to cope with stress. This includes both the broad social and economic contexts in which children live and the characteristics of stressful events and conditions with which they are coping. The research base to date has been confined almost exclusively to Caucasian children of middle socioeconomic status. The types of coping responses that are used by and are effective for children of more diverse backgrounds and who live in other types of social environments are not known. Furthermore, possible interactions between individual differences (e.g., temperament) and social context represent an important and exciting avenue for future research.

Both naturalistic and laboratory research are needed. The need to understand the social context of coping will be accomplished through research conducted in children's natural social environments. However, naturalistic research needs to be complemented by controlled studies in laboratory contexts in which important aspects of stressful situations can be controlled, and both volitional and automatic responses can be measured. Laboratory research on coping diminished after the formulation of Lazarus and Folkman's (1984) process model of coping. However, automatic processes such as attentional bias to threat and physiological reactivity and recovery can best be examined in controlled settings (e.g., Vasey et al., 1996). Certain aspects of the coping process can be modeled in the laboratory, allowing for much clearer causal inferences about factors that contribute to coping and the effects of coping on emotions and physiological responses. Parallel questions can be addressed in both natural and laboratory settings, allowing for tests of convergence in these two important types of evidence.

More rigorous research is needed on the relationship of coping with psychological adjustment and psychopathology. Much of the important research on the association of coping with psychological adjustment and psychopathology remains to be done. Additional cross-sectional studies will be valuable only to the extent that they shed light on new populations or new types of stressful situations that have not received attention in previous research. The primary emphasis of research on the correlates and consequences of coping should now shift to the use of prospective designs in which changes in both coping and indicators of adjustment or pathology are measured over time. Prospective designs can begin to disentangle the direction of effects between coping and adjustment or maladjustment. Furthermore, time cannot be treated as a passive variable in prospective research, because both the nature of the stressor and the developmental capacities of the child may change over the course of the study, depending on the time frame that is selected. Careful attention to these factors should help clarify the role of coping responses in increasing or decreasing symptoms as well as provide important information on the coping process. Moreover, previous research has relied on checklists to measure symptoms of psychopathology; this approach needs to be complemented by studies in which structured diagnostic interviews are used to assess *DSM–IV* diagnoses (American Psychiatric Association, 1994) so as to place coping research within the mainstream of much of the current research on psychopathology in childhood and adolescence (e.g., Biedel, Turner, & Morris, 1999).

Increased research is needed on the association of coping with physical health and illness. Research with adults has clearly established that stress exerts effects on both psychological and biological processes and that coping is an important mediator and moderator of the impact of stress on physical health and illness (e.g., Cohen & Herbert, 1996; Cohen & Williamson, 1991). Research with adults and infants has also provided provocative evidence for the role of coping or self-regulation in biological outcomes of stress. A high priority for future research is the role coping and responses to stress play in childhood and adolescence in the regulation or dysregulation of biological processes and, ultimately, health status and the onset and progression of illness. Research with children and adolescents has lagged significantly behind adult research in this area, and it represents a high priority for future research.

Basic research on child–adolescent coping needs to be linked with intervention research. Finally, there is a critical need for research on psychosocial interventions to both provide controlled tests of the role of coping in adjustment and psychopathology and document the importance of coping skills in the prevention as well as treatment of psychopathology. The link between basic research and intervention research promises to be fruitful in both directions. Findings from correlational research will be greatly enhanced by the types of experimental data that can be obtained from randomized clinical trials in which interventions that change coping strategies are compared with relevant controls. Similarly, the emerging database on the nature and correlates of coping in childhood and adolescence should inform the development and refinement of interventions designed to enhance the ways in which young people cope with stress in their lives.

References

Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin, 101,* 213–232.

Affleck, G., Tennen, H., Urrows, S., & Higgins, P. (1994). Person and contextual features of daily stress reactivity: Individual differences in relations of undesirable daily events with mood disturbance and chronic pain intensity. *Journal of Personality and Social Psychology, 66,* 329–340.

Allen, S., & Hiebert, B. (1991). Stress and coping in adolescents. *Canadian Journal of Counselling, 25,* 19–32.

Altshuler, J. L., Genevro, J. L., Ruble, D. N., & Bornstein, M. H. (1995). Children's knowledge and use of coping strategies during hospitalization for elective surgery. *Journal of Applied Developmental Psychology, 16,* 53–76.

Altshuler, J. L., & Ruble, D. N. (1989). Developmental changes in children's awareness of strategies for coping with uncontrollable stress. *Child Development, 60,* 1337–1349.

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Austin, J. K., Patterson, J. M., & Huberty, T. J. (1991). Development of the Coping Health Inventory for Children. *Journal of Pediatric Nursing, 6,* 166–174.

Ayers, T. S., Sandler, I. N., & Twohey, J. (1998). Conceptualization and

measurement of coping in children and adolescents. In T. H. Ollendick & R. J. Prinz (Eds.), *Advances in clinical child psychology* (Vol. 20, pp. 243–301). New York: Plenum.

Ayers, T. S., Sandler, I. N., West, S. G., & Roosa, M. W. (1990, August). *Assessment of children's coping behaviors: Testing alternative models of coping.* Poster presented at the 98th Annual Convention of the American Psychological Association, Boston, MA.

Ayers, T. S., Sandler, I. N., West, S. G., & Roosa, M. W. (1996). A dispositional and situational assessment of children's coping: Testing alternative models of coping. *Journal of Personality, 64,* 923–958.

Bachanas, P. J., & Blount, R. L. (1996). The Behavioral Approach-Avoidance and Distress Scale: An investigation of reliability and validity during painful medical procedures. *Journal of Pediatric Psychology, 21,* 671–681.

Band, E. B. (1990). Children's coping with diabetes: Understanding the role of cognitive development. *Journal of Pediatric Psychology, 15,* 27–41.

Band, E., & Weisz, J. (1988). How to feel better when it feels bad: Children's perspectives on coping with everyday stress. *Developmental Psychology, 24,* 247–253.

Band, E., & Weisz, J. (1990). Developmental differences in primary and secondary control: Coping and adjustment to juvenile diabetes. *Journal of Clinical Child Psychology, 19,* 150–158.

Bargh, J. A. (1997). The automaticity of everyday life. In R. S. Wyer (Ed.), *The automaticity of everyday life: Advances in social cognition* (Vol. 10, pp. 1–61). Mahwah, NJ: Erlbaum.

Barr, R. G., Young, S. N., Wright, J. H., Gravel, R., & Alkawaf, R. (1999). Differential calming responses to sucrose taste in crying infants with and without colic. *Pediatrics, 103,* 68–75.

Bernzweig, J., Eisenberg, N., & Fabes, R. A. (1993). Children's coping in self- and other-relevant contexts. *Journal of Experimental Child Psychology, 55,* 208–226.

Biedel, D. C., Turner, S. M., & Morris, T. L. (1999). Psychopathology of childhood social phobia. *Journal of the American Academy of Child and Adolescent Psychiatry, 38,* 643–650.

Blass, E. M., & Ciaramitaro, V. (1994). A new look at some old mechanisms in human newborns: Taste and tactile determinants of state, affect, and action. *Monographs of the Society for Research in Child Development, 59*(1, Serial No. 244).

Boyce, W. T., Barr, R. G., & Zeltzer, L. K. (1992). Temperament and the psychobiology of childhood stress. *Pediatrics, 90,* 483–486.

Brandtstaedter, J., & Renner, G. (1990). Tenacious goal pursuit and flexible goal adjustment: Explication and age-related analysis of assimilative and accommodative strategies of coping. *Psychology and Aging, 5,* 58–67.

Brodzinsky, D. M., Elias, M. J., Steiger, C., Simon, J., Gill, M., & Hitt, J. C. (1992). Coping Scale for Children and Youth: Scale development and validation. *Journal of Applied Developmental Psychology, 13,* 195–214.

Cannon, W. (1933). *The wisdom of the body.* New York: Norton.

Cannon, W. (1934). The significance of emotional level. *Scientific Monthly, 38,* 101–110.

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

Causey, D., & Dubow, E. (1992). Development of a self-report coping measure for elementary school children. *Journal of Clinical Child Psychology, 21,* 47–59.

Chaffin, M., Wherry, J. N., & Dykman, R. (1997). School age children's coping with sexual abuse: Abuse stresses and symptoms associated with four coping strategies. *Child Abuse and Neglect, 21,* 227–240.

Chan, D. W. (1995). Depressive symptoms and coping strategies among Chinese adolescents in Hong Kong. *Journal of Youth and Adolescence, 24,* 267–279.

Clarke, G. N., Hawkins, W., Murphy, M., Sheeber, L. B., Lewinsohn, P. M., & Seeley, J. R. (1995). Targeted prevention of unipolar depressive disorder in an at-risk sample of high school adolescents: A randomized trial of a group cognitive intervention. *Journal of the American Academy of Child and Adolescent Psychiatry, 34,* 312–321.

Cohen, S., & Herbert, T. B. (1996). Health psychology: Psychological factors and physical disease from the perspective of human psychoneuroimmunology. *Annual Review of Psychology, 47,* 113–142.

Cohen, S., & Williamson, G. M. (1991). Stress and infectious disease in humans. *Psychological Bulletin, 109,* 5–24.

Compas, B. E. (1987). Coping with stress during childhood and adolescence. *Psychological Bulletin, 101,* 393–403.

Compas, B. E. (1998). An agenda for coping research and theory: Basic and applied developmental issues. *International Journal of Behavioral Development, 22,* 231–237.

Compas, B. E., Connor, J. K., Osowiecki, D., & Welch, A. (1997). Effortful and involuntary responses to stress: Implications for coping with chronic stress. In B. H. Gottlieb (Ed.), *Coping with chronic stress* (pp. 105–130). New York: Plenum.

Compas, B. E., Connor, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. (1999). Getting specific about coping: Effortful and involuntary responses to stress in development. In M. Lewis & D. Ramsey (Eds.), *Soothing and stress* (pp. 229–256). New York: Cambridge University Press.

Compas, B. E., Forsythe, C. J., & Wagner, B. M. (1988). Consistency and variability in causal attributions and coping with stress. *Cognitive Therapy and Research, 12,* 305–320.

Compas, B. E., & Harding Thomsen, A. (1998). Competence across the lifespan: Lessons from coping with cancer. In D. Pushkar, W. Bukowski, A. Schwartzman, D. Stack, & D. White (Eds.), *Improving competence across the lifespan: Building interventions based on theory and research* (pp. 9–26). New York: Plenum.

Compas, B. E., Malcarne, V. L., & Fondacaro, K. M. (1988). Coping with stressful events in older children and young adolescents. *Journal of Consulting and Clinical Psychology, 56,* 405–411.

Compas, B. E., Worsham, N., Ey, S., & Howell, D. C. (1996). When mom or dad has cancer: II. Coping, cognitive appraisals, and psychological distress in children of cancer patients. *Health Psychology, 15,* 167–175.

Connor-Smith, J. K., Compas, B. E., Wadsworth, M. E., Thomsen, A. H., & Saltzman, H. (in press). Responses to stress in adolescence: Measurement of coping and involuntary stress responses. *Journal of Consulting and Clinical Psychology.*

Coyne, J. C., & Gottlieb, B. J. (1996). The mismeasure of coping by checklist. *Journal of Personality, 64,* 959–991.

Creasy, G. C., Mitts, N., & Cantanzaro, S. (1995). Associations among daily hassles, coping, and behavior problems in nonreferred kindergartners. *Journal of Clinical Child Psychology, 24,* 311–319.

Daleiden, E. L., & Vasey, M. W. (1997). An information-processing perspective on childhood anxiety. *Clinical Psychology Review, 17,* 407–429.

Dise-Lewis, J. E. (1988). The Life Events and Coping Inventory: An assessment of stress in children. *Psychosomatic Medicine, 50,* 484–499.

Dumont, M., & Provost, M. A. (1999). Resilience in adolescents: Protective role of social support, coping strategies, self-esteem, and social activities on experience of stress and depression. *Journal of Youth and Adolescence, 28,* 343–363.

Dusek, J. B., & Danko, M. (1994). Adolescent coping styles and perceptions of parental child rearing. *Journal of Adolescent Research, 9,* 412–426.

Ebata, A., & Moos, R. (1991). Coping and adjustment in distressed and healthy adolescents. *Journal of Applied Developmental Psychology, 12,* 33–54.

Edelbrock, C., & Costello, A. J. (1988). Convergence between statistically derived behavior problem syndromes and child psychiatric diagnoses. *Journal of Abnormal Child Psychology, 16,* 219–231.

Eisenberg, N., Fabes, R. A., Bernzsweig, J., Karbon, M., Poulin, R., &

Hanish, L. (1993). The relations of emotionality and regulation to preschoolers' social skills and sociometric status. *Child Development, 64,* 1418–1438.

Eisenberg, N., Fabes, R. A., & Guthrie, I. (1997). Coping with stress: The roles of regulation and development. In J. N. Sandler & S. A. Wolchik (Eds.), *Handbook of children's coping with common stressors: Linking theory, research, and intervention* (pp. 41–70). New York: Plenum.

Eisenberg, N., Fabes, R. A., Guthrie, I. K., Murphy, B. C., Maszk, P., Holmgren, R., & Suh, K. (1996). The relations of regulation and emotionality to problem behavior in elementary school children. *Development and Psychopathology, 8,* 141–162.

Eisenberg, N., Fabes, R. A., Guthrie, I. K., & Reiser, M. (2000). Dispositional emotionality and regulation: Their role in predicting quality of social functioning. *Journal of Personality and Social Psychology, 78,* 136–157.

Eisenberg, N., Fabes, R. A., Karbon, M., Murphy, B. C., Wosinski, M., Polazzi, L., Carlo, G., & Juhnke, C. (1996). The relations of children's dispositional prosocial behavior to emotionality, regulation, and social functioning. *Child Development, 67,* 974–992.

Eisenberg, N., Fabes, R. A., Minore, D., Mathy, R., Hanish, L., & Brown, T. (1994). Children's enacted interpersonal strategies: Their relations to social behavior and negative emotionality. *Merrill-Palmer Quarterly, 40,* 212–232.

Eisenberg, N., Fabes, R. A., Murphy, B., Maszk, P., Smith, M., & Karbon, M. (1995). The role of emotionality and regulation in children's social functioning: A longitudinal study. *Child Development, 66,* 1360–1364.

Eisenberg, N., Fabes, R. A., Nyman, M., Bernzweig, J., & Pinnuelas, A. (1994). The relations of emotionality and regulation to young children's anger-related reactions. *Child Development, 65,* 109–128.

Eisenberg, N., Fabes, R. A., Shepard, S. A., Murphy, B. C., Guthrie, I. K., Jones, S., Friedman, J., Poulin, R., & Maszk, P. (1997). Contemporaneous and longitudinal prediction of children's social functioning from regulation and emotionality. *Child Development, 68,* 642–664.

Eisenberg, N., Guthrie, I. K., Fabes, R. A., Reiser, M., Murphy, B. C., Holmgren, R., Maszk, P., & Losoya, S. (1997). The relations of regulation of emotionality to resiliency and competent social functioning in elementary school children. *Child Development, 68,* 295–311.

Fabes, R. A., & Eisenberg, N. (1992). Young children's coping with interpersonal anger. *Child Development, 63,* 116–128.

Fabes, R. A., Eisenberg, N., Karbon, M., Troyer, D., & Switzer, G. (1994). The relations of children's emotion regulation to their vicarious emotional responses and comforting behaviors. *Child Development, 65,* 1678–1693.

Fallon, T., & Schwab-Stone, M. (1994). Determinants of reliability in psychiatric surveys of children aged 6–22. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 35,* 1391–1408.

Feldman, S. S., Fisher, L., Ransom, D. C., & Dimiceli, S. (1995). Is "what is good for the goose good for the gander?" Sex differences in relations between adolescent coping and adult adaptation. *Journal of Research on Adolescence, 5,* 333–359.

Fields, L., & Prinz, R. J. (1997). Coping and adjustment during childhood and adolescence. *Clinical Psychology Review, 17,* 937–976.

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

Forsythe, C. J., & Compas, B. E. (1987). Interactions of coping and perceptions of control: Testing the goodness of fit hypothesis. *Cognitive Therapy and Research, 11,* 473–485.

Frank, N. C., Blount, R. L., & Brown, R. T. (1997). Attributions, coping and adjustment in children with cancer. *Journal of Pediatric Psychology, 22,* 563–576.

Frydenberg, E., & Lewis, R. (1991). Adolescent coping: The different ways in which boys and girls cope. *Journal of Adolescence, 14,* 119–133.

Gamble, W. (1994). Perceptions of controllability and other stressor event characteristics as determinants of coping among young adolescents and young adults. *Journal of Youth and Adolescence, 23,* 65–84.

Gamble, W., & McHale, S. (1989). Coping with stress in sibling relationships: A comparison of children with disabled and non-disabled siblings. *Journal of Applied Developmental Psychology, 10,* 353–373.

Garber, J., & Little, S. (1999). Predictors of competence among offspring of depressed mothers. *Journal of Adolescent Research, 14,* 44–71.

Gil, K. M., Thompson, R. J., Keith, B., Tota-Faucett, M., Noll, S., & Kinney, T. (1993). Sickle cell disease pain in children and adolescents: Change in pain frequency and coping strategies over time. *Journal of Pediatric Psychology, 18,* 621–637.

Gil, K. M., Williams, D. A., Thompson, R. J., & Kinney, T. R. (1991). Sickle cell disease in children and adolescents: The relation of child and parent pain coping strategies to adjustment. *Journal of Pediatric Psychology, 16,* 643–663.

Glyshaw, K., Cohen, L. H., & Twobes, L. C. (1989). Coping strategies and psychological distress: Prospective analyses of early and middle adolescents. *American Journal of Community Psychology, 17,* 607–623.

Gotlib, I. H., & Krasnoperova, E. (1998). Biased information processing as a vulnerability factor for depression. *Behavior Therapy, 29,* 603–617.

Grant, K. E., Compas, B. E., Thurm, A., McMahon, S. D., & Ey, S. (2000). *Stress and developmental psychopathology: Moving from markers to mechanisms of risk.* Unpublished manuscript, De Paul University, Chicago.

Gray, J. A. (1991). The neuropsychology of temperament. In J. Strelau & A. Angleitner (Eds.), *Explorations in temperament: International perspectives on theory and measurement* (pp. 105–128). New York: Plenum.

Gunnar, M. (1994). Psychoendocrine studies of temperament and stress in early childhood: Expanding current models. In J. E. Bates & T. D. Wachs (Eds.), *Temperament: Individual differences at the interface of biology and behavior* (pp. 25–38). Washington, DC: American Psychological Association.

Guthrie, I. K., Eisenberg, N., Fabes, R. A., Murphy, B. C., Holmgren, R., Maszk, P., & Suh, K. (1997). The relations of regulation and emotionality to children's situational empathy-related responding. *Motivation and Emotion, 21,* 87–108.

Halstead, M., Johnson, S. B., & Cunningham, W. (1993). Measuring coping in adolescents: An application of the Ways of Coping Checklist. *Journal of Clinical Child Psychology, 22,* 337–344.

Hart, K. E. (1991). Coping with anger-provoking situations. *Journal of Adolescent Research, 6,* 357–370.

Hastings, T. L., Anderson, S. J., & Kelly, M. L. (1996). Gender differences in coping and daily stress in conduct-disordered and non-conduct-disordered adolescents. *Journal of Psychopathology and Behavioral Assessment, 18,* 213–226.

Heckhausen, J. (1997). Developmental regulation across adulthood: Primary and secondary control of age-related challenges. *Developmental Psychology, 33,* 176–187.

Herman, M., & McHale, S. (1993). Coping with parental negativity: Links with parental warmth and child adjustment. *Journal of Applied Developmental Psychology, 14,* 121–136.

Herman-Stahl, M., & Petersen, A. C. (1996). The protective role of coping and social resources for depressive symptoms among young adolescents. *Journal of Youth and Adolescence, 25,* 733–753.

Herman-Stahl, M. A., Stemmler, M., & Petersen, A. C. (1995). Approach and avoidant coping: Implications for adolescent mental health. *Journal of Youth and Adolescence, 24,* 649–665.

Hoffman, M. A., Levy-Shiff, R., Sohlberg, S. C., & Zarizki, J. (1991). The impact of stress and coping: Developmental changes in the transition to adolescence. *Journal of Youth and Adolescence, 21,* 451–469.

Horowitz, M. J. (1993). Stress-response syndromes: A review of posttraumatic stress and adjustment disorders. In J. P. Wilson & B. Raphael (Eds.), *International handbook of traumatic stress syndromes* (pp. 49–60). New York: Plenum.

Irion, J. C., Coon, R. C., & Blanchard-Fields, F. (1988). The influence of divorce on coping in adolescence. *Journal of Youth and Adolescence, 17,* 135–145.

Jeney-Gammon, P., Daugherty, T. K., Finch, A. J., Belter, R. W., & Foster, K. Y. (1993). Children's coping styles and report of depressive symptoms following a natural disaster. *Journal of Genetic Psychology, 154,* 259–267.

Johnson, B. K., & Kenkel, M. B. (1991). Stress, coping, and adjustment in female adolescent incest victims. *Child Abuse and Neglect, 15,* 293–305.

Kagan, J. (1989). The concept of behavioral inhibition to the unfamiliar. In J. S. Reznick (Ed.), *Perspectives on behavioral inhibition* (pp. 1–23). Chicago: University of Chicago Press.

Kagan, J., Reznick, S., & Snidman, N. (1987). The physiology and psychology of behavioral inhibition in children. *Child Development, 58,* 1459–1473.

Kagan, J., & Snidman, N. (1991). Temperamental factors in human development. *American Psychologist, 46,* 856–862.

Kagan, J., Snidman, N., & Arcus, D. M. (1992). Initial reactions to unfamiliarity. *Current Directions in Psychological Science, 1,* 171–174.

Kendall, P. C., Flannery-Schroeder, E., Panichelli-Mindel, S. M., Southam-Gerow, M., Henin, A., & Warman, M. (1997). Therapy for youths with anxiety disorders: A second randomized trial. *Journal of Consulting and Clinical Psychology, 65,* 366–380.

Kliewer, W. (1991). Coping in middle childhood: Relations to competence, type A behavior, monitoring, blunting and locus of control. *Developmental Psychology, 27,* 689–697.

Kliewer, W., & Sandler, I. (1993). Social competence and coping among children of divorce. *American Journal of Orthopsychiatry, 63,* 432–440.

Krohne, H. W. (1996). Individual differences in coping. In M. Zeidner & N. S. Endler (Eds.), *Handbook of coping: Theory, research, and application* (pp. 381–409). New York: Wiley.

Kupst, M. J., Natta, M. B., Richardson, C. C., Schulman, J. L., Lavigae, J. V., & Das, L. (1995). Family coping with pediatric leukemia: Ten years after treatment. *Journal of Pediatric Psychology, 20,* 601–617.

Langrock, A., Compas, B. E., Keller, G., & Merchant, M. J. (2000). *Coping with the stress of parental depression: Parents' reports of children's coping and emotional/behavioral problems.* Manuscript submitted for publication.

Lazarus, R. S. (1993). Coping theory and research: Past, present, and future. *Psychosomatic Medicine, 55,* 2324–2347.

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

Lee, H. B., Chan, D. W., & Yik, M. S. (1992). Coping styles and psychological distress among Chinese adolescents in Hong Kong. *Journal of Adolescent Research, 7,* 494–506.

Lee, M., & Larson, R. (1996). Effectiveness of coping in adolescence: The case of Korean examination stress. *International Journal of Behavioral Development, 19,* 851–869.

Lengua, L., & Sandler, I. (1996). Self-regulation as a moderator of the relation between coping and symptomatology in children of divorce. *Journal of Abnormal Child Psychology, 24,* 681–701.

Lengua, L. J., Sandler, I. N., West, S. G., Wolchik, S. A., & Curran, P. J. (1999). Emotionality and self-regulation, threat appraisal, and coping in children of divorce. *Development and Psychopathology, 11,* 15–37.

Lewis, H., & Kliewer, W. (1996). Hope, coping, and adjustment among children with sickle cell disease: Tests of mediator and moderator models. *Journal of Pediatric Psychology, 21,* 25–41.

Lewis, M. (1989). Culture and biology: The role of temperament. In P. R. Zelazo & R. G. Barr (Eds.), *Challenges to developmental paradigms: Implications for theory, assessment and treatment* (pp. 203–223). Hillsdale, NJ: Erlbaum.

Lopez, D., & Little, T. (1996). Children's action-control beliefs and emotional regulation in the social domain. *Developmental Psychology, 32,* 299–312.

Losoya, S., Eisenberg, N., & Fabes, R. A. (1998). Developmental issues in the study of coping. *International Journal of Behavioral Development, 22,* 287–313.

Manne, S. L., Bakeman, R., Jacobsen, P., & Redd, W. J. (1993). Children's coping during invasive medical procedures. *Behavior Therapy, 24,* 143–158.

Masten, A. S., & Coatsworth, J. D. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist, 53,* 205–220.

Mathews, A., & MacLeod, C. (1994). Cognitive approaches to emotion and emotional disorders. *Annual Review of Psychology, 45,* 25–50.

McCarty, C. A., Wesiz, J. R., Wanitromanee, K., Eastman, K. L., Suwanlert, S., Chaiyasit, W., & Band, E. B. (1999). Culture, coping, and context: Primary and secondary control among Thai and American youth. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 40,* 809–818.

McNally, R. J. (1995). Automaticity and the anxiety disorders. *Behavior Research and Therapy, 33,* 747–754.

Mischel, W. (1997). Was the cognitive revolution just a detour on the road to behaviorism? On the need to reconcile situational control and personal control. In R. J. Wyer (Ed.), *The automaticity of everyday life: Advances in social cognition* (Vol. 10, pp. 181–186). Mahwah, NJ: Erlbaum.

Moss, E., Gosselin, C., Parent, S., Rousseau, D., & Dumont, M. (1997). Attachment and joint problem-solving experiences during the preschool period. *Social Development, 6,* 1–17.

Nolen-Hoeksema, S., Morrow, J., & Fredrickson, B. L. (1993). Response styles and the duration of episodes of depressed mood. *Journal of Abnormal Psychology, 102,* 20–28.

Normandeau, S., & Gobeil, A. (1998). A developmental perspective on children's understanding of causal attributions in achievement-related situations. *International Journal of Behavioral Development, 22,* 611–632.

O'Brien, M., Bahadur, M. A., Gee, C., Balto, K., & Erber, S. (1997). Child exposure to marital conflict and child coping responses as predictors of child adjustment. *Cognitive Therapy and Research, 21,* 39–59.

O'Brien, M., Margolin, G., & John, R. S. (1995). Relation among marital conflict, child coping, and child adjustment. *Journal of Clinical Child Psychology, 24,* 346–361.

Osowiecki, D., & Compas, B. E. (1998). Coping and control beliefs in adjustment to cancer. *Cognitive Therapy and Research, 22,* 483–499.

Osowiecki, D. M., & Compas, B. E. (1999). Coping and perceived control in adjustment to breast cancer. *Cognitive Therapy and Research, 23,* 169–180.

Patterson, J., & McCubbin, H. (1987). Adolescent coping style and behaviors: Conceptualization and measurement. *Journal of Adolescence, 10,* 163–186.

Pennebaker, J. (1997). *Opening up: The healing power of expressing emotions* (rev. ed.). New York: Guilford Press.

Phelps, S., & Jarvis, P. (1994). Coping in adolescence: Empirical evidence for a theoretically based approach to assessing coping. *Journal of Youth and Adolescence, 23,* 359–371.

Plancherel, B., & Bolognini, M. (1995). Coping and mental health in early adolescence. *Journal of Adolescence, 18,* 459–474.

Posner, M. I., & Rothbart, M. K. (1994). Attentional regulation: From mechanism to culture. In P. Bertelson, P. Eelen, & G. d'Ydewalle (Eds.), *International perspectives on psychological science* (Vol. 1, pp. 41–55). Hove, England: Erlbaum.

Primo, K., Compas, B. E., Oppedisano, G., Epping-Jordan, J. E., Howell, D. C., & Krag, D. K. (2000). Intrusive thoughts and avoidance in breast cancer: Individual differences and association with psychological distress. *Psychology and Health, 14,* 1141–1153.

Ptacek, J. T., Smith, R. E., Espe, K., & Rafferty, B. (1994). Limited correspondence between daily coping reports and retrospective coping recall. *Psychological Assessment, 6,* 41–49.

Radovanovic, H. (1993). Parental conflict and children's coping styles in

litigating separated families: Relationships with children's adjustment. *Journal of Abnormal Child Psychology, 21,* 697–713.

Ried, G. J., Dubow, E. F., & Carey, T. C. (1995). Developmental and situational differences in coping among children and adolescents with diabetes. *Journal of Applied Developmental Psychology, 16,* 529–554.

Ried, G. J., Dubow, E. F., Carey, T. C., & Dura, J. R. (1994). Contribution of coping to medical adjustment and treatment responsibility among children and adolescents with diabetes. *Developmental and Behavioral Pediatrics, 15,* 327–335.

Rothbart, M. K. (1988). Temperament in childhood: A framework. In G. A. Kohnstamm, J. E. Bates, & M. K. Rothbart (Eds.), *Temperament in childhood* (pp. 59–73). Chichester, England: Wiley.

Rothbart, M. K. (1991). Temperament: A developmental framework. In J. Strelau & A. Angleitner (Eds.), *Explorations in temperament: International perspectives on theory and measurement* (pp. 61–74). New York: Plenum.

Rothbart, M. K., Posner, M. I., & Hershey, K. L. (1995). Temperament, attention and developmental psychopathology. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology: Vol. 1. Theory and methods* (pp. 315–340). New York: Wiley.

Rothbaum, F., Weisz, J. R., & Snyder, S. S. (1982). Changing the world and changing the self: A two-process model of perceived control. *Journal of Personality and Social Psychology, 42,* 5–37.

Rudolph, K. D., Dennig, M. D., & Weisz, J. R. (1995). Determinants and consequences of children's coping in the medical setting: Conceptualization, review, and critique. *Psychological Bulletin, 118,* 328–357.

Ryan-Wegner, N. M. (1990). Development and psychometric properties of the Schoolagers' Coping Strategies Inventory. *Nursing Research, 39,* 344–349.

Salkovskis, P. M., & Campbell, P. (1994). Thought suppression induces intrusion in naturally occurring negative intrusive thoughts. *Behavior Research and Therapy, 32,* 1–8.

Sandler, I., Tein, J., & West, S. (1994). Coping, stress, and the psychological symptoms of children of divorce: A cross-sectional and longitudinal study. *Child Development, 65,* 1744–1763.

Sandler, I., Wolchik, S., MacKinnon, D., Ayers, T., & Roosa, M. (1997). Developing linkages between theory and intervention in stress and coping processes. In S. A. Wolchik & I. N. Sandler (Eds.), *Handbook of children's coping with common life stressors: Linking theory, research, and interventions* (pp. 3–40). New York: Plenum.

Scheier, M. F., & Carver, C. S. (1988). A model of behavioral self-regulation: Translating intention into action. In L. Berkowitz (Ed.), *Advances in experimental social psychology: Vol. 21. Social psychological studies of the self* (pp. 303–346). San Diego, CA: Academic Press.

Seiffge-Krenke, I. (1990). Health related behaviour and coping with illness in adolescence: A cross-cultural perspective. In L. Schmidt, P. Schwenkmezger, J. Winman, & S. Maes (Eds.), *Theoretical and applied aspects of health psychology* (pp. 267–279). London: Harwood Academic.

Seiffge-Krenke, I. (1993). Coping behavior of Finnish adolescents: Remarks on a cross-cultural comparison. *Scandinavian Journal of Psychology, 33,* 301–314.

Seiffge-Krenke, I. (1995). *Stress, coping, and relationships in adolescence.* Mahwah, NJ: Erlbaum.

Sharpe, J., Brown, R., Thompson, N., & Eckman, J. (1994). Predictors of coping with pain in mothers and their children with sickle cell syndrome. *Journal of the American Academy of Child and Adolescent Psychiatry, 33,* 1246–1255.

Shiffrin, R. M. (1997). Attention, automatism, and consciousness. In J. D. Cohen & J. W. Schooler (Eds.), *Scientific approaches to consciousness* (pp. 49–64). Mahwah, NJ: Erlbaum.

Shiffrin, R. M., & Schneider, W. (1977). Controlled and automatic human information processing: II. Perceptual learning, automatic attending, and a general theory. *Psychological Review, 84,* 127–190.

Skinner, E. A. (1995). *Perceived control, motivation, and coping.* Thousand Oaks, CA: Sage.

Skinner, E. A., & Wellborn, J. G. (1994). Coping during childhood and adolescence: A motivational perspective. In D. Featherman, R. Lerner, & M. Perlmutter (Eds.), *Life-span development and behavior* (pp. 91–133). Hillsdale, NJ: Erlbaum.

Smith, D., & Brodzinsky, D. (1994). Stress and coping in adopted children: A developmental study. *Journal of Clinical Child Psychology, 23,* 91–99.

Spirito, A. (1996). Commentary: Pitfalls in the use of brief screening measures of coping. *Journal of Pediatric Psychology, 21,* 573–575.

Spirito, A., Francis, G., Overholser, J., & Frank, N. (1996). Coping, depression, and adolescent suicide attempts. *Journal of Clinical Child Psychology, 24,* 147–155.

Spirito, A., Overholser, J. C., & Stark, L. J. (1989). Common problems and coping strategies: II. Findings with adolescent suicide attempts. *Journal of Abnormal Child Psychology, 17,* 213–221.

Spirito, A., Stark, L. J., Gil, K. M., & Tyc, V. (1995). Coping with everyday and disease-related stressors by chronically ill children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 34,* 283–290.

Spirito, A., Stark, L., & Tyc, V. (1994). Stressors and coping strategies described during hospitalization by chronically ill children. *Journal of Clinical Child Psychology, 23,* 314–322.

Spirito, A., Stark, L., & Williams, C. (1988). Development of a brief coping checklist for use with pediatric populations. *Journal of Pediatric Psychology, 13,* 555–574.

Stanton, A. L., Danoff-Burg, S., Cameron, C. L., & Ellis, A. P. (1994). Coping through emotional approach: Problems of conceptualization and confounding. *Journal of Personality and Social Psychology, 66,* 350–362.

Steele, R., Forehand, R., & Armistead, L. (1997). The role of family processes and coping strategies in the relationship between parental chronic illness and childhood internalizing problems. *Journal of Abnormal Child Psychology, 25,* 83–94.

Steele, R., Forehand, R., Armistead, L., Morse, E., Simon, P., & Clark, L. (1999). Coping strategies and behavior problems of urban African-American children: Concurrent and longitudinal relationships. *American Journal of Orthopsychiatry, 69,* 182–193.

Stern, M., & Alvarez, A. (1992). Pregnant and parenting adolescents: A comparative analysis of coping response and psychosocial adjustment. *Journal of Adolescent Research, 7,* 469–493.

Stern, M., & Zevon, M. A. (1990). Stress, coping, and family environment: The adolescent's response to naturally occurring stressors. *Journal of Adolescent Research, 5,* 290–305.

Stone, A. A., Greenberg, M. A., Kennedy-Moore, E., & Newman, M. (1991). Self-report, situation-specific coping questionnaires: What are they measuring? *Journal of Personality and Social Psychology, 61,* 648–658.

Stone, A., & Kennedy-Moore, E. (1992). Commentary to Part Three: Assessing situational coping: Conceptual and methodological considerations. In H. S. Friedman (Ed.), *Hostility, coping, and health* (pp. 203–214). Washington, DC: American Psychological Association.

Stone, A. A., Kennedy-Moore, E., & Neale, J. M. (1995). Association between daily coping and end-of-day mood. *Health Psychology, 14,* 341–349.

Tapert, S. F., Brown, S. A., Myers, M. G., & Granholm, E. (1999). The role of neurocognitive abilities in coping with adolescent relapse to alcohol and drug use. *Journal of Studies on Alcohol, 60,* 500–508.

Thomas, A., Chess, S., & Birch, M. G. (1968). *Temperament and behavior disorders in children.* New York: New York University Press.

Thomsen, A. H., Compas, B. E., Colletti, R. B., & Stanger, C. (2000). *Parents' reports of coping and stress responses in children with recurrent abdominal pain.* Manuscript submitted for publication.

Thurber, C. A., & Weisz, J. R. (1997). "You can try or you can just give up": The impact of perceived control and coping style on childhood homesickness. *Developmental Psychology, 33,* 508–517.

Tobin, D. L., Holroyd, K. A., Reynolds, R. V., & Wigal, J. K. (1989). The hierarchical factor structure of the Coping Strategies Inventory. *Cognitive Therapy and Research, 13,* 343–361.

Varni, J. W., Waldron, S. A., Gragg, R. A., Rapoff, M. A., Bernstein, B. H., Lindsley, C. B., & Newcomb, M. D. (1996). Development of the Waldron/Varni Pediatric Pain Coping Inventory. *Pain, 67,* 141–150.

Vasey, M. W., El-Hag, N., & Daleiden, E. L. (1996). Anxiety and the processing of emotionally threatening stimuli: Distinctive patterns of selective attention among high- and low-test-anxious children. *Child Development, 67,* 1173–1185.

Wadsworth, M. E., & Compas, B. E. (2000). *Coping with family conflict and economic strain during adolescence.* Manuscript submitted for publication.

Walker, L. S., Smith, C. A., Garber, J., & Van Slyke, D. A. (1997). Development and validation of the Pain Response Inventory for Children. *Psychological Assessment, 9,* 392–405.

Ware, J., Brook, R. H., Davies-Avery, A., Williams, K. N., Stewart, A. L., Rogers, W. H., Donald, C. A., & Johnson, S. A. (1984). *Conceptualization and measurement of health for adults in the insurance industry study: Vol. 1. Model of health and methodology.* Los Angeles: Rand.

Wegner, D. M. (1994). Ironic processes of mental control. *Psychological Review, 101,* 34–52.

Wegner, D. M. (1997). When the antidote is the poison: Ironic mental control processes. *Psychological Science, 8,* 148–150.

Weisenberg, M., Schwarzwald, J., Waysman, M., Solomon, Z., & Klingman, A. (1993). Coping of school-age children in the sealed room during scud missile bombardment and postwar stress reactions. *Journal of Consulting and Clinical Psychology, 61,* 462–467.

Weisz, J. R. (1990). Development of control-related beliefs, goals, and styles in childhood and adolescence: A clinical perspective. In J. Rodin, C. Schooler, & K. Warner Schaie (Eds.), *Self-directedness: Cause and effects throughout the life course* (pp. 103–145). Hillsdale, NJ: Erlbaum.

Weisz, J. R., McCabe, M. A., & Dennig, M. D. (1994). Primary and secondary control among children undergoing medical procedures: Adjustment as a function of coping style. *Journal of Consulting and Clinical Psychology, 62,* 324–332.

Whitesell, N. R., Robinson, N. S., & Harter, S. (1993). Coping with anger-provoking situations: Young adolescents' theories of strategy use and effectiveness. *Journal of Applied Developmental Psychology, 14,* 521–545.

Wills, T. A. (1986). Stress and coping in early adolescence: Relationships to substance use in urban school samples. *Health Psychology, 6,* 503–529.

Windle, M., & Windle, R. (1996). Coping strategies, drinking motives, and stressful life events among middle adolescents: Associations with emotional and behavioral problems and with academic functioning. *Journal of Abnormal Psychology, 105,* 551–560.

Wolchik, S. A., & Sandler, I. N. (Eds.). (1997). *Handbook of children's coping: Linking theory and intervention.* New York: Plenum.

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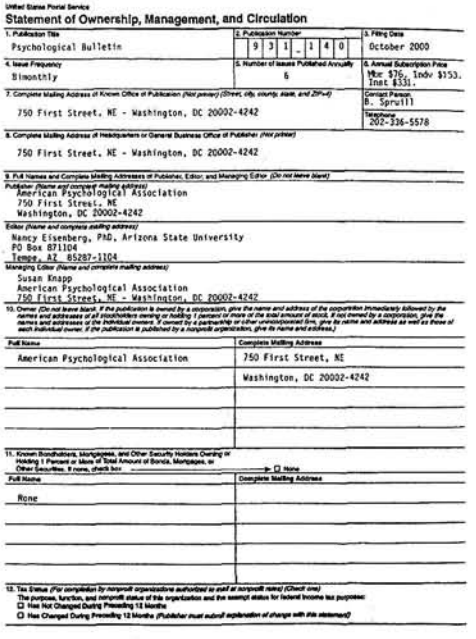

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