Coping With Stress During Childhood and Adolescence

Bruce E. Compas
University of Vermont

In this article, research on how children and adolescents cope with stress and coping's role in reducing the adverse psychological states associated with stress is reviewed. Child and adolescent coping is reflected in seven different lines of research—infants' responses to maternal separation, social support, interpersonal cognitive problem-solving, coping in achievement contexts, Type A behavior pattern in children, repression–sensitization, and resilience to stress. A variety of different coping resources, styles, and specific strategies are important in successfully adapting to stress, including efforts that focus directly on the problem, as well as attempts to deal with adverse emotions associated with stress. Directions for future research are identified, emphasizing the need for more systematic comparisons of coping across different types of stress and over time in response to a single stressful episode.

A central feature of human development involves coping with psychosocial stress. Beginning in infancy, individuals are confronted with a stream of potentially threatening and challenging situations that require action and adaptation. The modest to moderate correlations typically found between stressful life events and disorder during childhood and adolescence suggest that individual difference factors related to coping may moderate the stress–disorder relation (see Compas, in press, for a review). The resources available to cope with stress and the manner in which individuals actually cope may be important factors influencing patterns of positive growth and development as opposed to the onset of a host of psychological and somatic problems.

Although the study of coping with stress during adulthood has been characterized by increasing convergence in conceptualization and measurement (e.g., Lazarus & Folkman, 1984; Menaghan, 1983; Moos & Billings, 1982), this is not true for coping during childhood and adolescence. Instead, coping in younger age groups has been represented by different definitions and methods of measurement, as well as several divergent lines of research. The purpose of this review is to integrate these somewhat disparate areas of research and to identify future directions for study. First, various definitions and conceptualizations of coping are discussed. Second, empirical studies of coping during childhood and adolescence are reviewed. Finally, conclusions drawn from this research, the major issues facing the field, and directions for future research are outlined.

Conceptualization of Coping

As no systematic effort has been made to conceptualize coping during childhood and adolescence, the adult literature must

be drawn on for this purpose (cf. Rutter, 1981). At the most general level, coping has been considered to include all responses to stressful events or episodes. This feature is characteristic of both animal (e.g., N. E. Miller, 1980) and human (e.g., Silver & Wortman, 1980) models of coping. For example, Silver and Wortman (1980) defined coping as "any and all responses made by an individual who encounters a potentially harmful outcome" (p. 281). At this level, coping includes instinctive or reflexive reactions to threat as well as an array of learned responses to aversive stimuli. However, theorists from a variety of perspectives have argued that this definition is too broad. Coping has been further differentiated on the basis of (a) effortful versus noneffortful responses, (b) coping's function, and (c) a focus on resources, styles, or specific responses.

Coping as Effortful Responses to Stress

Several authors have argued for the importance of distinguishing coping as including effortful or purposeful reactions to stress but excluding reflexive or automatic responses (e.g., Lazarus & Folkman, 1984; Murphy, 1974). By focusing only on adaptational responses involving effort, coping is distinguished from instinctual mechanisms that are beyond the individual's volitional control. With regard to coping responses of children, Murphy and associates (Murphy, 1974; Murphy & Moriarity, 1976) have placed coping at the middle of a continuum ranging from reflexes that are present from birth to automatized mastery responses that have been learned to the extent that they no longer require conscious control. Purposeful responses may become automatic after being repeated many times. Lazarus and Folkman (1984) pointed out that focusing on effortful responses avoids the pitfall of defining coping so broadly that it includes everything that individuals do in relating to the environment.

This perspective on coping is best reflected by Lazarus and Folkman's (1984) definition: "We define coping as constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). They pointed out that managing stress includes accepting, tolerating, avoid-

ing, or minimizing the stressor as well as the more traditional view of coping as mastery over the environment. Coping is not limited to successful efforts but includes all purposeful attempts to manage stress regardless of their effectiveness.

Functions of Coping

Coping efforts have been delineated into those intended to act on the stressor (problem-focused coping) and those intended to regulate emotional states associated with or resulting from the stressor (emotion-focused coping; Folkman & Lazarus, 1980). Efforts to act on the stressor include strategies for problem solving or altering the stressful relation between the individual and the environment. Alternatively, adjustment or adaptation can be facilitated by emotional regulation achieved through avoiding the stressor, cognitively reframing the stressor, or selectively attending to positive aspects of the self or situation. Problem- and emotion-focused coping can be carried out through either cognitive or behavioral channels.

Resources, Styles, and Specific Coping Efforts

It is also useful to distinguish among the resources available to the individual in coping with stress, the styles of coping that characterize an individual's responses, and the specific coping efforts displayed in a particular stressful episode (e.g., Menaghan, 1983). Coping resources include those aspects of the self (e.g., problem-solving skills, interpersonal skills, positive self-esteem) and the social environment (e.g., the availability of a supportive social network) that facilitate or make possible successful adaptation to life stress. Coping styles are methods of coping that characterize individuals' reactions to stress either across different situations or over time within a given situation. These may partly reflect the ways of coping preferred by individuals because they are consistent with personal values, beliefs, and goals. Coping styles do not necessarily imply the presence of underlying personality traits that predispose the person to respond in a particular way (Lazarus & Folkman, 1984). Instead, coping styles may reflect the tendency to respond in a particular way when confronted with a specific set of circumstances (e.g., an individual may display different coping styles in controllable vs. uncontrollable situations). Finally, specific coping efforts or strategies refer to the cognitive or behavioral actions taken in the course of a particular stressful episode. These may vary across time and context depending on the nature of the stressful encounter.

Child and Adolescent Coping

Applying these general notions of coping to the actions of children and adolescents requires some alterations and additions. First, the nature of the infant or young child's dependence on adults for survival emphasizes the need to include the child's social context in understanding his or her coping resources, styles, and efforts (Leiderman, 1983). Thus, adaptive coping cannot be characterized by a description of the individual's skills or resources alone but instead lies in the relation between the child and the environment. Whereas this relational definition of coping may apply throughout life, it should be especially important early in development. Second, the child's coping

efforts will be constrained by his or her psychological and biological preparedness to respond to stress. For example, temperament is frequently cited as playing a central role in influencing the child's coping responses (e.g., Kagan, 1983; Lerner, Baker, & Lerner, 1985; Rutter, 1981). The child's temperament may define a range of responsivity to stress and influence the style that characterizes the child's coping. Children differ in their sensitivity to the environment, with some showing signs of arousal and distress to a much wider array of stimuli than others. More responsive children may need to cope with a greater number of situations than less responsive youngsters. Further, individual differences are apparent in the ways children react once they are aroused or threatened, for example, in the degree of inhibition of behavior and expressions of fear they display in response to a stressful stimulus (e.g., Garcia Coll, Kagan, & Reznick, 1984). Third, basic features of cognitive and social development are likely to affect what children experience as stressful and how they cope (e.g., Maccoby, 1983). Important aspects of development include self-perceptions (Harter, 1983) and self-efficacy beliefs (Bandura, 1981), self-control or inhibitory mechanisms (Harter, 1983), attributions of cause (Ruble & Rholes, 1981), friendships (Hartup, 1983), and parental relationships (Maccoby & Martin, 1983), among others. Although it is beyond the scope of this discussion to review each of these areas, it is important to recognize the ways in which the study of coping during childhood and adolescence can contribute to as well as benefit from research on these fundamental aspects of human development.

Not surprisingly, it appears that coping during childhood is affected by both personal and environmental factors. The degree to which coping is effective may depend on the goodness of fit between the child and the environment (e.g., Lerner et al., 1985; Lerner & Lerner, 1983). For example, if a child's temperamental style does not effectively elicit caretaking responses from the parents, then a poor fit exists and the child's coping efforts will not facilitate successful adaptation to stressful encounters with the environment. Thus, research investigating coping during childhood must account for the environmental context in which the stressful episode occurs (including both the nature of the stressor and the availability of resources for coping), the individual's developmental level, the personal resources the individual brings to the situation, the prior history of and preferred ways of coping, and the actual coping responses.

Empirical Investigations

Aspects of coping as just conceptualized have been central themes in seven areas of research, all concerned with adaptation to stress during childhood and adolescence—(a) attachment and separation during infancy (e.g., Ainsworth, 1979), (b) social support (e.g., Barrera, 1981), (c) interpersonal cognitive problem solving (e.g., Spivack & Shure, 1982, 1985), (d) coping in achievement contexts (e.g., Dweck & Wortman, 1982), (e) Type A and B behavior patterns (e.g., Matthews, 1981), (f) coping styles of repression and sensitization (e.g., Krohne & Rogner, 1982) or monitoring and blunting (e.g., S. M. Miller & Green, 1984), and (g) resilience or invulnerability to stress (e.g., Garmezy, 1983). The common theme among these lines of re-

search is that they all concern the responses of children and adolescents to stressful stimuli.

Attachment and Separation

The attachment of the infant to the mother or caretaker and evidence of distress in reaction to separation from the mother are fundamental aspects of human social development. More specifically, the infant's reactions to separation from the mother may be the infant's first experiences in coping with stress. Although there is considerable variability in infants' responses to maternal separation, indications of behavioral inhibition, fear, and distress are common (e.g., Garcia Coll et al., 1984). This distress is typically relieved by renewed contact with the mother. Thus, behaviors displayed by the infant in response to separation that promote the mother's return can be seen as the earliest forms of coping an individual displays.

The "strange situation" paradigm developed by Ainsworth and colleagues (e.g., Ainsworth, 1979) is the context used most often for the study of infants' reactions to maternal separation. Infants are observed for brief periods in an unfamiliar laboratory setting in the presence of their mother, with a stranger, with the mother and the stranger, and alone. Whereas the primary purpose of this research is to classify the quality of the attachment between the infant and mother, and the representativeness of infant behavior in this context has been called into question (e.g., Kagan, 1984; Lamb, Thompson, Gardner, Charnov, & Estes, 1984), the behavior observed with the strange situation can be seen as an interesting example of infant coping (cf. Hock & Clinger, 1981). The pattern labeled as representing a secure attachment (i.e., mildly protesting after the mother leaves, seeking proximity to the mother when she returns, and being easily placated by her) might reflect a pattern of coping with an event that is experienced by the infant as mildly stressful. Alternatively, less effective coping may be reflected in the behavior of insecurely attached children, who become seriously distressed when the mother leaves and are not easily soothed by their mothers' attempts to calm them. Finally, a third group of avoidant children, who do not protest the mother's departure and do not seek her out when she returns, may reflect a group not experiencing the event as stressful and, thus, not being mobilized to cope.

The study of responses to maternal separation highlights two intriguing problems that confront coping researchers, particularly in studying young children. First, if it is accepted that coping involves effortful but not reflexive responses, it is unclear whether infants' reactions to maternal separation actually represent coping, as opposed to predisposed patterns of responding. Although there is substantial variability among infants in their patterns of response, there is considerable stability in individuals' reactions across time. Thus, infants' reactions to separation may reflect stable temperamental factors to a great extent (Kagan, 1983). However, temperament may affect the likelihood or degree to which separation is experienced as stressful but not necessarily infants' attempts to cope with the event. Kagan (1984) and Hock and Clinger (1981) have argued that some infants who fail to display distress when the mother departs may be better able to cope with uncertainty rather than being poorly attached to mother. Their behavior may imply that "babies who do not become upset in the Strange Situation have acquired

adaptive coping strategies to deal with stress" (Kagan, 1984, p. 61). These adaptive strategies are probably influenced by parenting patterns that value self-reliance and the capacity to control fear. Thus, infant responses are likely to reflect the effects of both temperamental patterns and learned effortful behavior.

The second dilemma of coping research illustrated by studies of separation distress involves the overlapping nature of stress and coping. The constellation of behaviors that indicates that separation is stressful (inhibition of exploratory behavior, fretting, and crying) is simultaneously defined as the infant's effort to cope with the separation by promoting the mother's return. Further, the absence of distress may indicate that the separation is not stressful, and it may also represent more adaptive coping. The interdependent and reciprocal nature of the relation between stress and coping is evident in other literature on coping during childhood and adolescence.

Social Support

The continued importance of social bonds and relationships throughout childhood and adolescence is evident in studies of social support. This concept has been approached by numerous researchers and has involved several different conceptualizations. Most of these investigators have applied definitions of social support developed in work with adult populations to the use of the construct with children and adolescents (e.g., Cauce, Felner, & Primavera, 1982; Kaplan, Robbins, & Martin, 1983). Barrera (1981) developed the most comprehensive definition of social support during childhood and adolescence. He argued that the concept must include explication of the providers of support, the individual's subjective appraisal of support, and the activities involved in the provision of support. Whereas social support is typically viewed as a form of coping or a factor that facilitates coping, Barrera's (1981) conceptualization goes the furthest in this regard by outlining examples of socially supportive behaviors. These are likely to include attempts to assist the individual in mastering emotional distress, sharing responsibilities, providing advice, teaching skills, and providing material aid.

In studies of social support as a resource for coping among children and adolescents, researchers have examined both the direct relation between social support and adjustment and the interaction of life events and social support in relation to well-being. Evidence for a direct relation between social support and levels of psychological or physical symptomatology or both has been strong; Barrera (1981), Cauce et al. (1982), Compas, Slavin, Wagner, and Vannatta (1986), Compas, Wagner, Slavin, and Vannatta (1986), Felner, Ginter, and Primavera (1982), Sandler (1980), and Sandler and Barrera (1984) reported significant relations. Although it is clear that the quality of one's social support is related to symptom levels, this relation varies as a function of a number of subject characteristics (e.g., gender, age, and socioeconomic status) and the aspect or dimension of social support under investigation (e.g., number of supportive relationships, satisfaction with social support, and others' socially supportive behaviors). Differences in subjects, measures, and research designs make it difficult to draw conclusions in this literature at present.

Studies of interactive effects of social support have been more mixed in their findings. Compas, Slavin, et al. (1986) and Gad

and Johnson (1980) failed to find any interaction between life events and social support in predicting symptom level. The Life Event × Social Support interactions that have been reported are limited to certain types of subjects, particular aspects of social support, specific symptoms, or all three. For example, in a study of stressful events and social support in pregnant adolescents, Barrera (1981) found that negative life events interacted with total size of the social network and unconflicted network size in predicting depression. No interactions occurred, however, in regression equations predicting anxiety or total symptom level. The socially supportive behaviors of others and satisfaction with social support did not interact with negative life events in predicting any symptomatology. The inconsistent nature of the findings of this and other studies (Hotaling, Atwell, & Linsky, 1978; Sandler, 1980; Sandler & Barrera, 1984; Sandler & Lakey, 1982) prohibit making any conclusions regarding the differential effects of life events among individuals with high and low social support.

Interpersonal Cognitive Problem Solving (ICPS)

Spivack, Shure, and their colleagues' work has provided extensive evidence on the ways in which children and adolescents respond to problems encountered in interpersonal relationships (see reviews by Spivack, Platt, & Shure, 1976; Spivack & Shure, 1982, 1985). Specifically, they have addressed the way an individual recognizes a problem and thinks during an interpersonal situation. The cognitive steps one goes through in response to a social problem are viewed as mediators of the quality of social and personal adjustment. Their research has contained a strong developmental flavor, centered around the proposition that interpersonal cognitive problem-solving skills may differ in their significance as a function of age. Interpersonal cognitive problem-solving skills contain the following components: generation of alternative solutions, consideration of consequences of social acts, development of means–ends thinking, development of social causal thinking, sensitivity to problems, and a dynamic orientation (see Spivack & Shure, 1982). Spivack and Shure have acknowledged that their research deals with one mode of coping (cognitive problem solving) in reference to one type of stressful situation (interpersonal). Although they have speculated on other cognitive responses to interpersonal problems (e.g., not thinking and defensive thinking), they have not attempted to conceptualize these or other coping strategies or to address tactics to deal with nonsocial problems (e.g., a school examination or a physical illness).

Empirical investigations by the Spivack and Shure group have had three focuses—(a) delineation of the component skills that constitute ICPS, (b) examination of the relation of these skills to adaptive functioning, and (c) examination of the effects of programs to increase ICPS skills on children's and adolescents' well-being. Their findings have generally been positive in each of these areas (Spivack & Shure, 1982). First, they have shown that six separate skills compose ICPS (see previous paragraph), and that these skills emerge at different points in development. For example, the ability to generate alternative solutions to a problem emerges as important as early as age 4 or 5 and remains a valuable skill throughout life (e.g., Shure & Spivack, 1978, 1980). In contrast, the development of means–

ends thinking, defined as mentally articulating the sequence or step-by-step means necessary to carry out a particular solution to an interpersonal problem, does not become significant for adjustment until approximately ages 8 to 10 (Spivack et al., 1976). The investigators raised the plausible hypothesis that means–ends thinking requires complex cognitive processes that are not sufficiently developed in younger children.

Studies of the relation between ICPS skills and levels of adjustment have consistently shown a strong association between the two. The typical design used in these studies has been to identify a sample of well-adjusted children or adolescents and a matched sample of youngsters displaying emotional or behavioral problems (see Spivack & Shure, 1982). The level of ICPS skills of the two groups has then been compared. Each of the six ICPS skills has been shown to discriminate problem from nonproblem samples, but their effects have varied as a function of age. The generation of alternative solutions, consideration of consequences of social acts, and development of means–ends thinking have been studied most extensively (Spivack & Shure, 1982). It is not clear, however, whether ICPS skills are important in modifying the impact of stress, are directly related to adjustment independent of stress, or both.

Finally, data from intervention studies have been somewhat more mixed regarding the importance of ICPS skills for coping with interpersonal problems. Intervention programs have been designed for preschool and school-age children (Spivack & Shure, 1982) and adolescents (Spivack et al., 1976). Increased ICPS skills were found to be related to enhanced adjustment in three studies, but improved adjustment was not associated with problem-solving training in seven studies (Durlak, 1983, 1985). Specifically, only the Hahnemann group (Spivack & Shure, 1982) was able to show that increased ICPS skills are associated with improved behavioral adjustment. These varied results may suggest that certain elements are essential for ICPS interventions to affect children's functioning (e.g., the use of dialoguing on an ongoing basis is a central part of Spivak and Shure's work). Alternatively, these programs may be more effective for children experiencing high levels of stress than for those under relatively less stress. This possibility has not been investigated.

Coping in Achievement Contexts

The coping of children in achievement contexts has been studied extensively in both laboratory and field investigations. This work is best exemplified by Dweck and her colleagues' investigations of "helpless" and "mastery-oriented" children (see reviews by Dweck & Licht, 1980; Dweck & Wortman, 1982). This conceptualization of coping parallels Spivack and Shure's work in that the primary emphasis is on the cognitive strategies used by children to adapt to aversive experiences. Coping strategies are viewed as individuals' efforts to minimize distress and to maximize performance (Dweck & Wortman, 1982). Implicit in this work is a distinction between effective and ineffective coping with failure on academic achievement tasks. Mastery-oriented children are examples of effective copers in that they sustain high levels of motivation, persist in attempts at problem solving, increase their concentration, and display enhanced performance. Alternatively, helpless children display ineffective coping, as reflected by their reduced levels of effort, high levels of discouragement, and deteriorated performance. Observa-

tions of these children indicate that the behavior of the two groups is quite similar prior to experiencing failure but differs dramatically following failure. The cognitive coping strategies used in response to failure distinguish the two groups (Dweck & Licht, 1980).

In early studies of causal attributions for achievement tasks, researchers found that mastery-oriented youngsters attribute success to their abilities and failure to changeable factors such as effort, whereas helpless children blame their failure on a lack of personal ability and see success as caused by variable factors (e.g., Dweck & Reppucci, 1973). When helpless children were taught to attribute failure to a lack of personal effort, improvements occurred in their persistence and level of performance (Dweck, 1975). Further, the attribution pattern of helpless children was found to occur more often in girls and to be linked to socialization practices observed in school classrooms (e.g., Dweck & Bush, 1976; Dweck, Davidson, Nelson, & Enna, 1978; Dweck, Goetz, & Strauss, 1980).

The role of causal attributions in these coping patterns was subsequently explored more extensively by using an alternative research design. In the early studies, an experimenter instructed the children to provide explanations for the cause of their performance. In a later series of studies, Diener and Dweck (1978, 1980) allowed children to freely report their thoughts while working on a similar achievement task. They found that the key difference between mastery-oriented and helpless children may not be in the types of attributions they make but in whether they generate attributions for the cause of their behavior at all. Few of the mastery-oriented children made any attributions of causality. Instead, they focused their thinking on problem-solving strategies, generating alternative solutions, and task-relevant information. Helpless children continued to focus their attention on an explanation for the cause of their failure and made attributions of cause to uncontrollable factors with high frequency. Dweck and Wortman (1982) hypothesized that the reactions of these children to success and failure in an achievement situation depend on the meaning of the outcome for the individual. They suggested that failure has self-evaluative meaning for helpless children and task-relevant information value for mastery-oriented children. The attribution search for an explanation of the cause of failure is short-circuited in the adaptive responders. This may have a dual benefit. First, they avoid focusing attention on the fact that they have failed and thereby avoid the aversive emotions associated with it. Second, they are free to invest more of their cognitive activity in trying to generate more adaptive coping strategies and, therefore, increase their likelihood of doing so.

Type A Behavior Pattern

The importance of more generalized coping styles is seen in studies of Type A behavior in children and adolescents. Descriptions of the antecedents of the Type A coronary-prone behavior pattern have been focused on personality styles or traits as determinants of coping behavior (e.g., Matthews, 1981, 1982). This style of responding has been observed in children and adolescents in contexts similar to those used in studying adults (e.g., Matthews, 1979; Matthews & Volkin, 1981). Based on laboratory and field research, Matthews (1981) conceptualized children's Type A behaviors as "a distinctive style of coping

with potentially uncontrollable events" (p. 243). Emphasis is placed on the three major behavioral components of Pattern A—competitive achievement striving, a sense of time urgency and impatience, and aggressiveness-hostility. Viewed from a developmental perspective, these patterns in childhood and adolescence are seen as precursors of coronary heart disease in adulthood and are influenced by certain child-rearing practices (Matthews, 1977).

Empirical work concerning Type A behavior in children has entailed measurement development, generation of a base of descriptive information about the characteristics of Pattern A in children, and examination of factors that contribute to the development of Type A behavior. Of the four measures for assessment of Type A behavior in children, the Matthews Youth Test for Health (MYTH; Matthews & Angulo, 1980) is the most psychometrically sound (see Matthews, 1981, for a comparison of the different measures). Studies with the MYTH and other assessment instruments have provided a picture of the characteristics of Type A behavior in children. The Type A behavior pattern observed in children closely parallels the style observed in adults, especially in situations in which individuals feel threatened by a loss of control (Matthews, 1979). That is, Type A children make more efforts to control than do Type Bs when initially threatened by a loss of control. High levels of Type A behavior are inversely related to empathy level in children, suggesting that the competitive, impatient, and hostile feelings associated with Type A behavior distract the individual from concern about another's welfare (Matthews, Barnett, & Howard, 1979). Available developmental data have failed to reveal any effects of age on level of Type A behavior, but a consistent gender effect, with boys higher in Type A behavior than girls, has been reported at all ages (Matthews & Angulo, 1980).

Research on the antecedents of Type A behavior has been concentrated on familial influences, which include genetic factors, modeling of Type A behavior by parents, and child-rearing practices. Twin studies designed to assess genetic contributions to Type A behavior have produced conflicting findings, with no effects reported on structured interviews assessing Type A behavior but support for a genetic contribution when self-report measures have been used (Rahe, Hervig, & Rosenman, 1978). Matthews (1981) argued that any conclusions regarding genetic contributions to the Type A behavior pattern would be premature and must await further research that addresses methodological problems in prior studies. Similarly, data on the effects of parental modeling on children's Type A behavior are only at a preliminary level (e.g., Bortner, Rosenman, & Friedman, 1970; Matthews & Krantz, 1976). Data indicating the effects of child-rearing practices on Type A behavior are somewhat stronger. Glass (1977) reported that when observed in an experimental setting, Type A boys were treated differently than Type B boys by their mothers. Type A boys were given fewer positive evaluations of task performance than were Type B boys. Further, Type A boys were pushed to try harder than Type B boys, particularly by Type B mothers. Matthews (1977) found that this pattern of feedback was not elicited from female strangers, indicating that it is unlikely that Type A boys elicit these behaviors from their mothers.

More recently, attention has been focused on early temperament factors in the development of Type A behavior patterns in adulthood (Steinberg, 1985). In a follow-up of data from the

New York Longitudinal Study, Steinberg found that temperament ratings obtained at ages 3 and 4 were significant predictors of Type A behavior 20 years later. Although the role of socialization and constitutional factors in the development of Type A patterns is not clear, this behavioral style appears to have roots very early in development and to be stable over time in at least some individuals.

Repression–Sensitization

The sixth conceptualization of coping during childhood and adolescence is similar to the notion of the Type A pattern in that it focuses on personality styles or traits. A number of investigators have argued that coping behavior can be assigned to a point on the unidimensional, bipolar personality characteristic of repression–sensitization (e.g., Byrne, 1964; Krohne & Rogner, 1982). Whereas individuals in the middle range of the continuum are considered to be coping adaptively, those at either end are viewed as responding maladaptively. Specifically, repressors neglect or avoid information in threatening situations, and sensitizers focus their attention on cues that indicate danger in such situations. Krohne (1979) suggested that these coping patterns depend on an individual's learning history, especially certain characteristics of family socialization. These characteristics include inconsistency in patterns of punishment and reward administered by parents, parental restriction of certain coping responses by the child, or failure to provide an adequate model of adaptive coping. Similarly, S. M. Miller (S. M. Miller, 1981; S. M. Miller & Green, 1984) has distinguished between two styles of coping that she has labeled "monitoring" and "blunting." Monitoring, similar to the strategies used by sensitizers, involves being alert for and sensitized to the negative or potentially negative aspects of an experience. Alternatively, blunting parallels repressing in that it involves distraction from and cognitively protecting oneself from sources of danger. S. M. Miller and her associates have not yet examined factors influencing the development of monitoring or blunting coping styles.

Empirical examinations of the repressor–sensitizer or monitor–blunter dimension in the coping styles of children and adolescents have been rare. Krohne (1979) reported two studies in which parental child-rearing practices were examined in relation to children's coping styles. Parental inconsistency, restrictiveness, and use of punishment were all related to repression-sensitization in children, providing preliminary support for Krohne's (1979) conceptualization. These associations were more pronounced for boys than for girls. Krohne cautioned that these studies were based on questionnaire data and should be viewed only as preliminary. No data are available on the psychological or behavioral outcomes of repression or sensitization in children.

Direct evidence on monitoring and blunting in children is also sparse. An extensive literature has developed, however, on the use of information-seeking and information-avoidant coping styles in children during uncontrollable aversive events (see S. M. Miller & Green, 1984). These studies have been focused on interventions designed to prepare children for dental or medical procedures (e.g., Burstein & Meichenbaum, 1979; Melamed, 1982; Melamed & Siegel, 1975; Siegel & Peterson, 1980). These procedures are characterized as highly aversive and beyond the personal control of children who undergo them.

Interventions that facilitate selective attention to nonaversive aspects of the procedure, filtering of information about the event, distraction from salient aversive cures, and focusing attention on less threatening cures are associated with reduced arousal and anxiety (S. M. Miller & Green, 1984). Although the coping styles of monitoring and blunting have not been assessed in these studies, these findings indicate that increasing children's use of strategies similar to blunting in these situations is efficacious.

Resilience or Invulnerability to Stress

Finally, coping of children and adolescents has been described in studies of resilience or invulnerability to stress. This line of research grew from investigations of factors that predispose individuals or place them at risk for developing psychopathology. Findings from several studies have indicated that a portion of youngsters who have been exposed to grossly deprived or disadvantaged environments during development do not suffer emotional or psychological problems (e.g., Rutter, 1979). This has led to an interest in so-called *protective factors,* defined by Garmezy (1983) as "those attributes of persons, environments, situations, and events that appear to temper predictions of psychopathology based upon an individual's at-risk status" (p. 73). Interest has centered around stable characteristics of the child or the environment that reduce the potentially deleterious effects of chronic stressors.

Garmezy (1983) summarized five approaches to the study of invulnerability—(a) the epidemiological studies conducted by Rutter and his colleagues (Rutter, 1979; Rutter, Cox, Tupling, Berger, & Yule, 1975; Rutter, Yule, et al., 1975) on the Isle of Wight and in an inner-city area of London, (b) studies of competent black children in urban ghettos who have been exposed to the stressors of poverty and prejudice (see Garmezy, 1981), (c) a longitudinal–developmental study from birth to adulthood of a cohort of children born on the island of Kauai in the Hawaiian islands (Werner & Smith, 1982), (d) a longitudinal–developmental examination of ego resilience in children (Block & Block, 1980), and (e) studies of children growing up in war (e.g., Fields, 1977; Zuckerman-Bareli, 1982). Garmezy (1983) found that these diverse lines of investigation shared the following characteristics:

> (1) an emphasis on prospective developmental studies of children who (2) have been exposed to stressors of marked gravity (3) which can be accentuated by specific biological predispositions, familial and/or environmental deprivations (4) typically associated with a heightened probability of present or future maladaptive outcomes but (5) which are not actualized in some children whose behavior instead is marked by patterns of behavioral adaptation and manifest competence. (p. 73)

These studies differ from most of the other literature concerned with coping during childhood and adolescence in that they have not emphasized what youngsters do to cope with stress. Instead, they have focused on the identification of stable, enduring characteristics of resilient children and their environments that distinguish them from others who respond maladaptively to stress. The following three broad factors have been consistently found to characterize invulnerable children across various studies (see Garmezy, 1983): (a) dispositional and constitutional characteristics of the child, including tempera-

ment, high self-esteem, internal locus of control, and autonomy; (b) the presence of a supportive family environment, including parental warmth, cohesiveness, closeness, and order and organization; and (c) a supportive individual or agency in the environment that provides the child with a support system to aid in coping and positive models for identification. Although the methodological rigor of these studies varies greatly, the consistency with which these themes have appeared is encouraging.

Summary and Evaluation

Empirical investigations of coping during childhood and adolescence have generated a rich and interesting picture of the diverse nature of coping in these age groups. Psychometrically adequate measures of certain aspects of coping have been developed, research designs used in both laboratory and field settings have been sound, and many of the findings have been quite consistent and dramatic. Clearly, children and adolescents' efforts at coping can have a powerful effect in moderating the impact of stress. This research will now be discussed in terms of the three themes outlined in the introduction to this article.

Coping as Effortful Responses to Stress

In prior research concerned with child and adolescent coping, both reflexive and purposeful behavior has been addressed. Regarding the former, childhood temperament has been examined in studies of attachment and separation, Type A behavior pattern, and invulnerability to stress. Children's responses to stress appear to be influenced by dispositional factors, and these effects may carry into coping patterns during adulthood (e.g., Steinberg, 1985). On the other hand, effortful or purposeful responses to stress have been addressed extensively in the literature concerning child and adolescent coping. In particular, such behaviors are the central feature of interpersonal problem solving, coping in achievement contexts, and monitoring–blunting. However, similar to the study of coping during adulthood (Lazarus & Folkman, 1984), the concept of coping becomes meaningless when it is applied to both the broad domains of effortful and automatic behavior of children and adolescents. Coping needs to be distinguished from the whole of human development and adaptation. Thus, it seems necessary to limit the use of the term to a subset of adaptational actions involving effort (cf. Lazarus & Folkman, 1984; Murphy, 1974).

A central task facing researchers is to examine the relation between coping and reflexive or automatized adaptive behaviors. Initial work in this regard might focus on the relation between temperament and coping. Temperament factors may influence coping by restricting the range of coping responses of an individual or by affecting the types of situations perceived as stressful. Prospective longitudinal research is needed for examining whether the use of various problem- and emotion-focused coping strategies is affected by a child's temperamental style. For example, "difficult" infants who display low adaptability to change and intense negative emotional responses (Chess & Thomas, 1984) may have greater difficulty in developing a diverse set of coping strategies than more adaptable, less emotional infants. In a sense, a youngster may need to learn to cope with his or her own temperamental style, in addition to coping

with stress in the environment. This would be more likely if the child's style is a poor match for the caretaking environment.

Functions of Coping

Studies of child and adolescent coping suggest that both problem- and emotion-focused coping are important in successful adaptation to stress. For example, Spivack and Shure have shown the importance of one type of problem-focused coping, cognitive problem solving. However, they indicated that other coping strategies aimed at emotional regulation may also be important to positive adjustment (Spivack & Shure, 1985). This is evident in studies showing the effectiveness of distraction and reframing (emotion-focused coping) in dealing with stressful medical procedures (S. M. Miller & Green, 1984). The importance of problem- and emotion-focused coping may vary in response to different types of stress or different points in time (see Suls & Fletcher, 1985, for a discussion of this issue regarding adults coping with health-related problems). Further, studies with adults indicate that both problem- and emotion-focused coping are used during almost all stressful episodes (Folkman & Lazarus, 1980, 1985) and that the use of relatively more problem- or emotion-focused coping varies in effectiveness across different types of stressors (Forsythe & Compas, in press).

Because both problem- and emotion-focused strategies are important in coping with stress, effective coping is likely to be characterized by flexibility and change. New demands require new ways of coping, and thus, no single coping strategy is effective for all types of stress. A closer examination of studies of child and adolescent coping indicates that a strategy that may be adaptive for dealing with one stressor may be maladaptive when used in a different context or at a different point in time in response to the same stressor. Several examples are offered to clarify this point. First, generating attributions for the cause of a stressful event has received mixed praise from researchers. An analysis of the cause of a problem is seen as a component of effective ICPS. Spivack and Shure (1982) stated, "The better adjusted individual not only weighs alternatives but sees a problem in the light of prior causes and later effects" (p. 329). In contrast, Dweck and her colleagues' findings, which indicate that effective copers (mastery-oriented children) did not attempt to generate attributions for the cause of failure, whereas helpless children did make causal attributions, have been cited. The situations in which attributions have been found to be beneficial, as opposed to harmful, differ in a number of ways. For example, it may be useful to analyze causes for personal or interpersonal problems but not for impersonal problems like the tasks in Dweck's studies. Alternatively, it may be useful to generate attributions at some points in time during a given stressful encounter but not at others. Spivack and Shure's (1982) subjects were analyzing the causes of an event that had already occurred. In contrast, Dweck studied children during a stressful encounter. Analyzing causes may facilitate coping after an event by helping prepare for similar stressful encounters in the future but impede coping during an event by distracting attention from more important features of the situation.

Similar disagreement exists about the effectiveness of cognitively "reframing" or avoiding certain features of a stressor. Attempts to enhance children's preparation for medical or dental procedures indicate that information about the event is most

beneficial when it is presented in an attenuated form (S. M. Miller & Green, 1984). Selectively attending to less threatening aspects of the event, transforming how the event is cognitively processed, and even being distracted from the event itself have all been found to benefit children's coping. In contrast, Spivack and Shure (1982) argued that dysfunctional coping with interpersonal problems is characterized by daydreaming, fantasizing, and attempting to avoid or escape the problem. The stressful situations discussed by these authors may differ in the amount of personal control that children have or perceive that they have. Cognitive strategies to reframe a stressor may be beneficial when it appears beyond the personal control of an individual, as in the case of surgery. These strategies may not be useful, however, when dealing with an interpersonal problem over which one might have considerable control (cf. Forsythe & Compas, in press).

A related theme in the child and adolescent coping literature involves the costs and benefits that may result from particular coping strategies and resources. While researchers have focused almost exclusively on the positive consequences of various types of coping (i.e., reduction of psychological distress or somatic problems), it is apparent that coping has negative side effects as well. This is most apparent regarding social relationships and social support. Negative consequences of social support in adults have been identified in several lines of research (e.g., Kessler & McLeod, 1984; Rook, 1984). Adverse effects of social support include greater vulnerability to stress because of the loss of supportive others, experiencing the effects of stressful events in the lives of members of one's social network, and negative interpersonal exchanges with others. With regard to children and adolescents, the possible costs of social ties in early development are reflected in the attachment and separation literature. Infants classified as having formed an attachment to the mother, whether secure or insecure, experience maternal separation as stressful, whereas the avoidant group, infants considered not to have formed the attachment, does not display signs of distress. Thus, infants who have formed an attachment with the mother may be experiencing, for the first time, the costs and benefits of a close social bond. These processes are less clearly understood in later childhood and adolescence and should be a focus of future research.

Resources, Styles, and Specific Coping Efforts

The availability of personal and social resources for coping, cross-situational or temporally stable coping styles or both, and coping strategies used in specific situations have all been shown to be important in the efforts of children and adolescents to manage or overcome psychosocial stress. Although each of these factors appears to be important in coping, the distinction between them is somewhat blurred in the literature already described. Their importance as well as sources of confusion among them are briefly summarized.

With regard to resources, the importance of social resources to assist children in coping with stress is the focus of studies concerned with early social bonds and attachment, social support, and invulnerable children. Supportive relationships with parents or adults outside the family or both (Garmezy, 1983), peers (Cauce et al., 1982), and siblings (Sandler, 1980) have all been found to be resources for coping with stress. Personal resources that facilitate coping appear to include high self-esteem (Garmezy, 1983) and the requisite skills to solve interpersonal (Spivack & Shure, 1982) and impersonal problems (Dweck & Wortman, 1982).

To a certain extent, all of the literature reviewed here is concerned with coping styles. The invulnerability literature has examined broad dispositional factors related to positive adaptation under adverse circumstances, that is, the coping styles of those youngsters who adapt successfully. The social support literature is concerned with the use of support in coping across a variety of stressors in an individual's life. The other literature has been somewhat more limited in scope, focusing on the ways individuals cope with a specified type of stress. For example, interpersonal problems, achievement tasks, medical procedures, and uncontrollable situations have each been addressed separately. Children and adolescents are typically classified into groups based on their style of responding in a given type of stressful situation, and differences between the groups in symptoms and well-being are examined. For example, children characterized as mastery-oriented (i.e., those who generate alternative solutions to a problem, focus on task-relevant information, and use problem-solving strategies) functioned better than helpless children on achievement-related tasks. Thus, coping styles have been conceptualized at two levels. At the first, coping is assumed to be consistent across a wide variety of stressful situations, similar to a broad personality trait. At the second, coping is assumed to be consistent under similar circumstances but possibly vary as features of the environment or cognitive appraisals of the environment change (Compas, Forsythe, & Wagner, 1987). Among those coping styles whose adaptive consequences have been studied, it is apparent that no single style of coping is adaptive in all situations.

Finally, specific coping strategies have been examined in some detail in studies of interpersonal cognitive problem solving, coping on achievement tasks, monitoring–blunting, and social support. As already indicated, both problem- and emotion-focused strategies have been shown to be important in coping with stress. It has not been determined, however, which strategies are most effective in coping with which types of stress at what points in time.

Although the distinctions among coping resources, styles, and strategies have been important in conceptualizations of the coping process (e.g., Lazarus & Folkman, 1984; Menaghan, 1983), the differences among these concepts are not completely clear in the study of child and adolescent coping. In particular, researchers have failed to adequately distinguish between coping styles and specific strategies. That is, coping styles have typically been assessed through self-report measures that ask youngsters how they usually respond in a given type of situation or how they would respond in a hypothetical situation (e.g., Krohne & Rogner, 1982; Matthews & Angulo, 1980; Spivack & Shure, 1982). This method may, however, disguise variability in the coping strategies used by children and adolescents because they are not reporting on the ways they actually coped in different stressful episodes (see Lazarus & Folkman, 1984, pp. 128–130, for a discussion of this problem in studies of adult coping). Those investigators who have studied samples of children's coping in specific stressful situations (e.g., Dweck & Wortman, 1982; Hock & Clinger, 1981) have inferred that these samples of behavior represent styles of coping, at least in similar situations.

This may be an accurate inference, but it remains to be tested by observing multiple samples of the coping behavior of the same children over time in similar situations.

Directions for Future Research

The first task confronting researchers interested in further clarifying the nature of coping during childhood and adolescence involves the development of comprehensive measures of coping that will allow for systematic comparisons of responses to different stressors and over time in response to the same stressful episode. Questionnaires for the assessment of coping styles or strategies used in a specific stressful encounter have been developed for adults (e.g., Billings & Moos, 1981; Folkman & Lazarus, 1985; Pearlin & Schooler, 1978). This has facilitated investigations of consistency and change in the ways adults cope with stress. Development of such a measure of child and adolescent coping will, in all probability, require different versions for various age groups to reflect changes in cognitive development and response capabilities. Whereas adult measures have typically relied on structured checklists, recent work with more open-ended formats (Stone & Neale, 1984) indicates that this may be a promising method to pursue with children and adolescents.

The second area for future research involves the relation between effortful coping responses and more stable, nonvolitional factors, such as temperament. This would serve to clarify further the distinction between coping and other adaptational responses to stress. In addition, research in this area might clarify the ways in which stable features of individuals limit or constrain the type of coping responses they are willing or able to use.

Third, the relation between various social contexts or ecologies and the coping behavior of children and adolescents needs to be examined in greater detail. Foremost among these is the role of the family. For example, it is unclear whether children learn some or much of their coping behavior through observations of their parents' efforts to manage stress in their own lives. Although several investigators have noted the potential importance of parental modeling of coping (e.g., Krohne, 1979; Matthews, 1981), these processes have received little attention in empirical studies. More broadly, socialization practices as a whole may influence the development and use of different coping strategies. Gender identity and sex-role socialization may affect the types of coping displayed by boys and girls, as suggested by the work of Dweck and her colleagues (e.g., Dweck & Bush, 1976; Dweck et al., 1978, 1980). Parents, teachers, and peers all influence children's values and beliefs, which may in turn either facilitate or impede the use of different coping strategies.

Finally, prospective longitudinal studies are needed for clarifying the ways in which coping resources, styles, and behaviors change or remain constant with development. Spivack and Shure's (1982, 1985) work indicates that cognitive problem-solving skills change with age, probably as a result of cognitive development. Similar changes probably occur in emotion-focused coping strategies, but this has not been investigated. Similar changes associated with social development may affect coping. For example, the changing nature of children's friendships

(e.g., Hartup, 1983) indicates that the nature of social support may change with development.

In sum, research concerned with coping during childhood and adolescence has been conducted in several independent lines of investigation and has yielded numerous important findings. However, it now seems necessary to look for factors and processes that may be common to effective coping across a wide variety of stressful experiences. The important features of effective coping with failing an exam at school and with an argument with one's parents may ultimately differ substantially, but both may be characteristics of an individual who is capable of dealing purposefully and effectively with the wide-ranging demands that are part of human development.

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