

Running head: DEVELOPMENT OF COPING

Development of Coping in Low- and Mid-Income Youth

Cynthia Neuendorf

Cornell University

Abstract

The environment of poverty has been implicated as a major risk factor for later childhood adjustment and achievement. The present study examined the effect of exposure to poverty at age 8 on coping at age 13 using measures of coping and family income-to-needs ratio. Additionally, temperament at age 8 was examined as a potential moderator of the relationship between poverty and adolescent coping. The study hypothesized that exposure to poverty at age 8 would predict adolescent's use of disengagement coping strategies (e.g., avoidance, distraction, or inaction). Temperament was predicted to moderate the relationship between poverty and disengagement coping strategies. Results of regression analyses indicated that exposure to poverty at age 8 predicted adolescent inaction in response to stress. Furthermore, the relationship between poverty status at age 8 and distraction at age 13 was moderated by temperament (age 8).

Development of Coping Ability in Low- and Mid-Income Youth

The last twenty years has seen a rise in the amount of research on stressors that are both uncontrollable and chronic. Furthermore, children living in impoverished areas are exposed to elevated numbers of such stressors (Evans, 2004). In the United States, more children (under 18 years) than any other age group are living below the poverty line, and the households that they live in are operated most often by single mothers who struggle to find work (U.S. Census, 2005). These children are surrounded by unpredictable environments characterized by heightened levels of noise and crowding, and unstructured routines (Evans, Gonnella, Marcynyszyn, Gentile, & Salpekar, 2005). Prolonged exposure to poverty is harmful to cognitive development (Brooks-Gunn & Duncan, 1997). Furthermore, adolescents who have spent childhood in poverty are more susceptible to a variety of psychological problems (Wadsworth & Compas, 2002). Families that are under economic pressure subsist in poor neighborhoods, in which violence, punitive parenting, and interparental conflict are common (Wadsworth & Compas, 2002). Wadsworth & Compas (2002) found that children exposed to economic hardship were more likely to use avoidance, denial, and wishful thinking in dealing with stress compared to engagement strategies such as mobilization of active coping and social support resources. These disengagement strategies have been associated with poorer outcomes (e.g., internalizing and externalizing behaviors) than coping efforts that serve to orient ones attention to the problem (Wadsworth & Compas, 2002). When low-income children focus their attention on problems, they tend to elicit responses of helplessness (Taylor, 1988). Therefore, low-income children, who are likely to avoid responses of helplessness may be more likely than middle-income children to use engagement coping. Unfortunately, previous research on poverty and coping did not examine

whether more affluent youth use a similar array coping strategies as their low-income peers (Wadsworth & Compas, 2002).

Low-income adolescents are expected to be faced with a heightened number of outcomes to consider in terms of employing a coping response. It is quite possible that they are more susceptible to becoming overwhelmed by various tasks due to this environmentally driven difference in the cognitive manipulation of events. Furthermore, because the environment of poverty is marked by inconsistency (Evans et al., 2005; Wadsworth & Compas, 2002), low-income children may lack coping responses, more familiar to their more advantaged peers. In this sense, the stressors associated with poverty may alter the range of coping responses seen as available by low-income adolescents. As compared to temperament, which may provide adolescents with certain pre-potent responses to their environment, poverty may prevent specialization of coping by situation by increasing the number of outcomes adolescents must consider prior to engaging a response. However, the relationship between poverty and temperament has not been investigated since temperament is thought to be a stable basis for personality across age and experience.

The present study sought to investigate the relationship between poverty and adolescent coping in low- and middle-income samples. Additionally, the study examined the relationship between poverty and temperament and its effect on adolescent coping. Exposure to poverty at in childhood was expected to predict less advantageous coping in adolescence. Specifically, low-income adolescents were expected to employ a higher level of disengagement efforts when dealing with problems. Furthermore, children with more difficult temperaments were expected to differ in coping response based on their exposure to poverty-related stressors.

Coping

The ability to deal effectively with stressors and adapt to changes in one's environment is integral to human development. *Coping* involves efforts to mobilize one's personal resources in order to manage acute and chronic stressors (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Coping efforts have been shown to buffer the stress – psychopathology relationship (Wadsworth, Raviv, Compas, & Connor-Smith, 2005). Deficits in coping ability have been linked to a variety of poor socio-emotional outcomes such as externalizing and internalizing behaviors (Matsen & Coatsworth, 1995). Coping efficacy differs, however, across individuals as well as stressful contexts. Salient adolescent stressors are romantic relations, peers or friends, school, parents, one's future, critical life events, and idiosyncratic events (Seiffge-Krenke & Klessinger, 2000). Responses to these stressors are altered by individual differences in physical and social environments, variability in mood and experience with the stressor. The purpose of the present study was to examine differences in adolescent coping in relation to rural poverty. The study also sought to examine childhood temperament as a potential moderator of the relationship between poverty and adolescent coping.

Adolescence marks a period of development in which children are faced with physical and socio-emotional challenges as well as a rapidly changing amount and type of responsibilities. Cognition is greatly altered in adolescence as well. The development of higher order cognitive faculties, which increases with age, is associated with more emotion-focused coping (Compas, 1986). Coping may become more sophisticated as children experience more opportunities for social learning and modeling (Eisenberg et al., 1996). Children also become more interested in building supportive friendships throughout adolescence, further strengthening their repertoire for social modeling and learning. At the same time children begin to develop better cognitive and self-regulative ability, the stressors they encounter become increasingly less predictable and

more emotionally taxing. This is especially true for high-risk youth such as those raised in poverty-stricken environments (Evans, Gonnella, Marcynyszyn, Gentile, & Salpekar, 2005). Although poverty is associated with “lower order” coping (Compas, 1986), it is unclear whether the nature of low-income adult cognition is characteristically different or simply delayed when compared to the mature coping of middle-income individuals. Little research has been done on the developmental processes underlying coping (for an exception see Losoya, Eisenberg, & Fabes, 1998).

Lazarus, Folkman, and colleagues have largely contributed to the conceptualization of coping through their transactional model of stress and coping (DeLongis, Folkman, & Lazarus, 1988, Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986, Lazarus & Folkman, 1984). According to Lazarus, Folkman, and colleagues (1986), coping is individual-specific and cognitive and behavioral “coping efforts” are dynamic processes that serve to control the external and internal demands placed on the child. Lazarus and Folkman (1984) emphasize the role of cognitive appraisal in mediating the relationship between stress and coping. *Cognitive appraisal* is conceived to be the lens through which an individual views and internalizes the stressors that surround them. In light of this theory, Folkman and colleagues went on to study intra-individual variation in coping over five encounters with stressful situations (Folkman et al., 1986). However, regardless of what individuals bring to the table in terms of temperament or neurobiological factors, aspects of the stressors themselves can influence the type of coping response elicited in a given situation. For example, if the stressor is controllable (e.g., conflict within a close interpersonal relationship) then coping efforts employed are likely to differ from those provoked by an unforeseen and uncontrollable stressor (e.g., premature death in the family). Consideration of the stressor itself has incited contemporary researchers to identify characteristic

groups of environmental stressors and to develop a valid conceptualization of the coping behavior that these stressors provoke.

Many researchers have evolved coping models from Folkman, Lazarus, and colleagues' (1986) binary model, which contrasts individuals' attempts to focus on either the problem itself or one's emotional response to it. *Emotion-focused coping* entails responses to stressors where one selectively manages the distressing feelings that arise from the stressor. On the contrary, *problem-focused coping* includes attempts to change or remove the source of the stress (Folkman et al., 1986)—a reaction more commonly resulting from daily hassles. This categorization of coping by function is inherently flawed, however, as the categories are not mutually exclusive. Factor analysis indicates that this two-part model does not adequately depict the range of coping efforts that are naturally employed. In fact, Lazarus and Folkman (1984) found that *all* of their participants implemented both emotion- and problem-focused coping across stressors and therefore, they could draw no conclusions about differences in coping styles (in Skinner, Edge, Altman, & Sherwood, 2003). The merit of this conceptualization, however, is that it clarifies the dual nature of coping with both a cognitive (emotion-focus) and a behavioral (response to problem-focus) component. The proposition that coping is codependent on the stressor itself and other personal and environmental factors supports the idea that the development of one's coping style may depend on one's niche in society and the stressors associated with it.

Other systems for understanding and grouping coping efforts have been investigated. Ayers, Sandler, West and Roosa (1996) examined coping efforts in fourth to sixth graders and grouped them into four groups based on direction of attention while combining emotion- and problem- focused coping. Their model includes active coping, distraction strategies, avoidance strategies, and support seeking strategies. *Active coping* strategies focus on the problem and

include behavioral or cognitive attempts to solve it. *Distraction* classifies the release of emotions through behavioral or cognitive attempts to divert one's attention from the problem. Children who evoke behavioral or cognitive efforts to deny the severity of a problem (i.e. fantastical/wishful thinking) are thought to be using *avoidance* strategies. Ayers and colleagues (1996) used the *support* category of coping to group active attempts to gain either advice or comfort from others.

Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman (2000) outline a similar model for coping based on locus of control and attention—dividing coping efforts into voluntary/involuntary, primary/secondary control, and engaging/disengaging. Unlike most models, the Connor-Smith model used an a priori approach to establishing lower order coping efforts, which produced involuntary physical and cognitive categories of coping that had not been identified previously. Connor-Smith and colleagues propose that the model put forth by Lazarus and Folkman (1984) was incomplete—distinguishing between a generalized stress response and cognitive efforts without examining important individual differences in the latter. The primary/secondary control and engaging/disengaging axes of the newer model also highlight the overarching differences between many of the categories put forth by Ayers et al. (1996). Connor-Smith and colleagues tested their coping taxonomy with three age groups: 16-19 years; 12-18 years; and 11-17 years. Situation-based stressors differed across the three groups. While college-aged students examined responses to social stressors, high school-aged students evaluated coping in light of economic strain and family conflict, and the youngest sample responded to painful stressors. Unlike the binary model put forth by Lazarus and Folkman (1984), Connor-Smith's tri-partite model was found to be unaltered by age, gender, or stressor. Connor-Smith's model features five types of coping: primary control; secondary control; effortful

disengagement; involuntary engagement; and involuntary disengagement. *Engagement coping* has been defined as any attempt to direct one's attention to the problem, whereas *disengagement coping* involves an individual's actions to divert his or her attention from the problem at hand. The engage-disengage distinction has been particularly useful for contrasting people's responses to chronic environmental stressors (Skinner et al., 2003). The model assumes that children must acquire attentional self-regulation prior to the development of sophisticated cognitive skills such as coping. Therefore, this particular model may help uncover the process through which children *develop* coping strategies. Furthermore, applying Connor-Smith and colleagues' engagement-disengagement distinction to the model proposed by Ayers (1996), which divides coping efforts into subcategories of these two components, may provide a more comprehensive approach to categorizing coping.

Coping generally refers to behaviors one uses to adapt to one's environment and ranges from adaptive to maladaptive (Carson & Bittner, 1994). With this in mind, it has been difficult to separate environmental contributions to coping from the inherent nature of the child to interact with their environment in a particular manner. The present study examined exposure to poverty in childhood as an environmental influence on adolescent coping. Furthermore, the study investigated the inherent influence of temperament on adolescent coping. Additionally, temperament was examined in relation to its effect on the relationship between poverty and coping.

Temperament

Temperament is thought to influence coping ability by affecting the way an individual composes a response to stress and by shaping how one regulates the emotional reaction (Eisenberg et al., 1996). Thomas and Chess (1977) speculate that temperament may alter how

events are perceived and furthermore, may limit the range of coping strategies perceived as viable in a given situation. The construct of temperament has been broadly identified as individual differences in both behavioral and cognitive expression of emotions, which give rise to responsive styles that surface early in childhood, are stable over time and situation, and are thought to have a modifiable, biological center (Shiner, 1998). Although it has been generally accepted that temperament is multidimensional, no single model has been validated in terms of delineating the components of temperament. Most models include a measure of emotionality and some even separate negative and positive emotionality into two sub-scales. For example, the tripartite model put forth by Derryberry & Rothbart (1988) includes negative emotionality, positive emotionality, and constraint-attentional control. These three temperamental dimensions are thought to be derived from neurobiological reward pathways, identifying a spectrum across which people differ in their sensitivity to rewarding and punishing cues (Compas, Connor-Smith, & Jaser, 2004). Positive emotionality is associated with measures of extraversion and the activity and sociability subscales in the Emotionality-Activity-Sociability-Impulsivity (EAS) model of temperament put forth by Buss & Plomin (1984). Derryberry & Rothbart's (1988) negative emotionality component of temperament corresponds to the emotionality dimension of Buss & Plomin's four-part model (1984). The impulsivity component of the four-part model corresponds to the tripartite model's element of constraint. Both models incorporate elements of self-control, persistence, and planfulness (Buss & Plomin, 1984, Derryberry & Rothbart, 1988). Variation within the construct of temperament as measured by various subscales is thought to predispose individuals to be more or less influenced by environmental stressors and therefore more or less susceptible to certain pathologies such as depression (Compas, Connor-Smith, & Jaser, 2004). In

fact, many measures combine subscales in order to use temperament as a single measure of “difficultness,” thereby approximating a child’s level of inherent psychological risk.

In a recent review article, Compas, Connor-Smith, and Jaser (2004) examined a potential model for children’s responses to stress and resultant coping strategies in which temperament was proposed as a mediator variable. Compas et al. (2004) posit that temperament facilitates the controlled processes that result from exposure to stress in addition to provoking automatic (and predominantly biological) changes in one’s emotional state. In other words, temperament not only directs one’s innate stress response but also dictates one’s pattern of cognitively applied coping strategies, which in turn influences one’s ability to effectively deal with a particular stressor. Temperament predicted certain psychopathologies such as anxiety and depression, and this relationship was found to be mediated by a subset of coping strategies, namely secondary control coping (distraction, acceptance, cognitive restructuring, and positive thinking; Compas et al., 2004).

Temperament may interact with environmental variables resulting in a balancing act between risk and resilience for adolescents in unpredictable environments. The mechanism of this interaction and its relationship to coping may be related to the concept of cognitive appraisal, a central component of the Lazarus & Folkman coping model. However, attempting to distinguish temperament as a separate entity from cognitive appraisal or coping efforts in any coping model has proven quite difficult. Understanding how environmental and inherent variables contribute to coping may facilitate better conceptualization of the development of such processes. Temperament may function for young children as an essential set of cognitively reinforced response guidelines. Subsequently, these internal “rules,” which are subject to environmental cues, may mature into a relatively stable pattern of coping reactions as children

advance to higher-level cognitive processes. However, the developmental course of these cognitive facilities and their interactions with the psychosocial environment has not been well studied to date. Moreover, even less research has examined this developmental sequence in environments with differing levels and types of stress.

The present study addresses three major gaps in the present literature. First, the study examines a model of coping that assesses disengagement and engagement as well as lower level categories of coping, which target specific behaviors. The study also investigates potential differences in the coping of low- versus middle-income children. Although coping with poverty-related stressors has been studied before (Wadsworth & Compas, 2002), few studies have compared coping styles of different income groups. Lastly, the study examines a potential moderator of the relationship between poverty and coping. Temperament has been consistently used as a standard measure of inherent personality or behavior-driving factors in studies of social, psychological, and emotional well-being. The present investigation sought to examine the influence of temperament on coping and how this relationship is altered by exposure to poverty.

Method

Participants

A group of two hundred and twenty-six children (52.7 % male), 96.9 % Caucasian, participated in the present study. Average age of the sample at wave II was 13.37 years (SD = 11.9 months). Children were between 8 and 10 years of age when first sampled. Participants were considered low-income if their income-to-needs ratio was below 1.3. This ratio is used to compare household incomes to federal estimates of the minimum amount of income required for food and shelter expenses. The income-to-needs ratio is annually adjusted and is a per capita index, with a ratio of one being defined as the poverty line by the U.S. government. Participants

were all residents of upstate New York, who were recruited as part of a longitudinal study. The non-poverty sample (N = 150) included 99.2 % Caucasian or Asian children (54.7 % male), with a mean income-to-needs ratio of 2.37 (SD = .94). The poverty sample (N = 76) included 100 % Caucasian or African American children (48.7% male), with an average income-to-needs ratio of .70 (SD = .23). Participants in the present sample were excluded if wave I temperament or wave II coping measures were unobtainable.

Materials

Temperament was measured through parental responses on the Emotionality-Activity-Sociability (EAS) Temperament Scale (Buss & Plomin, 1984; see Appendix for survey). As suggested by Buss and Plomin (1984), a subset of questions on shyness was implemented in addition to those on sociability. Test-retest correlations for EAS subscales range from .75 to .85. Items were observations of child behaviors and preferences, which parents disclosed as “not typical,” “slightly or a little bit typical,” “somewhat typical,” “typical,” or “very typical” of the target child. Parents answered five, randomly ordered questions from each subscale; resulting in a total of twenty questions. The questions were coded on a 0 to 4 point scale, with zero being “not typical” of the child and 4 representing “very typical” of the child. Summed scores were generated for each of the four subscales. *Emotionality* included items such as “child gets upset easily” or “child cries easily.” *Shyness* was confirmed by statements like “child tends to be shy” and was negated by statements such as “child is very friendly with strangers (reversed scoring).” These two subscales were combined to create a “difficult temperament” variable (alpha = .530).

The assessment of adolescents’ coping efforts was carried out through self-report answers on a general coping checklist adapted from Ayers et al. (1996; see Appendix for measure). The inventory contained twenty-eight items; however, factor-analysis yielded four items irrelevant to

the six categories. Analyses were based on responses to the remaining twenty-four questions. Participants were given a life-events checklist adapted from (Compas, Wagner, Slavinlesley, Vannatta, 1986). Coping items on the life-events checklist surveyed problems children had experienced with money, family members, school, and friends (see Appendix for checklist). The child was first asked to fill out the life events checklist, indicating items that happened to them in the last six months. This measure was then used as a reference when children were asked to respond to twenty-four statements that completed the phrase “When these kinds of problems come up...” Items regarding the four groups of problems were presented in a random order. Participants responded to the statements by indicating whether they dealt with problems in the manner indicated “never,” “sometimes,” “often,” or “most of the time” (0-3). Prior to completing the coping inventory, each child was asked to look back at the life events checklist, specifically at the items they had marked off. Children were assured that there were no right or wrong answers to the coping questions, and were told that the experimenter was interested in what they truly do when problems arise in their family, friend circles, at school or about money.

Factor analysis was performed to identify categories of coping strategies and resulted in identification of two major categories of coping, engagement and disengagement, which corresponds well to the coping measure put forth by Connor-Smith et al. (2000). Engagement coping included subcategories of active coping strategies; efforts to gain social support from adults; and efforts to gain social support from friends. Disengagement coping was further categorized by distraction strategies, avoidance strategies, and inaction strategies. *Active coping* included items such as “I handle these problems myself” (alpha = .530). The *adult support* scale was comprised of items like “I try to work things out with my mom or dad” (alpha= .051). *Friend support* was categorized by statements such as “I try to figure out what I can do about

[these problems] with my friends” ($\alpha = .396$). *Distraction* included when adolescents “do something physical like walk; ride my bike, dance, or some sports activity” ($\alpha = .499$). The *avoidance* subscale included items such as “I just don’t think about [my problems]” ($\alpha = .167$). Lastly, *inaction* included items such as “I tend to just give up” ($\alpha = .368$).

Procedure

Both the EAS temperament scale (parent, wave I) and the coping inventory (child, wave II) were administered as part of a longitudinal study on cumulative risk and housing quality. Data were collected in the participants’ homes. For the temperament and income measures, a parent/guardian of the child, typically the mother was asked to respond to the statements as indicated on a note card, which equated each response to a number.

Results

The present findings resulted from longitudinal analyses that regressed coping at age 13 onto income-to-needs ratios at wave 1 (Grades 3-5) and temperament at wave 1. Income-to-needs ratios were used to create a dichotomous variable, labeled poverty, with a cut-off point of 1.3. Exposure to poverty at age 8 significantly predicted the inactive nature of adolescents’ coping responses to problems with school, family, money, and peers, $t = 2.482$, $p < .05$. Adolescents, whose families were considered poor at age 8, showed significantly higher scores on the inaction sub-scale of disengagement.

 Put figure 1 about here

Adolescent coping did not differ between participants based on parents’ ratings of temperament at age 8. However, the interaction between poverty and temperament significantly

predicted adolescents' scores on the distraction subscale of coping, $t = 2.753$, $p < .01$. Children who were described as having difficult temperaments at age 8 (showing high levels of emotionality and shyness) used significantly more distraction strategies in adolescence **if they had been exposed to poverty at age 8**. Gender did not interact with these factors so was ignored in the present analyses.

Put figure 2 about here

Discussion

The present results indicate that exposure to poverty affects children's development of coping styles both directly and indirectly. The chaotic environment of poverty has direct effects on children's performance in a learned helplessness task (Evans et al., 2005). The present study implemented a subjective measure of coping that may reflect learned helplessness—the inactive coping subscale assessed children's tendency to essentially “give up” when faced with family, school, money, and peer-related problems. Children exposed to poverty at age 8 were more likely to respond to problems by “go[ing] along with the way things are,” “just giv[ing] up,” or “realizing/feeling that there is nothing that [they] can do” at age 13 (Figure 1). Several explanations for this result exist in the literature. Children who live in high-risk, low-income environments may be exposed to stressors that are generally less alterable than those encountered by middle-income children. Therefore it may be advantageous for them to deal with problems by disengaging—either by avoiding (cognitive and behavioral) the problems or by distracting oneself from them. Gamble (1994) found associations between low controllability of stressors and avoidance tactics. Futhermore, Roth & Cohen (1986) examined approach versus avoidance

behavior and found that in high stress environments, avoidance responses to stressors may facilitate more helpful approach tactics in the long run. Likewise, Wadsworth and Compas (2002) found that children exposed to economic strain and family conflict had a tendency to rely on disengagement strategies. However, the present results do not support a general increase in disengagement tactics when exposed to poverty-related stressors. There was no effect of poverty on overall disengagement, only on inaction responses.

Alternatively, poverty exposure during childhood may not alter the coping response in a way that is measurable by most coping assessments, such as the present measure, which recognizes qualitative differences in coping efforts. The risk associated with poverty may in fact change the cognitive process that precedes coping – possibly increasing the number of variables considered by a child in the appraisal of a situation. A simple assay of adolescents' behavioral response to stressors would not be sensitive to this difference in cognitive processing. Additionally, if low-income adolescents are forced to consider a heightened number of variables prior to engaging a coping response, a higher frequency of inactive or delayed responses could be expected. Learned helplessness, as measured by behavioral responses on an effortful task, may focus too much on the outcome of learned helplessness rather than on the purpose served by “giving up” (Taylor, 1983). The present finding that inactive coping responses are more prevalent among low-income adolescents supports this idea of increased cognitive load as a response to the chaotic environment of poverty. Future studies should survey the considerations adolescents undertake prior to implementing a coping response in low- and middle-income populations.

Children who have difficult temperaments, marked by high levels of emotionality and shyness, may be more susceptible to poverty-related stressors. The present results show that the

interaction between difficult temperament and poverty lends higher levels of distraction in adolescents (Figure 2). As in the poverty analyses, the interaction between poverty and temperament yields coping styles more dominated by disengagement in low-income children compared to their middle-income peers. Children who are more distressed in general are expected to be more affected by their environments (Buss & Plomin, 1984). Furthermore, adolescents who had difficult temperaments at age 8 and who had been exposed to poverty-related stressors may respond to their environments by distracting themselves from the distress provoking situations. Temperament is thought to limit the coping responses evaluated as possible by adolescents (Thomas & Chess, 1977). Variation within the construct of temperament as measured by various subscales is thought to predispose individuals to be more or less influenced by environmental stressors (Compas, Connor-Smith, & Jaser, 2004) and therefore may be predisposed to certain coping responses. The lack of fit between the response limiting effect of difficult temperament and the response flooding poverty could plausibly lead to cognitive overload and further low-income adolescents' use of disengaging (anxiety reducing) strategies. The present results support this theory in part. The interaction between poverty and difficult temperament is highly predictive of distraction coping in adolescence. However, poverty, temperament, and the relationship between these two variables predict different disengaging responses. Future studies should examine individual differences in the types of disengagement strategies implemented by low-income children.

Limitations

The present findings were limited by the age and rural location of the sample. Future studies should compare the effects of rural and urban poverty on coping across age groups. The present findings may have resulted from the nature of the coping measure. Each construct was

assessed by 4 items, which may not have adequately surveyed the trait of coping intended.

Additionally, the categorization of coping used in the study may not have been exhaustive or extensive enough to survey the range of responses within each construct. No opportunity was given to the participants to disclose ways in which they usually dealt with their problems other than those examined by the coping inventory. Because the temperament measure was given at age 8, it is unclear whether this measure actually tapped the innate personality of the children or a composite construct of their experiences and inherent behavioral attributes. Furthermore, the interaction between poverty and temperament relied on poverty as a dichotomous variable.

Future studies should look at this relationship when poverty is measured continuously and should include measures of cumulative risk.

References

- Ayduk, O., Mendoza-Denton, R., Mischel, W., Downey, G., Peake, P., & Rodriguez, M. (2000). Regulation the interpersonal self: Strategic self-regulation for coping with rejection sensitivity. *Journal of Personality and Social Psychology, 79*, 776-792.
- 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.
- Brooks-Gunn, J. & Duncan, G. (1997). The effects of poverty on children. *Children and Poverty, 7*, 55-71.
- Buss, A. & Plomin, R. (1984). *Temperament: Early Personality Traits*. Hillsdale, New Jersey: Erlbaum.
- Carson, D.K. & Bittner, M.T. (1994). Temperament and school-aged children's coping abilities and responses to stress. *Journal of Genetic Psychology, 155*, 289-302.
- Cole, P.M., Martin, S.E., & Dennis, T.A. (2004). Emotion regulation as a scientific construct: Methodological challenges and directions for child development research. *Child Development, 75*, 317-333.
- Compas, B.E., Connor-Smith, J., & Jaser, S.S. (2004). Temperament, stress reactivity, and coping: Implications for depression in childhood and adolescence. *Journal of Clinical Child and Adolescent Psychology, 33*, 21-31.
- Compas, B.E., Connor-Smith, J.K., Saltzman, H., Thomsen, A.H., & Wadsworth, M.E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential theory and research. *Psychological Bulletin, 127*, 87-127.

- Compas, B.E., Wagner, B.M., Slavinlesley, A., Vannatta, K. (1986). A prospective study of life events, social support, and psychological symptomatology during the transition from high school to college. *American Journal of Community Psychology, 14*, 241-259.
- Connor-Smith, J.K., Compas, B.E., Wadsworth, M.E., Thomsen, A.H., & Saltzman, H. (2000). Responses to stress in adolescence: Measurement of coping and involuntary stress responses. *Journal of counseling and Clinical Psychology, 68*, 976-992.
- DeLongis, A., Folkman, S., & Lazarus, R.S. (1988). The impact of daily stress on health and mood: Psychological and social resources as mediators. *Journal of Personality and Social Psychology, 54*, 486-495.
- Derryberry, D. & Rothbart, M.K. (1988). Arousal, affect, and attention as components of temperament. *Journal of Personality and Social Psychology, 55*, 958-966.
- Eisenberg, N., Fabes, R.A., Murphy, B., 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., Sadovsky, A., Spinrad, T.L., Fabes, R.A., Losoya, C.V., Reiser, M., Cumberland, A., & Shepard, S.A. (2005). The relations of problem behavior status to children's negative emotionality, effortful control, and impulsivity: Concurrent relations and prediction of change. *Developmental Psychology, 21*, 193-211.
- Evans, G.W. (2004). The environment of childhood poverty. *American Psychologist, 59*, 77-92.
- Evans, G.W. & English, K. (2002). The environment of poverty: Multiple stressor exposure, psychophysiological stress, and socioemotional adjustment. *Child Development, 73*, 1238-1248.

- Evans, G.W., Gonnella, C., Marcynyszyn, L.A., Gentile, L., & Salpekar, N. (2005). The role of chaos in poverty and children's socioemotional adjustment. *Psychological Science, 16*, 560-565.
- Evans, G.W. & Rosenbaum, J. (unpublished). The income achievement gap: Examination of socioemotional explanations.
- Folkman, S., Lazarus, R.S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R.J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology, 50*, 992-1003.
- Howse, R.B., Lange, G., Farran, D.C., & Boyles, C.D. (2003). Motivation and self-regulation as predictors of achievement in economically disadvantaged children. *The Journal of Experimental Education, 71*, 151-174.
- Landry, S.H., Smith, K.E., Miller-Loncar, C.L., & Swank, P.R. (1997). Predicting cognitive-language and social growth curves from early maternal behaviors in children at varying levels of biological risk. *Developmental Psychology, 33*, 1040 -1053.
- Lazarus, R.S. (2000). Toward better research on stress and coping. *American Psychologist, 55*, 665-673.
- Lazarus, R.S. & Folkman, S. (1984). Stress, appraisal and coping. New York: Springer.
- Losoya, S., Eisenberg, N., & Fabes, R.A. (1998). Developmental issues in the study of coping. *International Journal of Behavioral Development, 22*, 287-313.
- Matsen, A.S. & Coatsworth, J.D. (1998). The development of competence in favorable and unfavorable environments. *American Psychologist, 53*, 205-220.
- Mischel, W., Shoda, Y., & Rodriguez, M.I. (1989). Delay of gratification in children. *Science, 26*, 933-938.

- Raver, C. C. (2002). Emotions matter: Making the case for the role of young children's emotional development for early school readiness. *Social Policy Report, 16*, 3-19.
- Raver, C.C. (2004). Placing emotional self-regulation in sociocultural and socioeconomic contexts. *Child Development, 75*, 346-353.
- Roth, S., & Cohen, L.J. (1986). Approach, avoidance, and coping with stress. *American Psychologist, 41*, 813-819.
- Seffige-Krenke, I.S. & Klessinger, N. (2000). Long-term effects of avoidant coping on adolescents' depressive symptoms. *Journal of Youth and Adolescence, 29*, 617-630.
- Selvig, L.A. (unpublished). Temperament in the coping process: A study of affect intensity, cognitive appraisals, and coping strategies in adolescents.
- Shiner, R.L. (1998). How shall we speak of children's personalities in middle childhood? A preliminary taxonomy. *Psychological Bulletin, 124*, 308-332.
- Skinner, E.A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin, 129*, 216-269.
- Taylor, S.E. & Brown, J.D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103*, 193-210.
- Thomas, A. & Chess, S. (1977). Temperament and development. New York: Brunner/Mazel.
- U.S. Census. Retrieved February 20, 2007, from <http://www.census.gov/hhes/www/poverty/poverty.html>.
- Wadsworth, M. & Compas, B. (2002). Coping with family conflict and economic strain: The adolescent perspective. *Journal of Research on Adolescence, 12*, 243-274.

Wadsworth, M., Raviv, T., Compas, B., Connor-Smith, J. (2005). Parent and adolescent responses to poverty related stress: Tests of mediated and moderated coping models. *Journal of Child and Family Studies, 14*, 283-299.

Appendix

Table 1. EAS Child Temperament Scale (Buss & Plomin, 1984)

Item	Subscale	Reverse scoring
1. Child tends to be shy.	Shyness	
2. Child cries easily.	Emotionality	
3. Child likes to be with people.	Sociability	
4. Child is always on the go.	Activity	
5. Child prefers playing with others rather than alone.	Sociability	
6. Child tends to be somewhat emotional.	Emotionality	
7. When child moves about, he usually moves slowly.	Activity	X
8. Child makes friends easily.	Sociability	
9. Child is off and running as soon as he wakes up in the morning.	Activity	
10. Child finds people more stimulating than anything else.	Sociability	
11. Child often fusses and cries.	Emotionality	
12. Child is very sociable.	Shyness	X
13. Child is very energetic.	Activity	
14. Child takes a long time to warm up to strangers.	Shyness	
15. Child gets upset easily	Emotionality	
16. Child is something of a loner.	Sociability	X
17. Child prefers quiet, inactive games to more active ones.	Activity	X
18. When alone, child feels isolated.	Sociability	
19. Child reacts intensely when upset.	Emotionality	
20. Child is very friendly with strangers.	Shyness	X

Appendix

Table 2. Coping Scale

When these kinds of problems come up:	Subscale
1. I find a friend who is really good at helping me figure out what to do.	Friend Support
2. I have friends I can talk to who make me feel better.	Friend Support
3. I put my mind on other things to distract myself.	Distraction
4. I handle the problems myself.	Active Cope
5. I try to work things out with my mom or dad.	Adult Support
6. I can talk to my mom or dad about my feelings.	Adult Support
7. I ignore the problems.	Avoidance
8. I just go along with the way things are.	Inaction
9. I tend to just give up.	Inaction
10. I try not to think about problems that have happened.	Avoidance
11. I solve them on my own.	Active Cope
12. I watch TV, listen to music, or read.	Distraction
13. I have a grownup other than my parents; I can turn to for help.	Adult Support
14. I throw myself into my schoolwork or other activities to help take my mind off of these kinds of problems.	Distraction
15. I deal with these kinds of problems myself.	Active Cope
16. I have a friend I talk to who really cares about my feelings.	Friend Support
17. I realize that there is nothing I can do.	Inaction
18. I try to figure out what I can do about them with my friends.	Friend Support
19. I just don't think about them.	Avoidance
20. I figure out what to do about these problems on my own.	Active Cope
21. I try to figure out what to do by talking with another grownup, outside of my family.	Adult Support
22. I do something physical like walk; ride my bike, dance, or some sports activity.	Distraction
23. I feel like there is nothing I can do.	Inaction
24. I try to put them out of my mind.	Avoidance

Appendix

Life Events Checklist

Instructions:

Here is a list of events which may or may not have happened to you. Please check off any events which happened to you in the last six months.

Everything you tell us is confidential.

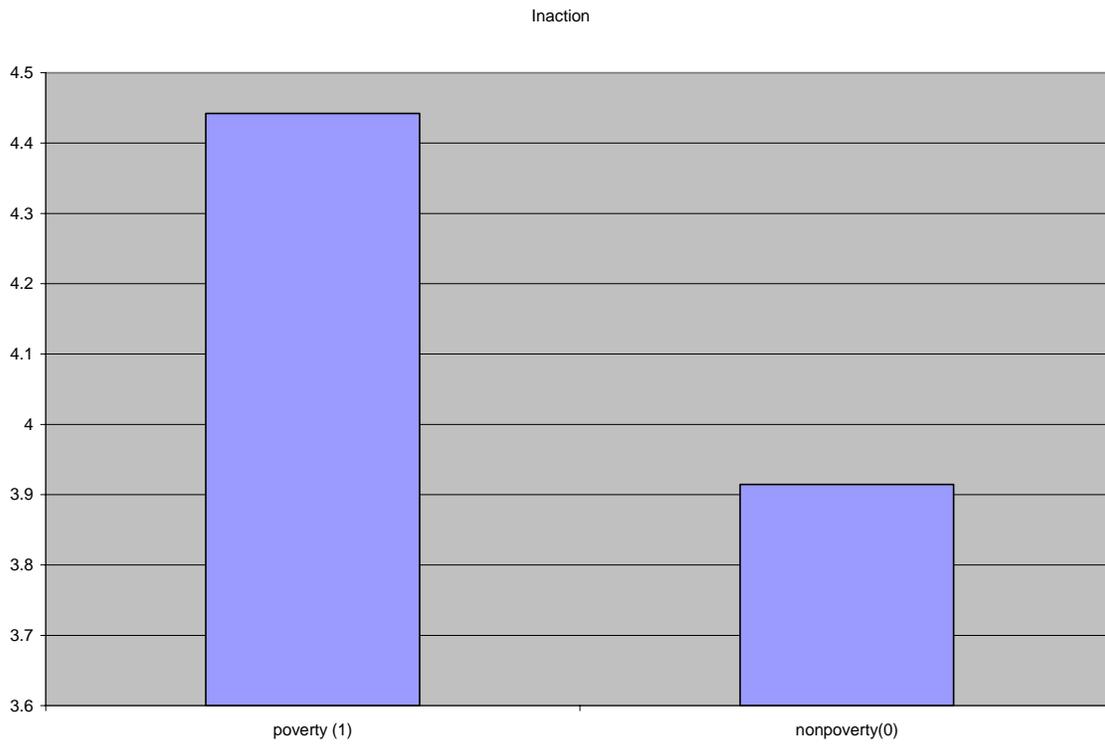
Give dates of start/stop or is this an ongoing problem?

Event has happened in the last six months:

1. Fight or problems with a friend
2. Family didn't have enough money to buy clothes we really needed.
3. Did poorly on a test or paper at school
4. Getting in trouble at school
5. Getting bad grades or progress reports at school
6. We ran out of food because we didn't have enough money
7. Pretty serious arguments or fights between parents
8. Pretty serious arguments or problems with boyfriend/girlfriend.
9. Parents discover something you didn't want them to know about
10. Becoming pregnant or getting someone else pregnant
11. Pretty serious problems or argument with your parents and or brother or sister
12. Alcohol or drug abuse in your family
13. Worrying about having enough money
14. Breaking up or being rejected by your boy or girlfriend
15. Death of a close friend
16. Parents getting divorced or separated.
17. Not having a boyfriend or girlfriend
18. Flunked a class
19. Kept back a year in school
20. Left you or ignored by other kids
21. Someone tried to pressure you to smoke drink or take drugs
22. Other kids picked on you made fun of you bullied you
23. You were pressured to have sex
24. Not enough money to go on school trip or do some special school activity
25. Parent remarried or got engaged
26. Worried about test or project assignment
27. Worried because of trouble understanding schoolwork
28. Couldn't do something with friends because family couldn't afford it
29. Having bad classes or teachers
30. Problems or arguments with teachers or principal.

Appendix

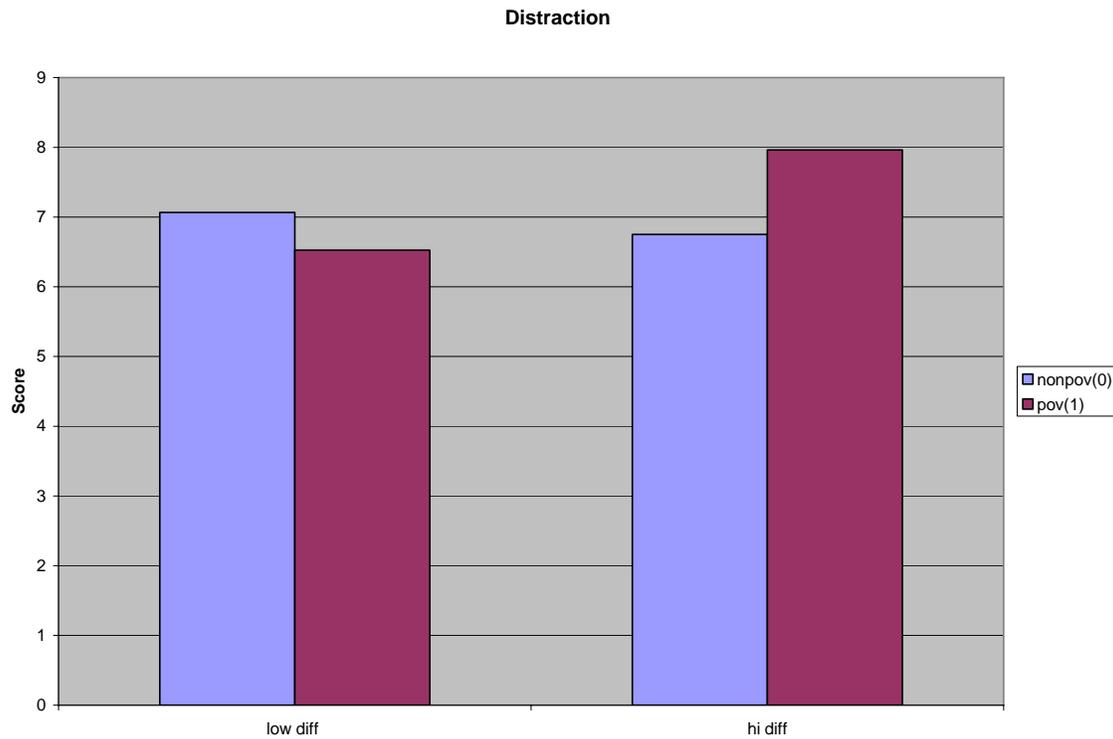
Figure 1. Exposure to Poverty at Age 8 Predicts Adolescents' Inactive Coping Style at Age 13



Inaction coping subscale scores at age 13 are higher for children who were exposed to poverty at age 8.

Appendix

Figure 2. Adolescents' Use of Distraction Efforts at age 13 Based on Temperament and Poverty at Age 8



Children with difficult temperaments at age 8 are more likely to rely on distraction in dealing with their problems in adolescence (age 13) if they had been exposed to poverty at age 8.