

11-2009

Coping styles of African American youth living in poverty: Understanding the role of coping in resiliency

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COPING STYLES OF AFRICAN AMERICAN YOUTH LIVING IN POVERTY:
UNDERSTANDING THE ROLE OF COPING IN RESILIENCY

A Thesis

Present in

Partial Fulfillment of the
Requirements for the Degree of
Master of Arts

November, 2009

BY

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CHAPTER I

INTRODUCTION

Resiliency

There is a great deal of interest in the resilience of urban African American youth, as they are disproportionately at risk for poor outcomes due to the disproportionate rate of poverty among this population (Yakin & McMahon, 2003; Li, Nussbaum, & Richards, 2007; Smokowski, Reynolds & Bezruczko, 2000; Barrow, Armstrong, Vargo, & Boothroyd, 2007; Fergus & Zimmerman, 2005). Despite the extraordinary risk factors faced in urban poverty, many African American youth living in urban poverty adapt. Resiliency is conceptualized as good outcomes despite serious threats to adaptation or normal development (Masten, 2001). Resiliency requires that two conditions be met: 1) the existence of high risk that threatens normal development; and 2) observable, successful adaptation as indicated by better than predicted outcomes given the high risk status (Masten, 2001; Masten & Coatsworth, 1998).

Key Determinants of Adaptation in Adolescence

Successful adaptation refers to overcoming or coping with adversities in a manner that produces better than expected outcomes. Adaptation can be defined based on the presence of an observable track record of meeting the major expectations for the behavior of children of the appropriate age and particular situation (Masten, 2001; Masten & Coatsworth, 1998). These adaptation determinants are typically age appropriate behavioral functioning, including conduct and low rates of delinquency and aggression. Adaptation can also be defined as the absence of psychopathology or a low level of symptoms and/or impairment (Masten, 2001; Grant, Compas, Thurm, McMahon, & Gipson, 2004; Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Examples of these psychological markers include the absence or low levels

of anxiety, depression, and other forms of internal distress (Masten, 2001; Compas et al., 2001; Gaylord-Harden, Gipson, Mance, & Grant, 2008). Youth can display resilient outcomes in as few as one or two domains or as many as all domains.

Establishing Risk: The Multi-systemic Impact of Poverty

The other requirement of resiliency is the presence of extreme risk that threatens adaptation or normal development. Risk is defined as “an elevated probability of a negative outcome” (Wright & Masten, 2005, p.20) whereby a group of people with a specific risk factor is less likely overall to do well in some regard (Wright & Masten, 2005; Yates, & Masten, 2004). Poverty is one of the most profound and debilitating risk factors (Masten, 2001; Schorr & Schorr, 1988; Luthar, 1991; Werner, 1990).

As a result of historical and contemporary racism and discrimination, a disproportionate number of African Americans live in poverty, and generally live among other African Americans who are also poor (U.S. Department of Health and Human Services, 2001). While 11% of all U.S. families have incomes below the federal poverty line, about 23% of all African American families have incomes below the federal poverty line and are more likely to live in severe poverty (U.S. Census Bureau, 2006). Further, African Americans tend to have longer periods in poverty and, therefore, are more likely to suffer from its long-term effects (U.S. Department of Health and Human Services, 2001). Nearly 34% of African Americans under the age of 18 live in poor homes, while the national poverty rate is 17% for all U.S. youth under the age of 18 (U.S. Census Bureau, 2006).

Schorr and Schorr (1988) described that “family poverty is relentlessly correlated with school-aged childbearing, school failure, and violent crime, [and] virtually all other risk factors that make rotten outcomes more likely are also found disproportionately among poor children”

(p. 22). As Schorr and Schorr's (1988) description implies, the negative effects of poverty on normal development arise from the multisystemic impact that poverty has on youth's lives, including the individual, family, educational structures and broader community (Schorr & Schorr, 1988). Poverty encompasses many risk factors, including exposure to violence, strain of financial resources and increased stressful life experiences. African American youth in impoverished neighborhoods are often exposed to violence, and are more likely to be victimized, abused and neglected (U.S. Department of Health and Human Services, 2001). Due to the constant exposure to violence, they are less likely to encounter opportunities for safe, structured recreational and constructive activities (National Research Council, 1993; U.S. Department of Health and Human Services, 2001; Gaylord-Harden et al., 2008). As a result of limited financial means, poor African American youth and their families are more likely to have compromised housing, medical care, and nutrition and are more likely to attend substandard schools and receive a substandard education (U.S. Department of Health and Human Services, 2001). Among youth living in poverty, constant stressful life experiences are experienced to a greater degree than their counterparts not living in poverty (Grant, Poindexter, Davis, Cho, McCormick, & Smith, 2000) and have negative effects on well-being. In a review, Grant and colleagues (2004) found that youth experienced increased symptoms of emotional and behavioral problems following exposure to stressors and general stressful experiences (Grant et al., 2004).

Coping

Successful adaptation despite poverty's extreme threats to normal development is accomplished by means of protective factors. Protective factors are individual, familial and extrafamilial processes that provide youth with positive support and impact youth in such a way that buffer the negative imprints of high risk and promote resilience (Utsey, Bolden, Lanier, &

Williams, 2007; Luthar, 1991). One of the most important protective factors at the individual level is coping style (Yates & Masten, 2004). According to Compas and colleagues (2001), coping is defined as a process of adaptation whereby one displays “conscious volitional efforts to regulate emotion, cognition, behavior, physiology, and the environment in response to stressful events or circumstances” (p. 89). Although coping style is not deeply investigated in the resiliency research, it nevertheless has been consistently evaluated in general child and adolescent research areas as a major factor essential to how adolescents effectively manage risk in their environments. In a review of the coping literature, substantial evidence has shown support for coping as an effective means of counteracting the negative effects of stress on adolescents (Compas et al., 2001) who are at risk for psychological problems (Grant, O’Koon, Davis, Roache, Poindexter, Armstrong, Minden, & McIntosh, 2000). However, much of this evidence stems from research on White, middle-class adolescents (Compas et al., 2001; Gaylord-Harden et al., 2008) and is typically not incorporated into the resiliency context. Because of the disproportionate amount of challenging and detrimental environmental factors that urban African American youth living in poverty must face, it is important to understand which coping strategies are most effective and efficient for those youth who are able to demonstrate resilience.

Coping has been categorized into four strategy subtypes: active strategies, social support seeking strategies, distraction strategies, and avoidant strategies (Ayers, Sandler, West, & Roosa 1996; Compas et al., 2001). This categorization of coping has been widely used with low-income, urban populations (Prelow, Michaels, Reyes, Knight, & Barrera, 2002; Gaylord-Harden et al., 2008) and normed on economically and racially diverse populations (Ayers et al., 1996). Active coping strategies, social support seeking strategies and distraction strategies have been considered adaptive coping, and they have generally been associated with positive outcomes

(Ayers et al., 1996; Compas et al., 2001, Clarke, 2006). In contrast, the use of avoidant strategies has been generally deemed maladaptive and associated with negative outcomes (Ayers et al., 1996; Compas et al., 2001). However, these distinctions between adaptive and maladaptive coping styles do not seem to apply fully to African American youth living in poverty and are not associated with resiliency in predictable ways.

Studies of the coping styles of African American youth living in poverty are inconsistent in their results. In some instances, researchers are not finding the same support for some “adaptive” coping strategies as are found in the general population literature (for reviews see Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001 and also see Grant, Compas, Thurm, McMahon, Gipson, Campbell, Krochock, & Westerholm, 2006; Gaylord-Harden et al., 2008). Studies with African American youth living in poverty have failed to find consistent positive effects for the use of active strategies; rather, some have found positive effects for the use of avoidant strategies (Grant, Poindexter, Davis, Cho, McCormick, & Smith, 2000; Steward, Steward, Blair, Jo, & Hill, 2008). This may be because many of the stressors in environments marked by chronic poverty are uncontrollable, making active strategies a maladaptive response (Compas et al., 2001; Gonzales, Tein, Sandler, & Friedman, 2001) and may actually exacerbate the effects of these negative circumstances on youth.

Specifically, it has been shown that in response to community violence, avoidant strategies seem to be a more adaptive for African American youth living in poverty (Grant et al., 2000; Edlynn, Gaylord-Harden, Richards, & Miller, 2008; Rosario, Salzinger, Feldman, & Ng-Mak, 2003). Edlynn and colleagues (2008) found that avoidant strategies served a protective-stabilizing function for experiencing community violence, such that youth that used higher levels of avoidant strategies had stable anxiety scores overtime whereas youth that used lower levels of

avoidant strategies had higher anxiety scores over time. Additionally, avoidant coping was also found to buffer the negative effects of other threatening circumstances, such as the effect of victimization on delinquency for boys (Rosario et al., 2003).

In other instances, some studies on the coping styles of African American youth have found results somewhat similar to those seen in studies of the general youth population. Dempsey (2002) found that the use of avoidant strategies in response to community violence led to negative outcomes overtime, such as symptoms of post-traumatic stress disorder, anxiety and depression. Roache (2004) found positive support for the use of active strategies in reducing symptoms of depression in low-income African American youth. Some studies have found mixed effects for social support seeking, which have also been found for youth in the general population (Grant et al., 2006; Tolan, Gorman-Smith, Henry, Chung, & Hunt, 2002). Some research has found negative effects for social support seeking with peers and family (Steward et al., 2008). Still yet, some research has shown positive effects for social support seeking. Tolan and colleagues (2002) found that African American inner-city youth that relied on social support seeking strategies showed the most psychological resiliency, displaying the lowest levels of externalizing and internalizing problems. Grant and colleagues (2000) found that social support-seeking strategies were protective for girls that experienced high rates of major life stressful events; while these positive effects were not found when girls used this strategy in response to daily hassles.

Given the mixture and inconsistency of research on African American youth's coping, it is unclear what is adaptive and what is not for this particular population. Advances in understanding how resilient African American youth successfully cope with the risk factors associated with poverty warrant serious consideration. Understanding the coping patterns in this

population is best done using person-level techniques such as cluster analysis (Masten, 2001; Rasmussen, Aber, & Bhana, 2004), which will provide rich profiles of how low-income African American youth naturally cope. Cluster analysis allows for the meaningful grouping of persons based on similarities and dissimilarities among identified criteria (Dillon & Goldstein, 1984; Kaufman & Rousseeuw, 1990). These groups can then be compared across different outcomes. Thus, outcome comparisons of coping groups derived from the cluster analysis will give important information about which coping strategies are associated with more resilient youth and which are associated with groups that have less successful outcomes.

Gaylord-Harden and colleagues (2008) utilized cluster analysis to classify African American adolescents living in poverty on the basis of their coping patterns. Gaylord-Harden and colleagues (2008) found evidence for two distinct coping groups, with one group using more avoidant strategies and little use of problem- and emotion-focused social support seeking (self-reliant avoidant coping group) and the other group showing a moderate use of all strategies (diversified coping group). Coping groups were compared to determine whether they differed on various psychological outcomes and experiences with stress. Although the self-reliant coping group experienced more major life events, no differences in the presentation of psychological symptoms were found among the two distinct coping groups of African American adolescents. Some study limitations may have impacted such few findings. The present study attempts to build off of this study by addressing its limitations.

Gaylord-Harden and colleagues (2008) used one measure of stress to assess how each coping groups differed in terms of risk. Using one measure of stress is limiting when it is known that poverty is multi-faceted in the negative risk factors it creates. As such, a more comprehensive evaluation of risk that included not only general stressful life experiences, but

also other risk factors imbedded in poverty, particularly exposure to violence and economic strain, is warranted. Additionally, Gaylord-Harden and colleagues (2008) included just one self report of psychological and behavioral symptoms. Research has shown that while youth are the best self-reporters of internal symptoms, parents are better reporters of externalizing symptomatology such as delinquency, social problems, aggression and other behavioral functioning (Lau, Garland, Yeh, McCabe, Wood, & Hough, 2004). Multiple reports of internalizing and externalizing symptomatology will provide more information about youth functioning.

Furthermore, Gaylord-Harden and colleagues' (2008) study is cross-sectional. One-time assessment is not sufficient in determining if resilient African American youth will remain so over time (Luthar & Zigler, 1991). Longitudinal analyses can further our understandings of which coping styles are predictive of certain outcomes over time. Researchers have pointed to the limiting nature of cross-sectional studies (Gaylord-Harden et al., 2008; Masten, 2001; Compas et al., 2001) and urge future research to utilize analyses that are longitudinal in nature to better understand the role of coping styles in promoting positive outcomes in adolescents over time (Compas et al., 2001; Grant et al., 2004).

Rationale

Because of the inconsistent research on the coping styles of African American youth living in poverty, this study investigates such styles. Using cluster analysis, this study classified African American youth living in poverty on the basis of their coping styles. This study sought to build on the existing Gaylord-Harden and colleagues (2008) research study by including both youth and parent report to assess outcomes including psychological well-being, social functioning and behavioral functioning. Moreover, the current study included risk using scales

that measure general stressful life experiences, economic strain and exposure to violence. Additionally, this study expanded Gaylord-Harden and colleagues' (2008) cross-sectional study design by its use of longitudinal data to investigate the predictive value of the projected coping groups. Coping groups were used to predict future psychological and behavioral outcomes in an effort to identify which coping styles are associated with positive outcomes over time.

Research Questions

The exploratory nature of cluster analysis and the lack of consensus on adaptive coping styles of African American youth living in poverty inhibit the development of specific hypotheses. Therefore, this study seeks to answer four main research questions. Research Question I: Which coping strategies are most utilized in this sample of African American youth living in poverty? Research Question II: A. How do the African American youth in this sample naturally cluster based on coping strategy used? Research Question III: Which coping groups are associated with resilient outcomes in this sample? Research Question IV: Which coping groups are associated with resilient outcomes over time?

CHAPTER II

METHOD

Research Participants

The participants were 143 African American adolescents previously recruited as part of a larger longitudinal study on adolescent stress and coping in a sample of low-income urban adolescents (The Stress and Coping Project). Participants were recruited from three public schools in a large Midwestern city where most students were eligible for free or reduced lunch programs. At the start of the study, the students ranged from the 6th through 9th grades, and approximately 34% (N = 48) were male and 66% (N= 95) were female. The average age at the time of initial data collection was 12.82 years (range 11 years to 15 years). At wave two of data collection, the total sample size decreased to 96 total participants and the average age was 13.57 years (range 12 years to 17 years).

Procedure

Passive consent was used in all schools. Students were then only allowed to participate if their parents did not return the consent form indicating that they did want their children to participate. Students whose parents did not return consent forms were given a description of the purpose of the study, the assurance that participation was completely voluntary and refusal to participate would not result in penalties or withdrawal of services. The larger study consisted of two forms of data collection: survey and interview. Only survey data are used in the current study. Participating adolescents completed a series of pencil and paper measures on stress, coping, and internalizing and externalizing problems. Each year following the initial data collection, researchers attempted to contact participants in order to obtain the follow up

information. At each time point, data collection procedures were the same as described above. This study will utilize data collected during two waves of the project.

Measures

Level of Risk. The level of risk for these youth will be determined by their report of three measures of risk associated with urban poverty: general stressful life experiences, exposure to violence, and economic strain.

General Stressful Life Experience. General stressful life experiences were assessed using only the negative life experience items on The Urban Adolescent Life Experiences Scale (UALES; Allison, Burton, Marshall, Perez-Febles, Yarrington, Kirsh, & Merriwether-DeVries, 1999). The scale contains 85 questions. The items are rated on the following scale: “never,” “once or twice,” “once a month,” “once a week,” or “once a day.” Higher scores are associated with greater levels of life stress. Sample items include, “I am pressured to use drugs,” and “A parent gets beat up, attacked, or injured” for major stressors and “I get pressure from parents or family to do better at school” for daily hassles. Internal consistency was good ($\alpha = .84$)

Economic Strain. Economic strain was assessed using the Family Economic Pressure Index (Conger, 1992). The Family Economic Pressure Index is a 16-item, self-rated inventory of the participant’s family’s financial matters. The measure includes a series of statements about financial matters that are rated as “strongly agree,” “agree,” “kind of agree,” “disagree,” or “strongly disagree.” Example items are “We have enough money for the kind of clothing that most people have,” “We have enough money to feed everyone in our family,” and “My family has enough money to pay our bills.” Internal consistency for this sample was also good ($\alpha = .83$).

Exposure to Violence. Exposure to violence was assessed using the Exposure to Violence Survey – Screening Version (Richters & Martinez, 1990). The Exposure to Violence Survey –

Screening Version is a 58-item questionnaire developed on low income urban 5th and 6th grade African American youth. Response choices denote the frequency of exposure to violent incidences and include “never,” “has happened once or twice,” “has happened three or four times,” “has happened five or six times,” “has happened more than six times.” Sample items are “I have seen other people use, sell or give out illegal drugs,” and “I know someone who has been beaten or mugged.” Internal consistency for this sample was very good ($\alpha = .95$).

Psychological and Behavioral Outcomes. Psychological and behavioral outcomes were assessed using measures of internalizing and externalizing functioning.

Psychological Well-being. Psychological well-being was assessed using the Youth Self-Report scale (YSR; Achenbach & Rescorla, 2001). The YSR is a 119-item self-rated inventory of psychological symptomatology. Items are rated on a three-point Likert scale from 0 (not at all) to 2 (often or always). The measure produces two broad-band scales covering internalizing and externalizing symptoms and eight narrow-band scales covering syndromes including a scale measuring social problems. The broad-band scale for internalizing symptoms was used to determine psychological well-being as self-reported by youth. Internal consistency for the internalizing broad-band scale for this sample was good ($\alpha = .91$).

Psychological well-being was also assessed using the Child Behavior Checklist (CBCL; Achenbach, 1991). The CBCL is a parent report measure analogous to the YSR. Again, the broad-band internalizing scale was used to assess youth’s psychological well-being as reported by parents. Internal consistency for this sample was $\alpha = .87$.

Behavioral Functioning. The YSR and CBCL broad-band scales for externalizing symptoms were used to determine behavioral functioning as self-reported by youth and reported

by parents. The internal consistencies for the broad-band externalizing scales of the YSR and CBCL are $\alpha = .87$ and $\alpha = .90$, respectively.

Coping Styles. Coping strategies were measured using the Children's Coping Strategies Checklist (CCSC; Ayers et al., 1996). The checklist consists of 52 self-report items assessing how frequently respondents engage in certain strategies when they have a problem of some sort. Items are answered on a scale of 1 (never) to 4 (most of the time). Items are summed to create 10 subscales measuring different coping strategies: Cognitive Decision Making, Direct Problem Solving, Seeking Understanding, Positive Cognitive Restructuring, Avoidant Action, Cognitive Avoidance, Physical Release of Emotion, Distracting Action, Problem-Focused Social Support Seeking, and Emotion-Focused Social Support Seeking. Scores for each subscale are derived by taking the mean score of the items that makeup each subscale. These 10 coping subscales are incorporated into the four primary categories of coping style: Distraction Strategies, Avoidant Strategies, Active Strategies, and Social Support Seeking. Internal consistencies for the subscales range from $\alpha = .58$ to $\alpha = .70$ for all except Physical Release of Emotion, which had an internal consistency of $\alpha = .49$. It should be noted that the number of items for each subscale ranges from four to five. Due to the low number of items for each subscale, some subscales do not contain enough items needed for satisfactory internal consistency for coping measures (Skinner, Edge, Altman, & Sherwood, 2003; Gaylord-Harden et al., 2008). Sample items include, "When I have a problem, I figure out what I can do by talking with one of my friends" (social support seeking), "When I have a problem, I go for a walk" (distraction), "When I have a problem, I try to make things better by changing what I do" (active), and "When I have a problem, I try to stay away from things that make me feel upset" (avoidant).

CHAPTER III

RESULTS

Descriptives

Prior to preliminary analyses, the presence of univariate and multivariate outliers was evaluated using the standard criterion of three standard deviations above the sample mean. Eleven univariate outliers and one multivariate outlier were found and excluded from future analyses. The means, standard deviations, and correlations for coping subscales, psychological well-being scales, behavioral functioning scales, and risk assessment are presented in Table 1. The most frequently used coping strategies in this sample were Avoidant Actions ($M = 2.73$, $SD = 0.68$) and Cognitive Avoidance ($M = 2.73$, $SD = 0.71$). The least frequently used coping strategy was Physical Release of Emotions ($M = 2.25$, $SD = 0.65$). T-tests indicated that boys reported significantly more use of the Physical Release of Emotions coping strategy ($M = 2.55$, $SD = 0.62$) than girls reported ($M = 2.11$, $SD = 0.62$), $t = 3.62$, $p < .001$. Results of a T-test also indicated that boys reported significantly higher levels of exposure to violence ($M = 100.28$, $SD = 28.33$) than girls reported ($M = 90.07$, $SD = 21.83$), $t = 2.19$, $p < .05$). Genders did not significantly differ on reported economic strain and general stressful life experiences. Genders also did not significantly differ on self-reported or parent-reported levels of internalizing symptoms or externalizing symptoms.

Correlational analyses indicated some associations among risk level, outcomes and coping subscales. All coping subscales were significantly correlated with one another, except Physical Release of Emotion was not significantly correlated with Avoidant Actions or Cognitive Avoidance. General Stressful Life Experiences were positively associated with Cognitive Avoidance, Positive Cognitive Restructuring and Problem-Focused Social Support coping

strategies. None of the ten coping strategies were significantly correlated with any outcome. Economic Pressure was positively correlated with youth-reported internalizing symptoms. Exposure to Violence was positively associated with youth reported internalizing symptoms and youth and parent reported externalizing symptoms. General Stressful Life Experiences were positively associated with all outcomes for both youth and parent report. All risk measures were associated with one another. Lastly, all outcomes were positively correlated with one another, except youth and parent-reported externalizing symptoms were not significantly correlated with each other.

Table 1
Means, Standard Deviations and Correlations Among Coping Subscales, Risk Assessments, and Psychological and Behavioral Outcomes

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coping Subscales																		
1. Cognitive Decision Making	2.65	0.67																
2. Direct Problem Solving	2.71	0.67	.72**															
3. Seeking Understanding	2.59	0.67	.62**	.70**														
4. Positive Cognitive Restructuring	2.49	0.59	.66**	.62**	.59**													
5. Avoidant Actions	2.73	0.68	.45**	.59**	.52**	.46**												
6. Cognitive Avoidance	2.73	0.71	.45**	.50**	.60**	.42**	.54**											
7. Physical Release of Emotion	2.25	0.65	.19**	.35**	.21**	.33**	.13	.12										
8. Distracting Action	2.69	0.58	.40**	.42**	.40**	.35**	.33**	.52**	.39**									
9. Problem-Focused Social Support	2.40	0.67	.57**	.58**	.61**	.59**	.48**	.53**	.35**	.45**								
10. Emotion-Focused Social Support	2.41	0.66	.46**	.44**	.48**	.55**	.34**	.37**	.31**	.36**	.79**							
Psychological Well-Being																		
11. YSR Internalizing	13.85	8.34	.01	-.07	.12	.07	.04	.12	-.06	.06	.11	.13						
12. CBCL Internalizing	7.11	6.20	.08	.11	-.08	.13	.14	.12	.01	.10	.13	.15	.43**					
Behavioral Functioning																		
13. YSR Externalizing	12.57	7.76	-.02	-.10	.04	.03	-.15	-.06	.05	-.01	.07	.08	.61**	.20				
14. CBCL Externalizing	7.17	6.10	.13	.16	.08	.27	.11	.27	.03	.24	.01	.08	.16	.51**	.18			
Risk Assessment																		
15. Stressful Life Experiences (UALES)	152.33	21.01	.09	-.01	.15	.22*	.04	.25**	.07	.18	.19*	.16	.41**	.31**	.56**	.43**		
16. Exposure to Violence	93.15	24.26	.01	-.07	.08	.08	-.07	.16	.07	.20	.15	.12	.22*	.14	.30**	.35**	.66**	
17. Economic Pressure Index	27.08	6.67	.05	-.02	.00	-.02	-.00	.15	-.16	-.03	.06	.07	.27**	.09	.11	.14	.26**	.27*

Cluster Analysis

Standard cluster analytic procedures were followed as outlined in Gaylord-Harden and colleagues (2008) study. First, agglomerative hierarchical cluster analysis was conducted to classify participants based on all ten coping subscales and establish the number of clusters in the sample; and second, *k*-means cluster analysis was used to group individuals (Milligan and Sokol, 1980). In preparation for analysis, all data were mean-centered, meaning the sample mean for each variable was subtracted from all individual observations for the respective variable to emphasize individual differences.

For the hierarchical agglomerative cluster analytic procedures, solutions for two through seven clusters were tested using Ward's (1963) method with squared Euclidean distances, as outlined in Gaylord-Harden and colleagues (2008) and recommended by Milligan and Sokol (1980). The agglomeration schedule, dendrogram, and percentages of individuals in each cluster were examined to determine the optimal number of clusters. Based on this information, a three cluster solution was determined to be the best solution that provided the most interpretable pattern and maximized the homogeneity of individuals within clusters and heterogeneity of individuals between clusters. Once the number of clusters is determined using hierarchical agglomerative cluster analysis a *k*-means cluster analysis was conducted to reassign individuals into three clusters based on their pattern of coping.

A validation procedure was conducted in order to ensure confidence with the three cluster solution. The most recommended cluster validation technique is replication and the most common replication method is called cross-validation (Mandara, 2003; Breckenridge, 2000). In the cross-validation procedure two independent samples measured on the same variables undergo standard cluster analytic procedures. Then, the second sample undergoes an additional standard

cluster analytic procedure using the cluster centers from the first sample. Agreement between the two second sample solutions is estimated using a measure of rater agreement. Higher agreement indicates a more successful replication.

Following these cross-validation procedures (Mandara, 2003; Breckenridge, 2000), the current sample was first randomly divided into two independent samples: Sample A (N = 66) and Sample B (N = 65). Hierarchical cluster analysis using Ward's method and squared Euclidian distances was conducted on Sample A and a three cluster solution was identified as the most appropriate cluster solution. Next, *k*-means cluster analysis procedures were performed using the three cluster solution obtained from the hierarchical cluster analysis, and the cluster centers were saved. The same procedures were performed on Sample B and a three cluster solution was again determined to be the most appropriate cluster solution. A *k*-means cluster analysis was then performed on Sample B using the three cluster solution. An additional *k*-means cluster analysis was performed on Sample B using the three cluster solution and the cluster centers obtained in the *k*-means cluster analytic procedure on Sample A. Lastly, Cronbach's alpha was used to estimate the agreement between the two *k*-means cluster analyses performed on Sample B. Cronbach's alpha indicated strong agreement. In sum, the cross-validation procedure supports the three-cluster solution for the entire sample.

Results of the *k*-means cluster analysis with the entire sample revealed differences in age distribution across the three clusters, $\chi^2(8) = 19.08, p < .05$. While 11 and 14 year olds were evenly distributed among groups, while the majority of 12 year olds (51%), 13 year olds (66%) and 15 year olds (75%) were in Cluster 1. No differences in gender distribution were found across the three clusters, $\chi^2(2) = 3.98, p = .14$. The means for each cluster on all ten coping subscales are presented in Table 3. Post-hoc tests indicated that Cluster 1 (N = 57), Cluster 2 (N

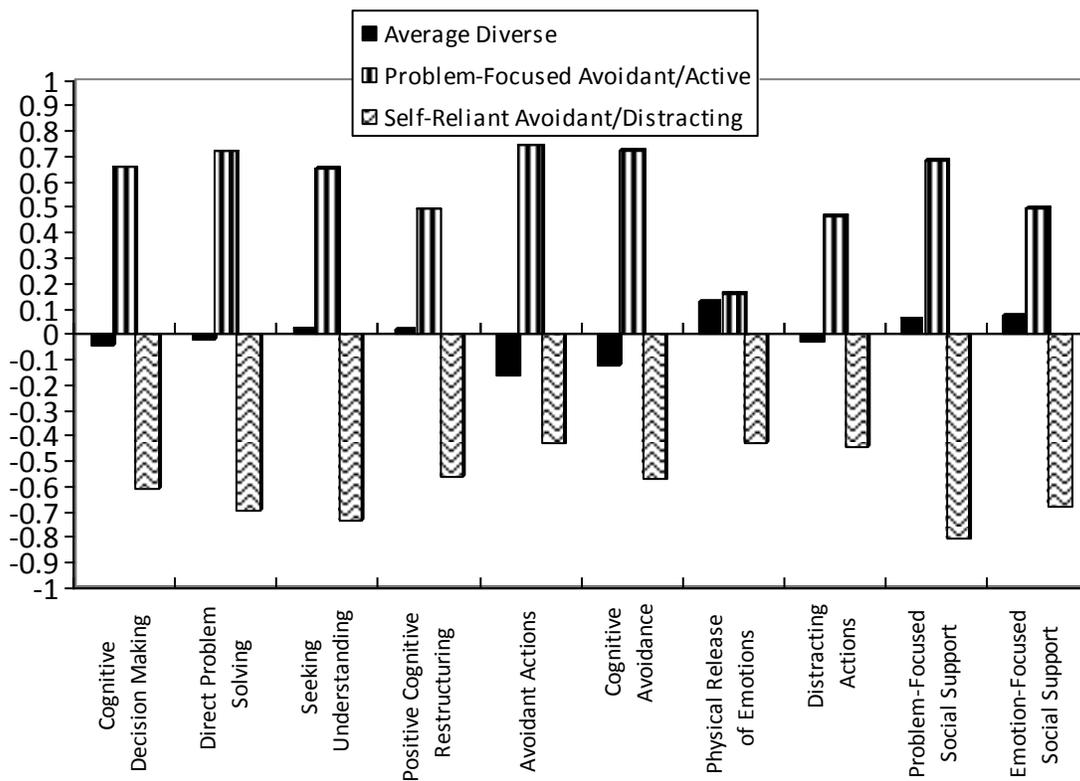
= 32) and Cluster 3 (N = 29) were significantly different on all coping subscales ($p < .000$), except Cluster 1 and Cluster 2 did not differ significantly on use of Physical Release of Emotions. Between group differences illustrate clear high, moderate and low coping groups with Cluster 1 generally using moderate levels of all coping strategies, Cluster 2 generally using very high levels of all coping strategies and Cluster 3 generally using very low levels of all coping strategies (Table 2).

Table 2

Cluster Means on Coping Subscales (Based on mean centered data)

Variables	Average Diverse N = 57	Problem-Focused Avoidant/Active N = 32	Self-Reliant Avoidant/Distracting N = 29
Cognitive Decision Making	-0.0442	0.6585	-0.6091
Direct Problem Solving	-0.0197	0.7209	-0.6953
Seeking Understanding	0.0241	0.6557	-0.7322
Positive Cognitive Restructuring	0.0207	0.4947	-0.5578
Avoidant Actions	-0.1653	0.7435	-0.4321
Cognitive Avoidance	-0.1231	0.7233	-0.5718
Physical Release of Emotions	0.1285	0.1620	-0.4253
Distracting Actions	-0.0262	0.4659	-0.4427
Problem-Focused Social Support	0.0630	0.6836	-0.8052
Emotion-Focused Social Support	0.0728	0.4969	-0.6828

Cluster Means on Coping Subscales



Within cluster evaluation showed some unique cluster characteristics that allowed for descriptive cluster labeling. Cluster 1 used moderate levels of all coping strategies with means close to that of the sample mean; thus, this cluster was labeled Average Diverse coping group. Cluster 2 showed use of all coping strategies; however, means for Avoidant Actions and Cognitive Avoidance were more than one standard deviation above the sample means, indicating heavy use of avoidant strategies. Additionally, Cluster 2 means for Direct Problem Solving and Problem-Focused Social Support were more than one standard deviation above the sample mean, indicating heavy use of strategies that are aimed at directly solving the problem. Cognitive Decision Making and Seeking Understanding strategies approached one standard deviation above the sample mean, indicating some reliance on coping strategies that are active in nature and aimed at understanding problems. Because of the mixture of avoidant and problem-focused coping strategies with some reliance on active coping strategies seen in this cluster, Cluster 2 was labeled Problem-Focused Avoidant/Active coping group.

Cluster 3 showed low use of all coping strategies; however, means for Direct Problem Solving, Seeking Understanding, Problem-Focused Social Support and Emotion-Focused Social Support coping strategies were more than one standard deviation below the sample means. Extremely low use of these strategies indicates that this cluster rarely uses coping strategies that were aimed at directly understanding or solving the problem and rarely seeks the help of others. Closer to the sample means were the means of Distracting Actions, Physical Release of Emotions, Avoidant Actions and Cognitive Avoidance coping strategies. This perhaps indicates that if this cluster does use a coping strategy, it is likely that they may use strategies that distract them from or help them avoid the problem. Thus, Cluster 3 was labeled the Self-Reliant Avoidant/Distraction coping group.

In terms of between group evaluations, an obvious distinction between the Self-Reliant Avoidant/Distracting and Problem-Focused Avoidant/Active coping groups is the use of social support seeking coping strategies. To examine the extent to which clusters might also differ on the extent to which they actually receive social support, in addition to seeking it, all coping groups were compared across a measure of social support that focuses on parent-child relationships. The parent-child relationship measure evaluates maternal and paternal attachment, which can be used as a rough proxy of perceived availability of parental social support. Multiple independent T-tests were conducted to evaluate differences across groups on the maternal and paternal attachment subscales. To reduce the likelihood of Type 1 error, which is increased by the use of multiple T-tests, a corrected significance criterion of $p < .025$ was used. These supplemental analyses indicated coping group difference on reported maternal attachment. The Problem-Focused Avoidant/Active coping group reported a significantly stronger maternal attachment ($M = 63.94, SD = 8.28$) than the Average Diverse coping group ($M = 62.89, SD = 7.19, t = 2.36, p < .025$), and the Self-Reliant Avoidant/Distracting coping group ($M = 58.80, SD = 8.03, t = 2.43, p < .025$). Thus, it appears that the Problem-Focused Avoidant/Active coping group perceives more available maternal social support than the Self-Reliant Avoidant/Distracting and Average Diverse coping group. Coping groups did not differ in terms of reports of paternal attachment.

Tests of Group Differences on Outcome Variables

Cross-sectional Analyses

To test for possible differences across coping groups on outcome variables, a series of multivariate analyses of variances (MANOVA) were conducted. Prior to analyses, the

prerequisite assumptions for MANOVA were tested. Coping group membership was entered as the independent variable, and age and gender were controlled in all MANOVAs.

No significant differences in general stressful life experiences, exposure to violence or economic strain were found between coping groups with Wilks' $\lambda = .936$, $F(6, 198) = 1.104$, $p = .361$. Additionally, no significant differences in youth reported internalizing and externalizing outcomes were found between coping groups with Wilks' $\lambda = .929$, $F(6, 214) = 1.339$, $p = .241$. and lastly, no significant effects of coping groups were found for parent-reported internalizing and externalizing outcomes at Wave 1 with Wilks' $\lambda = .879$, $F(6, 132) = 1.460$, $p = .197$.

Longitudinal Analyses

To understand which coping groups are associated with resiliency over time, the predictive value of coping group on outcomes at Wave 2 was tested while controlling for outcomes at Wave 1. A series of MANOVAs were again conducted with all outcomes as the dependent variables. Because youth-reported outcomes were correlated with one another, they were entered together as dependent variables in one MANOVA. Likewise, parent-reported outcomes were highly correlated and thus entered together as dependent variables in the second MANOVA.

Significant multivariate effects for coping group membership on externalizing outcomes were found with Wilks' $\lambda = .639$, $F(6, 60) = 2.512$, $p = .031$. Specifically, the Problem-Focused Avoidant/Active Coping group ($M = 9.51$, $SD = 10.36$) had significantly higher levels of parent-reported youth externalizing symptoms at Wave 2 than the Average Diverse ($M = 6.11$, $SD = 5.24$, $p = .016$) and the Self-Reliant Avoidant/Distractioin coping groups ($M = 3.21$, $SD = 3.28$, $p = .014$). The Average Diverse coping group and Self-Reliant Avoidant/Distractioin coping group did not differ in terms of parent-reported youth externalizing symptoms at Wave 2.

To better understand the higher levels of parent-reported youth externalizing symptoms at Wave 2 in the Problem-Focused Avoidant/Active coping group, supplemental analyses were conducted to investigate this group's risk level characteristics at Wave 2 to rule out higher levels of risk at Wave 2 as an explanation of higher levels of externalizing symptoms. While controlling for Wave 1 risk, no significant multivariate effects of coping groups were found for risk level variables at Wave 2 with Wilks' $\lambda = .866$, $F(6, 126) = 1.564$, $p = .163$.

An item by item analysis was conducted to determine if the most commonly parent-reported externalizing symptoms at Wave 2 were possibly more adaptive for African American youth in the context of urban poverty. The most commonly parent-endorsed externalizing items in this coping group were: "argues a lot" ($M = .85$), "talks too much" ($M = .71$), "sudden changes in mood/feeling" ($M = .67$), "prefers older kids" ($M = .62$), "lying/cheating" ($M = .62$), "usually loud" ($M = .57$), and "temper tantrums/hot temper" ($M = .57$).

CHAPTER IV

DISCUSSION

This study sought to understand the role of coping styles in resiliency among urban African American adolescents living in poverty by expanding on the findings of Gaylord-Harden and colleagues' (2008) study. The most used coping strategies in the current sample were Cognitive Avoidance and Avoidant Actions. Gaylord-Harden and colleagues (2008) also found that the most used coping strategy in their sample was Cognitive Avoidance. It is not surprising that this sample of African American youth living in poverty would rely on avoidant coping strategies. Research has indicated that avoidant strategies are particularly effective for African American youth living in highly stressed, urban environments where exposure to violence is chronic (Grant et al., 2000; Edlynn et al., 2008; Rosario et al., 2003).

Significant correlations between risk factors and outcomes illustrated a positive linear relationship between risk and symptoms, which is consistent with previous research examining the relationship between risk and psychopathology (Carlson & Grant, 2008; Grant et al., 2006; Grant et al., 2004). Specifically exposure to violence was significantly correlated with self-reported internalizing symptoms, self-reported externalizing symptoms, and parent-reported externalizing symptoms. Further, general stressful life experiences were correlated with all psychological and behavioral outcomes. Regarding correlations among outcomes, youth and parent-reported externalizing symptoms were not significantly correlated with each other. A lack of correlation between youth and parent report of externalizing symptoms is consistent with previous research indicating that parent and youth discrepancies in the report of externalizing symptoms on the CBCL and YSR are common (Achenbach, McConaughy, & Howell, 1987;

Lau, Garland, Yeh, McCabe, Wood, & Hough, 2004; Youngstrom, Loeber, & Stouthamer-Loeber, 2000).

There were few gender differences found in the current sample. As was found in Gaylord-Harden and colleagues' (2008) study and in previous research on urban African American youth (Carlson & Grant, 2008), boys in the current sample reported higher use of the Physical Release of Emotions coping strategy. Although other studies have found that boys reported higher use of avoidant and distraction strategies and girls reported higher use of support seeking and active strategies (Grant et al., 2000; Tolan et al., 2002; Chandra & Batada, 2006), the current study did not find these gender differences. Boys reported more exposure to violence than girls. This finding is consistent with previous research on urban African American youth (Carlson & Grant, 2008; Warner & Weist, 1996). Genders did not differ in terms of self-reported or parent-reported levels of internalizing and externalizing symptoms. This finding is inconsistent with previous research that has found boys report higher externalizing symptoms (Huselid & Cooper, 1994) and consistent with growing research that gender differences in internalizing symptoms are suppressed in low-income, urban environments (Grant et al., unpublished manuscript). A possible explanation for the uncharacteristic findings could be that in this sample the genders are equally negatively affected by the stressors associated with poverty. Specifically, aside from exposure to violence (which was significantly different but still high for both), both genders reported relatively equal levels of stressful life experiences and economic strain; thereby indicating that, in general, stressors are somewhat evenly distributed across genders. Thus, perhaps the risks associated with urban poverty are so great in this sample that they did not have varying effects across genders.

Cluster Analysis

The current cluster analyses based on the ten subscales of coping on the Children's Coping Strategies Checklist (Ayers et al., 1996) produced three distinct coping groups. Not surprisingly, between cluster comparisons showed clusters were distinguished by high, moderate and low use of all ten coping subscales. Research has consistently found the African American youth are clustered in low, medium and high coping groups (Gaylord-Harden et al., 2008).

The Problem-Focused Avoidant/Active coping group had significantly higher levels of reported Social Support Seeking with particular use of Problem-Focused Social Support. Because this group also reported significantly higher levels of maternal attachment, it seems that this group has more perceived availability and access to maternal social supports. More perceived access to social support provides a reason for this group's higher use of social support seeking as a coping strategy. On the other end, the Self-Reliant Avoidant/Distraction coping group reported almost absent use of social support seeking coping in addition to low levels of perceived maternal attachment, which may indicate low levels of perceived availability of social support. Thus, this group's low level of perceived availability of social support may provide a reason for why this group did not rely on social support seeking as a coping strategy.

In other words, it may be that youth who have social support available to them may be more likely to take advantage of that social support by seeking it as part of a coping strategy. The inverse process may also be an explanation. It may also be possible that the youth who use social support seeking coping elicit more social support from others and, thereby, strengthen their connections with those providing the support, such as parents. Therefore, it is possible that in the present sample, social support seeking and positive mother-adolescent relationships are reciprocally related. Additional research with social support seeking coping and parent-child

relationship data collected at multiple time points is needed to test this hypothesized interpretation.

Cross-Sectional Differences among Coping Groups

Cross-sectional analysis of risk across coping groups produced no significant differences between cluster in terms of risk level (general stressful life experiences, exposure to violence, and economic pressure) or youth- and parent-reported internalizing and externalizing symptoms at Wave 1. These results are not surprising as they are similar to those found in Gaylord-Harden and colleagues' (2008) cross-sectional study, indicating longitudinal analysis is needed to see the impact of coping on functioning.

Longitudinal Differences among Coping Groups

Longitudinal analyses allowed for expansion on these findings to determine if coping groups differed on these and/or other outcomes over time. Problem-Focused Avoidant/Active coping group membership was associated with higher parent-reported externalizing symptoms in youth at Wave 2. Supplemental analyses indicated that coping groups did not differ on reported exposures to violence, economic strain or stressful life experiences at Wave 2, indicating that all coping groups experienced relatively similar levels of risk. Thus, it can be ruled out that higher risk accounted for the higher externalizing symptoms.

The Problem-Focused Avoidant/Active coping group is the only group associated with poorer behavioral functioning in the long term. Because this group differs from the other groups in terms of high use of problem-focused and active strategies, perhaps it is the distinct and specific higher use of problem-focused and active strategies that are predictive of behavioral problems overtime. Research with African American youth living in poverty has shown that active coping strategies are not as adaptive in environments where stressors are chronic and

uncontrollable (Compas et al., 2001; Gonzales, Tein, Sandler, & Friedman, 2001). For example, Rosario and colleagues (2003) found that confrontational, or active, coping approaches increased the risk for delinquent behavior for those victimized by and exposed to community violence.

It seems that active approaches may necessitate aggressive responses to the stressors common in urban poverty. Another explanation for the increase in externalizing symptoms is that they may actually be adaptive in the context of urban poverty. Evaluation of the most commonly parent-reported externalizing symptoms in the Problem-Focused Avoidant/Active group showed just that. For example, “argues a lot,” “usually loud” and “talks too much” were the most reported externalizing behaviors. These behaviors show assertiveness and a lack of vulnerability. These may be adaptive in the context of urban poverty because assertiveness can be used as a defensive technique to avoid and/or protect against victimization and vulnerability. Also, “prefers older kids” was also among the most reported externalizing behaviors. This may be adaptive in the context of urban poverty because it may serve to protect youth in dangerous environments. Older youth may be more experienced and physically bigger and therefore better able to protect younger youth. In sum, the use of active strategies may present as aggressive behaviors but could actually be adaptive in the context of urban poverty.

Additionally, some research has shown that parents are more likely to socialize their children to use more active coping strategies with high maternal attachment strongly associated with use of active strategies (McKernon, Holmbeck, Colder, Hommeyer, Shapera, & Westhoven, 2001). The close parent-child relationship reported in this group may provide more opportunities for parents to teach and encourage active coping approaches regardless of the type or kind of stressor. As a consequence of parent teaching or other reasons, this group may be using active coping strategies to address uncontrollable and severe stressors in their environment. In the short

term this may reduce youths' distress, as indicated by this coping group not being associated with any negative outcomes at Wave 1. In the long term this may increase the presence of externalizing symptoms. However, as previously discussed, the presentation of externalizing symptoms may actually simply reflect active coping in context of urban poverty (e.g. confrontational or active coping is externalizing behavior). This hypothesized interpretation is an indication that there could be some benefit to externalizing behaviors.

In sum, it seems that the use of active strategies in this sample is a double-edged sword as it is associated with adaptive and problematic outcomes in the long term. On the one hand, use of active strategies to address the typical stressors in poverty is associated with an increase in externalizing symptoms. On the other hand, the use of active strategies in the context of urban poverty may pull for use of aggressive responses, and these aggressive responses may actually be adaptive. The ambiguous adaptive or maladaptive quality of active strategies is consistent with mixed findings in previous research (Grant et al., 2000; Gonzales et al., 2001; Roache, 2004).

Moreover, this group demonstrated high use of problem-focused social support. Due to the high reports of maternal attachment, it is likely that this group received problem-focused social support from the maternal parent. It might be that mothers in this sample also experience similar rates of stress as the youth in this sample and are negatively affected in similar ways (Grant et al., 2000). It is likely that mothers' mental health, emotional resources and problem-solving abilities are eroded by the chronic, severe and at times uncontrollable stressors seen in poverty (Grant et al., 2000); thus, this sample of mothers may be limited in their ability to provide effective problem-focused social support. Thus, like that of active strategies, the adaptive quality of problem-focused social support seeking may also be ambiguous. Problem-focused social support seeking appears to be associated with less resilient outcomes over time

when the social support source is limited in their ability to provide positive support. Future research is needed to understand what sorts of outcomes are associated with problem-focused social support seeking when the source of support is more able, and all in the context of urban poverty.

Limitations, Strengths and Conclusions

The current study has many limitations. The sample size is relatively small, particularly as compared to Gaylord-Harden and colleagues' study. Moreover, significant sample size was lost at Wave 2 due to missing, incomplete or invalid data. Future studies should expand on previous research with larger longitudinal sample sizes. Additionally, the current study focused on African American adolescents living in poverty. This narrow focus may limit the amount of generalizability to adolescent coping more broadly.

The coping style measure used in the current study can be seen as a limitation. It does not provide assessment of culturally relevant coping strategies that African American youth living in poverty may be using. Research has examined the use of culturally relevant coping in African American adolescents and it urges the use of more culturally relevant assessments (Utsey, Adams, & Bolden, 2000). Perhaps the inclusion of culturally relevant coping items might have given more information about coping groups.

In spite of its limitations, the current study has added to the literature in various ways. The first is through its design elements. The current study utilized multiple reporters for the assessment of psychological well-being and behavioral outcomes allowing for examination of the effects of coping on multiple dimensions of functioning from multiple perspectives. Additionally, the current study used the person-centered approach of cluster analysis which allows for an understanding of natural patterns among individuals (Masten, 2001). And lastly,

the current study is one of few to replicate and expand on an existing study of African American coping with longitudinal data.

Second, this study adds to the literature in that it illustrates that what is seen as adaptive coping strategies in the general population may not be true for African American populations living in poverty as other factors influence coping effectiveness. This study demonstrated the ambiguous relationship between some coping strategies and resiliency. Use of problem-focused and active strategies was associated with parent-reported youth externalizing symptoms over time. However, these externalizing symptoms could actually be adaptive in the context of urban poverty. Additionally, the effectiveness of social support seeking strategies is dependent on the abilities of the social support resource. These findings indicated that, in the long term, active and problem-focused social support seeking strategies may be associated with maladaptive or resilient behavioral outcomes depending on the factors that surround the use of those strategies.

CHAPTER V

SUMMARY

Coping styles of African American youth living in poverty will be investigated in order to both understand which coping styles are associated with resiliency for this population and expand on previous findings of Gaylord-Harden and colleagues' (2008) coping style cluster analysis of urban African American youth. As part of a larger study, the current study surveyed 143 African American youth in grades 6 through 9 about their coping styles, psychological well-being, and social and behavioral functioning. Cluster analysis was used to classify African American youth on the basis of their coping styles, and coping groups were compared cross-sectionally on psychological and behavioral outcomes and risk factors. In longitudinal analyses, coping group membership was used to predict later outcomes and risk. Results indicated a three-cluster solution with high, moderate and low use coping groups. Within cluster variation showed that the high use coping group used significantly more Avoidant, Active and Problem-Focused Social Support Seeking than other strategies. Additionally, the low-use coping group showed almost absent use of all types of Social Support Seeking and limited use of Avoidant and Distraction strategies. Coping groups did not differ based on risk assessment and outcomes at Wave 1. However, coping group membership was associated with future externalizing symptoms based on parent report. The importance of coping strategies in resilient outcomes in the short-term and long-term is evaluated. Limitations, strengths and future directions are discussed.

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APPENDIX A.

Unabbreviated Version of Defended Thesis

CHAPTER I

INTRODUCTION

Resiliency

There is a great deal of interest in the resilience of urban African American youth, as they are disproportionately at risk for poor outcomes due to the disproportionate rate of poverty among this population (Barbarin, 1993; Yakin & McMahon, 2003; Gayles, 2005; Li, Nussbaum, & Richards, 2007; Spencer, Cole, DuPree, Glymph, & Pierre, 1993; Smokowski, Reynolds & Bezruczko, 2000; Jarrett, 1997; Barrow, Armstrong, Vargo, & Boothroyd, 2007; Dubow, Edwards, & Ippolito, 1997; Masten, 1994). Despite the extraordinary risk factors faced in urban poverty, many African American youth living in urban poverty adapt. They are resilient.

Resiliency is conceptualized as good outcomes despite serious threats to adaptation or normal development (Masten, 2001). Resiliency requires that two conditions be met: 1) the existence of high risk that threatens normal development; and 2) observable, successful adaptation as indicated by better than predicted outcomes given the high risk status (Masten, 2001; Masten & Coatsworth, 1998). In accordance with this conceptualization of resiliency, the study of resiliency is typically reserved for high risk populations, such as African American youth living in poverty, with a particular focus on youth who have overcome emotional, developmental, economic, and environmental challenges faced during development (Masten, 2001).

Key Determinants of Adaptation in Adolescence

Successful adaptation refers to overcoming or coping with adversities in a manner that produces better than expected outcomes. There are two main ways in which adaptation is judged. The first stems from a developmental perspective. Typically, developmental investigators define adaptation based on the presence of an observable track record of meeting

the major expectations for the behavior of children of the appropriate age and particular situation (Masten, 2001; Masten & Coatsworth, 1998; Waters, & Sroufe, 1983). These adaptation determinants are typically external outcomes, such as age appropriate social and/or behavioral functioning. For example, social functioning may include age appropriate peer interactions and behavioral functioning may include conduct, rates of delinquency and aggression. The second judgment of adaptation stems from the field of clinical psychology which is concerned with the prevention of psychopathology. These investigators define adaptation as the absence of psychopathology or a low level of symptoms and/or impairment (Masten, 2001; Grant, Compas, Thurm, McMahon, & Gipson, 2004; Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Typically, these adaptation determinants are a mixture of internal and external outcomes. Examples of these psychological markers include the absence or low levels of anxiety, depression, and other forms of internal distress (internal) (Masten, 2001; Compas et al., 2001; Gaylord-Harden, Gipson, Mance, & Grant, 2008), as well as the absence or low levels of delinquency and other forms of problematic behaviors (external). Youth can display resilient outcomes in as few as one or two domains or as many as all domains.

Establishing Risk: The Multi-systemic Impact of Poverty

The other requirement of resiliency is the presence of extreme risk that threatens adaptation or normal development. Risk is defined as “an elevated probability of a negative outcome” (Wright & Masten, 2005, p.20). It is important to note that risk is a group term, such that a risk factor does not indicate that all individuals in an at-risk group will eventually display adaptational difficulties; rather, it indicates that a group of people with a specific risk factor is less likely overall to do well in some regard (Wright & Masten, 2005; Yates, & Masten, 2004). Resilient African American youth living in poverty meet the risk requirement of resiliency.

Poverty is one of the most profound and debilitating risk factors (Masten, 2001; Schorr, 1988; Luthar, 1991; Werner, 1990).

As a result of historical and contemporary racism and discrimination, a disproportionate number of African Americans live in poverty, and generally live among other African Americans who are also poor (U.S. Department of Health and Human Services, 2001). The federal poverty guidelines indicate that a family of four earning \$21,200 or under is living in poverty (United States Department of Health and Human Services, 2008). While 11% of all U.S. families have incomes below the federal poverty line, about 23% of all African American families have incomes below the federal poverty line (U.S. Census Bureau, 2006). Additionally, African American families are more likely to live in severe poverty with incomes at or below 50% of the federal poverty threshold (U.S. Census Bureau, 2006). Further, African Americans tend to have longer periods in poverty and, therefore, are more likely to suffer from its long-term effects (U.S. Department of Health and Human Services, 2001). Nearly 34% of African Americans under the age of 18 live in poor homes, while the national poverty rate is 17% for all U.S. youth under the age of 18 (U.S. Census Bureau, 2006).

Schorr (1988) described that “family poverty is relentlessly correlated with school-aged childbearing, school failure, and violent crime, [and] virtually all other risk factors that make rotten outcomes more likely are also found disproportionately among poor children” (p. 22). As Schorr’s (1988) description implies, the negative effects of poverty on normal development arise from the multisystemic impact that poverty has on youth’s lives, including the individual, family, educational structures and broader community (Mrazek & Haggarty, 1994; Felner, Silverman, & Adix, 1991; Schorr, 1988). A key risk factor embedded in urban poverty with a multisystemic impact is frequent exposure to violence, either as a witness or as a victim. African American

youth in impoverished neighborhoods are often exposed to violence, and are more likely to be victimized, abused and neglected (U.S. Department of Health and Human Services, 2001). Due to the constant exposure to violence, they are less likely to encounter opportunities for safe, structured recreational and constructive activities (National Research Council, 1993; U.S. Department of Health and Human Services, 2001; Gaylord-Harden et al., 2008). A second risk factor imbedded in poverty with a multisystemic impact is the strain of limited financial means. As a result of limited financial means, poor African American youth and their families are more likely to have compromised housing, medical care, and nutrition (Barbarin, 1993), and are more likely to attend substandard schools and receive a substandard education (U.S. Department of Health and Human Services, 2001). Among youth living in poverty, constant stressful life experiences are experienced to a greater degree than their counterparts not living in poverty (Grant, Poindexter, Davis, Cho, McCormick, & Smith, 2000), which adds as a third risk factor imbedded in the negative impact of poverty. In a review, Grant and colleagues (2004) found a consistent link between cumulative stressful experiences and psychopathology in poor youth. Specifically, youth experienced increased symptoms of emotional and behavioral problems following exposure to stressors and general stressful experiences (Grant et al., 2004).

Coping

Successful adaptation despite poverty's extreme threats to normal development is accomplished by means of intervening processes, also named protective factors. Protective factors are individual, familial and extrafamilial processes that provide youth with positive support and impact youth in such a way that buffer the negative imprints of high risk and promote resilience (Utsey, Bolden, Lanier, & Williams, 2007; Luthar, 1991). Typically investigated in studies of resiliency is the domain of individual processes; that is, processes at the

individual level that promote resiliency. One of the most important protective factors at the individual level is coping style (Yates & Masten, 2004). According to Compas and colleagues (2001), coping is defined as a process of adaptation whereby one displays “conscious volitional efforts to regulate emotion, cognition, behavior, physiology, and the environment in response to stressful events or circumstances” (p. 89). Although coping style is not deeply investigated in the resiliency research, it nevertheless has been consistently evaluated in general child and adolescent research areas as a major factor essential to how adolescents effectively manage risk in their environments. In a review of the coping literature, substantial evidence has shown support for coping as an effective means of counteracting the negative effects of stress on adolescents (Compas et al., 2001) who are at risk for psychological problems (Grant, O’Koon, Davis, Roache, Poindexter, Armstrong, Minden, & McIntosh, 2000). However, much of this evidence stems from research on White, middle-class adolescents (Compas et al., 2001; Gaylord-Harden et al., 2008) and is typically not incorporated into the resiliency context. Because of the disproportionate amount of challenging and detrimental environmental factors that urban African American youth living in poverty must face, it is important to understand which coping strategies are most effective and efficient for those youth who are able to demonstrate resilience.

Coping has been categorized into four strategy subtypes: active strategies, social support seeking strategies, distraction strategies, and avoidant strategies (Ayers, Sandler, West, & Roosa 1996; Compas et al., 2001). This categorization is based on Ayers and colleagues’ (1996) Children’s Coping Strategies Checklist. This factorization of coping has been widely used with low-income, urban populations (Prelow, Michaels, Reyes, Knight, & Barrera, 2002; Gaylord-Harden et al., 2008) and normed on economically and racially diverse populations (Ayers et al., 1996). Active coping strategies and social support seeking strategies have been considered

adaptive coping, and they have generally been associated with positive outcomes (Ayers et al., 1996; Compas et al., 2001, Clarke, 2006). Active strategies include cognitive decision making, direct problem solving, seeking understanding, and positive cognitive restructuring; while, social support seeking strategies include emotion-focused support seeking and problem-focused support seeking. There is also support for positive outcomes associated with the use of distraction strategies (Ayers et al., 1996; Compas et al., 2001). Distraction strategies include distracting actions and physical release of emotions. In contrast, the use of avoidant strategies has been generally deemed maladaptive and associated with negative outcomes (Ayers et al., 1996; Compas et al., 2001). Avoidant strategies include cognitive avoidance and avoidant action. However, these distinctions between adaptive and maladaptive coping styles do not seem to apply fully to African American youth living in poverty and are not associated with resiliency in predictable ways.

Studies of the coping styles of African American youth living in poverty are few and inconsistent in their results. In some instances, researchers are not finding the same support for some “adaptive” coping strategies as are found in the general population literature (for reviews see Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001 and also see Grant, Compas, Thurm, McMahon, Gipson, Campbell, Krochock, & Westerholm, 2006; Gaylord-Harden et al., 2008). Studies with African American youth living in poverty have failed to find consistent positive effects for the use of active strategies; rather, some have found positive effects for the use of avoidant strategies (Grant, Poindexter, Davis, Cho, McCormick, & Smith, 2000; Steward, Steward, Blair, Jo, & Hill, 2008). This may be because many of the stressors in environments marked by chronic poverty, such as violence, are uncontrollable, making active

strategies a maladaptive response (Compas et al., 2001; Gonzales, Tein, Sandler, & Friedman, 2001) and may actually exacerbate the effects of these negative circumstances on youth.

Specifically, it has been shown that in response to community violence, avoidant strategies seem to be a more adaptive for African American youth living in poverty (Grant et al., 2000; Edlynn, Gaylord-Harden, Richards, & Miller, 2008; Rosario, Salzinger, Feldman, & Ng-Mak, 2003). Edlynn and colleagues (2008) found that avoidant strategies served a protective-stabilizing function for experiencing community violence, such that youth that used higher levels of avoidant strategies had stable anxiety scores overtime whereas youth that used lower levels of avoidant strategies had higher anxiety scores over time. Further, avoidance of dangerous situations may be defined as an avoidant strategy when the conscious decision and effort to avoid a dangerous situation may actually be conceptualized as an active strategy in this population (Gaylord-Harden et al., 2008). Additionally, avoidant coping was also found to buffer the negative effects of other threatening circumstances, such as the effect of victimization on delinquency for boys (Rosario et al., 2003).

In other instances, some studies on the coping styles of African American youth have found results somewhat similar to those seen in studies of the general youth population. Dempsey (2002) found that the use of avoidant strategies in response to community violence led to negative outcomes overtime, such as symptoms of post-traumatic stress disorder, anxiety and depression. Roache (2004) found positive support for the use of active strategies in reducing symptoms of depression in low-income African American youth. Some studies on coping styles of African American youth have found mixed effects for social support seeking, which have also been found for youth in the general population (Grant et al., 2006; Tolan, Gorman-Smith, Henry, Chung, & Hunt, 2002). Some research has found negative effects for social support seeking with

peers and family (Steward et al., 2008). African American adolescents living in poverty turn to peers for support; however, these peers are also affected by the risk factors associated with poverty and may also display negative behaviors, thereby reinforcing perhaps maladaptive functioning (Grant et al., 2000). Additionally, family members, particularly parents, may also be affected and overwhelmed by the stressors of poverty and are therefore, despite possible extraordinary efforts, unable to maintain high levels of support (Grant et al., 2000; Steward et al., 2008). Still yet, some research has shown positive effects for social support seeking. Tolan and colleagues (2002) found that African American inner-city youth, in general, used more social support seeking strategies than did White and Latino youth. African American inner-city youth that relied on social support seeking strategies showed the most psychological resiliency, displaying the lowest levels of externalizing and internalizing problems. Grant and colleagues (2000) found that social support-seeking strategies were protective for girls that experienced high rates of major life stressful events; while these positive effects were not found when girls used this strategy in response to daily hassles. Given the mixture and inconsistency of research on African American youth's coping, it is unclear what is adaptive and what is not for this particular population.

Advances in understanding how resilient African American youth successfully cope with the risk factors associated with poverty warrant serious consideration. Understanding the coping patterns in this population is best done using person-level techniques such as cluster analysis (Masten, 2001; Rasmussen, Aber, & Bhana, 2004), which will provide rich profiles of how low-income African American youth naturally cope (Rasmussen, Aber, & Bhana, 2004). Cluster analysis allows for the meaningful grouping of persons based on similarities and dissimilarities among identified criteria (Tryon & Bailey, 1970; Dillon & Goldstein, 1984). Cluster analysis is

a practical and logical approach to objectively find groups in data (Tryon & Bailey, 1970; Kaufman & Rousseeuw, 1990). These groups can then be associated and compared across different outcomes (Rasmussen, Aber, & Bhana, 2004). Thus, a comparison across outcomes of coping groups derived from the cluster analysis will give important information about which coping strategies are associated with more resilient youth and which are associated with groups that have less successful outcomes. A relatively recent study has made significant progress in the investigation of coping patterns among urban African American youth living in poverty (Gaylord-Harden et al., 2008). Gaylord-Harden and colleagues (2008) utilized the aggressive analytic approach of cluster analysis to classify African American adolescents into coping groups. As with previous research on African American coping styles, replication and expansion of Gaylord-Harden and colleagues' (2008) study are necessary to further our understanding of how coping styles influence resiliency in African American youth living in poverty.

Additionally, because there are several conceptualizations of coping used in the literature (Compas et al., 2001), it is important and necessary for future studies to maintain consistency whenever possible. It is for this reason that the current study is using new data to build off of an existing study of African American coping styles such that the conceptualization and measure of coping remain consistent, further strengthening our understanding of African American coping styles.

Gaylord-Harden and colleagues (2008) used cluster analysis to classify urban African American adolescents living in poverty on the basis of their coping patterns to determine whether coping groups emerged and differed on various psychological outcomes and experiences with stress. They found evidence for two distinct coping groups, with one group using more avoidant strategies and little use of problem- and emotion-focused social support seeking (self-reliant

avoidant coping group) and the other group showing a moderate use of all strategies (diversified coping group) (Gaylord-Harden et al., 2008). Although the self-reliant coping group experienced more major life events, no differences in the presentation of psychological symptoms were found among the two distinct coping groups of African American adolescents. Gaylord-Harden and colleagues (2008) have provided a strong base from which to build more research about the coping styles of African American youth living in poverty. The present study attempts to build off of this study by addressing its limitations.

For example, Gaylord-Harden and colleagues (2008) used one measure of stress to assess how each coping groups differed in terms of risk. Using one measure of stress is limiting when it is known that poverty is multi-faceted in the negative risk factors it creates. As such, a more comprehensive evaluation of risk that included not only general stressful life experiences, but also a specific evaluation of the other risk factors imbedded in poverty, particularly exposure to violence and economic strain, is warranted. Additionally, Gaylord-Harden and colleagues (2008) included just one self report of psychological and behavioral symptoms. Research has shown that while youth are the best self-reporters of internal symptoms, parents are better reporters of externalizing symptomatology such as delinquency, social problems, aggression and other behavioral functioning. Multiple reports of internalizing and externalizing symptomatology will provide more information about youth functioning.

Furthermore, Gaylord-Harden and colleagues' (2008) study is cross-sectional. One-time assessment is not sufficient in determining if resilient African American youth will remain so over time (Luthar & Zigler, 1991) or how coping groups will compare over time in terms of outcomes and risk. Longitudinal analyses can further our understandings of which coping styles are predictive of positive outcomes over time. Tolan and colleagues (2002) found some support

for the predictive quality of coping using longitudinal analyses. In particular, in their study, those youth that used few coping strategies had greater increases in internalizing and externalizing symptoms than those that used social support seeking strategies. Moreover, those that used emotion-focused coping had higher increases in externalizing symptoms over time than other coping groups. Such findings are encouraging and provide reason to further the use of longitudinal analyses. Researchers have pointed to the limiting nature of cross-sectional studies (Gaylord-Harden et al., 2008; Masten, 2001; Compas et al., 2001) and urge future research to utilize analyses that are longitudinal in nature to better understand the role of coping styles in promoting positive outcomes in adolescents over time (Compas et al., 2001; Grant et al., 2004).

Rationale

Because of the limited and inconsistent research on the coping styles of African American youth living in poverty, this study investigates such styles. Using cluster analysis, this study will classify African American youth living in poverty on the basis of their coping styles and then compare coping groups on the basis of risk factors and psychological, social and behavioral outcomes. This study seeks to build on the existing Gaylord-Harden and colleagues (2008) research study by including both youth and parent report to assess outcomes including psychological well-being, social functioning and behavioral functioning. Moreover, because this previous research did not include multiple assessments of risk, the current study will include risk using scales that measure general stressful life experiences, economic strain and exposure to violence. These three variables are key risk factors embedded in urban poverty. Additionally, this study will expand Gaylord-Harden and colleagues' (2008) cross-sectional study design by using longitudinal data to investigate the predictive value of the projected coping groups of African American youth. The coping groups that emerge from the cluster analysis will be used

to predict future psychological, social and behavioral outcomes in an effort to identify which coping styles are associated with positive outcomes over time.

Research Questions

The exploratory nature of cluster analysis and the lack of consensus on adaptive coping styles of African American youth living in poverty inhibit the development of specific hypotheses. Therefore, this study seeks to answer four main research questions. Research Question I: Which coping strategies are most utilized in this sample of African American youth living in poverty? Research Question II: A. How do the African American youth in this sample naturally cluster based on coping strategy used? B. How do the projected coping groups differ in risk level? Research Question III: Which coping groups are associated with resilient outcomes in this sample of African American youth living in poverty? Research Question IV: Which coping groups are associated with resilient outcomes over time?

CHAPTER II

METHOD

Research Participants

The participants were 143 African American adolescents previously recruited as part of a larger longitudinal study on adolescent stress and coping in a sample of low-income urban adolescents (The Stress and Coping Project). Participants were recruited from three public schools in a large Midwestern city. Schools were selected purposefully. This selection was based on the number of students at each school eligible to participate in federal free or reduced price lunch programs. At the two elementary schools, more than 90% of the students were eligible for these programs. At the third, a high school, 57% were eligible. This third school was chosen because many of the students from the two participating elementary schools fed into it after graduation from eighth grade. Participants were given gift certificates upon completion as compensation. Each participating student received two movie passes as well as \$20 for participation in the interview portion of the project.

At the start of the study, the students ranged from the 6th through 9th grades. Of the 143 participants, approximately 34% (N = 48) were male and 66% (N= 95) were female. The average age at the time of initial data collection was 12.82 years (range 11 years to 15 years). At wave two of data collection, the total sample size decreased to 96 total participants and the average age was 13.57 years (range 12 years to 17 years).

Procedure

Passive consent was used in all schools. Consent forms were mailed to students' homes. Students were then only allowed to participate if their parents did not return the consent form indicating that they did want their children to participate. Students whose parents did not return consent forms were given a description of the purpose of the study, the assurance that

participation was completely voluntary and refusal to participate would not result in penalties or withdrawal of services, the assurance that their answers would remain confidential, and the option to answer only those questions they wished to answer. Parents and students were informed of the study through the use of classroom announcements and flyers. Parents were also contacted via telephone prior to the interview to confirm informed consent. Clinical psychology doctoral students announced the project in classrooms and answered any questions students may have had and distributed consent forms.

The larger study consisted of two forms of data collection: survey and interview. Participating adolescents completed a series of pencil and paper measures during regularly scheduled class time. Measures were on stress, coping, and internalizing and externalizing problems. Prior to each survey packet administration, participants were told that their responses were completely confidential and that no identifying information would be attached to their answers. They were also informed that their participation was voluntary and they could choose to withdraw at any time. A doctoral graduate student read the survey packet aloud to ensure that students at varying reading levels did not have difficulty reading or keeping pace with the survey administration. At the end of survey administration, graduate students collected all surveys. Within two weeks of survey administration, all participating adolescents were invited to participate in a semi-structured interview about protective factors and stressors. Interviews were conducted by trained graduate students in a private room on school grounds during regular school hours at students' and teachers' convenience. The full interview and completion of all paper and pencil measures took approximately three hours.

Each year following the initial data collection, researchers attempted to contact participants in order to obtain the follow up information. At each time point, data collection

procedures were the same as described above. Whenever possible, follow up data were collected during school hours at school. In some circumstances, data were collected at community locations, such as public libraries. Additionally, whenever possible, interview participants were interviewed by the same graduate student at each time point. This study will utilize data collected during two waves of the project.

Measures

Level of Risk. The level of risk for these youth will be determined by their report of three measures of risk associated with urban poverty: general stressful life experiences, exposure to violence, and economic strain. The cumulative risk nature of poverty demands that more than one measure be used to establish the level of risk imposed by poverty.

General Stressful Life Experience. General stressful life experiences were assessed using only the negative life experience items on The Urban Adolescent Life Experiences Scale (UALES; Allison, Burton, Marshall, Perez-Febles, Yarrington, Kirsh, & Merriwether-DeVries, 1999). The scale contains 85 questions, and was created specifically for, and developed with, an urban adolescent population in order to better understand the specific stressors they face. The items are rated on the following scale: “never,” “once or twice,” “once a month,” “once a week,” or “once a day.” The main scale has two subscales: one for daily hassles and one for major events. Higher scores are associated with greater levels of life stress. Sample items include, “I am pressured to use drugs,” and “A parent gets beat up, attacked, or injured” for major stressors and “My parents get upset or worried” and “I get pressure from parents or family to do better at school” for daily hassles. Internal consistency for this sample was good ($\alpha = .84$)

Economic Strain. Economic strain was assessed using the Family Economic Pressure Index (Conger, 1992). The Family Economic Pressure Index is a 16-item, self-rated inventory of

the participant's family's financial matters. The measure includes a series of statements about financial matters that are rated as "strongly agree," "agree," "kind of agree," "disagree," or "strongly disagree." Also included on this measure are items that ask the participant to rate the extent to which financial matters are a source of conflict and/or stress in their family. Good reliability and validity are reported for this measure (Conger, Conger, Elder, Jr., Lorenz, Simons, & Whitbeck, 1992). Example items are "We have enough money for the kind of clothing that most people have," "We have enough money to feed everyone in our family," and "My family has enough money to pay our bills." Internal consistency for this sample was also good ($\alpha = .83$).

Exposure to Violence. Exposure to violence was assessed using the Exposure to Violence Survey – Screening Version (Richters & Martinez, 1990). The Exposure to Violence Survey – Screening Version is a 58-item questionnaire developed on low income urban 5th and 6th grade African American youth. Response choices denote the frequency of exposure to violent incidences and include "never," "has happened once or twice," "has happened three or four times," "has happened five or six times," "has happened more than six times." Participants indicate whether they have witnessed or experienced 27 types of crimes/violence. Test-retest reliability ($r = .90$) is reported as good (Richters & Martinez, 1990). Sample items are "I have been chased by groups or other people," "I have seen other people use, sell or give out illegal drugs," and "I know someone who has been beaten or mugged." Internal consistency for this sample was very good ($\alpha = .95$).

Psychological, Social and Behavioral Outcomes. Psychological, social and behavioral outcomes were assessed using measures of psychological well-being, social functioning and behavioral functioning.

Psychological Well-being. Psychological well-being was assessed using the Youth Self-Report scale (YSR; Achenbach & Rescorla, 2001). The YSR is a 119-item self-rated inventory of psychological symptomatology. The measure was developed and normed with a nationally representative sample and has been extensively used in previous research. Items are rated on a three-point Likert scale from 0 (not at all) to 2 (often or always). The measure produces two broad-band scales covering internalizing and externalizing symptoms and eight narrow-band scales covering syndromes including scales measuring anxious-depression, withdrawn depression, conduct problems/delinquency, and social problems. The subscales were obtained using a principal components analysis. The broad-band scale for internalizing symptoms (including narrow-band scales) was used to determine psychological well-being as self-reported by youth. Internal consistency for the internalizing broad-band scale for this sample was good ($\alpha = .91$).

Psychological well-being was also assessed using the Child Behavior Checklist (CBCL; Achenbach, 1991). The CBCL is a parent report measure analogous to the YSR. Again, the broad-band internalizing scale was used to assess youth's psychological well-being as reported by parents. Internal consistency for this sample was $\alpha = .87$.

Social and Behavioral Functioning. The YSR and CBCL broad-band scales for externalizing symptoms were used to determine behavioral functioning as self-reported by youth and reported by parents. The internal consistencies for the broad-band externalizing scales of the YSR and CBCL are $\alpha = .87$ and $\alpha = .90$, respectively. Additionally, the narrow-band scale of social problems on the YSR and CBCL were separately used in analysis to investigate the specific developmental outcome of social functioning. Internal consistencies for the YSR and CBCL social problems subscales are $\alpha = .56$ and $\alpha = .60$, respectively.

Coping Styles. Coping strategies were measured using the Children's Coping Strategies Checklist (CCSC; Ayers et al., 1996). The checklist consists of 52 self-report items assessing how frequently respondents engage in certain strategies when they have a problem of some sort. Items are answered on a scale of 1 (never) to 4 (most of the time). Items are summed to create 10 subscales measuring different coping strategies: Cognitive Decision Making, Direct Problem Solving, Seeking Understanding, Positive Cognitive Restructuring, Avoidant Action, Cognitive Avoidance, Physical Release of Emotion, Distracting Action, Problem-Focused Social Support Seeking, and Emotion-Focused Social Support Seeking. Scores for each subscale are derived by taking the mean score of the items that makeup each subscale. These 10 coping subscales are incorporated into the four primary categories of coping style: Distraction Strategies, Avoidant Strategies, Active Strategies, and Social Support Seeking. This four factor structure of coping is supported by results of confirmatory factor analysis (Ayers et al., 1996). Internal consistencies for the subscales range from $\alpha = .58$ to $\alpha = .70$ for all except Physical Release of Emotion, which had an internal consistency of $\alpha = .49$. It should be noted that the number of items for each subscale ranges from four to five. Due to the low number of items for each subscale, some subscales do not contain enough items needed for satisfactory internal consistency for coping measures (Skinner, Edge, Altman, & Sherwood, 2003; Gaylord-Harden et al., 2008). Sample items include, "When I have a problem, I figure out what I can do by talking with one of my friends" (social support seeking), "When I have a problem, I go for a walk" (distraction), "When I have a problem, I try to make things better by changing what I do" (active), and "When I have a problem, I try to stay away from things that make me feel upset" (avoidant).

CHAPTER III

RESULTS

Descriptives

Prior to preliminary analyses, the presence of univariate and multivariate outliers was evaluated using the standard criterion of three standard deviations above the sample mean. Eleven univariate outliers and one multivariate outlier were found and excluded from future analyses. The means, standard deviations, and correlations for coping subscales, psychological well-being scales, behavioral functioning scales, social functioning scales and risk assessment are presented in Table 1. The most frequently used coping strategies in this sample were Avoidant Actions ($M = 2.73, SD = 0.68$) and Cognitive Avoidance ($M = 2.73, SD = 0.71$). The least frequently used coping strategy was Physical Release of Emotions ($M = 2.25, SD = 0.65$). T-tests indicated that boys reported significantly more use of the Physical Release of Emotions coping strategy ($M = 2.55, SD = 0.62$) than girls reported ($M = 2.11, SD = 0.62$), $t = 3.62, p < .001$. Results of a T-test also indicated that boys reported significantly higher levels of exposure to violence ($M = 100.28, SD = 28.33$) than girls reported ($M = 90.07, SD = 21.83$), $t = 2.19, p < .05$. Genders did not significantly differ on reported economic strain and general stressful life experiences. Genders also did not significantly differ on self-reported or parent-reported levels of internalizing symptoms, externalizing symptoms or social problems.

Correlational analyses indicated some associations among risk level, outcomes and coping subscales. All coping subscales were significantly correlated with one another, except Physical Release of Emotion was not significantly correlated with Avoidant Actions or Cognitive Avoidance. General Stressful Life Experiences were positively associated with Cognitive Avoidance, Positive Cognitive Restructuring and Problem-Focused Social Support coping strategies. None of the ten coping strategies were significantly correlated with any outcome. Economic Pressure was positively correlated with youth-reported internalizing symptoms. Exposure to Violence was positively associated with youth reported internalizing symptoms and

youth and parent reported externalizing symptoms. General Stressful Life Experiences were positively associated with all outcomes for both youth and parent report. All risk measures were associated with one another. Lastly, all outcomes were positively correlated with one another, except, parent-reported youth social problems were not significantly associated with youth-reported externalizing symptoms, and youth-reported social problems were not significantly associated with parent-reported youth externalizing symptoms. In addition, youth and parent-reported externalizing symptoms were not significantly correlated with each other.

Cluster Analysis

Standard cluster analytic procedures were followed as outlined in Gaylord-Harden and colleagues (2008) study. First, agglomerative hierarchical cluster analysis was conducted to classify participants based on all ten coping subscales and establish the number of clusters in the sample; and second, *k*-means cluster analysis was used to group individuals (Milligan and Sokol, 1980). In preparation for analysis, all data were mean-centered, meaning the sample mean for each variable was subtracted from all individual observations for the respective variable to emphasize individual differences. This sample of adolescents was classified into coping groups based on their pattern of coping behavior across all ten coping subscales of the Children's Coping Strategy Checklist (Ayers et al., 1996), including the Physical Release of Emotions subscale. Although the Physical Release of Emotions subscale was determined by Gaylord-Harden and colleagues (2008) to have a very low mean (meaning low usage) and not load on its original factor in their sample, in the current sample it was found to be used by a substantial number of adolescents (90%) and thus retained in all analyses.

For the hierarchical agglomerative cluster analytic procedures, solutions for two through seven clusters were tested using Ward's (1963) method with squared Euclidean distances, as

outlined in Gaylord-Harden and colleagues (2008) and recommended by Milligan and Sokol (1980). Ward's (1963) method "joins objects based upon minimizing the minimal increment in the within or error sum of squares" (Timm, 2002, p. 529). The agglomeration schedule, dendrogram, and percentages of individuals in each cluster were examined to determine the optimal number of clusters. Based on this information, a three cluster solution was determined to be the best solution that provided the most interpretable pattern and maximized the homogeneity of individuals within clusters and heterogeneity of individuals between clusters. Once the number of clusters is determined using hierarchical agglomerative cluster analysis, *k*-means cluster analysis places individuals into the determined number of clusters based on the variable(s) being measured. Therefore, using the three cluster solution obtained from the hierarchical analysis, a *k*-means cluster analysis was conducted to reassign individuals into three clusters based on their pattern of coping.

A validation procedure was conducted in order to ensure confidence with the three cluster solution. The most recommended cluster validation technique is replication and the most common replication method is called cross-validation (Mandara, 2003; Breckenridge, 2000). In the cross-validation procedure two independent samples measured on the same variables undergo standard cluster analytic procedures. Then, the second sample undergoes an additional standard cluster analytic procedure using the cluster centers from the first sample. Agreement between the two second sample solutions is estimated using a measure of rater agreement. Higher agreement indicates a more successful replication.

Following these cross-validation procedures (Mandara, 2003; Breckenridge, 2000), the current sample was first randomly divided into two independent samples: Sample A (N = 66) and Sample B (N = 65). Hierarchical cluster analysis using Ward's method and squared Euclidian

distances was conducted on Sample A. After investigation of the agglomeration schedule, dendrogram, and percentages of individuals in each cluster, a three cluster solution was identified as the most appropriate cluster solution. Next, *k*-means cluster analysis procedures were performed using the three cluster solution obtained from the hierarchical cluster analysis, and the cluster centers were saved. The same procedures were performed on Sample B. Based on the agglomeration schedule, dendrogram, and percentages of individuals in each cluster produced by the hierarchical cluster analysis, a three cluster solution was again determined to be the most appropriate cluster solution. A *k*-means cluster analysis was then performed on Sample B using the three cluster solution. An additional *k*-means cluster analysis was performed on Sample B using the three cluster solution and the cluster centers obtained in the *k*-means cluster analytic procedure on Sample A. Lastly, as recommended by Milligan and Cooper (1986) and Steinley (2004), Hubert and Arabie's (1985) adjusted Rand index was used to estimate the agreement between the two *k*-means cluster analyses performed on Sample B. The agreement between the clusters was .98 indicating strong agreement. The 3 x 3 cross validation contingency table used to calculate Hubert and Arabie's (1985) adjusted Rand index is presented in Table 2. In sum, the cross-validation procedure supports the three-cluster solution for the entire sample.

Table 2⁺
Cross-Validation of Coping Clusters

Cluster from Sample B	Cluster from Sample B x A*		
	1	2	3
1	14	0	0
2	0	26	1
3	0	0	14

*Sample B x A indicates 3 cluster solution on Sample B using cluster centers from Sample A.

⁺The table indicates the agreement and disagreement of case assignment between the 3 cluster solution using Sample B and the 3 cluster solution using Sample B with cluster centers from Sample A. For example, the table indicates that just one case is in disagreement. This one case was placed in cluster 2 when Sample B was used and placed in cluster 3 when Sample B x A was used.

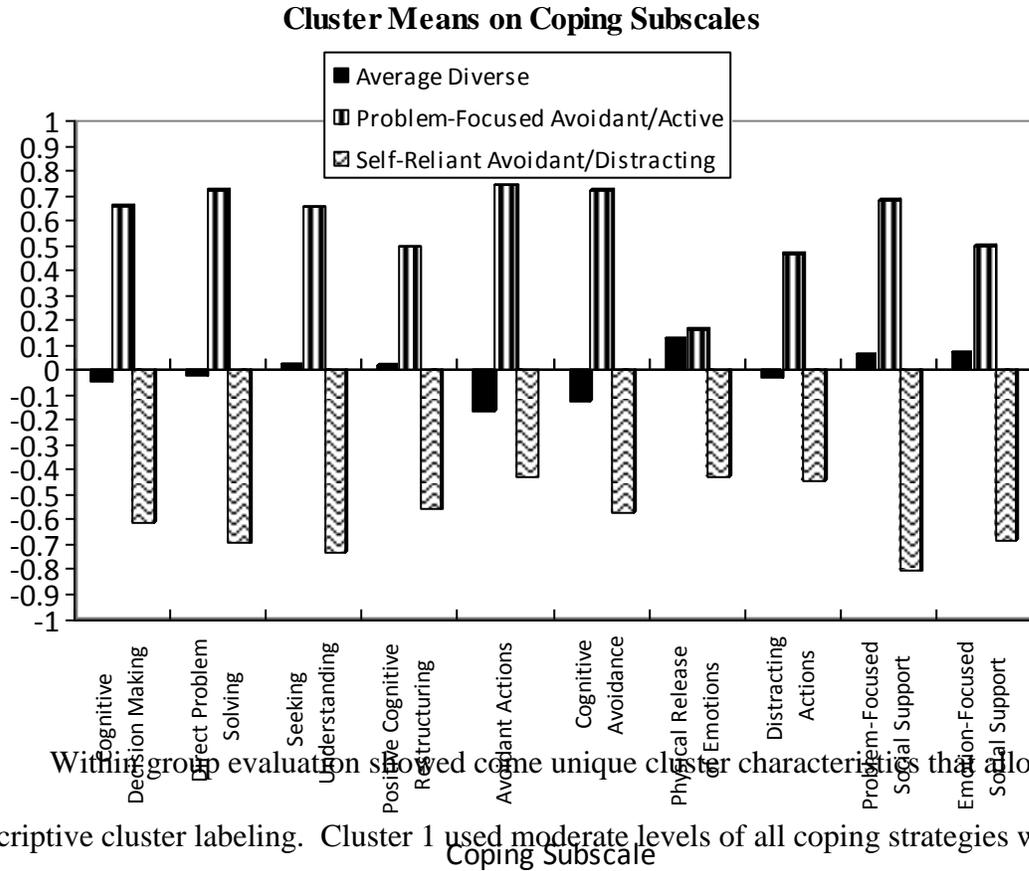
Results of the *k*-means cluster analysis with the entire sample revealed differences in age distribution across the three clusters, $\chi^2(8) = 19.08, p < .05$. While 11 and 14 year olds were evenly distributed among groups, 12, 13 and 15 year olds were not. Specifically, the majority of 12 year olds (51%), 13 year olds (66%) and 15 year olds (75%) were in Cluster 1. No differences in gender distribution were found across the three clusters, $\chi^2(2) = 3.98, p = .14$. The means for each cluster on all ten coping subscales are presented in Table 3. Post-hoc tests indicated that Cluster 1 (N = 57), Cluster 2 (N = 32) and Cluster 3 (N = 29) were significantly different on all coping subscales ($p < .000$), except Cluster 1 and Cluster 2 did not differ significantly on use of Physical Release of Emotions. Between group differences illustrate clear high, moderate and low coping groups with Cluster 1 generally using moderate levels of all coping strategies, Cluster 2 generally using very high levels of all coping strategies and Cluster 3 generally using very low levels of all coping strategies (Table 3).

Table 3

Cluster Means on Coping Subscales (Based on mean centered data)

Variables	Average Diverse N = 57	Problem-Focused Avoidant/Active N = 32	Self-Reliant Avoidant/Distraction N = 29
Cognitive Decision Making	-0.0442	0.6585	-0.6091
Direct Problem Solving	-0.0197	0.7209	-0.6953
Seeking Understanding	0.0241	0.6557	-0.7322
Positive Cognitive Restructuring	0.0207	0.4947	-0.5578
Avoidant Actions	-0.1653	0.7435	-0.4321
Cognitive Avoidance	-0.1231	0.7233	-0.5718
Physical Release of Emotions	0.1285	0.1620	-0.4253
Distracting Actions	-0.0262	0.4659	-0.4427

Problem-Focused Social Support	0.0630	0.6836	-0.8052
Emotion-Focused Social Support	0.0728	0.4969	-0.6828



Within group evaluation showed some unique cluster characteristics that allowed for descriptive cluster labeling. Cluster 1 used moderate levels of all coping strategies with means close to that of the sample mean; thus, this cluster was labeled Average Diverse coping group. Cluster 2 showed use of all coping strategies; however, means for Avoidant Actions and Cognitive Avoidance were more than one standard deviation above the sample means, indicating heavy use of avoidant strategies. Additionally, Cluster 2 means for Direct Problem Solving and Problem-Focused Social Support were more than one standard deviation above the sample mean, indicating heavy use of strategies that are aimed at directly solving the problem. Cognitive Decision Making and Seeking Understanding strategies approached one standard deviation above the sample mean, indicating some reliance on coping strategies that are active in nature and aimed at understanding problems. Because of the mixture of avoidant and problem-focused

coping strategies with some reliance on active coping strategies seen in this cluster, Cluster 2 was labeled Problem-Focused Avoidant/Active coping group.

Cluster 3 showed low use of all coping strategies; however, means for Direct Problem Solving, Seeking Understanding, Problem-Focused Social Support and Emotion-Focused Social Support coping strategies were more than one standard deviation below the sample means. Extremely low use of these strategies indicates that this cluster rarely uses coping strategies that were aimed at directly understanding or solving the problem and rarely seeks the help of others. Closer to the sample means were the means of Distracting Actions, Physical Release of Emotions, Avoidant Actions and Cognitive Avoidance coping strategies. This perhaps indicates that if this cluster does use a coping strategy, it is likely that they may use strategies that distract them from or help them avoid the problem. Thus, because of the extremely low levels of active and social support seeking strategies and indications of some use of distracting and avoidant strategies, Cluster 3 was labeled the Self-Reliant Avoidant/Distraction coping group.

In terms of between group evaluations, an obvious distinction between the Self-Reliant Avoidant/Distracting and Problem-Focused Avoidant/Active coping groups is the use of social support seeking coping strategies. To examine the extent to which clusters might also differ on the extent to which they actually receive social support, in addition to seeking it, all coping groups were compared across a measure of social support that focuses on parent-child relationships. The parent-child relationship measure evaluates maternal and paternal attachment, which can be used as a rough proxy of perceived availability of parental social support. Multiple independent T-tests were conducted to evaluate differences across groups on the maternal and paternal attachment subscales. To reduce the likelihood of Type 1 error, which is increased by the use of multiple T-tests, a corrected significance criterion of $p < .025$ was used. These

supplemental analyses indicated coping group difference on reported maternal attachment. The Problem-Focused Avoidant/Active coping group reported a significantly stronger maternal attachment ($M = 63.94, SD = 8.28$) than the Average Diverse coping group ($M = 62.89, SD = 7.19, t = 2.36, p < .025$), and the Self-Reliant Avoidant/Distracting coping group ($M = 58.80, SD = 8.03, t = 2.43, p < .025$) (Table 5). Thus, it appears that the Problem-Focused Avoidant/Active coping group perceives more available maternal social support than the Self-Reliant Avoidant/Distracting and Average Diverse coping group. Coping groups did not differ in terms of reports of paternal attachment.

Table 5
Means and Standard Deviations of the Coping Clusters on Parent-Child Relationship Measure

	Average Diverse		Problem-Focused Avoidant/Active		Self-Reliant Avoidant/Distracting	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Maternal Attachment	62.89	7.19	63.94	8.28	58.80	8.03
Paternal Attachment	52.84	12.75	53.51	15.54	51.77	12.31

Tests of Group Differences on Outcome Variables

Cross-sectional Analyses

To test for possible differences across coping groups on outcome variables, a series of multivariate analyses of variances (MANOVA) were conducted. Prior to analyses, the prerequisite assumptions for MANOVA were tested. The assumption that all of the dependent variables were multivariately normally distributed was checked by examining the normal Q-Q Plots of the data. The assumption of independent observations was checked by examining the Detrended Normal Q-Q Plot of the residuals. And lastly, the assumption that the dependent variables have equal variances and covariances across all levels of the independent variable was

checked using the significance of Box's Test of Equality of Covariances. In cases in which any of these assumptions was violated, multiple independent t-tests were conducted as an alternative to the MANOVA. To reduce the likelihood of making a Type 1 error that may be increased by the multiple t-tests, significance criteria were corrected by dividing the significance criterion of $p < .05$ by the number of dependent variables in each analysis. Coping group membership was entered as the independent variable, and age and gender were controlled in all MANOVAs.

To test differences between coping groups across the multiple measures of risk level at Wave 1 (cross-sectionally), general stressful life experiences, exposure to violence and economic strain were entered as dependent variables. The MANOVA resulted in no significant multivariate effects for coping group. No significant differences in general stressful life experiences, exposure to violence or economic strain were found between coping groups with Wilks' $\lambda = .936$, $F(6, 198) = 1.104$, $p = .361$.

To test coping group differences in youth internalizing symptoms at Wave 1 (cross-sectionally), youth-reported internalizing symptoms and parent-reported youth internalizing symptoms from the YSR and CBCL, respectively, were entered as dependent variables. Box's Test of Equality of Matrices was significant, indicating a possible violation of the MANOVA assumption that the dependent variables have equal variances and covariances across all levels of the independent variable. Thus, multiple independent t-tests were computed with a corrected significance criterion of $p < .025$ ($p < .05$ divided by two). T-tests indicated a significant difference between Average Diverse and Self-Reliant Avoidant/Distracting coping groups ($t = 2.30$, $p < .025$), with the Average Diverse coping group self-reporting higher internalizing symptoms ($M = 15.80$, $SD = 8.68$) than the Self-Reliant Avoidant/Distracting coping group ($M =$

11.45, $SD = 6.93$). The Problem-focused Active/Avoidant coping group did not differ from the other coping groups.

To test for coping group differences in youth social problems at Wave 1, youth- and parent-reported social problems were entered as dependent variables. Significant multivariate effects of coping clusters were found with Wilks' $\lambda = .791$, $F(4, 132) = 4.112$ $p < .005$.

Univariate ANOVAs indicated that the Average Diverse coping group ($M = 4.56$, $SD = 3.31$) self-reported significantly higher levels of social problems than the other coping groups ($F(2, 72) = 8.389$, $p < .001$).

No significant multivariate effects of coping groups were found for youth- or parent-reported externalizing symptoms at Wave 1 with Wilks' $\lambda = .902$, $F(4, 134) = 1.779$, $p = .14$.

Table 6

Means and Standard Deviations of Coping Groups on All Outcomes and Risk Level at Wave 1

Variables	Average Diverse		Problem-Focused Avoidant/Active		Self-Reliant Avoidant/Distracting	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Psychological Well-Being						
YSR Internalizing	15.80	8.68	13.50	8.62	11.45	6.93
CBCL Internalizing	8.29	7.24	7.23	4.80	4.47	4.05
Behavioral Functioning						
YSR Externalizing	13.96	8.63	11.28	7.52	12.09	7.03
CBCL Externalizing	7.65	6.69	8.10	6.21	5.33	4.88
Social Functioning						
YSR Social Problems	4.56	3.31	3.35	2.66	3.33	2.90
CBCL Social Problems	2.63	2.39	2.91	3.02	2.20	2.03
Risk Assessment						
Stressful Life Experiences (UALES)	155.86	22.05	154.06	22.90	144.85	16.75
Exposure to Violence	99.31	26.51	92.98	21.91	87.40	21.97
Economic Pressure Index	27.69	7.08	26.87	7.63	25.78	4.81

Longitudinal Analyses

To understand which coping groups are associated with resiliency over time, the predictive value of coping group on outcomes at Wave 2 were tested using standard hierarchical regression procedures. Separate regressions were conducted for each outcome for a total of 6 regressions (YSR internalizing symptoms, CBCL internalizing symptoms, YSR externalizing symptoms, CBCL externalizing symptoms, YSR social problems and CBCL social problems). Because gender differences were found within the entire sample and age differences were found between clusters, age and gender were controlled for in the regression analyses. For each regression, gender and age were entered in Step 1 and symptoms at Wave 1 were entered in Step 2. A set of two dummy coded variables reflecting coping group membership was entered in Step 3¹ (see Table 4).

Table 4
Dummy Coded Variables to Indicate Cluster Membership

Original Cluster Group	Dummy Coded Variables			
	Cluster 1 as Reference Group		Cluster 2 as Reference Group	
	Group 1	Group 2	Group 1	Group 2
Cluster 1	0	0	1	0
Cluster 2	0	1	0	0
Cluster 3	1	0	0	1

One of the six regression analyses indicated that coping group membership significantly improved the prediction of parent-reported youth externalizing symptoms at Wave 2 ($\Delta R^2 = .13$, $\Delta F(2, 32) = 3.27$, $p < .05$) while controlling for age, gender, and parent-reported youth externalizing symptoms at Wave 1. Specifically, the Problem-Focused Avoidant/Active Coping

¹ Dummy coding results in a reference group to which the other groups are being compared. Thus, Cluster 1 as the reference compares means of Cluster 2 and Cluster 3 to Cluster 1. Just one set of dummy codes does not allow for comparison of Cluster 2 and Cluster 3 against each other. Therefore, a second set of dummy codes were needed to compare Cluster 2 and Cluster 3. Cluster 2 as the reference compares means of Cluster 1 and Cluster 3 to Cluster 2. All six regressions were first run with dummy codes for Cluster 1 as the reference group and then run with dummy codes for Cluster 2 as a reference group.

group ($M = 9.51$, $SD = 10.36$) had significantly higher levels of parent-reported youth externalizing symptoms at Wave 2 than the Average Diverse ($M = 6.11$, $SD = 5.24$, $t = -2.19$, $p < .05$) and the Self-Reliant Avoidant/Distractioin coping groups ($M = 3.21$, $SD = 3.28$, $t = -2.41$, $p < .05$). The Average Diverse coping group and Self-Reliant Avoidant/Distractioin coping group did not differ in terms of parent-reported youth externalizing symptoms at Wave 2.

To better understand the higher levels of parent-reported youth externalizing symptoms at Wave 2 in the Problem-Focused Avoidant/Active coping group, supplemental analyses were conducted to investigate this group's risk level characteristics at Wave 2 to rule out higher levels of risk as an explanation of higher levels of externalizing symptoms. Previously, in the cross-sectional analysis, differences in risk level were evaluated for Wave 1. In this longitudinal analysis, differences in risk level were evaluated for Wave 2 by testing whether coping group membership predicted risk level at Wave 2. Thus, in additional hierarchical regression analyses, coping group membership was regressed on general stressful life experiences and exposure to violence at Wave 2 separately, while controlling for age, gender, and general stressful life experiences and exposure to violence at Wave 1, respectively. Analyses indicated that coping group membership did predict one component of risk level, general stressful life experiences ($R^2 = .497$, $F(2, 67) = 4.394$, $p < .005$). Specifically, the Problem-Focused Avoidant/Active coping group ($M = 134.42$, $SD = 22.53$) reported significantly lower levels of general stressful life experiences at Wave 2 than the Average Diverse coping group ($M = 144.05$, $SD = 17.01$, $t = 2.05$, $p < .05$). The Self-Reliant Avoidant/Distractioin coping group did not significantly differ from the other coping groups on reported general stressful life experiences at Wave 2.

Because lower levels of general stressful life experiences at Wave 2 were reported for the Problem-Focused Avoidant/Active coping group, an item by item analysis was conducted to

determine if the most commonly parent-reported externalizing symptoms at Wave 2 were possibly more adaptive for African American youth in the context of urban poverty. The most commonly parent-endorsed externalizing items in this coping group were: “argues a lot” ($M = .85$), “talks too much” ($M = .71$), “sudden changes in mood/feeling” ($M = .67$), “prefers older kids” ($M = .62$), “lying/cheating” ($M = .62$), “usually loud” ($M = .57$), and “temper tantrums/hot temper” ($M = .57$).

Table 7

Means and Standard Deviations of Coping Groups on All Outcomes and Risk Level at Wave 2

Variables	Average Diverse		Problem-Focused Avoidant/Active		Self-Reliant Avoidant/Distraction	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Psychological Well-Being						
YSR Internalizing	8.92	6.28	8.10	4.82	6.70	4.28
CBCL Internalizing	6.36	5.38	6.39	4.37	4.08	4.15
Behavioral Functioning						
YSR Externalizing	8.90	5.53	7.33	5.23	8.11	5.56
CBCL Externalizing	6.11	5.24	9.51	10.36	3.21	3.28
Social Functioning						
YSR Social Problems	2.09	2.16	2.65	2.06	1.47	1.46
CBCL Social Problems	2.20	2.75	1.75	2.45	1.33	1.91
Risk Assessment						
Stressful Life Experiences (UALES)	144.05	17.01	134.42	22.53	137.71	11.01
Exposure to Violence	90.84	26.56	80.44	18.47	86.73	24.72
Economic Pressure Index	29.39	7.98	32.01	11.77	26.16	5.14

CHAPTER IV

DISCUSSION

This study sought to understand the role of coping styles in resiliency among urban African American adolescents living in poverty by replicating and expanding on the findings of

Gaylord-Harden and colleagues' (2008) study. The most used coping strategies in the current sample were Cognitive Avoidance and Avoidant Actions. Gaylord-Harden and colleagues (2008) also found that the most used coping strategy in their sample was Cognitive Avoidance. It is not surprising that this sample of African American youth living in poverty would rely on avoidant coping strategies. Research has indicated that avoidant strategies are particularly effective for African American youth living in highly stressed, urban environments where exposure to violence is chronic (Grant et al., 2000; Edlynn et al., 2008; Rosario et al., 2003).

Unlike what was found in Gaylord-Harden and colleagues (2008), for African American adolescents in this sample Physical Release of Emotions coping strategy obtained a mean comparable to other coping strategy means, indicating some use of this strategy in this sample. However, it was still the least used coping strategy as Gaylord-Harden and colleagues (2008) also found. It is likely that the reasons for relatively lower use of the Physical Release of Emotions coping strategy are similar to those explained by Gaylord-Harden and colleagues for the nearly absent use of this strategy in their sample. Dangerous neighborhoods and a lack of safe, beautiful outside space in which to engage in physical activities may prohibit many opportunities for the use of this strategy; however, some use of this strategy indicates that even though youth did not have many safe spaces, they may have found at least one safe space to engage in physical activities. Youth in this sample may have been more likely than the youth in Gaylord-Harden and colleagues sample to find safe spaces because they may have been living under less impoverished conditions. Reported general stressful life experiences can be used as a rough proxy for urban poverty. In this sample, youth reported a lower average of general stressful life experiences ($M = 152.33$, $SD = 21.01$) than the youth reported in Gaylord-Harden

and colleagues' study ($M = 202.32$, $SD = 35.08$), which is a possible indication of less general stressors in their environments and less impoverished conditions, in comparison.

Significant correlations between risk factors and outcomes illustrated a positive linear relationship between risk and symptoms, which is consistent with previous research examining the relationship between risk and psychopathology (Carlson & Grant, 2008; Grant et al., 2006; Grant et al., 2004). Specifically exposure to violence was significantly correlated with self-reported internalizing symptoms, self-reported externalizing symptoms, and parent-reported externalizing symptoms. Further, general stressful life experiences were correlated with all psychological, social and behavioral outcomes. Regarding correlations among outcomes, it was surprising that youth and parent-reported externalizing symptoms were not significantly correlated with each other. Along these same lines of disagreement, parent-reported youth social problems were not significantly associated with youth-reported externalizing symptoms, and youth-reported social problems were not significantly associated with parent-reported youth externalizing symptoms. A lack of correlation between youth and parent report of externalizing symptoms and social problems is consistent with previous research indicating that parent and youth discrepancies in the report of externalizing symptoms on the CBCL and YSR are common (Achenbach, McConaughy, & Howell, 1987; Lau, Garland, Yeh, McCabe, Wood, & Hough, 2004; Youngstrom, Loeber, & Stouthamer-Loeber, 2000).

There were few gender differences found in the current sample. As was found in Gaylord-Harden and colleagues' (2008) study and in previous research on urban African American youth (Carlson & Grant, 2008), boys in the current sample reported higher use of the Physical Release of Emotions coping strategy. Although other studies have found that boys reported higher use of avoidant and distraction strategies and girls reported higher use of support

seeking and active strategies (Grant et al., 2000; Tolan et al., 2002; Chandra & Batada, 2006), the current study did not find these gender differences. Boys reported more exposure to violence than girls. This finding is consistent with previous research on urban African American youth (Carlson & Grant, 2008; Warner & Weist, 1996). Genders did not differ in terms of general stressful life experiences and economic strain. Genders also did not differ in terms of self-reported or parent-reported levels of internalizing symptoms, externalizing symptoms and social problems. This finding is inconsistent with previous research that has found boys report higher externalizing symptoms (Thomas, Byrne, Offord, & Boyle, 1991; Huselid & Cooper, 1994). The lack of difference in internalizing symptoms across genders is consistent with growing research that gender differences in internalizing symptoms are suppressed in low-income, urban environments (Grant et al., unpublished manuscript). A possible explanation for the many uncharacteristic findings could be that in this sample the genders are equally negatively affected by the stressors associated with poverty. Specifically, aside from exposure to violence (which was significantly different but still high for both), both genders reported relatively equal levels of general stressful life experiences and economic strain; thereby indicating that, in general, stressors are somewhat evenly distributed across genders. Thus, perhaps the risks associated with urban poverty are so great in this sample that they did not have varying effects across genders.

Cluster Analysis

The current cluster analyses based on the ten subscales of coping on the Children's Coping Strategies Checklist (Ayers et al., 1996) produced three distinct coping groups. Between cluster comparisons showed clusters were distinguished by high, moderate and low use of all ten coping subscales. It is not surprising that the three coping groups either used moderate to high

levels of all coping strategies or low levels of all strategies. Research has indicated that highly stressed African American youth typically report use of many coping strategies regardless of effectiveness (Dempsey, 2002). Other research has consistently found the African American youth are clustered in low, medium and high coping groups (Gaylord-Harden et al., 2008). Therefore, moderate and high use of all coping strategies found in the Average Diverse coping group and the Problem-Focused Avoidant/Active coping group, respectively, and the low levels of coping use in the Self-Reliant Avoidant/Distraction coping group are somewhat typical of this subset of youth living in highly stressed environments marked by poverty.

Within cluster evaluation showed that one coping group, the Average Diverse coping group, used moderate levels of all coping strategies. Additionally, the second group, the Problem-Focused Avoidant/Active coping group, was characterized by high usage of all coping dimensions with particularly heavy use of avoidant coping strategies and active coping strategies that focused on direct problem solving. And the third group, the Self-Reliant Avoidant/Distraction coping group, was characterized by low usage of all coping dimensions with almost absent use of social support seeking and limited use of distraction and avoidant strategies.

Examination of other within group variation revealed differences in the frequencies of specific coping strategies used between coping groups. Additional analyses were specifically conducted to understand within group use of social support seeking strategies. The Problem-Focused Avoidant/Active coping group had significantly higher levels of reported Social Support Seeking with particular use of Problem-Focused Social Support. Because this group also reported significantly higher levels of maternal attachment, it seems that this group has more perceived availability and access to maternal social supports. More perceived access to some

social support provides a reason for this group's higher use of social support seeking as a coping strategy. On the other end, the Self-Reliant Avoidant/Distraction coping group reported almost absent use of social support seeking coping in addition to low levels of perceived maternal attachment, which may indicate low levels of perceived availability of social support. Thus, this group's low level of perceived availability of social support may provide a reason for why this group did not rely on social support seeking as a coping strategy.

In other words, it may be that youth who have social support available to them may be more likely to take advantage of that social support by seeking it as part of a coping strategy. The inverse process may also be an explanation. It may also be possible that the youth who use social support seeking coping elicit more social support from others and, thereby, strengthen their connections with those providing the support, such as parents. Therefore, it is possible that in the present sample, social support seeking and positive mother-adolescent relationships are reciprocally related. Additional research with social support seeking coping and parent-child relationship data collected at multiple time points is needed to test this hypothesized interpretation.

Cross-Sectional Differences among Coping Groups

Cross-sectional analysis of risk across coping groups produced no significant differences between cluster in terms of risk level (general stressful life experiences, exposure to violence, and economic pressure). However, in cross-sectional analyses of outcomes, differences among groups were found on youth-reported internalizing symptoms and social problems at Wave 1. The Average Diverse coping group self-reported higher internalizing symptoms than the Self-Reliant Avoidant/Distraction coping group and higher social problems than both of the other coping groups. Within group examination of the Average Diverse coping group is needed to

understand the negative cross-sectional outcomes for this group. Approximately equal use of all ten coping strategies indicates that this group did not distinguish among the strategies. Perhaps this group's lack of fastidiousness and discrimination between effective and ineffective strategies in response to stressors is associated with negative social and psychological well-being outcomes in the short term. Perhaps this coping group is characteristic of youth that have not yet developed an effective pattern of coping, which research has shown is typical in adolescence (Rasmussen, Aber, & Bhana, 2004; Gaylord-Harden et al., 2008).

In sum, it seems that undeveloped patterns of coping are associated with less resilient psychological well-being and social functioning outcomes in the short term. These associations were not found in the longitudinal analyses. A possible explanation for this is that this group's pattern of coping is so undeveloped that it does not have a strong impact on future functioning. The lack of longitudinal associations found in the Self-Reliant Avoidant/Distraction coping group provides further support for this hypothesis. The Self-Reliant Avoidant/Distraction coping group used low to absent levels of all coping strategies, indicating that, like the Average Diverse coping group, this group had undeveloped preferences for coping strategies. The only coping group to have longitudinal associations was the Problem-Focused Avoidant/Active coping group, and this group had stronger coping preferences than both of the other groups.

Longitudinal Differences among Coping Groups

Longitudinal analyses allowed for expansion on these findings to determine if coping groups differed on these and/or other outcomes over time. Analysis of the predictive value of coping groups indicated that coping group membership did predict future youth behavioral functioning as reported by parents. Problem-Focused Avoidant/Active coping group membership was associated with higher parent-reported externalizing symptoms in youth at

Wave 2. Supplemental analyses indicated that the Problem-Focused Avoidant/Active coping group reported significantly less general stressful life experiences at Wave 2 than other groups. Additionally, coping groups did not differ on reported exposures to violence at Wave 2, indicating that all coping groups experienced relatively similar exposures to violence. Thus, it can be ruled out that higher general stressful life experiences or exposures to violence accounted for the higher externalizing symptoms.

Although cross-sectional analyses indicated that the Average Diverse coping group was associated with poorer social functioning and psychological well-being in the short-term, the Problem-Focused Avoidant/Active coping group is the only group associated with poorer behavioral functioning in the long term. Between groups comparisons are useful in helping to clarify reasons for this finding. Because this group shares use of avoidant strategies with the Self-Reliant Avoidant/Distraction coping group and the Average Diverse, and differs from those groups in terms of high use of problem-focused and active strategies, perhaps it is the distinct and specific higher use of problem-focused and active strategies that are predictive of behavioral problems overtime. Research with African American youth living in poverty has shown that active coping strategies are not as adaptive in environments where stressors are chronic and uncontrollable (Compas et al., 2001; Gonzales, Tein, Sandler, & Friedman, 2001). Consequently, the use of active strategies may exacerbate the negative effects of stressors and increase externalizing behavior problems. For example, Rosario and colleagues (2003) found that confrontational, or active, coping approaches increased the risk for delinquent behavior for those victimized by and exposed to community violence.

It seems that active approaches may necessitate aggressive responses to the stressors common in urban poverty. Another explanation for the increase in externalizing symptoms and

decrease in reported general stressful life experiences seen in the Problem-Focused Avoidant/Active coping group is that the externalizing behaviors may actually be adaptive in the context of urban poverty. Evaluation of the most commonly parent-reported externalizing symptoms in the Problem-Focused Avoidant/Active group showed just that. For example, “argues a lot,” “usually loud” and “talks too much” were the most reported externalizing behaviors. These behaviors show assertiveness and a lack of vulnerability. These may be adaptive in the context of urban poverty because assertiveness can be used as a defensive technique to avoid and/or protect against victimization and vulnerability. Also, “prefers older kids” and “lying/cheating” were also among the most reported externalizing behaviors. These may be adaptive in the context of urban poverty because they may serve to protect youth in dangerous environments. Older youth may be more experienced and physically bigger and therefore better able to protect younger youth. Additionally, lying and cheating may serve as survival techniques that may protect youth in dangerous situations and reduce vulnerability. In sum, the use of active strategies may present as aggressive behaviors but could actually be adaptive in the context of urban poverty. The fact that reported general stressful life experiences decreased over time in this coping group provides support for the hypothesized interpretation.

Additionally, some research has shown that parents are more likely to socialize their children to use more active coping strategies with high maternal attachment strongly associated with use of active strategies (McKernon, Holmbeck, Colder, Hommeyer, Shapera, & Westhoven, 2001). The close parent-child relationship reported in this group may provide more opportunities for parents to teach and encourage active coping approaches regardless of the type or kind of stressor. As a consequence of parent teaching or other reasons, this group may be using active coping strategies to address uncontrollable and severe stressors in their environment. In the short

term this may reduce youths' distress, as indicated by this coping group not being associated with any negative outcomes at Wave 1. In the long term this may help to reduce stress but at a cost of an increase in externalizing symptoms, as indicated by this group's decrease in reported general stressful life experiences and increase in externalizing symptoms at Wave 2. However, as previously discussed, the presentation of externalizing symptoms may actually simply reflect active coping in context of urban poverty (e.g. confrontational or active coping is externalizing behavior). Thus, parents may be socializing their children to use more active coping strategies which are presenting as externalizing symptoms, and this kind of socialization is effective in reducing short term distress and long term stress. This hypothesized interpretation is another indication that there could be some benefit to externalizing behaviors.

In sum, it seems that the use of active strategies in this sample is a double-edged sword as it is associated with adaptive and problematic outcomes in the long term. On the one hand, use of active strategies to address the typical stressors in poverty is associated with an increase in externalizing symptoms. On the other hand, the use of active strategies in the context of urban poverty may pull for the use aggressive responses, and these aggressive responses may actually be adaptive as indicated by the decrease of reported general stressors over time. The ambiguous adaptive or maladaptive quality of active strategies is consistent with the mixed findings of previous research (Grant et al., 2000; Gonzales et al., 2001; Roache, 2004).

Moreover, this group demonstrated high use of problem-focused social support. Due to the high reports of maternal attachment, it is likely that this group received problem-focused social support from the maternal parent. It might be that mothers in this sample also experience similar rates of stress as the youth in this sample and are negatively affected in similar ways (Grant et al., 2000). It is likely that mothers' mental health, emotional resources and problem-

solving abilities are eroded by the chronic, severe and at times uncontrollable stressors seen in poverty (Grant et al., 2000); thus, this sample of mothers may be limited in their ability to provide effective problem-focused social support. Thus, like that of active strategies, the adaptive quality of problem-focused social support seeking may also be ambiguous. Problem-focused social support seeking appears to be associated with less resilient outcomes over time when the social support source is limited in their ability to provide positive support. Future research is needed to understand what sorts of outcomes are associated with problem-focused social support seeking when the source of support is more able, and all in the context of urban poverty.

It is important to note that membership in the Problem-Focused Avoidant/Active group predicted higher levels of *parent* – reported youth externalizing symptoms, but it did not predict higher youth-reported externalizing symptoms. Parents are better reporters of externalizing symptoms (Achenbach, McConaughy, & Howell, 1987). The close maternal attachment found in this coping group not only allowed for parent socialization of active coping strategies and the availability of social support for use of problem-focused social support seeking, it also allowed for better parent report of youths' use of these strategies. Parents' report of externalizing behavior is perhaps actually their report of and a reflection of youths' use of active strategies in the context of urban poverty.

Limitations, Strengths and Conclusions

The current study has many limitations. The sample size is relatively small, particularly as compared to Gaylord-Harden and colleagues' study. Moreover, significant sample size was lost at Wave 2 due to missing, incomplete or invalid data. Future studies should replicate and expand on previous research with larger longitudinal sample sizes. Additionally, the current

study focused on African American adolescents living in poverty. This narrow focus may limit the amount of generalizability to adolescent coping more broadly.

The coping style measure used in the current study can be seen as a limitation. It does not provide assessment of culturally relevant coping strategies that African American youth living in poverty may be using. Research has examined the use of culturally relevant coping in African American adolescents and it urges the use of more culturally relevant assessments (Utsey, Adams, & Bolden, 2000). Perhaps the inclusion of culturally relevant coping items might have given more information about coping groups.

In spite of its limitations, the current study has added to the literature in various ways. The first is through its design elements. The current study utilized multiple reporters for the assessment of psychological well-being, social and behavioral outcomes allowing for examination of the effects of coping on multiple dimensions of functioning from multiple perspectives. Additionally, the current study used the person-centered approach of cluster analysis which allows for an understanding of natural patterns among individuals (Masten, 2001). And lastly, the current study is one of few to replicate and expand on an existing study of African American coping with longitudinal data.

Second, this study adds to the literature in that it illustrates that what is seen as adaptive coping strategies in the general population may not be true for African American populations living in poverty as other factors influence coping effectiveness. Through understanding the role of coping styles in the context of resiliency, this study demonstrated how some strategies are associated with more resilient outcomes in the short-term and others are associated with less resilient outcomes in the long-term. Moderate use of all coping strategies found in the Average Diverse coping group was associated with poorer psychological well-being and social

functioning outcomes in the short term; indicating that in response to stress, these strategies may have immediate negative effects. However, the undeveloped coping pattern of the Average Diverse coping group did not have an impact on future functioning. The Problem-Focused Avoidant/Active coping group had more developed coping patterns and the predictive value of coping group was shown in this group. Specifically, use of problem-focused and active strategies was associated with parent-reported youth externalizing symptoms over time. These findings indicated that, in the long term, active and problem-focused social support seeking strategies may be associated with maladaptive or resilient behavioral outcomes depending on the factors that surround the use of those strategies.

This study provided more information on how African American youth living in poverty cope with the risk factors associated with an impoverished environment, and it also supports the need for continued research in this area. Future studies should continue to replicate and expand on existing studies, as this study did, in order to strengthen our understanding of the role of coping in the resiliency of African American youth living in poverty.

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