

# **Predicting Adolescent Anxiety: The Role of Acculturation, Negative Life Events, Ethnicity, Social Support, and Coping**

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**ABSTRACT**

Epidemiological studies indicate that between 8 and 20% of children suffer from an anxiety disorder (Costello, Egger, & Angold, 2004). Researchers have worked for many years to map the developmental trajectory of anxiety in children, yet the pathways remain unclear. The primary purpose of this study was to determine the relationship between specific predictors and anxiety in middle school Caucasian and African American adolescents. A secondary purpose was to explore whether acculturation contributes to the prediction of anxiety, after controlling for exposure to negative life events, in the African American adolescents. For the total sample, results indicated that negative life events, social support, coping, and ethnicity were all significant predictors of anxiety, accounting for 18.9% of the variance in anxiety scores. These relationships were confirmed in separate analyses for the African American and Caucasian youth. Furthermore, acculturation moderated the relationship between negative life events and anxiety in the African American sample, as anticipated. More specifically, the relationship between negative life events and anxiety was stronger for those adolescents reporting more affiliation with their own culture. These findings suggest that culture is an important context in understanding the development of anxiety and that it requires additional exploration to understand its relations to the development of mental health problems more broadly.

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# **I Introduction**

Epidemiological studies indicate that between 8 and 20% of youth suffer from an anxiety disorder; therefore, research is warranted to identify the early predictors of this prevalent disorder (Bernstein, Borchardt, & Perwien, 1996; Costello, Egger, & Angold, 2004; Grover, Ginsburg, & Ialongo, 2007; Muris, Merckelbach, Ollendick, King, & Bogie, 2002; Ollendick & King, 1994). With more knowledge, efforts can be made to develop screeners and preventive interventions to identify and help these youth (Birmaher, Khetarpal, Brent et al. 1997). Researchers have worked for many years in order to map the developmental trajectory of anxiety in children, yet the pathways remain unclear at this time.

Several areas of adolescent development need to be examined to determine their relationship to the developmental pathways to anxiety. Moreover, anxiety may be manifested differently in children and adolescents of diverse ethnicities and cultures (Austin & Chorpita, 2004; Last & Perrin, 1993). For example, Last and Perrin (1993) found higher rates of PTSD among African American children than Caucasian children after controlling for socioeconomic status and research by Ginsburg and Silverman (1996) found that Hispanic children reported more separation anxiety than Caucasian children. A similar example, found in the childhood fear literature, shows that fears may vary depending on the child's surrounding culture (Dong, Xia, Lin, Yang, & Ollendick, 1995). Thus, it is important to identify ethnic differences in the presentation and maintenance of anxious symptoms in adolescents. Furthermore, although differences exist between ethnicities, causal factors can vary for individuals within ethnicities. Research pertaining to African Americans has identified correlates of anxiety in early and later adulthood, such as acculturation and ethnic identity; however, findings on these associations in childhood and adolescence are limited.

The field of developmental psychopathology has emphasized the importance of determining the early correlates of psychopathology in children and adolescents (Mesman & Koot, 2001). Moreover, research has indicated continuity of anxiety disorders in children and adolescents; however this continuity is affected by contextual factors such as family environment, social support, and negative life events



(Gullone, King, & Ollendick, 2001; Seiffge-Krenke, 2000). Attention to these many factors will likely improve identification and treatment of youth in need of services.

In identifying and treating youth in need of services, it is important to look closely at African American youth. Presently, African Americans are not receiving the necessary mental health services, perhaps due to their underrepresentation in mental health research (Kataoka, Zhang, & Wells, 2002). It is important for clinicians to become culturally competent in order to keep clients engaged, encouraged, and interested in participating in research and in pursuing and obtaining treatment. Nearly 15 years after Neal and Brown (1994) indicated the need for more research on anxiety in African American children, knowledge of mental health issues in this community, outside of prevalence rates, remains lacking. As a result, a clear conceptualization of anxiety in African Americans and how to best treat their anxiety is yet to be determined. A means for better understanding anxiety in African Americans is through identifying the influence of acculturation and negative life events in the onset of anxiety problems.

## **i      Negative Life Events**

Understanding the etiology of anxiety in adolescents requires an examination of environmental stressors that are specifically related to anxiety. Seiffge-Krenke (2000) reported that research has found a link between major life events, social support, family relationships, and psychological and physiological adjustment. Moreover, research with twins supports the idea that threat events are related to anxiety (Eley & Stevenson, 2000); although this relationship is individually specific, it suggests that the experience of negative life events can lead to anxiety. Children exposed to more threat related events demonstrate more anxious symptoms than children who have not had the same experiences, suggesting that life events are an important correlate of anxiety in youth (Eley & Stevenson, 2000). When considering ethnicity, African Americans are disproportionately exposed to risk factors (such as poverty, crime, and racism) that may not only increase the likelihood of negative life events but also their resultant sequelae, including anxiety (McCabe, Clark, & Barnett, 1999).

During adolescence, the influence of environmental stressors can be more potent and the number of changes that occur may be greater than in other developmental periods (Seiffge-Krenke, 2000). As a result, the experience of these events may be overly stressful and dependent on the adolescent's ability to cope with these changes and events. According to Hill, Levermore, Twaite, and Jones (1996), the stress coping model suggests that children exposed to multiple stressful life events have an increased vulnerability to adverse social and emotional outcomes. Although there is a relationship between negative life events and anxious symptoms, this relationship does not appear to be stable over time, indicating that other variables may play a role in the maintenance of anxiety in adolescents (Seiffge-Krenke, 2000). The fact that some children who experience negative life events do not go on to develop psychopathology has led researchers to try and determine the conditions underlying the relationship between negative life events and adolescent anxiety. In this regard, variables such as social support and coping have been hypothesized to protect children from the impact that these negative life events might have on them.

There is a demonstrated link between poverty, chronic life stress, negative life events, and emotional and behavioral problems (Copeland & Hess, 1995; Kim, Conger, Elder, & Lorenz, 2003; Neal & Brown, 1994; Weist, Freedman, Paskewitz, Proescher, & Flaherty, 1995). The US Census Bureau (2007) reports that 34.5% of African Americans under the age of 18 live in poverty, whereas 10.1 % of Caucasians under the age of 18 live in poverty. Those adolescents living in poverty may be exposed to a more dangerous environment and therefore experience more threat related events. The higher anxiety rates documented in the African American community may be a result of qualitative differences in life experiences (i.e., neighborhood, socioeconomic status) between ethnicities.

## **ii      Coping Strategies**

Adolescence is a time for the development of psychosocial competence; this includes the development of effective coping strategies to handle stress and negative life events (Byrne, 2000). Even very young children attempt to cope and deal with their environment, and, in most instances, as these children get older their coping strategies change and mature (Byrne, 2000; Garnefski, Legerstee, Kraaij,

Van den Kommer, & Teerds, 2002). Utilization of coping strategies by children and adolescents in response to stressful life events is an important correlate of positive psychological adjustment (Compas, Conner-Smith, Saltzman, Harding, & Wadsworth, 2001). According to Lazarus and Folkman (1984), coping is defined as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (p. 141).

There are numerous coping strategies that may be utilized by adolescents in the face of adverse events. Seemingly, factors such as ethnicity, age, and gender may contribute to how and why adolescents use these coping strategies. Some children adapt successfully to negative life events, whereas other children experience adjustment difficulties. Prior research indicates that by the age of 12, males and females differ in coping strategies, and these coping strategies are different from the strategies that were utilized at a younger age (Bryne, 2000). Research has suggested that it is at about the age of 15 when an adolescent can most productively use efficacious and adaptive strategies to deal with stressful life events (Seiffge-Krenke, 2000). Effective coping can help an adolescent minimize the effects of negative life events and increased stress that is experienced and maintained during the adolescent years (Dumont & Provost, 1998; Seiffge-Krenke, 2000).

Coping efforts play a large role in the onset and maintenance of psychological disorders in adolescents (Dekovic, Koning, Jan Stams, & Buist, 2008; Langley & Jones, 2005). Ineffective coping seems to exacerbate the experience of stress for adolescents and may be associated with the development of anxiety (Herman-Stahl et al., 1995). The different coping styles adopted by children may serve to either protect or predispose a child to becoming anxious. Active and passive coping styles differentiate psychological adjustment (Dekovic et al., 2008). Active coping (i.e., problem solving) is a functional coping mode in which actions are taken to change the stressful situation. Ayers, Sandler, and Twohey (1998) define active coping as “efforts intended to increase personal control over stressful aspects of the environment.” In contrast to active coping, passive coping occurs when one leaves the situation without attempting to modify the situation, otherwise known as avoidance or disengagement (Ayers et al., 1996). The goal of passive coping is to reduce any psychological discomfort by avoiding reminders of the

stressor (Dumont & Provost, 1998). Passive coping does not seem instrumental in alleviating the problem and adolescents who engage in passive coping are more likely to develop psychological distress (Dumont & Provost, 1998).

The experience of many negative life events may contribute to the precise pattern of coping found in adolescents. There are many factors (e.g., culture) that influence the coping strategies of adolescents (Liu, Tein, & Zhao, 2004). The relationship between adolescent coping and psychological disorders is yet to be fully understood. This research has contributed to the field of adolescent mental health by identifying the relationship between coping and anxiety.

### **iii Social Support**

Social support is comprised of nuclear family support, extended family support, peer support, and individuals who provide emotional or financial support in times of need (e.g., counselors, therapists, ministers). Over the years, researchers have sought to explain the relationship between social support and psychological distress (Zimmerman, Ramirez-Valles, Zapert, & Maton, 2000). Individuals with sufficient resources in their social support network are better equipped to deal with stressful life events. Social support may help adolescents cope with the negative life events they experience. On the other hand, low social support is related to anxious symptoms in adolescents (Compas, 1987).

The extended family has been described as a main source of support for African Americans but less so for Caucasians, who are more likely to seek out formal health and mental health services. In general, studies have found that mental health services are underutilized by minorities (Alvidrez, 1999; Snowden & Thomas, 2000; Whaley, 2001). Rather, African Americans tend to seek assistance from immediate family, extended family, and friends to alleviate stress (Dressler, 1985). Formal use of mental health services is still low for African Americans in times of stress (Diala, Muntaner, Walrath, Nickerson, LaVeist, & Leaf, 2000; Ellison, 1990). Social support may play a large role as a protective factor for adolescents in preventing anxiety.

Although studies with African Americans have found that African Americans experience fewer psychological benefits from friends as opposed to family, there is research to suggest that the number of friends an individual has is positively related to mental health well-being among African Americans as well (see Ellison, 1990). This demonstrates that the field of psychology has yet to identify the varying roles of social support within the African American community. It is important to keep in context the role of extended family. A growing literature underscores the important role that extended family has in the African American community (Zimmerman, Ramirez-Valles, Zapert, & Maton, 2000).

Social support may interact with stress and act as a buffer in that the more social support an individual receives the less impact stress will have on adjustment (Hill et al., 1996; Kimbrough, 1996). Results from research (Hill et al., 1996) indicate that social support functions primarily as a protective variable in certain environmental contexts (i.e., low vs. high violence communities); moreover, this supports the view that additional research is needed to identify the relationship between social support and adolescent anxiety, specifically for African Americans.

#### **iv Acculturation**

Acculturation is the process by which the attitudes and behaviors of people from one culture change because of interactions with another culture (Moyerman & Foreman, 1992). There are many theories surrounding both the process and the effects of acculturation (Landrine & Klonoff, 1994). The level of acculturation may influence the psychological experiences of an individual; specifically, for adolescents, acculturation may serve as a protective or risk factor for psychological disorders. Contextual factors, including residence, social support, and coping abilities may determine whether an adolescent who is fully acculturated has difficulties adjusting after experiencing negative life events. Research supports the relationship between an individual's level of acculturation and subsequent psychological disorders (Burnham et al., 1987; Landrine & Klonoff, 1996). This research suggests that individuals struggling to maintain their own self-identity while identifying with the majority culture have significant

difficulties adjusting to society and may experience mental health symptoms and/or disorders (Joiner & Walker, 2002).

There is little empirical evidence pertaining to how adolescents from ethnic minority groups handle being part of their own culture and the majority culture; however, Phinney and Devich-Navarro (1997) suggest that there are different ways that adolescents identify with the cultures. Adolescents from ethnic minority groups are exposed to two cultures, their own and the culture of the larger society in which they live. Often there may be a conflict between one's own ethnic culture and that of the larger society. An individual can accept both their own culture as well as the culture of the larger society, termed bi-cultural, or may accept only one of the two cultures, referred to as assimilation or separation (Phinney & Devich-Navarro, 1997).

During adolescence, peers have considerable influence on an adolescent's self-evaluation and ethnic identity becomes more established (Copeland & Hess, 1995). The adolescent begins to venture out from the family of origin and identify more with peers. Acceptance from an ethnic group plays an important role in helping the adolescent develop self-confidence, which, in turn, might help the adolescent cope with life stressors. Research by Phinney (1989) demonstrates that adolescents who have explored their ethnic identity and have reached the final stage (i.e., identity achievement) outlined by Marcia (1980) show higher scores on self-evaluation, sense of mastery, social and peer interactions, and family relationships. This process of identity exploration plays a part in the acculturation of an adolescent and may change as the adolescent develops (Pope-Davis, Liu, Ledesma-Jones, & Nevitt, 2000). Although some may consider acculturation synonymous with ethnic identity, it is a separate construct. Social, behavioral, and cognitive patterns that define an individual's level of acculturation change as the adolescent develops an ethnic identity. The degree of acculturation may account for differences between individuals within and between ethnic groups.

Thus, acculturation provides a theoretical framework in which one can better understand cultural diversity. Research pertaining to acculturation initially focused on immigrants and ethnic groups such as Chinese Americans, Japanese Americans, Cuban Americans, Latin Americans, and Native Americans

(Landrine & Klonoff, 1994). African-Americans were not considered in this early research because it was believed that they differed from the majority culture by way of their race and not ethnicity and therefore, did not have a non-American national identity (Snowden & Hines, 1999). Further, it was believed that African Americans did not have a unique culture because it was destroyed during slavery (Landrine & Klonoff, 1994). However, it has been demonstrated that African Americans are a distinct ethnic group and that an Afrocentric worldview has been instilled in the African American community (Nobles, 1985). Traditional psychology, as opposed to Black Psychology, has ignored this fact and has regarded African Americans only as a separate race; however, researchers have demonstrated that African Americans do have their own culture and that the construct of acculturation applies to African Americans as well (Snowden & Hines, 1999).

There is evidence that identifying only with one's own culture is generally more stressful for ethnic minorities than identification or involvement with both cultures (Berry & Kim, 1987). However, other research has shown that African Americans who are traditionally or highly acculturated (the extremes) experience more depression and have lower self worth (Arroyo & Zigler, 1995; Berry, 1993; Fordham & Ogbu, 1986). It is expected that after experiencing negative life events, those adolescents who are traditionally acculturated (identify more with their own culture) would experience more anxiety than those adolescents who are acculturated (with the majority culture). Culture may influence the availability of social support and coping strategies utilized by adolescents, which may determine the anxiety experienced.

## **v      Summary**

The theory of acculturation, as proposed by Landrine and Klonoff (1996), reflects how African Americans have embraced or rejected traditions, values, beliefs, and behaviors associated with being African American or Caucasian. Further, this theory could be utilized to understand the differences between African Americans and Caucasians regarding the experience of anxiety. After experiencing a negative event, acculturation can be expected to have wide-ranging effects on an adolescent's perception

of social support and ability to cope. Coping strategies used by adolescents may therefore reflect aspects of the culture in which they most closely identify. Similarly, perceptions of social support may differ depending on whether an individual is acculturated with the main culture. African American adolescents who are less acculturated with the majority culture may hold specific beliefs about racism, consistent with their culture, and help-seeking behaviors will be less evident in this group of adolescents, again reflecting beliefs of the culture. Consequently, these adolescents may be quite different from those who are acculturated. Therefore, in the experience of negative life events, acculturation in an adolescent may determine whether the adolescent develops anxiety following negative events.

This study sought to identify the correlates of anxiety in African American and Caucasian adolescents. It was expected that adolescents with more negative life events and higher levels of passive coping would experience greater anxiety and that adolescents with higher levels of active coping and increased social support would have less anxiety. It was also predicted that these variables would have predictive utility in the model for the entire sample of adolescents (Figure 1). However, based on findings that suggest African Americans experience anxiety differently than Caucasians, it was expected that the relationship between negative life events and anxiety would be stronger for African American adolescents than for Caucasian adolescents (see Figure 2). Lastly, it was anticipated that for African Americans, the relationship between negative life events and anxiety would be stronger for those adolescents who are more traditionally acculturated than those who are more acculturated with the majority culture (Figure 3).

## **II Method**

### **i Participants**

The participants were drawn from two consenting middle schools (n=417, n=375) in the Roanoke City Schools in Roanoke, Virginia. Adolescents ranged in age from 11-14 years and were in 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade at the time of data collection. There were 403 females and 389 males of varying ethnicities, however for purposes of this research data only from African American (n=242) and



Caucasian (n=472) adolescents between the ages of 11 and 14 were considered (n=714). Of these adolescents, data from 349 males and 360 females (49.2 % of males and 50.7% of females) were utilized.

## **ii Procedure**

Data were previously collected from adolescents attending the two Roanoke City Middle Schools under the direction of Roanoke City personnel and upon their request. Permission to conduct the research was obtained from the Research Review Board of the Roanoke City School District. These two schools were pre-selected after reviewing demographic information. After permission was obtained from the principals of both schools, eligible classrooms were identified. All questionnaires were filled out in a group format by students during study periods at school. Students were provided with a brief description of the study as well as instructions for completing the materials. Administration of the instruments took approximately 50 minutes.

## **iii Instruments**

*Multidimensional Anxiety Scales for Children (MASC: March et. al., 1997).*

This instrument is a measure of anxiety that contains 39 items distributed across four domains: physical symptoms, harm avoidance, social anxiety, and separation anxiety symptoms. Three of these domains are further divided into: somatic/autonomic and tense/restless for the physical symptoms domain, perfectionism and anxious coping for the harm avoidance domain, and humiliation/rejection and public performance fears for the social anxiety domain. For purposes of this study, the MASC total score was used. Internal consistency estimates were acceptable.

*How I Coped Under Pressure Scale (HICUPS; Ayers, Sandler, West, & Roosa, 1996).*

This instrument is designed to measure coping responses in children and adolescents. This measure yields a four-factor solution: active, distraction, avoidance, and support seeking. However, a simpler two-factor solution has also been reported: active and passive coping. The two-factor solution was used in this study. This measure consisted of 22 items that were rated on a four point likert scale, 12

items for active coping and 10 items for passive coping. Avoidant and distraction behaviors were part of the passive factor and problem solving and making decisions were part of the active scale. Higher scores indicated that the adolescent frequently used the coping strategy to solve problems and lower scores indicated that the adolescent rarely used the coping strategy to solve problems. The internal consistency for this measure was .82 in the present study and the item to total correlations ranged from .24 to .58.

*Life Events Checklist (LEC; Johnson & McCutcheon, 1980).*

This 28-item instrument is designed to measure uncontrollable and controllable life events that occur to children and adolescents. A modified version was created for ease of use in a school setting; specifically, the children were only asked whether the event happened to them in the past year. The test-retest reliability for this modified version was .72 for negative life events. There were a total of 17 negative life events on the measure. The number of endorsed events was summed for each participant for a total score of negative life events.

*The African American Acculturation Scale II (Landrine & Klonoff, 1995).*

This instrument is a measure of different aspects of the African American culture. The original measure has 33 items but only 16 of the 33 items were used in this study. These items were selected based on high item-total score correlations from the original study. Participants answered “yes” or “no” to state whether the item represented them or if the item was not true of them. Higher scores on this scale indicate that the adolescent has a more Afro-centric orientation whereas lower scores indicate that the adolescent is more acculturated with the majority culture. The internal consistency for this measure has been reported to be between .81 and .88. For the present study, the internal consistency of the acculturation scale was .43 for the African American adolescents. However, this low internal consistency was likely due to the selection of diverse items for inclusion.

*The Child's Subjective Appraisals of Family, Teacher, and Peer Support (APP; Dubow & Ullman, 1987).*

The original instrument contained 41 items designed to measure participants' subjective appraisals of family, teacher, and peer support. For purposes of this research, a 9-item adaptation of the original instrument was used to measure children's perceptions of social support; these 9-items had the

highest item-total correlations in the original Dubow and Ullman (1987) study. Questions were answered using a 5-point likert scale. Internal consistency has been reported as .88 and test-retest reliability has been found to be .75 (Dubow & Ullman, 1989). This scale also contained 3 newly devised items in order to capture extended family social support. Internal consistency with these added items was estimated to be .81 and item total correlations ranged from .39 to .70 in the present study.

### **III Results**

#### *Subject Characteristics*

Means and standard deviations for all variables, including anxiety, for the entire sample are shown in Table 1. T-tests were performed on data from each instrument in order to compare African American and Caucasian participants and are reported in Table 2. Correlation tables for all study variables are reported separately for the entire sample (see Table 3), African-Americans only (see Table 4), and Caucasians only (see Table 5).

A t-test was conducted to determine if differences in the overall anxiety scores existed between African-American and Caucasian adolescents. Results of this analysis failed to show a significant difference between the two groups ( $t = -.723, p = .470$ ). Hence, African Americans did not score significantly higher on the MASC than Caucasians, as found in previous research. However, there were significant differences between the two ethnicities on negative life events, and active and passive coping, with African Americans scoring higher on all three variables, as hypothesized.

#### *Correlations for all variables*

It was hypothesized that negative life events, passive coping, and ethnicity would be positively related to total anxiety scores on the Multidimensional Anxiety Scale for Children (MASC) and that active coping and social support would be negatively related with the same total anxiety scores. Specifically, it was hypothesized that the more negative life events and passive coping reported the higher the anxiety score would be. Further, it was expected that the more active coping and social support an

individual reported, the less anxiety that individual would report. These hypotheses were analyzed using Pearson r correlation coefficients.

Results indicated that there were significant albeit modest relationships between anxiety and negative life events ( $r = .147, p < .001$ ), traditional social support ( $r = -.189, p < .001$ ), active coping ( $r = .305, p < .001$ ) and passive coping ( $r = .235, p < .001$ ) (see Table 3). Specifically, anxiety scores were associated with more negative life events and passive coping. In addition, the higher the social support score the lower the anxiety score. However, the hypothesis stating that more active coping would be associated with less anxiety was not supported and, in fact, the relationship was in the opposite direction and significant ( $r = .305, p < .001$ ). That is, unexpectedly, active coping was associated with higher levels of anxiety. Negative life events were negatively correlated with social support ( $r = -.387, p < .001$ ). Lastly, negative life events were shown to be positively correlated with ethnicity ( $r = .219, p < .001$ ), with African Americans reporting more negative life events.

#### *Ethnicity, Negative Life Events, Social Support, Active Coping, and Passive Coping as predictors of Anxiety for all adolescents*

It was hypothesized that ethnicity, negative life events, active coping, passive coping, and social support would all have utility in predicting anxiety. Results from a simultaneous regression indicated that all of the aforementioned variables were predictive of anxiety in this total sample of adolescents. Specifically, the entire model was significant,  $F(7, 700) = 23.306, p < .001$ . The variables included in the regression accounted for 18.9% of the total variance. Although not hypothesized specifically for this study, gender was found to be a significant predictor of anxiety, supporting findings previously reported in the anxiety literature (Table 6).

#### *Ethnicity moderating the relationship between negative life events and anxiety*

It was hypothesized that ethnicity would moderate the above found relationships. Specifically, it was hypothesized that there would be a stronger relationship between negative life events and anxiety for African Americans than for Caucasians. The variables: negative life events, active and passive coping,

and social support were all centered to control for multicollinearity. Following Baron and Kenny's (1986) suggestions for moderation analyses, testing the regression coefficients was the procedure of choice. A hierarchical regression was conducted to determine the effect of ethnicity on the relationship of negative life events and anxiety.

Age and gender were entered in Step 1 to control for the effect of these variables. Ethnicity and negative life events were entered in Step 2; social support, active and passive coping were entered in Step 3; and the interaction between negative life events and ethnicity entered in Step 4. An interaction between negative life events and ethnicity would suggest that ethnicity was a moderator in the relationship between life events and anxiety in this sample of adolescents. Results from this hierarchical regression did not support this hypothesis and indicated that ethnicity was not a moderator of the relationship between negative life events and anxiety for this adolescent sample (see Table 7).

#### *Acculturation moderating the relationship between the negative life events and anxiety in African-American youth*

It was hypothesized that acculturation would moderate the relationship between the predictor variables and anxiety for the African American sample. Results from the regression analyses, using Baron and Kenny's suggestions for moderation (1986), support this hypothesis. Age and gender variables were entered into the regression equation first in order to control for their effects. Next, negative life events and passive and active coping were entered into the equation followed by social support and acculturation. Lastly, the interaction between negative life events and acculturation was entered into the equation. As presented in Table 8, acculturation moderated the relationship between negative life events and anxiety for the African American adolescents ( $\beta = .179, t=2.218, p<.05$ ). Specifically, further probing of the interaction (Graph 1) suggested that the relationship between negative life events and anxiety was stronger for the adolescents who reported a traditional Afro-centric cultural orientation (more immersed in the African American culture).

### *Exploratory Analyses: Three-way interactions*

In order to test for interactions between ethnicity, anxiety, and the other study variables, three-way exploratory analyses were conducted. As noted above, ethnicity did not moderate the relationship between negative life events and anxiety as originally hypothesized. Nonetheless, ethnicity was a significant predictor of anxiety in this sample. Given the known disparity in mental health outcomes between ethnicities, it was proposed that there would be interactions between the study variables, ethnicity, and anxiety and these relations were tested in these exploratory regression analyses.

Results indicated that there was a significant interaction between negative life events, ethnicity, and active coping ( $\beta = .139, t = 2.539, p = .011$ ). Neither of the two way interactions for these variables were significant, however there was a main effect for active coping and ethnicity (see Table 9). The interaction indicates that the relationship of negative life events to anxiety varies at each level of ethnicity and active coping. Therefore, as a result of obtaining a significant three-way interaction, active coping was used as a moderator for the relationship of negative life events and anxiety in two-way analyses conducted separately for African Americans and Caucasians. Results of these analyses indicate that the interaction between negative life events and active coping was only significant for the African American adolescents (See Table 10). Post-hoc probing of the interaction between negative life events and active coping indicated that the relationship between negative life events and anxiety was stronger for those adolescents reporting the most active coping (see Graph 2).

### *Separate simultaneous regression analyses for each ethnicity*

Given the role of ethnicity in the prior analyses, separate regression analyses were conducted for the African American and Caucasian adolescents. Gender, negative life events, social support, active coping, and passive coping accounted for 17% of the variance in the model for the Caucasian adolescents. Gender ( $\beta = -1.911, p = .032$ ), social support ( $\beta = -.358, p = .000$ ), and active coping ( $\beta = .573, p = .000$ ) were all significant predictors of anxiety whereas, negative life events ( $\beta = .302, p = .060$ ) and passive coping ( $\beta = .249, p = .057$ ) were only marginally significant (see Table 6). Slightly different results were found for the African American adolescents; negative life events ( $\beta = .391, p = .050$ ), social support ( $\beta = -.212,$

$p=.006$ ), and active coping ( $\beta=.578, p=.000$ ) were found to be predictors in this sample and accounted for 23% of variance in the model (see Table 6).

## IV Discussion

Partial support for the hypotheses was obtained in the present study. Results indicate that there was a significant relationship between negative life events, traditional social support, active and passive coping, and anxiety in this sample of African American and Caucasian adolescents. Correlations between variables indicated that negative life events and passive coping were positively related to anxiety: the more negative life events and passive coping reported by adolescents, the higher the reported anxiety scores. As expected, results of correlations indicated that social support was negatively related to anxiety; the more social support that adolescents reported the less anxiety they indicated. Contrary to predictions, however, higher levels of active coping were not associated with lower levels of anxiety. To the contrary, a negative relationship was found with active coping associated with *more* anxiety. Correlation analyses were conducted separately for African American and Caucasian adolescents and the results indicated that active coping was positively associated with anxiety in both groups of adolescents.

Subsequent regression analyses were completed for the entire sample and separately for Caucasians and African Americans. Results supported the hypothesis, which posited that negative life events, ethnicity, active coping, passive coping, and social support would all be significant predictors of anxiety in this sample. Regression analyses completed separately for African Americans and Caucasians indicated similar findings, with one exception. Namely, passive coping was not significant for either group. For African Americans, after controlling for age and gender, negative life events, social support, and active coping were all significant predictors of anxiety. For Caucasians, gender, social support, and active coping were significant predictors of anxiety, whereas negative life events and passive coping were marginally significant.

The hypothesis proposing that ethnicity would moderate the relationship between negative life events and anxiety was not supported. The relationship between negative life events and anxiety did not

vary by ethnicity. However, the hypothesis that acculturation would moderate the relationship between negative life events and anxiety for African Americans was supported. The relationship between negative life events and anxiety was stronger for those African American adolescents who reported higher acculturation scores, indicating a traditional orientation with the African American culture.

## **i      Negative Life Events**

Many studies have demonstrated the relationship between negative life events and anxiety in adolescents (Eley & Stevenson, 2000; Seiffge-Krenke, 2000; Silberg, Rutter, Neale, & Eaves, 2001). In this study, separate analyses by ethnicity indicated that negative life events was a significant predictor for the African American adolescents; whereas negative life events was only marginally significant for the Caucasians. These results indicate that African Americans may be more prone to experiencing anxiety after exposure to negative life events, as suggested in the literature (Hill et al., 1996; McCabe, Clark, & Barrett, 1999). Further, these results suggest that there may be other variables, which influence the strength of this relationship, such that social support may buffer the effects of negative life events on adolescents (DeKovic, 2008).

Similar to the role of social support, many other factors may contribute to whether this relationship between negative life events and anxiety may hold true for specific groups of adolescents (e.g., older vs. younger adolescents, different ethnicities, and males vs. females). Another factor to consider is the perceived controllability of an event. Theoretically, uncontrollable negative life events, such as the death of a relative, chaotic home environments, or a decrease in resources may lead to feelings of increased helplessness and thoughts of more negative events, which then results in children being more prone to anxiety (Grover, Ginsberg, & Ialongo, 2005). Thus, perceived controllability along with the other variables considered in this research need to be further explored to determine their role in specified groups of adolescents.



## **ii Active and Passive Coping**

Lack of coping, as well as ineffective coping, may lead to anxiety following exposure to stressful life events. Consistent with earlier research findings, adolescents who engage in passive coping strategies, such as avoidance and distraction, are more likely to experience anxiety (Dumont & Provost, 1999; Herman-Stahl et al., 1995). Unexpectedly, active coping was positively related to anxiety in this study: more active coping was associated with higher anxiety. This finding is inconsistent with the extant literature, which shows that active coping is negatively related to anxiety (Lengua & Sandler, 1996). Although this finding was unanticipated, it is plausible. The coping literature points to many variables that influence the effectiveness and choice of coping strategies that adolescents use, such as self-efficacy, parental support, and attributions of cause (Compas, 1987). It is important to recognize the influence that these external and internal factors have on adolescents, which also influence the expression of anxiety and other psychological symptoms. Those adolescents who reported more active coping were also those adolescents who reported more negative life events; therefore, it is possible that increases in stress related events were associated with more attempts at active coping to decrease the anxiety experienced (Sandler, Tein, & West, 1994), even though this active coping did not appear to protect the adolescents from anxiety.

Future research should explore further this intriguing relationship between active coping and anxiety. Perhaps, there is a third variable interacting with this relationship that would account for the unexpected finding. Specifically, the expected relationship of passive coping and anxiety was not found in the African American sample; however, active coping was positively related to anxiety indicating that there was something about active coping that made it more likely to be related to the experience of anxiety. Research has yet to determine the variability in coping strategies utilized by children and adolescents. Adolescents may report utilizing specific coping strategies, but how and in which situations they use those strategies needs to be further delineated (Compas, 1987).

Although speculative, there are other possible explanations for the positive relationship between active coping and anxiety. First, the average level of anxiety in this sample fell in the normative range

( $T = 52.5$ ). Different results may be obtained from children presenting with clinical levels of anxiety. Second, certain cognitive coping strategies, such as catastrophizing and self-blame, may actually be a result of the anxiety experienced by adolescents. Garnesfski et al. (2002) note that a circular causal mechanisms may be at play and therefore coping may cause anxiety and anxiety may cause coping. This supposition would support our finding, which indicated that active coping predicted higher anxiety. Perhaps the anxiety caused increases in coping strategies utilized by adolescents. In an empirical study, Garnesfski, Kraaij, & Spinhoven (2001) showed that the more often an individual reported the use of cognitive coping strategies, the more depression and/or anxiety they reported. Those findings support the current research and may help explain why active coping was positively related to anxiety. More data and further research are needed as a means to understanding the relationship between coping and anxiety in adolescents.

Findings from the three way analyses indicate that the relationship between negative life events and anxiety is strongest for African Americans who report more active coping. This demonstrates that African American adolescents may use active coping as a means to reduce anxiety after experiencing negative life events; however, the use of this coping is not necessarily effective. Compas (2000) reports that there is little evidence to suggest that active coping is effective in reducing stress from uncontrollable events. Many of the negative life events experienced by low-income African Americans are those in which they have little control over (Grant, O'Koon, Davis, Roache, Pointdexter, et al., 2000). Other variables come into play that may influence adolescent psychopathology, such as social support.

### **iii Social Support**

The findings related to social support and anxiety are in line with those reported in earlier studies (Compas, 1986; Dumont & Provost, 1999; Demaray & Malecki, 2002); the higher the social support scores, the lower the anxiety. Much research has suggested that social support, including immediate and extended support from family, friends, teachers, and peers, is associated with better management of stressful life events and less anxiety (Dressler, 1985; Donovan & Spence, 2000; Zimmerman et al., 2000).

This relationship has been found for Caucasian and African American adolescents (White, Bruce, Farrell, & Kliever, 1998). There appears to be two theoretical orientations that help to explain the relationship between social support and adolescent functioning: the stress buffering model and main-effects model (Demaray & Malecki, 2002). The stress-buffering model posits that social support positively influences children and adolescents under stress or at risk and the main effects model suggests that access to social support has a positive benefit on an individual's overall psychological well-being and receiving helpful information from others may help reduce psychological stress. The main effects model guided the current study, as the hypothesis put forth suggested that social support would negatively predict anxiety. It was expected that social support would be beneficial regardless of whether these adolescents were under stress.

#### **iv Acculturation**

The results confirmed the expected relationship of acculturation, negative life events, and anxiety for the African American adolescents. The relationship between negative life events and anxiety was stronger for those adolescents with a traditional orientation (immersed in African American culture). As noted, higher acculturation scores indicate more acculturation with the African American culture. The adolescents who were more involved with their own culture and less immersed in the majority culture reported more anxiety as opposed to those adolescents who reported less acculturation with their own culture. These findings are in accord with those reported in earlier studies (Joiner & Walker, 2002; Landrine & Klonoff, 1996). Previous research highlights the relationship between having a traditional orientation and specific behaviors, such as alcohol use, hypertension, and smoking (Klonoff & Landrine, 1999; Landrine & Klonoff, 2004). There is limited research linking acculturation to specific anxiety disorders in African Americans; thus, this is an area for future research to explore.

The measure utilized in this study was a good indicator of acculturation in African Americans during the time that this measure was developed, however 15 years later, the culture has changed, and a more accurate measure of acculturation needs to be developed (Kitwana, 2002). The measure does not

adequately capture some aspects of the culture, such as style of dress, specific types of music, ideas concerning roles in relationships (friends, family, and significant others), and ideas concerning finances and perceived parenting styles that may be a better representation of the culture today. Further study of the behavioral and psychological correlates of acculturation will help to understand the development of anxiety and other mental health problems in African American adolescents. Research in this area is greatly needed to help cultivate an understanding of the influence African-American acculturation may have as a risk or protective factor for adolescents.

## **v      Limitations**

There are several limitations in the current study. First, this study did not incorporate other variables that might interact with negative life events, social support, coping, acculturation, and anxiety, such as social economic status (SES), self-competence, and gender. SES may be a good predictor of anxiety in these adolescents. Those families with a low SES may have fewer resources available to them and other factors such as parenting, nutrition, and environmental influence may play a larger role in the mental health of an adolescent. Similarly, self-competence has been linked to differences in levels of anxiety in adolescents (Bryne, 2000; Ohannessian, 1999). For example, Bryne (2000) found that self-esteem is inversely related to anxiety and the relationship is much stronger for females than males. Further, self-competence contributes to gender differences evident in the experience of anxiety and depression (Ohannessian, 1999). In addition, there is considerable need to look at gender differences in the experience of anxiety, especially as gender interacts with other variables of interest. For example, the influence of acculturation may differ for males and females and should be further explored. There are different stereotypes towards African American males and females; each gender has the unduly task of building a positive sense of self while learning to question negative identities that are attributed to their group. This process can be quite daunting; the stress that comes with engaging in this process may have different effects on males and females. For example, construal is influenced by attributions, perceptions, and experiences. For example, being followed in a store simply because one is African American, may

lead African American males to develop different construals of situations that in turn influence their overall development and acculturation (Yeh, 1999). This negative experience may cause African American males to mistrust Caucasians and therefore remain or become acculturated with their own culture. For the previous listed reasons, future research needs to address these issues to better identify predictors of anxiety in Caucasian and African American adolescents.

Second, it is also important to consider the internal consistency of the acculturation scale. The low internal reliability rating (.43) and low item to total correlations (.19-.50), suggests that this instrument did not perform as well as might have been expected given the high internal consistency ratings (.81-.88) from previous studies. One explanation for these low estimates could be the reduced number of items used in the current study. It will be recalled that only 16 of the original 33 items were used. In addition, the scale might not have been appropriate for use with these adolescents who ranged in age from 11-14 years. In previous research, this instrument has been used with adolescents as young as 15 (Landrine, Richardson, Klonoff & Flay, 1994) but not as young as those enlisted in the current study. For this reason, specific questions may not have been relevant to these adolescents due to their ages; moreover, the development of this measure was geared towards African-Americans who had experienced many events that the current adolescents were not exposed to. A better measure of acculturation could be obtained if items that are more specific to the current generation were used. As an example, questions pertaining to style of dress, music choice, and activities engaged in may have proved to be more salient for the present sample of African American adolescents.

Third, this acculturation scale only assessed for behaviors that aligned with African American culture. Klonoff and Landrine (2000) state that this scale measures orientation to African American culture; however, low scores on this measure may not indicate acculturation with the majority culture. This measure alone does not sufficiently address low acculturation scores. It is extremely important to describe the group of individuals who score low on that scale. Further assessing whether those individuals would indicate that they are more like the majority culture or whether they would report more of a blended culture is imperative so that the field is better able to describe the effects of acculturation.

Lastly, data collected from these adolescents consisted solely of self-report instruments. No other methods of data collection were utilized and therefore problems associated with this method of experimental inquiry are applicable. The detection of anxiety was made based on self-reported evaluations. Thus, responses of the adolescents may be comprised of transient feelings or may have been influenced by varying factors of the particular day on which the data were collected. A final limitation concerns the fact that the adolescents involved were from a community sample of children. Different findings might surface with a clinical sample of adolescents or even a more homogeneous (same aged, similar SES) sample of adolescents. Despite these listed limitations, important findings were obtained from this study, which can be used as the basis for further inquiry.

### *Conclusion*

The primary purpose of this study was to examine the relationship between negative life events, social support, coping, ethnicity, acculturation, and anxiety in a middle-school sample of African American and Caucasian adolescents. Specifically, this research sought to (1) determine the direction and strength of the relationship of these variables while controlling for age and gender; (2) determine the effect of ethnicity on the relationship between negative life events and anxiety, and (3) determine the effect of acculturation on the relationship between negative life events and total anxiety in the African American adolescents. Partial support was obtained for the proposed hypotheses in the present study.

Results of this study are consistent with earlier reports examining the relation between anxiety, social support, coping, and negative life events. These results provide support for the notion that negative life events, social support, and coping are all important factors in predicting anxiety for African Americans and Caucasian adolescents. Although similarities are evident between these two samples, it is important to note that there were variables that accounted for additional variance in the separate models for African Americans (negative life events, acculturation). Additional studies need to be conducted in this area to elucidate the developmental trajectory and identify predictors of anxiety in adolescents of varying ethnic groups.

## V References

- Alvidrez, J. (1999). Ethnic Variations in Mental Health Attitudes and Service Use among Low-Income African Americans, Latina, and European American Young Women. *Community Mental Health Journal, 35*(6), 515-531.
- Arroyo, C. G., & Zigler, E. (1995). Racial identity, academic achievement, and psychological well-being of economically disadvantaged adolescents. *Journal of Personality and Social Psychology, 69*, 903-914.
- Austin, A. & Chorpita, B. (2004). Temperament, Anxiety, and Depression: Comparisons across Five Ethnic Groups of Children. *Journal of Clinical Child and Adolescent Psychology, 33*(2), 216-226.
- Ayers, T. S., Sandler, I. N., & Twohey, J. (1998). Conceptualization and measurement of coping in children and adolescents. In T. H. Ollendick & R. J. Prinz (Eds.), *Advances in clinical child psychology (Vol. 20)*, (pp. 243–301). New York: Plenum Press.
- Ayers, T. S., Sandler, I. N., West, S. G., & Roosa, M. W. (1996). A dispositional and situational assessment of children's coping: Testing alternative models of coping. *Journal of Personality, 64*, 923–958.
- Baron, R.M., & Kenny, D.A. (1986). The Moderator- Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology, 51* (6), 1173-1182.
- Bernstein, G. A., Borchardt, C. M., & Perwien, A. R. (1996). Anxiety disorders in children and adolescents: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 1110-1119.
- Berry, J. W. (1993). Acculturation stress. In W. J. Lonner, & R. Malpass (Eds.), *Psychology and culture* (pp. 211–215). Boston: Allyn and Bacon.
- Berry, J.W., Kim, U., & Mok, D. (1987). Comparative Studies of Acculturative Stress. *International Migration Review, 21*(3), 491-511.

- Birmaher, B., Khetarpal, S., Brent, D., Cully, M., Balach, L., Kaufman, J., et al. (1997). The Screen for Child Anxiety Related Emotional Disorders (SCARED): Scale construction and psychometric characteristics. *Journal of the American Academy of Child and Adolescent Psychiatry* 36, 545–553.
- Bumham, M. A., Hough, R. L., Escobar, J. I., Karno, M., & Timbers, D. M. (1987). Six-month prevalence of specific psychiatric disorders among Mexican-Americans and non-Hispanic whites in Los Angeles. *Archives of General Psychiatry*, 44, 687-694.
- Bryne, B. (2000). Relationships between Anxiety, Fear, Self-Esteem, and Coping Strategies in Adolescence. *Adolescence*, 35(137), 201-215.
- Compas, B.E. (1987). Stress and life events during childhood and adolescence. *Clinical Psychological Review* 7, 275–302.
- Compas, B., Conner-Smith, J.K., Saltzman, H., Harding, A., & Wadsworth, M.E. (2001). Coping with Stress during Childhood and Adolescence: Problems, Progress, and Potential in Theory and Research. *Psychological Bulletin*, 127 (1), 87-127.
- Copeland, E.P., & Hess, R.S. (1995). Differences in Young Adolescents' Coping Strategies Based on Gender and Ethnicity. *Journal of Early Adolescence*, 15(2), 203-219.
- Costello E.J., Egger H.L., & Angold, A. (2004). The developmental epidemiology of anxiety disorders. In T. Ollendick & J. March (Eds.), *Phobic and Anxiety Disorders in Children and Adolescents: A Clinician's Guide to Effective Psychosocial and Pharmacological Interventions*. New York: Oxford University Press, pp 61-91.
- Diala, C., Muntaner, C., Walrath, C., Nickerson, K.J., LaVeist, T.A., & Leaf, P.J. (2000). Racial Differences in Attitudes towards Professional Mental Health Care and in the Use of Services. *American Journal of Orthopsychiatry*, 70(4), 455-464.
- DeKovic M., Koning, I.M., Jan Stams, G., & Buist, K.L. (2008). Factors associated with traumatic symptoms and internalizing problems among adolescents who experienced a traumatic event. *Anxiety Stress and Coping*, 21(4):377-86.



- Demaray, M.K. & Malecki, C.M. (2002). Critical Levels of Perceived Social Support Associated with Student Adjustment. *School Psychology Quarterly*, 17(3), 213-241.
- Dong, Q., Xia, Y., Lin, L., Yang, B., & Ollendick, T.H. (1995). The stability and prediction of fears in Chinese children and adolescents: A one-year follow-up. *Journal of Child Psychology and Psychiatry*, 36, 819-831.
- Donovan, C.L., & Spence, S.H. (2000). Prevention of childhood anxiety disorders. *Clinical Psychology Review*, 20,500–531.
- Dressler, W. (1985). Extended family relationships, social support, and mental health in a Southern Black Community. *Journal of Health and Social Behavior*, 26, 39-48.
- Dumont, M., & Provost, M.A. (1998). Resilience in adolescents: protective role of social support, coping strategies, self-esteem, and social activities on experience of stress and depression. *Journal of Youth and Adolescence*, 28(3), 343-364.
- Eley, T.C., & Stevenson, J. (2000). Specific Life Events and Chronic Experiences Differentially Associated with Depression and Anxiety in Young Twins. *Journal of Abnormal Child Psychology*, 28 (4), 383-394.
- Ellison, C. G. (1990). Family Ties, Friendships, and Subjective Well-being among Black Americans. *Journal of Marriage and the Family*, 52, 298-310.
- Fordham, S., & Ogbu, J. U. (1986). Black students' school success: "Coping with the burden of 'acting white'" *The Urban Review*, 18, 176-206.
- Garnefski, N., Legerstee, J., Kraaij, V., Van den Kommer, T., & Teerds, J. (2002). Cognitive coping strategies and symptoms of depression and anxiety: a comparison between adolescents and adults. *Journal of Adolescence*, 25, 603-611.
- Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative Life Events, cognitive emotion regulation and emotional problems. *Personality and Individual Differences*, 30, 1311-1327.
- Ginsburg, G.S., Silverman, W.K. (1996). Phobic and anxiety disorders in Hispanic and Caucasian youth. *Journal of Anxiety Disorders*, 10, 517-528.

- Grover, R.L., Ginsburg, G.S., & Ialongo, N. (2007). Psychosocial Outcomes of Anxious First Graders: A Seven-Year Follow-up. *Depression and Anxiety, 24*, 410-420.
- Grover, R.L., Ginsberg, G.S., & Ialongo, N. (2007). Childhood Predictors of Anxiety Symptoms: A Longitudinal Study. *Child Psychiatry and Human Development, 36*(2), 133- 153.
- Gullone, E., King, N. J., & Ollendick, T.H. (2001). Self-Reported Anxiety in Children and Adolescents: A Three-Year Follow-Up Study. *The Journal of Genetic Psychology, 62*(1), 5-19.
- Herman-Stahl, M.A., Stemmler, M., & Peterson, A. (1995). Approach and avoidant coping: Implications for adolescent mental health. *Journal of Youth and Adolescence, 24*(6), 649-656.
- Hill, H.M., Levermore, M., Twaite, J., & Jones, L.P. (1996). Exposure to Community Violence and Social Support as Predictors of Anxiety and Social and Emotional Behavior Among African American Children, *Journal of Child and Family Studies, 5*(4), 399-414.
- Joiner, T.E., & Walker, R.L. (2002). Construct Validity of a Measure of Acculturative Stress in African Americans. *Psychological Assessment, 14*(4), 462-466.
- Johnson, J. H., & McCutcheon, S.M. (1980). Assessing life stress in older children and adolescents: Preliminary findings with the Life Events Checklist. In Sarason & Spielberger (Eds.), *Stress and anxiety* (p.111-125). Washington, DC: Hemisphere.
- Kataoka, S.H., Zhang, L., & Wells, K.B. (2002). Unmet Need for Mental Health Care among U.S. Children: Variation by Ethnicity and Insurance Status. *American Journal of Psychiatry, 159*, 1548-1555.
- Kim, K.J., Conger, R.D., Elder, G.H., Lorenz, F.O. (2003). Reciprocal Influences between Stressful Life Events and Adolescent Internalizing and Externalizing Problems, *Child Development, 74*(1), 127-143.
- Kimbrough, R. M., Molock, S.D., & Walton, K. (1996). Perception of Social Support, Acculturation, Depression, and Suicidal Ideation among African American College Students at Predominantly Black and Predominantly White Universities. *The Journal of Negro Education, 65*(3), 295-307.

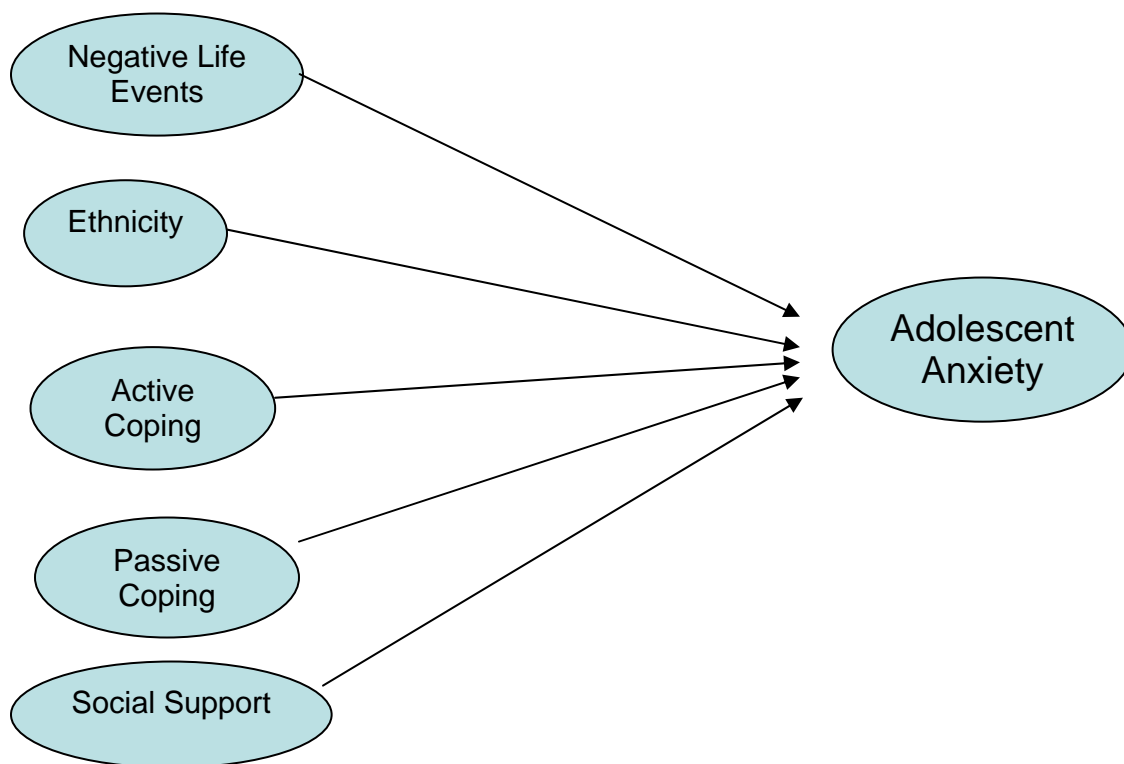
- Kitwana, B.(2002). *The Hip Hop Generation: Young Blacks and the Crisis in African American Culture*. New York: BasicCivitas Books.
- Klonoff, E.A., & Landrine, H. (1999). Acculturation and Cigarette Use Among African Americans: Replication and Implications for Prevention and Cessation Programs. *Journal of Behavioral Medicine*, 22(2), 195-204.
- Landrine, H. & Klonoff, E.A. (1994). The African American Acculturation Scale: Development, Reliability, and Validity. *Journal of Black Psychology*, 20 (2), 104-127.
- Landrine, H., Klonoff, E.A. (1995). The African American Acculturation Scale II: Cross- Validation and short form. *Journal of Black Psychology*, 21, 124-152.
- Landrine, H., & Klonoff, E.A. (1996). *African American acculturation: Deconstructing race and reviving culture*. London: Sage.
- Landrine, H., & Klonoff, E.A. (2004). Culture Change and Ethnic-Minority Health Behavior: An Operant Theory of Acculturation. *Journal of Behavioral Medicine*, 27 (6), 527-552.
- Langley, A. K., & Jones, R.T. (2005). Coping Efforts and Efficacy, Acculturation, and Post-Traumatic Symptomatology in Adolescents Following Wildfire. *Fire Technology*, 41, 125-143.
- Last, C., & Perrin, S. (1993). Anxiety Disorders in African-American and white children. *Journal of Abnormal Child Psychology*, 21(2), 153-164.
- Lazarus, R., & Folkman, S. (1984). *Stress, Appraisal, and Coping*. New York, NY: Springer Publishing Company.
- Lengua, L.J., & Sandler, I.N. (1996). Self-Regulation as a moderator of the relation between coping and symptomatology in children of divorce. *Journal of Abnormal Child Psychology*, 24(6), 681-701.
- Lewinsohn, P., Gotlib, I.H., Lewinsohn, M., Seeley, J., Allen, N.B. (1998). Gender differences in anxiety disorders and anxiety symptoms in adolescents. *Journal of Abnormal Psychology*, 107(1), 109-117.
- Liu, X., Tein, J.Y., Zhao, Z. (2004). Coping strategies and behavioral/emotional problems among Chinese adolescents. *Psychiatry Research*, 126, 275-285.

- McCabe, K.M., Clark, R., Barnett, D. (1999). Family Protective Factors Among Urban African American Youth. *Journal of Clinical Child Psychology*, 28(2), 137-150.
- Mesman, J., & Koot, H.M. (2001). Early preschool predictors of preadolescent internalizing and externalizing DSM-IV diagnoses. *Journal of American Academy of Child and Adolescent Psychiatry*, 40, 1029–1036.
- McCaughey-Ohannessian, C., Lerner, R.M., Lerner, J.V., & Von Eye, A. (1999). Does self-competence predict gender differences in adolescent depression and anxiety? *Journal of Adolescence*, 22, 397-411.
- Moyerman, D.R., & Foreman, B.D. (1992). Acculturation and Adjustment: A Meta-Analytic Study. *Hispanic Journal of Behavioral Sciences*, 14(2), 163-200.
- Muris, P., Merckelbach, H., Ollendick, T.H., King, N., & Bogie, N. (2002). Three traditional and three new childhood anxiety questionnaires: their reliability and validity in a normal adolescent sample. *Behavior Research and Therapy*, 40(7), 753-772.
- Neal, A.M. & Brown, B.J. (1994). Fears and Anxiety Disorders in African American Children. In S. Friedman (Ed.). *Anxiety Disorders in African Americans* (pp. 65-75). New York: Springer
- Neal, A.M., & Turner, S.M. (1991). Anxiety Disorders Research with African Americans: Current Status. *Psychological Bulletin*, 109(3), 400-410.
- Nobles, W.W. (1985). *Africanity and the Black family: The Development of a theoretical model*. Berkeley, CA: Institute for the Advanced Study of Black Family Life and Culture.
- Ollendick, T.H., & King, N.J. (1994). Diagnosis, assessment, and treatment of internalizing problems in children: The role of longitudinal data. *Journal of Consulting and Clinical Psychology*, 62, 918-927.
- Phinney, J.S. (1989). Stages of Ethnic Identity as Predictors of Self Esteem Among African American, Latino, and White Adolescents. *Journal of youth and Adolescence*, 26(2), 165-186.
- Phinney, J., & Devich-Navarro, M. (1997). Variations in Bicultural Identification Among African American and Mexican American Adolescents. *Journal of research on Adolescence*, 7(1), 3-32.

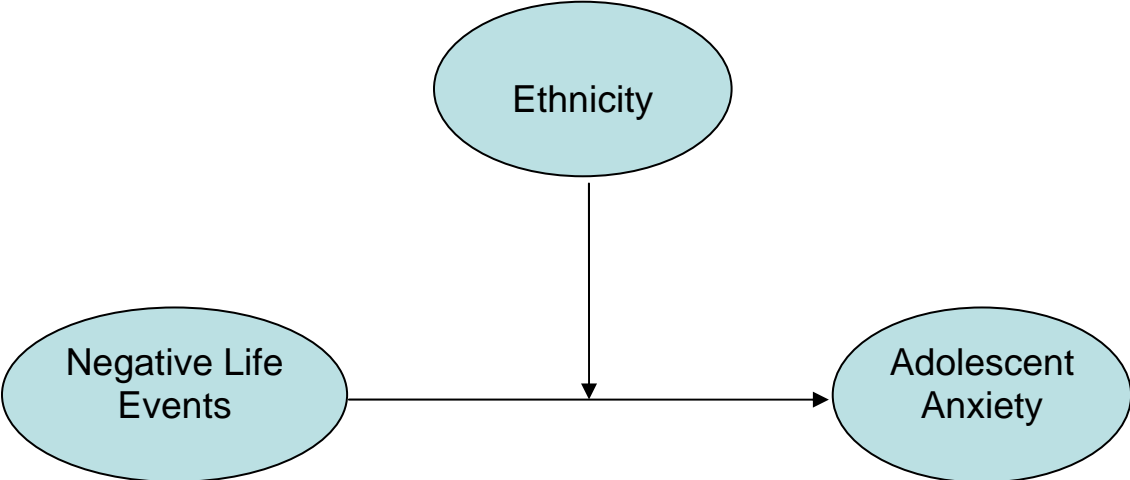
- Pope-Davis, D.B., Liu, W.M., Ledesma-Jones, S., & Nevitt, J. (2000). African American acculturation and Black racial identity: A preliminary investigation. *Journal of Multicultural Counseling and Development, 28*, 98–112.
- Sandler, I.N., Tein, J.Y., & West, S.G. (1994). Coping, Stress, and the Psychological Symptoms of Children of Divorce: A Cross-Sectional and Longitudinal Study. *Child Development, 65*, 1744-1763.
- Seiffge-Krenke, I. (2000). Causal links between stressful events, coping style, and adolescent symptomatology. *Journal of Adolescence, 23*, 675-691.
- Snowden, L.R., & Hines, A.M. (1999). A Scale to Assess African American Acculturation. *Journal of Black Psychology, 25*(1), 36-47.
- Snowden, L.R., & Thomas, K. (2000). Medicaid and African American Outpatient Mental Health Treatment. *Mental Health Services Research, 2* (2), 115-120.
- U.S. Census Bureau, Housing and Household Economic Statistics Division. (2007). Historical Poverty Tables-Table 3. Retrieved March 16<sup>th</sup> 2009 from <http://www.census.gov/hhes/www/poverty/histpov/perindex.html>.
- Weist, M.D., Freedman, A., Paskewitz, D. Proescher, E.J., & Flaherty, L. (1995). Urban youth under stress: Empirical identification of protective factors. *Journal of Youth and Adolescence, 24*(6), 705-721
- Whaley, A.L. (2001). Services for African Americans: A Review and Meta-Analysis. *The Counseling Psychologist, 29*(4), 513-531.
- White, K.S., Bruce, S.E., Farrall, A.D., & Kliewer, W. (1998). Impact of Exposure to Community Violence on Anxiety: A Longitudinal Study of Family Social Support as a Protective Factor for urban Children. *Journal of Child and Family Studies, 7*(2), 187-203.
- Yeh, C. (1999). Invisibility and Self-Construal in African American Men: Implications for training and practice. *The Counseling Psychologist, 27*(6), 810-819.

Zimmerman, M.A., Ramirez-Valles, J., Zapert, K.M., & Maton, K.I. (2000). A Longitudinal Study of Stress-Buffering Effects For Urban African-American Male Adolescent Problem Behaviors and Mental Health. *Journal of Community Psychology*, 28(1), 17-33.

**Figure 1: Predictors of Anxiety**

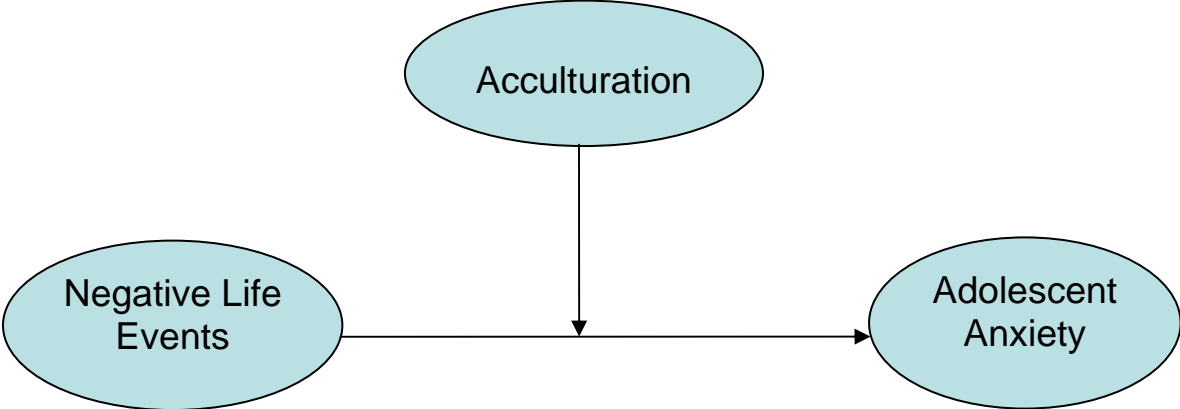


**Figure 2: Ethnicity moderates the relationship between negative life events and Adolescent anxiety**





**Figure 3: For African Americans, acculturation moderates the relationship between negative life events and anxiety**



**Table 1: Descriptive statistics of all study variables**

<b>Variable</b>	<b>N</b>	<b>Range</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Negative Life Events	714	17	0	17	4.73	3.09
Social Support	714	39	9	48	32.31	8.08
Anxiety	714	62	28	90	52.50	10.06
Active Coping	714	36	12	48	31.17	6.36
Passive Coping	714	23	9	32	22.86	4.06
Acculturation*	242	12	4	16	10.81	2.20

\* African American Adolescents only

**Table 2: Difference in means for Caucasians (0) and African Americans (1)**

<b>Variable</b>	<b>Ethnicity</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Std. Error Mean</b>	<b>Significance</b>
Negative Life Events	0	472	4.25	3.03	.14	.00
	1	272	5.68	2.99	.19	
Social Support	0	472	32.56	8.28	.38	.248
	1	272	31.82	7.67	.49	
Active Coping	0	472	30.63	6.33	.29	.002
	1	272	32.19	6.31	.41	
Passive Coping	0	472	22.55	3.87	.17	.004
	1	272	23.47	4.35	.28	
Anxiety	0	472	52.70	10.21	.47	.470
	1	272	52.12	9.77	.63	

**Table 3: Correlations among study variables for the Entire Sample**

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Ethnicity	-					
Negative Life Events	.22**	-				
Social Support	-.04	-.37**	-			
Anxiety	-.03	.15**	-.15**	-		
Active Coping	.12**	-.04	.31**	.31**	-	
Passive Coping	.11**	-.01	.20**	.24**	.56**	-

\*\*Correlation is significant at  $p < .01$  level (2 tailed).

**Table 4: Correlations among study variables for Caucasian Adolescents**

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Negative Life Events	-				
Social Support	-.43**	-			
Anxiety	.16**	-.17**	-		
Active Coping	-.13**	.42**	.25**	-	
Passive Coping	-.05	.23**	.20**	.52**	-

\*\*Correlation is significant at  $p < .01$  level (2 tailed).

**Table 5: Correlations among study variables for the African American adolescents**

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Negative Life Events	-					
Social Support	-.24**	-				
Anxiety	.16*	-.13*	-			
Active Coping	.05	.10	.43**	-		
Passive Coping	-.01	.16**	.31**	.62**	-	
Acculturation	.09	.13*	.10	.24**	.15*	-

\*\*Correlation is significant at  $p < .01$  level (2 tailed).

\* Correlation is significant at  $p < .05$  level (2 tailed),

**Table 6: Summary of Simultaneous Regression Analyses for variables predicting anxiety in the Entire sample, Caucasians, and African Americans**

<b>Variable</b>	<b>B</b>	<b>SE B</b>	<b>β</b>	<b>t</b>	<b>P</b>
<i><b>Entire Sample</b></i>					
Gender	-1.64	.70	-.08	-2.35	.02
Age	-.24	.37	-.02	-.65	.52
Ethnicity	-2.05	.75	-.10	-2.73	.01
Negative Life Events	.35	.12	.11	-2.83	.01
Social Support	-.31	.05	-.25	-6.36	.00
Active Coping	.56	.07	.35	8.21	.00
Passive Coping	.23	.10	.09	2.25	.03
<i><b>Caucasians</b></i>					
Gender	-1.9	.89	-.09	-2.15	.032
Age	-.137	.46	-.01	-.30	.77
Negative Life Events	.30	.16	.09	1.90	.06
Social Support	-.36	.06	-.29	-5.67	.00
Active Coping	.57	.09	.36	6.59	.00
Passive Coping	.25	.13	.09	1.91	.06
<i><b>African Americans</b></i>					
Gender	-1.27	1.16	-.07	-1.1	.27
Age	-.56	.64	-.05	-.88	.38
Negative Life Events	.39	.20	.12	1.97	.05
Social Support	-.21	.07	-.17	-2.75	.01
Active Coping	.58	.12	.37	5.01	.00
Passive Coping	.16	.17	.07	.96	.34
Acculturation	.13	.27	.03	.47	.64

**Table 7: Ethnicity as a Moderator**

	<b>Model</b>	<b>Unstandardized B</b>	<b>Standard Error</b>	<b>Standardized <math>\beta</math></b>	<b>t</b>	<b>Significance</b>
1	(Constant)	54.34	1.62		33.45	.00
	Value of Sex	-1.05	.76	-.05	-1.397	.16
	Age Values	-.06	.40	-.01	-.14	.89
2	(Constant)	56.05	1.65		33.93	.00
	Value of Sex	-1.36	.75	-.07	-1.82	.07
	Age Values	-.40	.40	-.04	-1.0	.32
	Ethnicity	-.99	.81	-.05	-1.22	.22
	Neg. Life Events	.57	.13	.18	4.50	.00
3	(Constant)	56.23	1.51		37.20	.00
	Value of Sex	-1.45	.70	-.07	-2.01	.04
	Age Values	-.25	.37	-.02	-.67	.50
	Ethnicity	-2.36	.74	-.11	-3.16	.00
	Neg. Life Events	.31	.12	.09	-2.47	.01
	Social Support	-.48	.07	-.28	-7.25	.00
	Active Coping	.56	.07	.35	8.31	.00
	Passive Coping	.23	.10	.10	2.30	.02
4	(Constant)	56.23	1.51		37.16	.00
	Value of Sex	-1.45	.70	-.07	-2.08	.04
	Age Values	-.25	.37	-.02	-.67	.50
	Ethnicity	-2.37	.75	-.11	-3.15	.00
	Neg. Life Events	.29	.15	.09	1.94	.05
	Social Support	-.48	.07	-.28	-7.21	.00
	Active Coping	.56	.07	.25	8.28	.00
	Passive Coping	.24	.10	.10	2.31	.02
	Neg Events* Ethnicity	.04	.24	.01	.16	.87

Note.  $R^2 = .003$  for Step 1;  $R^2 = .031$  for Step 2;  $R^2 = .189$  for Step 3; and  $R^2 = .189$  for Step 4;  $\Delta R^2 = .003$  for Step 1;  $\Delta R^2 = .028$  for Step 2;  $\Delta R^2 = .158$  for Step 3; and  $\Delta R^2 = .000$  for Step 4.



**Table 8: Acculturation as a Moderator for the African American Adolescents**

Model	Unstandardized B	Standard Error	Standardized $\beta$	T	Significance
1 (Constant)	56.13	2.88		19.50	.00
Value of Sex	-1.65	1.26	-.09	-1.31	.19
Age Values	-.44	.70	-.04	-.63	.53
2 (Constant)	55.23	2.67		20.70	.00
Value of Sex	-1.52	1.16	-.08	-1.31	.19
Age Values	-.63	.65	-.06	-.97	.33
Neg. Events	.53	.19	.17	2.75	.01
Passive Coping	.11	.17	.05	.62	.54
Active Coping	.58	.12	.38	5.04	.00
3 (Constant)	54.28	2.67		20.33	.00
Value of Sex	-1.32	1.15	-.07	-1.14	.26
Age Values	-.54	.64	-.05	-.85	.40
Neg. Life Events	.40	.20	.13	2.06	.04
Passive Coping	.17	.17	.08	1.03	.30
Active Coping	.56	.12	.37	4.88	.00
Social Support	-.30	.10	.18	-2.99	.003
Acculturation	.11	.26	.02	.40	.69
4 (Constant)	54.28	2.65		20.48	.00
Value of Sex	-1.33	1.14	-.07	-1.17	.25
Age Values	-.47	.63	-.04	-.74	.46
Neg. Life Events	.05	.26	.02	.21	.84
Passive Coping	.21	.17	.09	1.25	.21
Active Coping	.54	.12	.35	4.67	.00
Social Support	-.27	.10	-.16	-2.66	.01
Acculturation	-.03	.27	-.01	-.11	.92
Neg Events* Accult	.18	.08	.17	2.13	.03

Note.  $R^2 = .008$  for Step 1;  $R^2 = .207$  for Step 2;  $R^2 = .237$  for Step 3; and  $R^2 = .252$  for Step 4;  $\Delta R^2 = .008$  for Step 1;  $\Delta R^2 = .199$  for Step 2;  $\Delta R^2 = .030$  for Step 3; and  $\Delta R^2 = .015$  for Step 4.

**Table 9: Three-way regression analyses**

	Model	Unstandardized B	Standard Error	Standardized β	t	Significance
1	(Constant)	54.34	1.62		33.45	.00
	Value of Sex	-1.05	.76	.05	-1.40	.16
	Age Values	-.06	.40	.01	-.14	.89
2	(Constant)	56.23	1.51		37.20	.00
	Value of Sex	-1.45	.70	-.07	-2.09	.04
	Age Values	-.25	.37	-.02	-.67	.50
	Neg. Events	.31	.12	.09	2.47	.01
	Social Support	.48	.07	-.28	-7.25	.00
	Active Coping	.56	.07	.35	8.31	.00
	Passive Coping	.23	.10	.10	2.30	.02
	Ethnicity	-2.36	.74	-.11	-3.16	.002
3	(Constant)	56.40	1.53		36.89	.00
	Value of Sex	-1.47	.70	-.07	-2.08	.04
	Age Values	.28	.37	-.03	-.76	.45
	Neg. Events	.23	.16	.07	1.42	.16
	Social Support	-.60	.09	-.35	-6.89	.00
	Active Coping	.58	.08	.37	7.02	.00
	Passive Coping	.26	.13	.10	2.01	.04
	Ethnicity	-2.32	.76	-.11	-3.04	.002
	Ethn*Passive	-.12	.22	-.03	-.55	.59
	Ethn*Active	-.01	.15	-.003	.06	.95
	Ethn*Socia Support	.30	.14	.10	2.21	.03
	NLE*Ethnicity	.16	.26	.03	.63	.53
	NLE*Active	.001	.02	.001	.03	.98
	NLE*Passive	.03	.04	.04	.97	.33
	NLE*Socia Support	-4.28	.02	.00	-.002	.99
4	(Constant)	56.47	1.53		36.98	.00
	Value of Sex	-1.55	.70	-.08	-2.21	.03
	Age Values	-.27	.37	-.03	-.72	.47
	Neg. Events	.21	.18	.07	1.23	.22
	Social Support	-.59	.10	-.35	-5.88	.00
	Active Coping	.58	.08	.37	6.99	.00
	Passive Coping	.27	.13	.11	2.09	.04
	Ethnicity	-2.30	.77	-.11	-2.97	.003
	Ethn*Passive	-.08	.23	-.02	-.34	.74
	Ethn*Active	-.09	.15	-.03	-.57	.56
	Ethn*Socia Support	.31	.14	.10	2.19	.03
	NLE*Ethnicity	.13	.26	.02	.48	.64
	NLE*Active	-.03	.03	-.07	-1.31	.19
	NLE*Passive	.05	.04	.06	-.12	.26
	NLE*Socia Support	.01	.04	.01	.19	.85
	NLE*Ethn*Active	.12	.05	.14	2.55	.01
	NLE*Ethn*Passive	-.06	.07	-.05	-.85	.40
	NLE*Ethn*Socia	-4.87	.00	-.001	-.02	.99

Note.  $R^2 = .008$  for Step 1;  $R^2 = .207$  for Step 2;  $R^2 = .237$  for Step 3; and  $R^2 = .252$  for Step 4;  $\Delta R^2 = .008$  for Step 1;  $\Delta R^2 = .199$  for Step 2;  $\Delta R^2 = .030$  for Step 3; and  $\Delta R^2 = .015$  for Step 4.

**Table 10: Coping as a Moderator for the African Americans**

	<b>Model</b>	<b>Unstandardized B</b>	<b>Standard Error</b>	<b>Standardized B</b>	<b>t</b>	<b>Significance</b>
1	(Constant)	56.13	2.88		19.50	.000
	Value of Sex	-1.65	1.26	-.09	-1.31	.19
	Age Values	-.44	.70	-.04	-.63	.53
2	(Constant)	57.36	2.87		20.01	.000
	Value of Sex	-2.08	1.25	-.11	-1.66	.10
	Age Values	-.87	.70	-.08	-1.23	.22
	Neg. Events	.61	.21	-.19	2.90	.004
3	(Constant)	55.23	2.67		20.70	.000
	Value of Sex	-1.52	1.16	-.08	-1.31	.19
	Age Values	-.63	.65	-.06	-.97	.33
	Neg. Life Events	.53	.19	.17	2.75	.01
	Active Coping	.58	.12	.38	5.04	.000
	Passive Coping	.11	.17	.05	.62	.54
4	(Constant)	55.48	2.63		21.07	.000
	Value of Sex	-1.85	1.15	-.10	-1.61	.11
	Age Values	-.54	.64	-.05	-.85	.40
	Neg. Life Events	.46	.19	.14	2.37	.02
	Active Coping	.50	.12	.32	4.14	.000
	Passive Coping	.12	.18	.05	.65	.52
	CentNLEactive	.09	.04	.19	2.41	.02
	CentNLEpass	-.01	.06	-.02	.24	.81

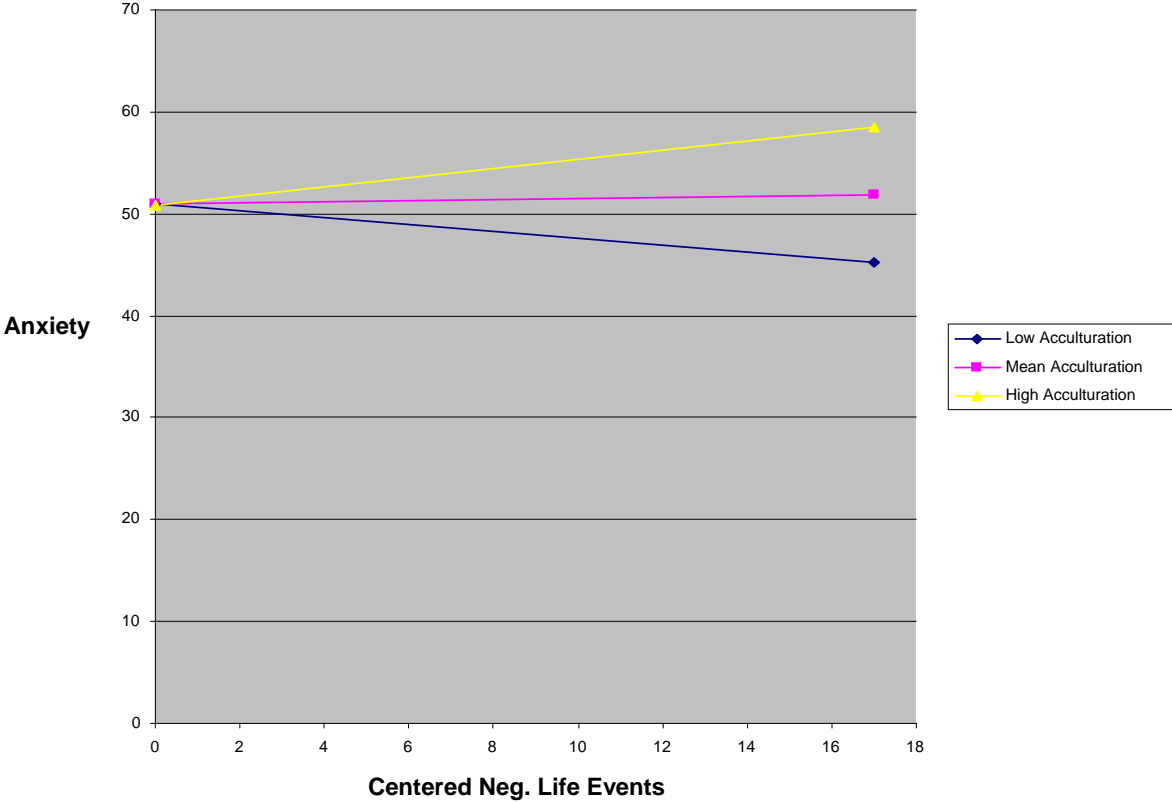
Note.  $\Delta R^2 = .008$  for Step 1;  $\Delta R^2 = .034^{**}$  for Step 2;  $\Delta R^2 = .165^{***}$  for Step 3; and  $\Delta R^2 = .029^*$  for Step 4.  
 Total  $R^2 = .236$ .

**Table 11: Coping as a Moderator for Caucasians**

	Model	Unstandardized B	Standard Error	Standardized B	t	Significance
1	(Constant)	53.54	1.98		27.02	.000
	Value of Sex	-.76	.94	-.04	-.80	.42
	Age Values	-.12	.49	.01	.24	.81
2	(Constant)	55.06	2.01		27.45	.000
	Value of Sex	-1.03	.94	-.05	-1.10	.27
	Age Values	-.21	.49	-.02	-.42	.67
	Neg. Events	.55	.16	.16	3.49	.001
3	(Constant)	56.50	1.93		29.27	.000
	Value of Sex	-2.18	.92	-.11	-2.38	.02
	Age Values	.03	.47	.003	.06	.95
	Neg. Life Events	.67	.15	.20	4.45	.000
	Active Coping	.42	.09	.26	4.87	.000
	Passive Coping	.23	.14	.09	1.67	.20
4	(Constant)	56.50	1.93		29.22	.000
	Value of Sex	-2.23	.92	-.11	-2.42	.02
	Age Values	.04	.47	.004	.08	.94
	Neg. Life Events	.66	.16	.20	4.25	.000
	Active Coping	.41	.09	.25	4.78	.000
	Passive Coping	.24	.14	.09	1.78	.08
	CentNLEactive	-.03	.03	-.06	-1.06	.29
	CentNLEpass	.03	.05	.03	.56	.58

Note.  $\Delta R^2 = .002$  for Step 1;  $\Delta R^2 = .025^{***}$  for Step 2;  $\Delta R^2 = .091^{***}$  for Step 3; and  $\Delta R^2 = .002$  for Step 4.  
 Total  $R^2 = .120$

**Graph 1: Post-Hoc probing of the interaction between Negative Life Events and Acculturation**



**Graph 2: Post-hoc probing of interaction between Negative Life Events and Active Coping for the African American Adolescents**

