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Using a Resiliency Framework to Examine Natural Mentoring Relationships and the Coping Efficacy as Buffers of the Negative Impact of Stressors on Academic Outcomes in Urban, Low-Income Ethnic Minority Youth

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USING A RESILIENCY FRAMEWORK TO EXAMINE NATURAL MENTORING RELATIONSHIPS AND COPING EFFICACY AS BUFFERS OF THE NEGATIVE IMPACT OF STRESSORS ON ACADEMIC OUTCOMES IN URBAN, LOW-INCOME, ETHNIC MINORITY YOUTH:

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VITA

The author was born in Washington D.C. in 1983. She received her B.A. from Northwestern University in 2005, and her M.A. from DePaul University in 2010. She is currently completing her pre-doctoral internship at the University of North Carolina.

CHAPTER I
INTRODUCTION

Currently, Latinos make up 15.1% of the United States (U.S.) population, and the percentage is expected to grow to 24.4% by 2050 (U.S. Census Bureau, 2007). Latinos are both the largest ethnic/racial minority group enrolled in U.S. schools, and the group that currently has the lowest educational attainment (Huber, Huidor, Malagon, Sánchez, & Solorzano, 2000). Only 63% of Latinos graduate high school (U.S. Department of Education, 2007). Latinos earn only 6.7% of post-secondary degrees, 6.3% of bachelor's degrees, 4.4% of master's degrees, and 3.2% of doctoral degrees (U.S. Department of Education, 2007). This is a particularly unfortunate trend, given that men who graduate with a bachelor's degree earn an average of 1.64 times more than men who graduate only from high school, and women who graduate with a bachelor's earn an average of 1.68 times more than women who graduate only from high school. The economic and career outcomes of Latinos reflect their educational trends, with 21.5% of Latinos living in poverty, compared with 13.3% of the total population (Webster & Bishaw, 2007). The median household income of Latinos in 2006 was $38,747, compared with a $51,429 household income for Whites, and $32,372 for African Americans (Webster & Bishaw, 2007).

In order to effectively change the inequalities in educational, occupational and economic outcomes, it is vital to better understand the factors that influence those outcomes. Research demonstrates that low-income, ethnic minority youth face more stressors than middle class, European American adolescents (Grant et al., 2003), and that these stressors may lead to poorer academic outcomes (Alva & de los Reyes, 1999). This is particularly problematic because youth with poor academic outcomes are more likely to live in poverty (Webster & Bishaw, 2007), to engage in delinquent behaviors (Chavez, Oetting, & Swaim, 1994), to use substances (Engberg

& Morral, 2006), and to have poor mental health outcomes (Shahar et al., 2006; Roeser, Eccles, & Sameroff, 2000).

In this study I explored the relationship between stressors and academic outcomes in Latino youth. I used Resiliency theory to examine the role of natural mentoring relationships and coping efficacy as positive factors in youth's lives that may offset the harmful impact of stressors. I specifically the impact of the number of mentors named by youth and the support for education that the mentors provided for them on academic achievement and motivation for education.

Experience of Stressors

Although there have been other proposed definitions of stress (e.g. Lazarus & Folkman, 1984), for the purpose of this paper I will use the definition that Grant and colleagues (2003) propose in their review of stress among children and adolescents. They propose that "stressors should be defined, specifically and exclusively, as environmental events or chronic conditions that objectively threaten the physical and or psychological health or well-being of individuals or a particular age in a particular society" (p. 462). This definition focuses on the experience of stressors, rather than on the subjective feelings of being under stress.

Youth experience a variety of stressful life events, in childhood and in adolescence. Increasing numbers of youth are faced with stressors, including acute traumatic events, chronic strain and adversity (Haggerty, Sherrod, Garmezy, & Rutter, 1994). Youth are also faced with daily hassles that can accumulate and become stressful (Haggerty et al.,1994). Youth experience both normative stressors (e.g, stressors associated with transitioning to a new school or arguments with friends) and non-normative stressors (e.g., natural disasters). Often, the presence of a stressor is accompanied by other stressors, causing multiple stressors to have a cumulative

negative effect (Rutter, 1987). Thus, the cumulative effect of stressors can play a negative role in the development and well-being of youth.

Stressors Among Inner City Youth

Research suggests that individuals who are at a social disadvantage, either due to their low socioeconomic status or due to being a racial minority, experience an increase in life stressors (Goodman, McEwen, Dolan, Schafer-Kalkhoff, & Adler, 2005). Youth in "inner city schools" generally fall into both of these risk categories, as most youth in these schools are both poor and students of color (Brunetti, 2006). These youth live in neighborhoods with a high concentration of poverty, characterized by poor living conditions, high crime, high unemployment, serious gang activity, and drug dealing (Zhou, 2003). Youth from the inner city are also more likely to be exposed to parental neglect or abuse (Coulton, Korbin, Su, & Chow, 1995; Gelles, 1992; Jones & McCurdy, 1992) than are children from less impoverished neighborhoods, and the schools they attend often suffer from a severe lack of resources, such as quality teachers and financial resources (Suarez-Orozco & Suarez-Orozco, 2001; Valdés, 1998). In a review of the literature on poverty in childhood, Evans (2004) found impoverished children were more likely than non-impoverished children to be exposed to family turmoil, violence, separation from their families, instability, and chaotic households. Evans also found that poor children experience less social support, and their parents are less responsive and more authoritarian. Poor children are also exposed to a variety of stressors in their physical environment, such as more polluted air and water, and more crowded and noisier homes. The neighborhoods poor children live in are more dangerous, have lower levels of social capital, and offer fewer municipal services (Evans, 2004).

Youth in inner city neighborhoods are exposed to high levels of violence (Gorman-Smith & Tolan, 1998; Youngstrom, Weist, & Albus, 2003). In a study of urban adolescents referred for mental health treatment, almost 95% knew at least one person who had been the victim of a violent act, almost 80% had witnessed a violent act, and almost 50% had been the target of at least one violent act (Youngstrom et al., 2003). In a study of inner-city Latino and African American adolescent males, Gorman-Smith and Tolan found that two-thirds of participants had seen someone "beaten up" (p. 108) and one-third of participants had seen a family member robbed or attacked. Almost one quarter of youth had seen somebody shot or killed, and 8% had a close friend who had been killed. Not surprisingly, exposure to violence was associated with higher rates of aggression and depressive symptoms.

One risk factor for exposure to violence and for other negative outcomes is involvement in gangs. Gangs are groups of people who come together to form semi-cohesive groups and often participate in violent or aggressive activities (Goldstein & Soriano, 1994). The majority of gangs are formed in urban, economically disadvantaged communities (Cummings & Monti, 1993), and approximately 10% of youth who reside in poor neighborhoods join gangs (Vigil, 2003). Most gang members in the U.S. are African American or Latino adolescents (Vigil, 2003). Gang members tend to have higher levels of involvement in risky behaviors (e.g., substance use), lower levels of family involvement and parental monitoring, more exposure to violence, and higher levels of feelings of distress (Li et al., 2002).

Another risk factor for youth in the inner city is involvement in drug dealing. Approximately one in six urban adolescents have had some involvement in drug dealing (Centers & Weist, 1998). Drug dealing is associated with a range of problems, including juvenile arrest,

involvement in violence (as victims and perpetrators), substance abuse, behavioral and emotional difficulties, and academic failure and dropout (Centers & Weist, 1998).

The risks associated with living in a low-income neighborhood can become more severe during adolescence. At this time, youth generally experience social changes, such as more interaction with peers and less with their families (Ebata et al., 1990). For low-income youth, adolescence is a time of increased exposure to and involvement in community violence. In fact, adolescents are at the highest risk of experiencing community violence (Tolan & Guerra, 1998). Adolescence is also a time of increased gang involvement, with most gang members being between ages 14 and 24 (Ruble & Turner, 2000).

Stressors of Urban, Low-income, Latino Youth

Clearly, low-income, urban adolescents are at high risk of experiencing many stressful events that may impact their academic and psychosocial functioning. In addition to the stressors that stem from living in an urban, impoverished environment, Latino youth may experience stressors that are associated with their ethnic background, such as stressors stemming from immigration, acculturation and discrimination (Vega, Zimmerman, Gil, Warheit, & Apospori, 1993; Gil, Vega & Dimas, 1994; Suarez-Orozco & Suarez-Orozco, 2002). For example, in a study of Latino and non-Latino students and parents in Oregon, Latino youth reported experiencing and observing higher levels of discrimination, and experiencing more institutional barriers at school than non-Latino students (the majority of whom were Caucasian). These barriers included not receiving information about school activities, not having time for school due to needing to work, having to pay prohibitively large fees at school, and not feeling comfortable around people at school. Latino parents in this study also reported feeling less welcome at their children's school than did non-Latino parents (Martinez, DeGarmo, & Eddy,

2004). Experiencing these types of stressors, and particularly in the school setting, may impact the academic functioning of Latino youth.

There is also evidence that some Latino youth experience high levels of stressors related to their family. A study of 10th grade Latino Chicago Public School students indicates that by far the most frequent type of stressor they experience is related to family, followed by stressors related to friends, school and personal (Kobus & Reyes, 2000). These family stressors included the death of a family member, increased arguments with their parents or between their parents, and trouble with a brother or sister. Family stressors may also stem from factors related to ethnicity, such as differences in acculturation between children and parents (Martinez, 2006) or the need for children to serve as language brokers for their parents and other relatives (Weisskirch & Alva, 2002; Love & Buriel, 2007).

The Role of Stressors in Academic Outcomes

It is particularly important to study stressful life events because of the negative associations they have with youth's functioning. Research demonstrates that stressful life events predict many negative outcomes, including internalizing and externalizing problems (Crean, 2004) and alcohol use (Scheier, Botvin, & Miller, 1999). Research also demonstrates that stressful life events impact one of the most important areas of youth's functioning, their performance at school.

Researchers have found that experiencing multiple stressors is related to poorer academic achievement. Using an ethnically diverse sample of inner-city middle school students, Gonzalez, Tein, Sandler, and Friedman (2001) found that exposure to family stressors, community stressors and peer stressors were each associated with lower grade point averages (GPAs). Similarly, Cunningham, Hurley, Foney, and Hayes (2002) found that experiencing more stressful life events

was associated with lower GPAs. Prelow, Bowman, and Weaver (2007) found that a composite variable which included experience of stressful events, association with deviant peers, and economic disadvantage was negatively correlated with GPA. In a longitudinal study of rural middle and high school students, DuBois, Felner, Brand, Adan, & Evans (1992) found that more life stressors predicted lower GPA.

Other studies have found that neighborhood stressors and exposure to violence can impact the academic functioning of youth. Using a nationally representative sample, Bowen and Bowen (1999) found that youth's perceptions of the negative peer culture of their neighborhood, combined with the stressors they experienced in their neighborhood in the last 30 days, predicted their academic outcomes. Specifically, youth who endorsed a negative peer culture in their neighborhood and who had experienced more stressors in their neighborhood had worse attendance at school, were more likely to have behavior problems in school, and had lower GPAs than those who experienced fewer stressors. The authors also measured youth's perceptions of the dangers in their school environment and youth's exposure to dangerous activity at school, such as getting in a fight or having a weapon pulled on them at school. Results demonstrated the same pattern as with neighborhood violence: students who perceived more danger at school had worse attendance, more behavior problems and lower GPAs. Similarly, Solberg, Carlstrom, Howard, and Jones (2007) found that exposure to violence predicted being in clusters with lower academic self-efficacy and lower intrinsic motivation for Latino and African-American urban high school students.

Research also demonstrates that family stressors can play a negative role in academic outcomes. Forehand, Bigger, and Kotchick (1998) examined the role of family stressors in adolescence in academic outcomes in adolescence and in young adulthood. Using a sample of

middle to lower-middle class Caucasian youth, they found that youth who endorsed more family stressors in adolescence had lower high school GPAs and fewer years of school completed as young adults compared to their peers with fewer family stressors. Additionally, in a 19-year longitudinal study of 194 European American families, Garnier, Stein, and Jacobs (1997) found that the number of family stressors that a parent endorsed in the first three years of a child's life predicted high school dropout. In a study of African-American urban and mostly low-income 7th graders, Gutman, Sameroff, and Eccles (2002) found that youth whose families had experienced more stressful life events in the past year were slightly more likely to be absent from school.

The Role of Stressors in the Academic Outcomes of Latino Youth

Although research indicates that academic outcomes for youth in general suffer as a result of stressful events (Bowen & Bowen, 1999; Forehand et al., 1998; Garnier et al., 1997), this study focused in particular on the role of stressors in the academic outcomes of Latino youth. Using a nationally representative sample of Latino youth aged 10-14, Eamon (2005) found that attending schools with fewer stressors was associated with higher achievement in math and reading, and that living in a better quality neighborhood was associated with higher reading achievement. In a study of 9th grade Latino students, Alva and Reyes (1999) found that stressful life events predicted lower GPAs. Similarly, in a study of 10th grade students in a predominately Mexican-American school in Chicago, Gillock and Reyes (1999) found that more major life events and chronic stressors in the last year each predicted lower GPA. In a sample of Latino middle school students, Crean (2004) found that both acute stressors and social conflict were negatively associated with GPA and positively associated with conduct scores on report cards. In another study of disadvantaged Latino adolescents, math and language achievement scores were negatively correlated with exposure to stressors, such as neighborhood problems and perceived

financial strain (Prelow & Loukas, 2003). Overall, research demonstrates that more stressful life events are related to poor academic outcomes for Latino youth.

Other studies have examined the negative academic impact of stressors that are particularly relevant to Latino youth, such as discrimination and perceived institutional barriers. In a sample of Latino middle and high school students in Oregon, more discrimination stressors were associated with lower academic well-being, as measured by student reported GPA and items asking students how frequently they completed homework, how satisfied they were with their own academic achievement, and how likely they were to drop out of school before graduating high school (DeGarmo & Martinez, 2006). Similarly, Martinez, DeGarmo, and Eddy (2004) found that more discrimination experienced and observed and more perceived institutional barriers by Latino youth were related to lower GPA and a greater perceived likelihood of dropping out of high school. These findings have been replicated by Berkel et al. (2009) in a socioeconomically diverse sample of 750 Mexican American fifth-graders. The authors found that experiencing discrimination predicted poorer academic self-efficacy and grades. Similarly, studies by Benner and Graham (2011) and Roche and Kuperminc (2012) found that perceived discrimination indirectly impacted the academic outcomes (attendance, GPA) of Latino youth, by negatively impacting the perception of their school climate and school belonging.

Although there are a number of studies examining the experience of stressors in low-income youth, these studies have important limitations. First, although many studies include Latino youth in their samples, to my knowledge there are only nine published studies which solely focus on the experiences of low-income, urban Latino youth and specifically examined the role of stressors on an academic outcome (Alva & Reyes, 1999; Benner & Graham, 2011; Crean,

2004; DeGarmo & Martinez, 2006; Eamon, 2005; Gillock & Reyes, 1999; Kobus & Reyes, 2000; Prelow & Loukas, 2003; Roche & Kuperminc, 2012). This is problematic due to the evidence that inner city Latino youth may experience high levels of stressors, and that they may experience unique stressors due to their ethnicity. Additionally, some of the existing studies do not discuss the psychometric properties of their measures (e.g., DeGarmo & Martinez, 2006; DeGarmo & Martinez, 2008). Second, most studies examine academic achievement using only objective measures, such as GPA, report card conduct scores or achievement scores. However, there is evidence that different ways of measuring academic outcomes do not necessarily correlate. Using a nationally representative sample, Rumberger and Palardy (2005) found schools that have high student achievement do not necessarily have lower dropout or transfer rates. Additionally, in a review of formal mentoring programs, Jekielek, Moore, Hair and Scarupa (2002) found that while formal mentoring plays a significant positive role in school attendance and attitudes towards school, it is unclear whether it has an effect on GPA or on college attendance. Therefore, it is important to examine multiple academic indicators, including grade point average, school attendance, academic motivation, and educational aspirations and expectations. Finally, only two of the studies reviewed (Alva & Reyes, 1999; Gillock & Reyes, 1999) examined possible moderators of the relationship between stressors and negative academic outcomes, and none of the studies examined natural mentoring or coping efficacy as moderators of this relationship.

Resiliency Theory

Although low-income, urban Latino youth are exposed to high levels of stressors (Vega et al., 1993; Gil et al., 1994; Kobus & Reyes, 2000; Suarez-Orozco & Suarez-Orozco, 2002; Weisskirch & Alva, 2002; Martinez et al., 2004; Martinez, 2006; Love & Buriel, 2007), there are

low-income Latino youth who succeed academically. The resiliency literature provides a framework for understanding why some youth who are exposed to high levels of risk do not experience the problems associated with those risks, or have outcomes that are more positive than those risks would suggest (Rutter, 1990; Wright & Masten, 2005; Fergus & Zimmerman, 2005). Resilience is defined as "good outcomes in spite of serious threats to adaptation or development" (Masten, 2001, p. 228). Resiliency theory focuses on the importance of positive factors in youth's lives that may offset the negative effects of risk factors (Zimmerman, Bingenheimer & Behrendt, 2005). These factors can be external resources, such as parental support or being a part of a community organization, or internal assets of the individual, such as coping efficacy and competence (Fergus & Zimmerman, 2005; Nettles & Pleck, 1996). They can include having support from an extra-familial adult (Werner & Smith, 1982) and feeling confident about their ability to cope with the stressors they experience (Cummings, Davies, & Simpson, 1994; Manne & Glassman, 2000).

Models of Resiliency Theory

There are a three major models explaining how protective factors work to improve outcomes: the compensatory model, the protective factors model, and the challenge model (Fergus & Zimmerman, 2005; Masten, Best, & Garmezy, 1990; Rutter, 1987; Zimmerman & Arunkumar, 1994). In this study, I examined the compensatory and protective factors models. The compensatory model suggests that positive factors in a youth's life may counteract or neutralize the effects of risk factors. In the compensatory model, risks and protective factors contribute in an additive fashion to the prediction of outcomes. For example, having a poor relationship with a teacher may be a risk factor to dropping out of school. However, this risk factor may be counteracted by having other supportive adults who are very committed to

academic success. The compensatory model is typically tested using a multiple linear regression by examining the main effects of having the compensatory factor when the risk factor is already included in the model (Zimmerman & Arunkumar, 1994).

The protective model suggests that certain positive factors may actually change the relationship between risk factors and outcomes in one of two ways. A protective factor may function by lessening the effect of a risk factor, such as when youth who have supportive adults in their lives are not as influenced as youth who do *not* have supportive adults in their lives by pressure to join gangs. In addition to weakening the relationship between risk factors and negative outcomes, protective factors can also strengthen the relationship between a positive factor and outcomes. For example, youth with high self-esteem may benefit more from their relationship with a supportive adult than youth with low self-esteem. In this scenario, self-esteem is a protective factor which increases the effectiveness of another positive factor. The protective factor models are generally tested by looking at the interactions between the variables in a regression or other general linear model, or by comparing groups using structural equation modeling (Fergus & Zimmerman, 2005; Zimmerman & Arunkumar, 1994).

In this study, I explored natural mentoring and coping efficacy as protective or compensatory factors. I will examine which model better fits the data to explain how natural mentoring and coping efficacy function to influence the relationship between stressors and academic outcomes.

Natural Mentoring

Research suggests that natural mentoring may be an important protective factor to examine when exploring which youth are resilient. This section will begin by presenting a definition and overview of natural mentoring, followed by reviewing the research on the role

natural mentors can play in promoting resilience. Natural mentors are "non-parental adults, such as extended family members, teachers or neighbors, from whom a young person receives support and guidance as a result of a relationship developed without the help of a program specifically designed to connect youth and adults to form such a relationship (i.e., program mentors)" (Zimmerman et al., 2005, p. 143). Natural mentoring relationships vary, and the role of mentors can range from that of a teacher to that of a challenger or a role model (Hamilton and Darling, 1996; Greeson, Usher, & Grinstein-Weiss, 2010) Youth may see their mentors as listeners, confidantes, advisors, helpers or companions (Cavell, Meehan, Heffer, & Holladay, 2002). In a study of urban, predominantly Mexican-origin youth, Sánchez and Reyes (1999) found that the vast majority of youth saw their mentor as a source of emotional support, while in a study of African American teen mothers, Klaw and colleagues (2003) found that mentors provided youth with both emotional support and instrumental support, such as helping them with school and giving them advice.

Characteristics of Natural Mentoring Relationships

Who has natural mentors? In order to understand more about the value of natural mentoring, it is important to know who has natural mentors. In a review of the natural mentoring literature, Spencer (2007) reported that between 53 and 85 percent of youth report having a natural mentor. Research is inconclusive as to whether young men or women are more likely to have a natural mentor (Spencer, 2007). A review of the mentoring literature reveals that youth of color are less likely to identify a natural mentor than are White youth (Sánchez, Colón, Feuer, Roundfield & Berardi, in press).

Who are mentors? According to Spencer's (2007) literature review, approximately half of the natural mentors reported are relatives, such as grandparents, aunts, or cousins, and the

remaining half are non-familial adults, such as teachers, coaches, counselors and ministers. Same-gender natural mentor relationships appear to be more common than cross-gender relationships, with between 65 and 73 percent of youth in various studies reporting having a same-gender mentor (Spencer, 2007). Mentors also tend to be of the same racial, ethnic and class backgrounds as youth. The research is unclear about whether youth of color are more or less likely than White youth to have a natural mentor who is a relative rather than an unrelated adult in their community (Spencer, 2007; Sánchez et al., 2011). Research also demonstrates that youth may develop more relationships with important adults as they move through adolescence, with older high school students more likely to have natural mentors than middle school students (Spencer, 2007).

Duration and frequency of contact. In general, natural mentoring relationships are of long duration. Although studies have reported varied results as to frequency of contact, the majority of studies have demonstrated that youth interact with their natural mentors daily or weekly (Spencer, 2007).

Number of mentors A limitation of the current research on natural mentoring is that researchers typically examine one mentoring relationship (Erikson et al., 2009; Zimmerman et al., 2005). However, some youth may have more than one natural mentor (Sánchez, Esparza & Colón., 2008; Packard, Kim, Sicley, & Piontkowski, 2009, Hurd, Zimmerman, & Xue, 2009). Zimmerman and colleagues (2005) recommended that studies incorporate the opportunity for adolescents to identify more than one natural mentor, as a cumulative effect of number of mentors may exist. In fact, Sánchez et al. (2008) found that more natural mentors reported by youth predicted fewer absences, a greater sense of school belonging, and higher educational expectations. Similarly, Packard et al. found a beneficial cumulative effect, such that having

more mentoring relationships predicted having more forms of support for education. Hurd et al. (2009) also found that youth who named two role models had better academic and behavioral outcomes than youth who named just one. The current study will address this limitation of mentoring research by allowing youth to identify up to three natural mentors.

Natural Mentoring and Youth Resilience

Natural mentoring was one of the first factors explored as a mechanism for promoting youth resilience. In a classic study on resiliency, Werner and Smith (1982) and Werner (1989) followed all of the children born in Kauai in 1955 from birth to age 30. The authors identified one-third of the sample who were at risk due to four or more of the following risk factors: moderate to severe prenatal stress, being born into poverty, being reared by mothers with little formal education, or living in a family troubled by discord, divorce, parental alcoholism or mental illness. They found that two-thirds of those with four or more risk factors by age two had developed serious learning or behavior problems by age 10. However, one-third of the at-risk group developed into competent young adults who did not exhibit these problems. Werner and Smith contrasted these resilient youth with the at-risk youth who developed behavioral and/or learning problems. They found that one of the factors that distinguished resilient youth from the others was the role of non-parental adults in the lives of these youth. Specifically, they were often nurtured as infants by "substitute parents" (Werner, 1989 p. 74). These "substitute parents" were generally non-parental family members, such as grandparents or older siblings who cared for the youth. These youth also had several close friends outside of the home, and they had important adults outside the home, such as teachers, ministers or elders to whom they confided. This research supports the protective factor model because natural mentoring and the other protective factors changed the relationships between risk factors and the adjustment in

adulthood. Interestingly, Werner and Smith found that as the number of early-life stressors increased, so did the number of protective factors needed to offset the risks.

More recent research has demonstrated that youth who have natural mentors are more likely to be resilient in terms of psychosocial outcomes (DuBois & Silverthorn, 2005a; Hurd & Zimmerman, 2010a, 2010b; Klaw, Rhodes & Fitzgerald, 2003; Munson & McMillen, 2009; Rhodes, Contreras, & Mangelsdorf, 1994; Rhodes, Ebert, & Fischer, 1992). Youth who have natural mentors are more likely to have reduced problem behaviors (DuBois & Silverthorn, 2005a), to have better psychological well-being and health (DuBois & Silverthorn, 2005a; Hurd & Zimmerman, 2010a, 2010b), to own assets (e.g., car, bank account) as a young adult (Greeson et al., 2010) as well as to work more than 10 hours per week as adults (DuBois & Silverthorn, 2005a). These studies support the compensatory model of resilience, as they simply examine the main effect of mentoring on psychosocial outcomes.

Research on natural mentoring also supports the protective model of resilience. In a study of African American young mothers, Rhodes et al. (1992) found that those with natural mentors reported lower rates of depression. They also found that having a natural mentor served as a moderator of the relationship between depression and relationship problems, social support, and satisfaction with support. For those young mothers with a natural mentor, even if they were depressed, the impact of that depression was not as great. Thus, natural mentoring served as a protective factor for these young mothers, weakening the relationship between depression and other negative psychosocial outcomes. Similarly, in a study of Latina inner-city adolescent mothers, Rhodes et al (1994) found that those with a natural mentor reported lower levels of anxiety and depression, and greater satisfaction with the support they received than those without a mentor. They also found that having a mentor moderated the effects of relationship and support

network problems on psychological distress. Again, natural mentoring served as a protective factor, weakening the relationship support network problems and experiencing psychological distress. Hurd and Zimmerman (2010a, 2010b) similarly found that natural mentoring moderated the effects of perceived stress on depressive and anxiety symptoms in African American adolescent mothers (Hurd & Zimmerman, 2010a), and moderated the effects of perceived stress on depressive symptoms in a larger sample of African American emerging adults (Hurd & Zimmerman, 2010b). These studies support the idea that natural mentoring serves as a protective factor, weakening the relationship between perceived stress and psychological symptoms.

The Role of Natural Mentoring on Youth's Educational Outcomes

Research has also demonstrated the positive role of natural mentoring on educational attainment. Using nationally representative samples, researchers have found that youth with natural mentors are likely to have higher GPAs (Erikson et al., 2009), are more likely to remain in school (DuBois & Silverthorn, 2005a; Erikson et al., 2009), to graduate from high school (DuBois & Silverthorn, 2005a; Erikson et al., 2009), and to attend college (DuBois & Silverthorn, 2005a; Erikson et al., 2009). Erikson et al. found that youth who reported a natural mentor were 53% more likely to advance to the next level of education (e.g., to graduate from high school, to attend college, or to graduate from college) than were youth who did not report a mentor. Additionally, they found that having a teacher mentor served a protective function for disadvantaged youth. The authors found that although having a teacher mentor is helpful in educational advancement for both disadvantaged and advantaged youth, it has a stronger impact on disadvantaged youth. Similarly, in a study of youth who recently aged out of the foster care system, Collins, Spencer, and Ward (2010) found that youth who identified a natural mentor were significantly more likely to complete high school or a GED than youth who did not identify a

natural mentor. In a study of African American adolescent mothers, Klaw, Rhodes, and Fitzgerald (2003) found that participants whose mentor relationships endured over the two year study were 3.5 times more likely than those who named no mentor at all to remain in school and graduate.

Natural mentoring may also play a positive role in subjective measures of academic achievement. Using a large sample of African American and Caucasian adolescents from a large Midwestern city, Zimmerman, Bingenheimer, and Notaro (2002) examined natural mentoring as a compensatory or protective factor in the relationship between negative peer influences and outcomes including problem behaviors and school attitudes. The authors found that natural mentors had both compensatory and protective effects on school attitudes, including school attachment, school efficacy, and school importance. That is, youth with natural mentors were more likely to have positive school attitudes, and there was an interaction between negative peer influences and natural mentoring, such that youth with natural mentors were less likely to have the negative outcomes generally associated with negative peer influences. However, natural mentoring had compensatory, but not protective effects on problem behaviors, including marijuana use and non-violent delinquency. Participants with natural mentors had lower levels of problem behaviors than did participants without natural mentors, but there was no significant interaction between natural mentoring and negative peer influence. Sánchez et al. (2008) found that youth with mentors had fewer absences and higher educational expectations and a stronger sense of school belonging than those with no mentors. In Hurd et al.'s (2009) study of ninth grade African American students, youth were asked if they had someone they "look up to" in their life. In other words, the authors asked youth if they had role models. Participants also completed a measure about negative behavior of adults in their lives, such as drug use and

possession of weapons. The authors found that having a role model was associated with better school outcomes, as measured by GPA, school attachment and expectations about graduating from high school and attending college. They also found that having a role model served as a moderator, weakening the relationship between negative adult influences and school outcomes.

Overall, research has demonstrated the positive role of natural mentoring on both objective and subject measures of educational outcomes. However, the research is mixed as to whether a compensatory or protective model better explains the role of natural mentors.

Mentor Support for Education

Support for education may include a variety of behaviors, including emotionally supporting youth in achieving academically, helping youth with homework, helping youth acquire the materials necessary to do their schoolwork, and role modeling positive academic achievement (Sánchez et al., 2008). Support for education may be an important mechanism by which mentors help youth achieve academically. Although natural mentoring is associated with positive academic outcomes (DuBois & Silverthorn, 2005a; Klaw et al., 2003; Sánchez et al, 2008), to date only four studies (Greenson & Bowen, 2008; Munson, Smalling, Spencer, Scott, & Tracy, 2010; Packard et al., 2009; Sánchez et al., 2008) have examined the mechanisms by which natural mentors support youth in education, and only one study (Sánchez et al., 2008) has examined the relationship between support received by natural mentors and educational outcomes. In a cross-sectional study examining the natural mentoring relationships of 140 Latino high school students, Sánchez et al. (2008) found that more social support in education provided by natural mentors predicted students' higher GPAs, lower absenteeism rates and a greater sense of school belonging (Sánchez et al., 2008).

Other studies have examined support for education offered by mentors, but have not examined the role of that support in academic outcomes. For example, Packard et al. (2000) examined the contexts and the nature of support in natural mentoring relationships of low-income, urban adolescent girls (majority Latina) who were interested in health care professions. The authors allowed youth to identify anyone who helped them with their future educational plans, including parents, family members and others. The authors chose not to use a formal definition of natural mentors, in order to allow youth to name individuals who may provide some mentoring functions but may not meet formal criteria for a natural mentor. The authors found that approximately three-quarters of youth reported receiving instrumental support from their mentors, and that two-thirds of youth received socio-emotional support from their mentors. They found that mentors at home were more likely to provide socio-emotional mentoring, while school and community mentors were more likely to provide instrumental support. Instrumental support included providing career information, bringing the youth to visit a healthcare workplace, providing transportation and monitoring academic progress. However, the authors did not examine how those forms of support were related to youth's academic achievement.

Similarly, Greenson and Bowen (2008) qualitatively interviewed seven female adolescents aged 16-20 who either were currently or had aged out of the foster care system. Participants were asked about the role of important adults in their lives. They reported that their natural mentors provided a variety of educational support, including encouraging them to stay in school, helping them to pay for school supplies and lunch at school, and assisting them in applying for school-related programs or college. Several youth reported that their mentors' support influenced them to get better grades in school, to stay in school, to attend school more regularly, and to behave better in school. However, this study relied solely on youth self-report

about their academic outcomes, and did not compare mentored youth to those who had no natural mentors. Munson et al. (2010) conducted a similar study, interviewing a larger sample of 339 youth who were in the process of aging out of the foster care system about their natural mentoring relationships. Youth in this study also reported that their natural mentors provided them with a variety of forms of educational support, including encouraging them to stay in high school or to get their GED, encouraging them to go to apply to and attend college, and helping with schoolwork. However, the researchers were unable to examine the role of mentor support in youth's academic outcomes because of the qualitative nature of the study.

Because of the limited research examining the role of mentor support in academic outcomes, the formal mentoring program literature was examined to provide insight into the mechanisms by which mentors may support youth in achieving positive academic outcomes. To the best of my knowledge, only two studies (Diversi & Mecham, 2005; Holt, Bry, & Johnson, 2008) have examined whether the support provided by mentors leads to better academic outcomes. Both of these programs include both tutoring and teaching components as part of the mentoring relationship.

Holt et al. (2008) evaluated a five-month school based mentoring program for "at-risk" urban 9th graders, who were primarily Latino and African American. Youth were classified as "at-risk" due to having at least two of the following risk factors: low grades and or low academic motivation, discipline problems, and frequent tardiness or absence from school. Youth were randomly assigned to either a five-month school-based mentoring program or a control condition. Mentors were teachers and school counselors, and they were given specific guidelines for helping youth academically. They were instructed to speak with students' teachers weekly, to discuss the youth's positive academic behavior, to do academic activities together, and to follow

youth's attendance, grades and conduct in school. Mentors were also encouraged to contact youth's parents monthly and to follow up with students on a monthly basis after the program was complete. The authors found that more instrumental support provided by mentors was related to fewer discipline referrals and that more availability of mentor support was related to a stronger sense of school belonging in students. This study suggests that instrumental support is important in the role of mentoring relationships on academic outcomes. It is important to note that mentors in this study were school professionals who also received explicit instructions about ways in which they could aid their mentees academically. This type of guidance and training is most likely rare among natural mentors, and particularly familial mentors.

Qualitative research also suggests that educational support provided by mentors is related to better academic outcomes. In a mixed methods study, Diversi and Mecham (2005) examined the views of rural Latino youth and mentoring program coordinators about the process by which a formal mentoring program improved the academic outcomes of the youth. They studied a group mentoring program which involved twice-weekly sessions with 20 to 25 youth and 4 to 5 college student mentors. Youth were all immigrants or children of immigrants, and they were identified for the program due to their failing grades or behavior problems. Program activities included assistance with homework and school projects, discussion of acculturation issues, and informal activities such as trips to parks and camping trips. The authors found that youth who participated in this program had improved GPA’s and reduced problem behaviors. Youth participants reported that they felt that their relationship with their mentors made them more successful at school because they had a time and place to complete their homework, and they received support, encouragement and teaching from their mentors. Program coordinators also noted that the homework assistance youth received in the program directly impacted their grades

because homework makes up the majority of youth's grades. As Holt et al. (2008) found, specifically providing social support in the area of education may be the mechanism by which mentors help youth perform better academically. A limitation of Holt's study is that the authors did not include a control group or use random assignment to the mentoring program, so it is impossible to determine if the program actually led to these findings.

Although the research suggests that social support provided by natural and formal mentors can have a positive impact on youth's academic outcomes, to date only two studies (Holt et al., 2008; Sánchez et al., 2008) have directly measured the role of various types of support for education in academic outcomes. Additionally, both of the formal mentoring studies which examine the role of support on academic outcomes also include tutoring and teaching components, introducing a potential confound to their findings. The present study will examine how various forms of support from natural mentors play a role in youth's academic outcomes.

The Role of Mentor Educational Attainment in Youth's Outcomes

Although natural mentoring relationships in general are associated with positive academic and psychosocial outcomes (DuBois & Silverthorn, 2005a; Klaw, Rhodes & Fitzgerald, 2003; Rhodes et al., 1992; Rhodes et al., 1994; Sánchez et al., 2008), research has demonstrated that certain characteristics of mentors and mentoring relationships may predict differential consequences for youth. Researchers have found differences in outcomes for youth based on characteristics of their mentors, such as educational attainment of mentors, length, frequency of contact, and emotional closeness (Chang, Greenberger, Chen, Heckhausen, & Farrugia, 2010; DuBois & Silverthorn, 2005b; Erikson et al., 2009; Klaw, Rhodes, & Fitzgerald, 2003; Sánchez et al., 2008).

Mentor education level may be particularly useful for predicting academic outcomes because mentors who have achieved higher levels of education may be better able to provide youth with instrumental support, role modeling and guidance in achieving higher education. To date, only two studies (Chang et al., 2010; Sánchez et al., 2008) have examined the role of educational attainment of mentor on youth outcomes. In a large (*N*=754), longitudinal study of multiethnic high school seniors, Chang et al. (2010) found that higher educational attainment of the important adults named by youth predicted higher school grades, higher educational expectations, lower levels of endorsed misconduct, and lower levels of depressive symptoms. Similarly, Sánchez et al. found that youth whose natural mentors had achieved higher levels of education were more likely to have higher GPA's, higher educational aspirations and higher educational expectations. This study addressed the gap in the natural mentoring literature by examining the educational attainment of mentors.

Limitations of the Natural Mentoring Literature

Although the current research demonstrates that natural mentoring may promote youth resilience (e.g. DuBois & Silverthorn, 2005a; Erikson et al., 2009; Klaw et al., 2003), there are some important limitations. There is extremely limited research that specifically focuses on natural mentoring in Latino youth, and particularly in low-income, urban, Latino youth (i.e., Sánchez & Reyes, 1999; Rhodes et al., 1994; Sánchez et al., 2008). This is problematic because the existing research demonstrates that there are some differences in the presence of natural mentoring relationships of Latino and other minority youth compared to White youth (Sánchez et al., in press). Additionally, the vast majority of studies have only examined one mentor, although it appears that there may be a cumulative benefit to multiple natural mentoring relationships (Packard et al., 2009; Sánchez et al., 2008). Another important limitation in the natural

mentoring literature is that very few studies have examined the features of the natural mentoring relationship (i.e., Greenson & Bowen, 2008; Munson et al.; 2010; Packard et al., 2009; Sánchez et al., 2008) or the characteristics of natural mentors (i.e., Chang et al., 2010; DuBois & Silverthorn, 2005b; Erikson et al., 2009; Klaw, Rhodes, & Fitzgerald, 2003; Sánchez et al., 2008) that may promote positive academic outcomes. Finally, research has been inconclusive as to whether natural mentoring best fits a compensatory or a protective factors model.

Coping Efficacy

In addition to the benefits of mentoring, research also demonstrates the potential ability of coping efficacy to buffer the effects of stressful life events (Cummings et al., 1994; Manne & Glassman, 2000). Coping efficacy is "the global belief that one can deal both with the demands made and the emotions aroused by a situation. Coping efficacy includes the beliefs that one has dealt well with stressors in the past and can deal effectively with the stressors one is likely to encounter in the future" (Sandler, Tein, Mehta, Wolchik and Ayers (2000), p. 1099). Theoretically, youth who have good coping efficacy may feel a greater sense of control over the stressors they experience, and therefore they may be able to achieve positive academic outcomes despite experiencing high levels of stressors. To date, I was unable to find any research on coping efficacy in Latino youth, and there is very little literature on coping efficacy in children generally. Therefore, I will review the sparse literature that does exist on coping efficacy both in adults and in children.

Research has demonstrated the coping efficacy leads to a decrease in physiological, behavioral and affective responses to stressors in adults (Bandura, Taylor, Williams, Mefford, & Barchas, 1985; Maddux, 1995; Thompson, 1981). Bandura et al. (1985) found that in an experiment with women who had phobias of spiders, participants had high epinephrine and

norepinephrine secretion on tasks about which they doubted their coping efficacy, but as they were taught ways to deal with the spiders and their perceived self-efficacy increased, their catecholamine reactivity subsided. This study demonstrates that coping efficacy can serve as a protective factor, changing the relationship between the experience of a stressor and physiological responses to stress. In a review of the literature on the relationship between control over an event and the amount of pain or stress it will cause, Thompson (1981) found that both behavioral and cognitive control are helpful in coping with painful or stressful events. She defined behavioral control as "a belief that one has a behavioral response available that can affect the aversiveness of an event" and cognitive control as "the belief that one has a cognitive strategy available that can affect the aversiveness of an event" (p. 90). The concepts of behavioral and cognitive control are closely related to the concept of coping efficacy, as they have to do with the beliefs a person has about their ability to cope with an aversive situation. Thompson's review showed that people will tolerate more of a noxious stimulus if they believe they will be able to control the event. Additionally, knowing that they can control it mitigates the disruptive post-event effects of exposure to an aversive event. Having a cognitive strategy to deal with the negative event appears to lessen anticipatory anxiety, reduce the impact of the stimulus, and improves the post-event effects. Thompson's review suggests that behavioral and cognitive control can serve as a buffer against the impact of aversive events, suggesting that it may function as a protective factor.

Coping efficacy has also been shown to predict psychosocial outcomes in youth. Cummings et al. (1994) conducted a study of nine- to twelve-year-old children, who were mostly Caucasian and middle class. The children watched a vignette of parents arguing and were asked how they would respond to it. Then they were asked how well their response would work to

make themselves feel better and to actually help their parents end the argument. The authors found that coping efficacy was positively correlated with the psychological adjustment of boys but not girls, as measured by a score on the Child Behavior Checklist (CBCL). The authors suggested that perhaps for girls, coping efficacy is related to aspects of family functioning besides marital conflict. In this study, the authors simply examined the correlation between coping efficacy and behavior problems rather than examining coping efficacy as a protective or compensatory factor.

Coping efficacy has also been shown to explain the relationship between a stressor and psychological well-being. Prelow, Weaver and Swenson (2006) found that in African American, but not in European American high school students, coping efficacy mediated the relationship between the number of stressors experienced and the number of depressive symptoms endorsed. Coping efficacy was measured by a 7-item scale developed by Sandler et al. (2000) that assessed adolescents' beliefs about their ability to handle problematic situations. Prelow et al. found that more stressors endorsed was associated with lower levels of coping efficacy, which was in turn associated with higher levels of depressive symptoms. The authors explain this finding by suggesting that ecological stressors have a direct negative effect on African American youth's perceptions of their abilities to deal with the demands made by exposure to these stressors. Similarly, in a study of married individuals with cancer, coping efficacy mediated the relationship between a spouse's negative behaviors and psychological distress. In order to measure coping efficacy, participants were asked to rate how well they think they are dealing with the changes and disruptions in their lives imposed by the illness, as well as how well they think they are dealing with the emotional stresses imposed on them by the illness (Manne &

Glassman, 2000). Individuals whose spouses were very negative were more likely to have lower coping efficacy, which led to higher levels of psychological distress.

Coping efficacy has also been shown to mediate the relationship between specific coping styles and psychological outcomes. In a study of children ages 9-12 whose mothers had divorced, coping efficacy was a mediator of the relationship between both active and avoidant coping and psychological problems (Sandler et al., 2000). Children who used active coping strategies felt that they were able to cope better, and therefore had fewer psychological problems, while children who used avoidant coping strategies felt less efficacious in their coping and had more psychological problems. This study also found the coping efficacy was associated with lower internalizing symptoms (Sandler et al., 2000).

Although research demonstrates that coping efficacy may be an important factor in predicting healthy psychological outcomes, the research is very limited. To date, there is no research on coping efficacy in Latino youth. There is also no literature examining the relationship between coping efficacy and academic outcomes. Additionally, although it seems theoretically plausible that high levels of coping efficacy could buffer the negative effects of stressors on youth's academic outcomes, it has never been examined in that way.

Rationale

Latinos are both the largest ethnic/racial minority group enrolled in U.S. schools, and the group that currently has the lowest educational and occupational attainment (Huber et al., 2000). In order to change the inequalities in educational, occupational and economic outcomes, it is vital to better understand the processes that influence those outcomes. Research demonstrates that low-income, ethnic minority youth face more stressors than middle class, European American adolescents (Vega et al, 1993; Gil et al., 1994; Kobus & Reyes, 2000; Suarez-Orozco

& Suarez-Orozco, 2002; Weisskirch & Alva, 2002; Martinez et al., 2004; Martinez, 2006; Love & Buriel, 2007), and that these stressors are related to poorer academic outcomes (Alva & Reyes, 1999).

Resiliency theory suggests that there are protective factors that may buffer the negative impact of stressors on academic and psychosocial outcomes (Rutter, 1990; Wright & Masten, 2005; Fergus & Zimmerman, 2005; Zimmerman et al., 2005). Two important protective factors to examine are natural mentoring and coping efficacy. Research has demonstrated that natural mentoring may serve a protective role for youth who are experiencing high levels of stressors (Rhodes et al., 1992,; Rhodes et al, 1994; Klaw et al., 2003; Sánchez et al., 2008). Research also suggests that coping efficacy may correlate with positive outcomes (Cummings et al., 1994; Manne & Glassman, 2000; Sandler et al., 2000), although there is no research examining coping efficacy in Latino youth, and there is no research examining coping efficacy and its role in academic outcomes. The research is further limited in terms of the types of academic outcomes that have been examined. The present study examined the ways in which stressors, coping efficacy and natural mentoring interact to predict a variety of academic outcomes for Latino youth.

In this study, I tested the compensatory and the protective factor model of resilience. There is research supporting both the compensatory model (DuBois & Silverthorn, 2005a; Hurd & Zimmerman, 2010a, 2010b; Greeson et al., 2010, Klaw et al., 2003, Sánchez et al., 2008, Zimmerman et al., 2002) and the protective factors model (Werner & Smith, 1982; Werner, 1989; Rhodes et al., 1992; Rhodes et al., 1994, Zimmerman et al., 2002). However, most of the research supporting the compensatory model simply looked at the main effect of mentoring, and did not examine mentoring as a possible moderator. Researchers who have examined mentoring

as a protective factor have, by in large, supported a protective factors model. Additionally, Zimmerman et al. (2002) found that natural mentors served as both a protective factor and a compensatory mechanism in terms of school attitudes. Therefore, I predicted that natural mentoring would serve both a compensatory and protective function in this study, but that the protective factors model would fit the data better. Although there is no research on coping efficacy and resilience, I predicted that coping efficacy would act as a protective factor, as there was theoretical justification for the ability of coping efficacy to change the impact of stressful life events on negative outcomes.

Statement of Hypotheses

Hypothesis 1. I hypothesized that the data would fit the protective factor model (see Figures 1 and 2). More specifically, I predicted that:

Hypothesis 1a. More total stressors endorsed would predict poorer academic outcomes, as measured by GPA, attendance, academic aspirations and expectations, and academic motivation.

Hypothesis 1b. Coping efficacy would be associated with better academic outcomes, as measured by GPA, attendance, academic aspirations and expectations, and academic motivation.

Hypothesis 1c: More mentors identified by participants would be associated with better academic outcomes, as measured by GPA, attendance, academic aspirations and expectations, and academic motivation.

Hypothesis 1d. Coping efficacy would moderate the relationship between the number of stressors endorsed and academic outcomes, such that higher levels of coping efficacy would reduce the negative impact of stressors on academic outcomes.

Hypothesis 1e. More mentors identified by participants would moderate the relationship between the number of stressors endorsed and academic outcomes, such that more mentors would reduce the negative impact of stressors on academic outcomes.

Hypothesis 1f. For participants with mentors, more mentor support for education, higher mentor education level, and more mentor activities related to education would moderate the relationship between the experience of stressors and academic outcomes, such that higher support, mentor education level and more mentor activities would reduce the negative impact of stressors on academic outcomes.

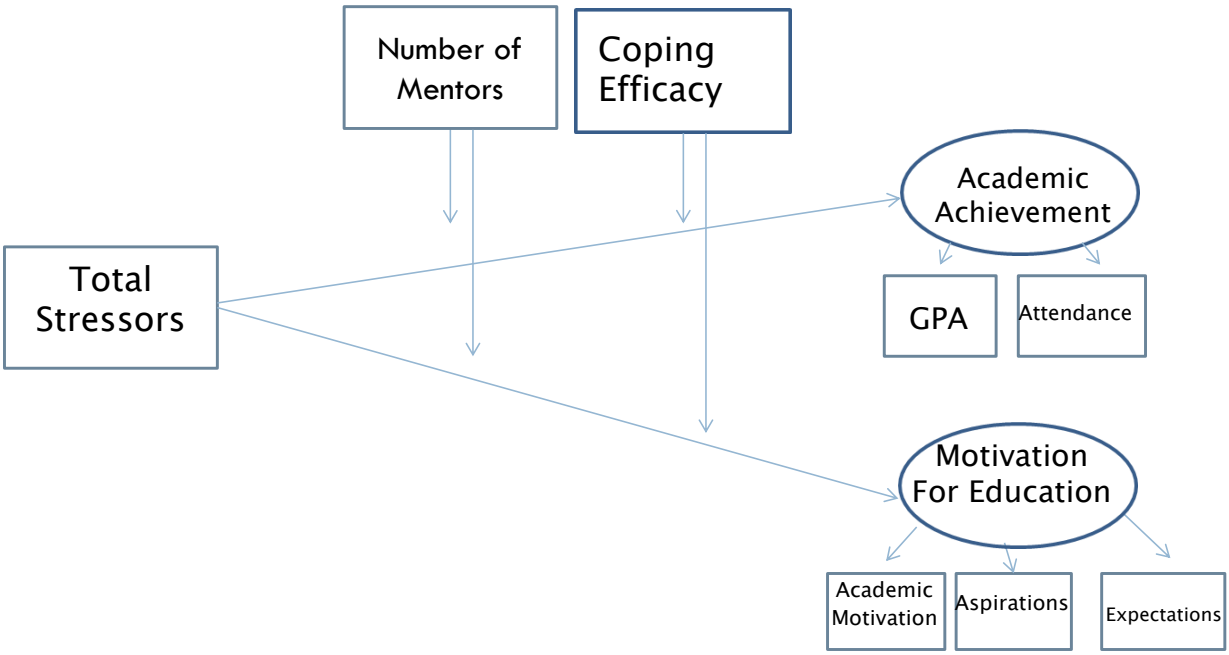

Figure 1. Theoretical model including all participants.

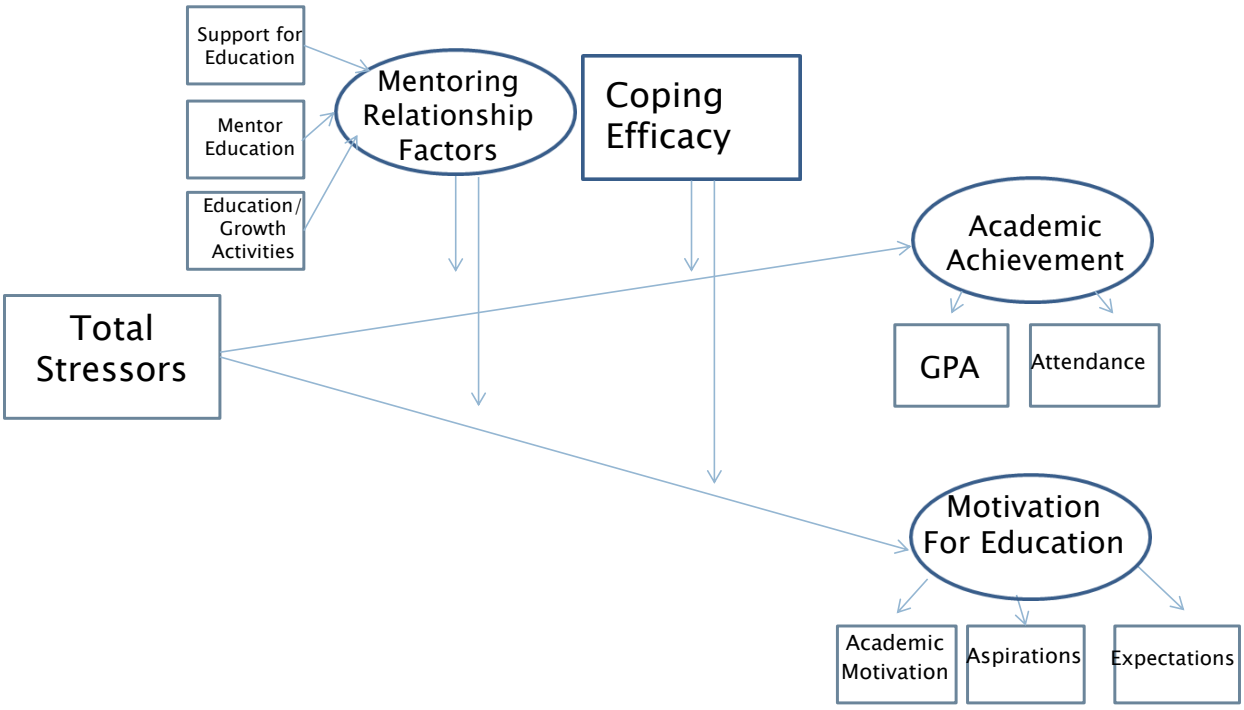

Figure 2. Theoretical model including participants who named mentors.

CHAPTER II

METHOD

This study was part of a larger investigation at DePaul University examining the associations among racial and cultural processes, natural mentoring relationships, and the academic outcomes of urban, low-income, Latino adolescents. The current study examined whether natural mentoring relationships and coping efficacy buffer the negative effects of stressors on academic outcomes among low-income, urban, Latino youth in their first year of high school.

Context

Participants were recruited from two public high schools in Chicago. A purposive sampling design was used to select two majority Latino high schools in Chicago. In a purposive sample, an investigator relies on his/her judgment in order to select units that are typical of the target population (Singleton & Straits, 2005).

The demographic makeup of the first school was 94.1% Latino, 3.5% Black, 1.4% White, and 1.1% other (Illinois School Report Card, 2010). This school is somewhat more homogenous than the population of the surrounding community. The zip code surrounding the school is 62.7% Latino, with 88.9% of the Latino population being predominantly Mexican or Mexican-American (US Census Bureau, 2000). Most of the students at the school (97%) are considered low-income, meaning that they come from families receiving public aid, live in institutions for neglected or delinquent children, live in foster homes supported by public funds, or are eligible to receive free or reduced-price lunches (Illinois School Report Card, 2010). The school has an 82.9% attendance rate, a 13.8% mobility rate, and a 64.4% graduation rate (Illinois School Report Card, 2010).

The demographic makeup of the second school was 89.0% Latino, 8.1% Black, 2.6% White, and 0.3% other (Illinois School Report Card, 2010). Ninety-two percent of students qualify for free or reduced-price lunches (Illinois School Report Card, 2010.) The school has an 79.7% attendance rate, and a 60.8% graduation rate (Illinois School Report Card, 2010)

Both schools are characterized as *community schools*, which operate under an open enrollment process to students living within the school's attendance area. Due to the open enrollment policy, students have a wide range of academic abilities and achievement.

Participants

Participants were 422 students who agreed to participate in a longitudinal study in their freshman and sophomore years of high school. To ensure that participants in the study reflected the varying academic abilities, all students in the ninth grade were recruited for participation in the study. Participants (N=422) were 47.1% male (n=193) and 52.9% female (n=217). The mean age of participants was 14.51 (SD=.67). Participants were allowed to check all ethnic labels that applied to them, so the following percentages add up to more than 100%. The vast majority of participants (n=362, 87.7%) identified as Mexican/Mexican American. The remaining participants identified as Puerto Rican (n=26, 6.4%), Latino/a (other) (n=18, 4.4%), African American (n=16, 3.9%), White/Caucasian (n=10, 2.5%), American Indian (n=5, 1.2%), Asian/Pacific Islander (n=1, 0.2%), and Other (n=4 1.0%).

Procedures

Participants were recruited through presentations in their homeroom classes and during their lunch periods, which were conducted by a predominantly bicultural/bilingual research team comprised of undergraduate and graduate students. All of the research assistants involved with the study completed online and in-person human subjects training. Presentations were conducted

in English or Spanish, depending on the preference of the students. Parental consent forms and youth assent forms were distributed to all 9th grade students in both languages. Students were informed about the purpose of the study, the study procedure, and risks and benefits of the study, in addition to compensation for participating in the study. Students were informed that they had a choice about whether or not to participate in the study, and that their decision to participate would have no impact on their grades or their academic standing. Students were also informed that all information in the study would be kept confidential, and that their name or identity would not be attached to any of the study findings. All students who returned a signed parental consent form, regardless of whether or not they chose to participate in the study and regardless of whether or not their parents allowed them to participate in the study, received a candy bar and were entered into a raffle to win a pair of movie tickets or an iPod Touch.

Survey administration took place during a one-hour extended homeroom period during students' final exam days. Participants completed self-administered questionnaires in either English or Spanish. Surveys were read aloud by a research assistant in the classroom. Surveys took approximately 45 minutes to complete. Participants received a $10 gift certificate to a local entertainment store for completion of the survey.

Measures

The survey included demographic questions and measures of stress, coping efficacy, natural mentoring and academic outcomes (see Appendix A).

Demographic Variables

Participants were asked to report their age, sex, race/ethnicity, and generational status. Generational status was determined by assessing the place of birth of participants, their parents, and their grandparents (inside or outside of the U.S.). Students were considered first generation if

they were born outside the U.S., second generation if one or more of their parents was born outside the U.S. and the student was born in the U.S., and third generation if one or more of their grandparents was born outside the U.S. and their parents and the student were born in the U.S.

Stressors

Stressors were measured using a slightly modified version of the shortened Multicultural Events Schedule for Adolescents (MESA; Prelow et al., 2004). The MESA is a 27-item dichotomous scale with six subscales, including Peer Hassles (7 items), Discrimination (6 items), Violence/Victimization (5 items), Family Trouble/Change (5 items), Economic Hassle (1 item) and School Hassle (3 items). Each item is a particular stressor, and participants are asked to indicate (yes=1/no =0) if they have experienced that stressor in the past three months. In order to avoid confounds with the outcome variables, the school hassles subscale of the MESA was no used in these analyses. Sample items of the MESA include "Your parents separated or divorced (family stressor)," "You were threatened with a weapon (violence/victimization)," "You were excluded from a group because of your race, ethnicity, and culture (discrimination stressor)," "A close friend died (peer stressor)," and "You were pressured to do drugs or drink alcohol (peer stressor)." The MESA has been demonstrated to have acceptable test-retest reliability (r=.81 for African American adolescents and r=.69 for European American youth; Prelow et al., 2004). It also significantly positively correlates with depression and conduct problems, and significantly negatively correlates with self-esteem and self-efficacy (Gonzales et al., 1995). In this study, the total stressors score without school hassles was examined.

Coping Efficacy

Coping efficacy was examined using Sandler's (2000) 7-item Coping Efficacy Scale. The measure examines both problem-focused (5 items) and emotion-focused (2 items) coping. It asks

about how well participants believe they have coped with problems in the past month, as well as how well they believe they will cope with their future problems. A sample problem-focused item is: "Overall, how well do you think that the things you did during the last month worked to make your problems better?," and a sample emotion-focused item is "Overall, how good do you think you will be at handling your feelings when problems come up in the future?" Participants rate the items on a 0 to 3 scale ranging from "Not at All Good" to "Very Good." The mean score of the entire measure was used, with higher scores indicating greater coping efficacy. The scale had good reliability (Cronbach's alpha = .85).

Presence and number of natural mentors

In order to examine whether participants had natural mentors, they were asked if they have:

> anyone in your life who is older (age 18 or older) and more experienced than you and you go to for support and guidance? This person is not a parent or the person who raised you or a boy/girlfriend. This person is someone who: a) you can count on to be there for you, b) who believes in you and cares deeply about you, c) who inspires you to do your best, and, d) who has really influenced what you do and the choices you make.

These criteria are based on past measures of natural mentoring (Rhodes, Ebert & Fischer, 1992; Rhodes, Contreras, & Mangelsdorf, 1994). Participants were asked whether they had someone like this. If yes, they were allowed to identify up to 3 individuals and are asked to rank order the adults from most to least important in playing a role in their lives.

Educational level of mentor

Mentors' education level was assessed by asking: "How far did this person go in school?" Responses range from "Less than a high school graduate," =1 to "More than a 4-year college degree (example, Master's, doctoral, law)" =5.

Support for education.

Using Sánchez et al.'s (2008) educational support measure, participants were asked "How does this person support and guide you in your education?" They were asked to check all forms of support that the mentor provided in their education (yes=1, no=0). The options included "gives me things for school (for example, money, clothes, food)," "emotional support around school issues (for example, encouragement, listening, cares for me)," "Directive guidance in school (for example, gives advice, asks questions, tutors or teaches)," "Role modeling (watching his/her behavior guides me)," Shares specific information about education or his/her life's experiences in education," "Physical assistance (shares tasks with me) on school things," "By doing fun and social activities with me (for example, go to the movies)," and "Other (please explain)." Total forms of support were calculated for each mentor by adding the types of support endorsed.

Educational and growth-oriented activities with mentors

Using the Growth Focus subscale of the Youth Mentoring Survey (Harris & Nakkula, 2004), participants were asked how often they engaged in growth-oriented activities, such as educational activities, with their mentors. This subscale contains six items which ask participants how often they do a given activity when they see their important adults. Response options range from "Never" =1 to "Every time" =5. Items include "Talk about how you are doing at school," "Work on school assignments or projects together," and "Do activities that teach you something or make you think (like reading, puzzles, educational games, etc)." The Growth Focus subscale had good reliability (Cronbach's alpha=0.83).

Academic achievement

School personnel provided participants' cumulative unweighted GPA for the fall and spring semesters, and attendance data from school records. The GPA was measured on a 4.0 scale. This study used the spring semester GPA, which is an average of the students' GPAs across the entire school year. Attendance data included total days present for the given academic year.

Educational aspirations and expectations

Two questions were asked to assess aspirations and expectations based on a modified measure used by Stevens, Putchell, Ryu, and Mortimer (1992). Educational aspirations were measured by asking, ''If it were up to you, how far would you like to go in school?'' with responses ranging from "less than a high school graduate" =1 to "more than a four-year degree (example, Master's, doctoral, law)" =5. Expectations were assessed by asking, "Some people do not get as much education as they would like, but other people get the level of education they would like. What is the highest level of schooling you *really* think you will finish?'' with the same response scale.

Academic Motivation

The Intrinsic and Extrinsic Motivation Scales (Lepper, Corpus & Iyenger, 2005) was used to assess academic motivation. This 33-item measure asks students to rate the degree to which both intrinsic and extrinsic reasons independently account for their academic behaviors in the classroom. Responses are on a 5-point scale and range from "Not at all true for me" =1 to "Very true for me" =5. The intrinsic motivation scale (17 items) has 3 subscales: a) preference for challenge, b) focus on curiosity and c) desire for independent mastery. Sample items from each subscale respectively include: "I like hard work because it is a challenge," "I ask questions in class because I want to learn new things," and "I like to try to figure out how to do school

assignments on my own." This scale had good reliability (Cronbach's Alpha = .93) The extrinsic motivation scale (16 items) has 3 subscales: a) desire for easy work, b) dependence on teacher and c) desire to please teacher. Sample items from each subscale respectively are "I like easy work that I am sure I can do," "When I don't understand something right away I want the teacher to tell me the answer," and "I read things because the teacher wants me to." This scale also had good reliability (Cronbach's Alpha = .86) A mean intrinsic score and mean extrinsic motivation score was calculated for each participant, as per Lepper et al.

CHAPTER III

RESULTS

Descriptive Statistics

On average, participants endorsed 4.44 (*SD* = 3.77) stressors out of the 24 possible stressors on the MESA scale. Table 1 displays the most common stressors endorsed.

Table 1.

Most common stressors endorsed

Item	*n*	%
Had an argument or a fight with a friend	205	48.7
Close family member was seriously ill or injured	182	43.2
Had something of value stolen	153	36.3
Saw a student who was treated badly or discriminated against because of his/her race/ethnicity	149	35.4
Close family member died	137	32.5
Other kids tried to fight you	135	32.1
Your parent lost his/her job	108	25.7
Heard other people making jokes about your racial/ethnic group	98	23.3
Your parents separated or divorced	84	20
Close friend died	71	16.9

Table 2 illustrates the descriptive statistics for coping efficacy and the academic variables. As shown in the table, participants' report of their self-efficacy was generally between "a little good" and "pretty good." See Table 2 for means and standard deviations of descriptive variables. Students mean GPA was around a C and their average days present in school was 149 out of 180 possible days. Participants had generally moderate levels of intrinsic and extrinsic motivation. Finally, participants' average educational aspirations was between a 4-year college degree and more than a 4-year college degree, but they had lower educational expectations, which was between a technical school/2-year college degree and 4-year college degree.

Extrinsic motivation was significantly negatively correlated to intrinsic motivation ($r(356) = -.21$, $p = .00$) and educational expectations ($r(344) = -.12.$, $p = .02$), and non-significantly negatively correlated to educational aspirations ($r(358) = -.04$, $p = .41$). Based on theoretical and empirical grounding, I decided to reverse the score on the extrinsic motivation scale in order to make it fit better with the rest of the motivation for education factor.

Table 2.

Means and *SD* of variables included in primary analyses

	M	*SD*
Coping Efficacy	1.85	0.57
GPA	2.41	0.90
Intrinsic Motivation	3.16	0.83
Extrinsic Motivation	2.97	0.73
Aspirations	4.23	0.92
Expectations	3.60	1.07
Days present	148.84	27.00

Presence and number of natural mentors

Participants were able to name up to three natural mentors. Two hundred and ninety-eight (70.6%) participants reported having at least one natural mentor. Forty-nine participants (11.6%) reported having one natural mentor, 59 (14.0%) reported having two mentors, and 190 (47.6%) reported having three mentors. Two hundred twenty-five (75.4%) of the mentors reported were familial, including older siblings ($n = 115$, 38.7%), aunt/uncle ($n = 59$, 19.9%), cousins ($n = 30$, 10.1%), and grandparents ($n = 20$, 6.7%). Seventy-three (24.6%) natural

mentors were non-familial, including older friends (*n* = 34, 11.4%), teachers (*n* = 13, 4.4%), other adults at school (*n* = 5, 1.7%), and pastor/minister/priests (*n* = 2, 0.7%).

Education level of mentor

Mentors varied widely in terms of their education level. Among students who reported having at least one natural mentor, the mean mentor education level reported was 2.71 (*SD* = 1.20) on a scale where 2 = high school graduate or GED and 3 = Technical college or 2-year degree. One hundred and fifteen (38.6%) of mentors had graduated from high school, 47 (15.8%) had less than a high school degree, 29 (9.7%) had completed a 4-year college degree, 17 (5.7%) had completed a two-year college degree or technical school, and 14 (4.7%) had completed more than a 4-year college. Interestingly, 75 participants (25.2%) did not know their mentor's education level.

Support for education

Among students who reported having at least one natural mentor, the most highly ranked mentor provided a mean of 4.73 (*SD* = 1.90) forms of support, out of a possible 8. The most common forms of support given across a participant's mentors were: emotional support (*M* = 2.36, *SD* = 1.00), directive guidance (*M* = 1.93, *SD* = 1.14), informational support (*M* = 1.87, *SD* = 1.08), and having fun together (*M* = 1.81, *SD* = 1.17).

Educational and growth-oriented activities with mentors

Participants reported that their mentors engaged with them in educational or growth oriented activities between "half the time" and "more than half the time." (*M* = 20.50, *SD* = 5.12). The most common activities were: "learn about things that interest you" (*M = 3.75*, SD = 1.05), "talk about how to be a good person" (*M* = 3.70, *SD* = 1.13), "talk about how to behave

well and stay out of trouble" (M = 3.55, SD = 1.12), and "talk about how you are doing at school (M = 3.48, SD = 1.09), on a scale where 3 = "half the time" and 4 = "more than half the time."

Primary Analyses

In order to conduct structural equation modeling for Theoretical Model 1 (see Figure 1), Bollen's (1989) two-step approach was utilized. First, a measurement model was developed based on the theoretical model and tested to see whether the items loaded properly on the latent factors.

Next, the scale of each latent factor was set by constraining one of the factor loadings to one. However, when running the measurement model for Theoretical Model 1, one of the standardized regression coefficients in the model was above 1, indicating a problem with the model. In order to address this issue, the scale was set instead by constraining the latent variance of the Academic Achievement variable to zero, rather than constraining the factor loadings to one (Byrne, 2010). The factor loadings of GPA and Attendance were also constrained to be equal to each other (see Figure 3). This model did not fit the data well ($\chi 2$ = 53.958, p = .000; RMSEA = 0.109, CFI = 0.883, TLI = 0.727).

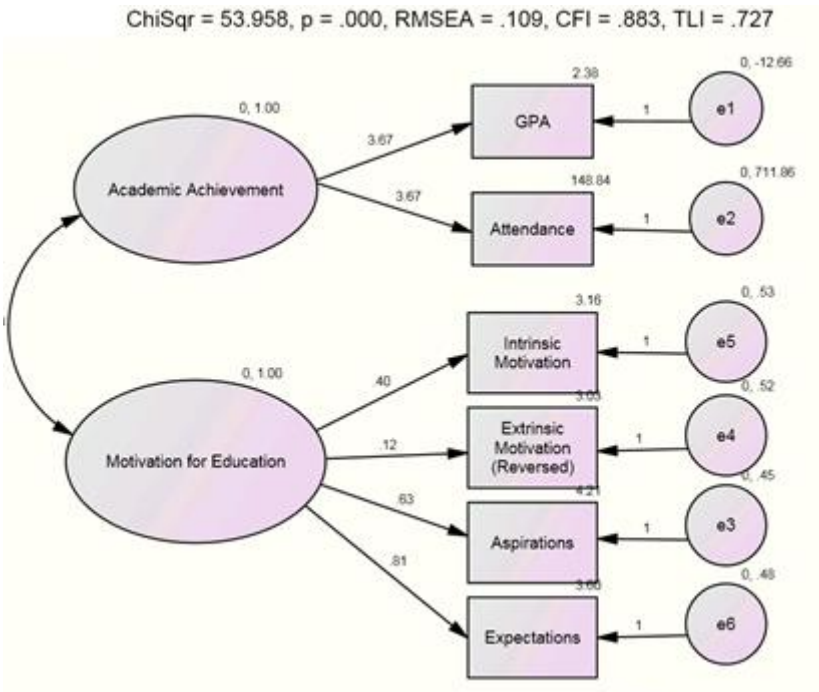

Figure 3. Measurement model of theoretical model 1.

Next, due to large differences in scale between the attendance variable and the GPA variable, the model was run again using a standardized version of the attendance variable. The model fit the data reasonably well ($\chi 2$ = 31.119, p = .000; RMSEA = 0.076, CFI = 0.953, TLI = 0.889, see Figure 4).

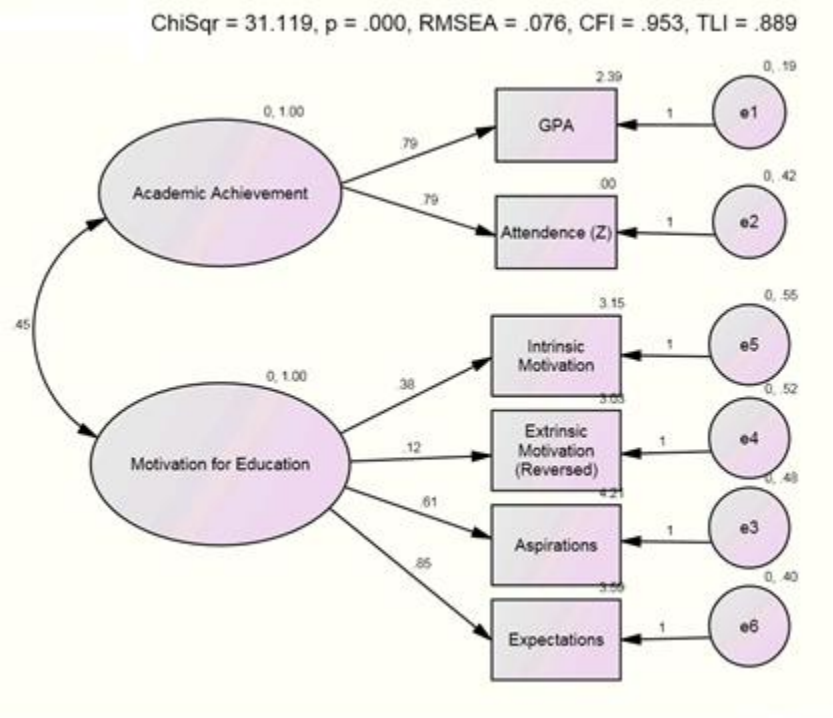

Figure 4. Measurement model of theoretical model 1 with standardized attendance.

In an attempt to improve model fit, the low-loading Extrinsic Motivation variable was removed, but model fit did not improve substantially ($\chi 2$ = 20.638, p = .001; RMSEA = 0.086, CFI = 0.966, TLI = 0.897), so the original measurement model was retained.

Next, the structural regression model based on the theoretical Model 1 was run. The model fit was poor ($\chi 2$ = 97.06, p = .000, RMSEA = .073, CFI = .879, TLI = .734).

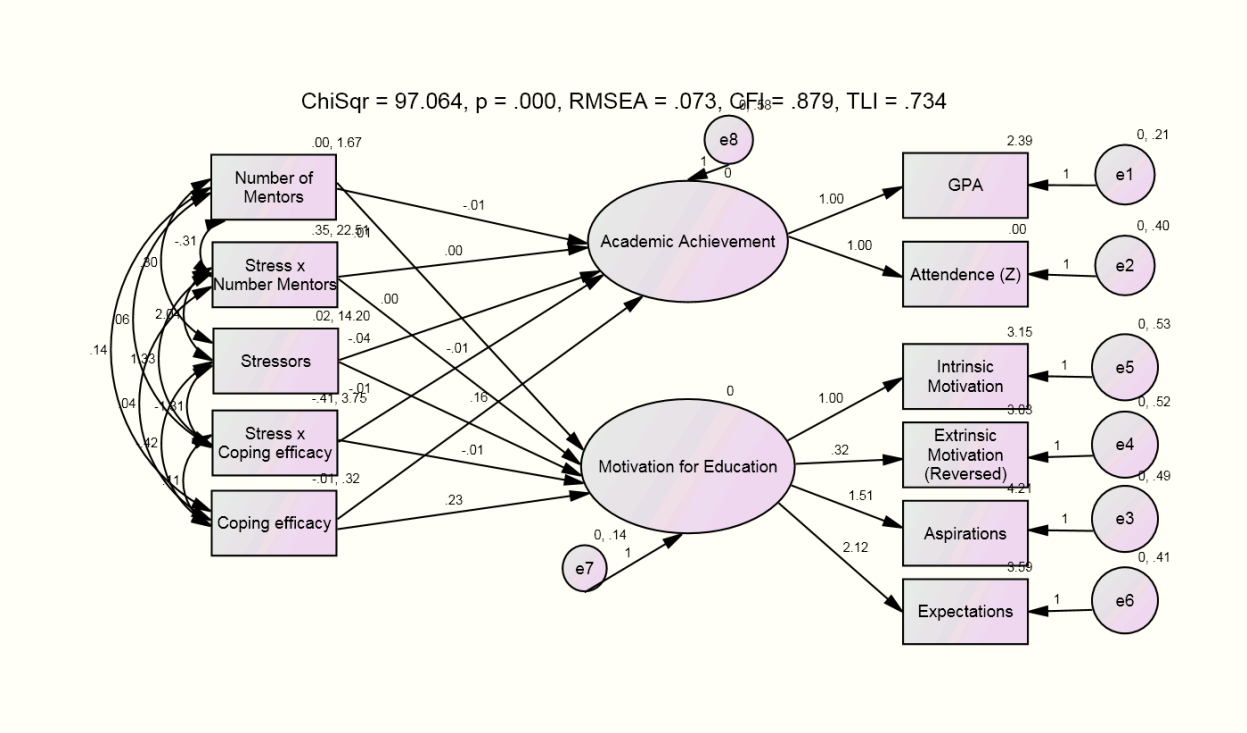

Figure 5. Structural regression model based on theoretical model 1.

The only significant paths were between total stressors and academic achievement and between coping efficacy and motivation for education. In order to improve model fit, the model was trimmed in several ways. First, the error terms for Intrinsic and Extrinsic motivation, and for Aspirations and Expectations were correlated, because they are measured using the same scales. This improved the model fit substantially ($\chi 2$ = 74.911, p = .000, RMSEA = .063, CFI = .915, TLI = .800) (See Figure 6).

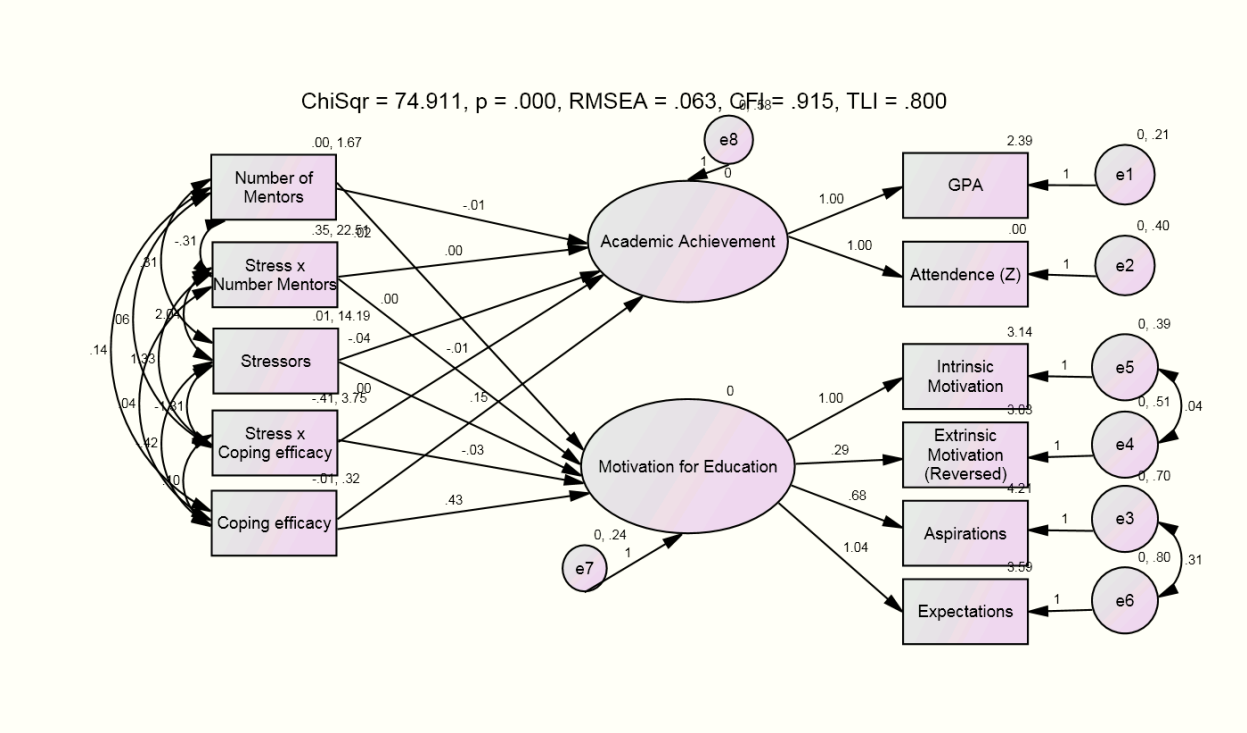

Figure 6. Trimmed structural regression model based on theoretical model 1.

In an attempt to find a model with a better fit, the model was trimmed based on examining the insignificant paths. Because none of the paths between the mentoring variables and the outcome variables were significant, the model was examined without the mentoring variables (see Figure 7), but the model fit was less good ($\chi 2$ = 73.259, p = .000, RMSEA = .80, CFI = .901 TLI = .777).

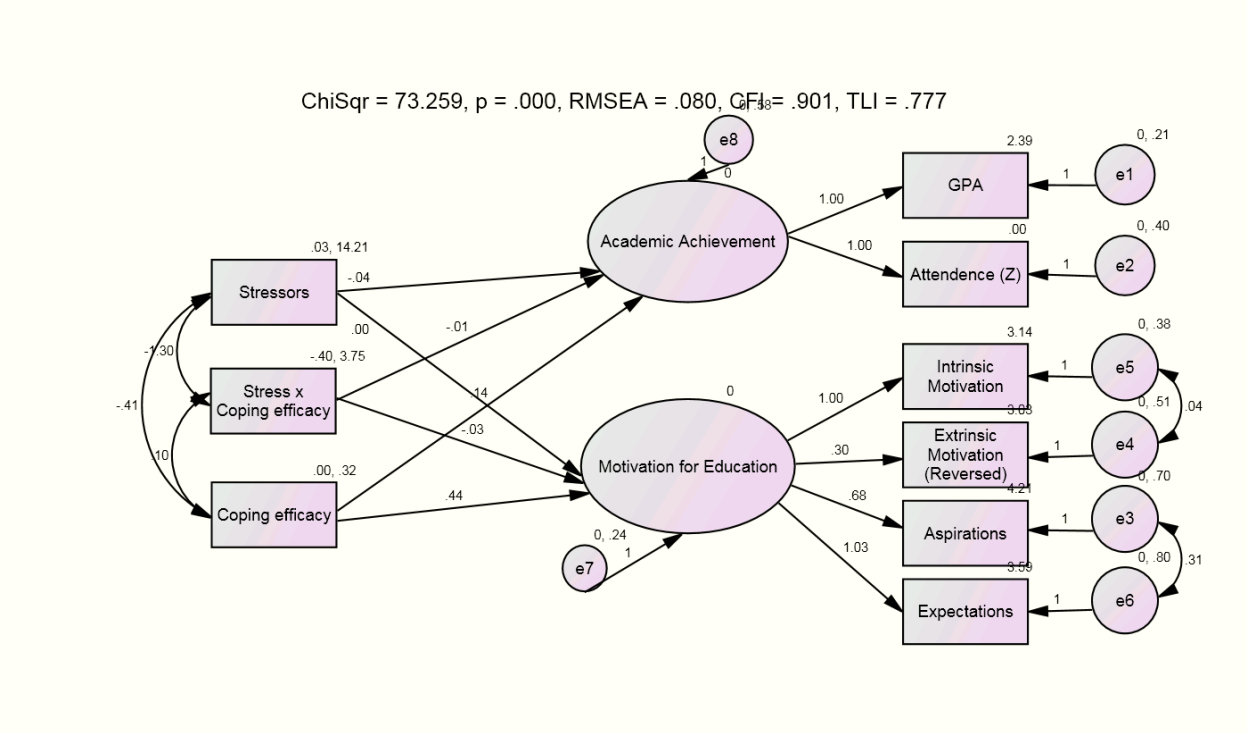

Figure 7. Trimmed structural regression model 1 without mentoring variables.

Next, because none of the paths between the moderating variables (Stress x Number of Mentors and Stress x Coping Efficacy) and the outcome variables were significant, the model was examined without moderating variables (see Figure 8).

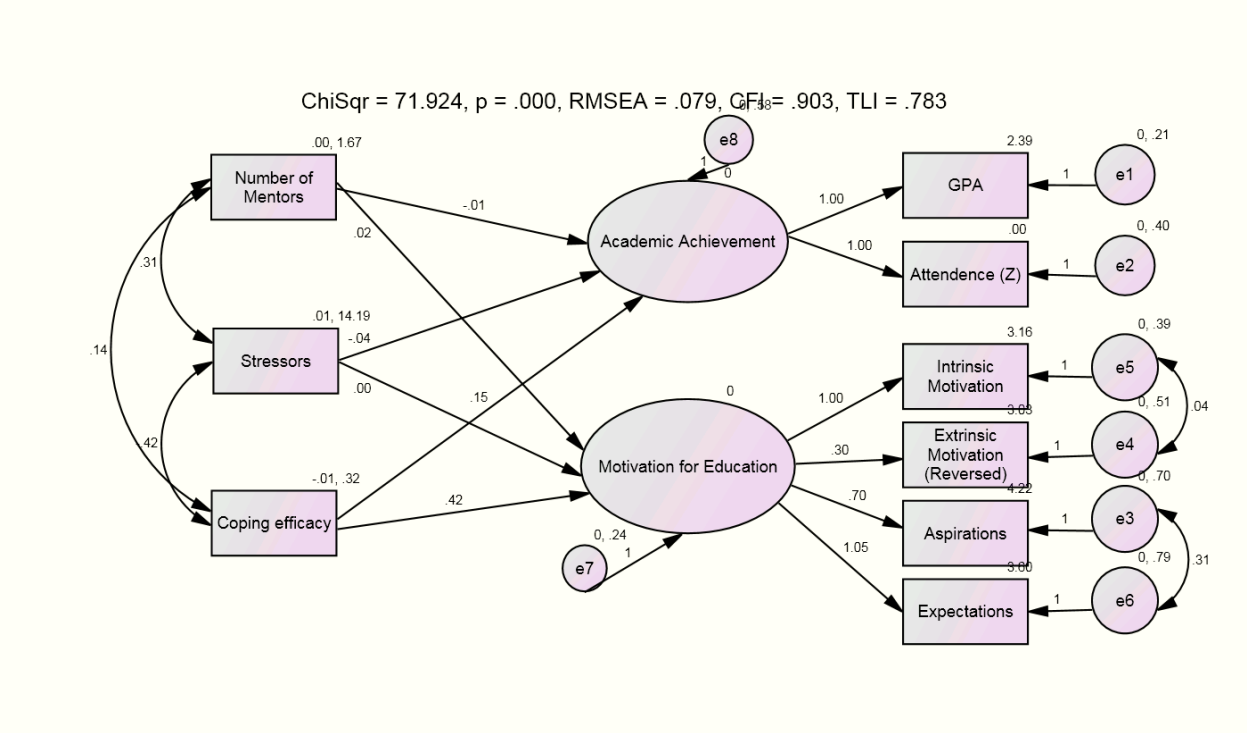

Figure 8. Structural regression model 1 with no moderators.

However, the model fit was not improved over the full model ($\chi 2$ = 71.924, p = .000, RMSEA = .079, CFI = .903, TLI = .783). Next the model was examined the model without mentoring variables or moderators (see Figure 9), but the model fit was not improved ($\chi 2$ = 70.703, p = .000, RMSEA = .090, CFI = .896, TLI = .767).

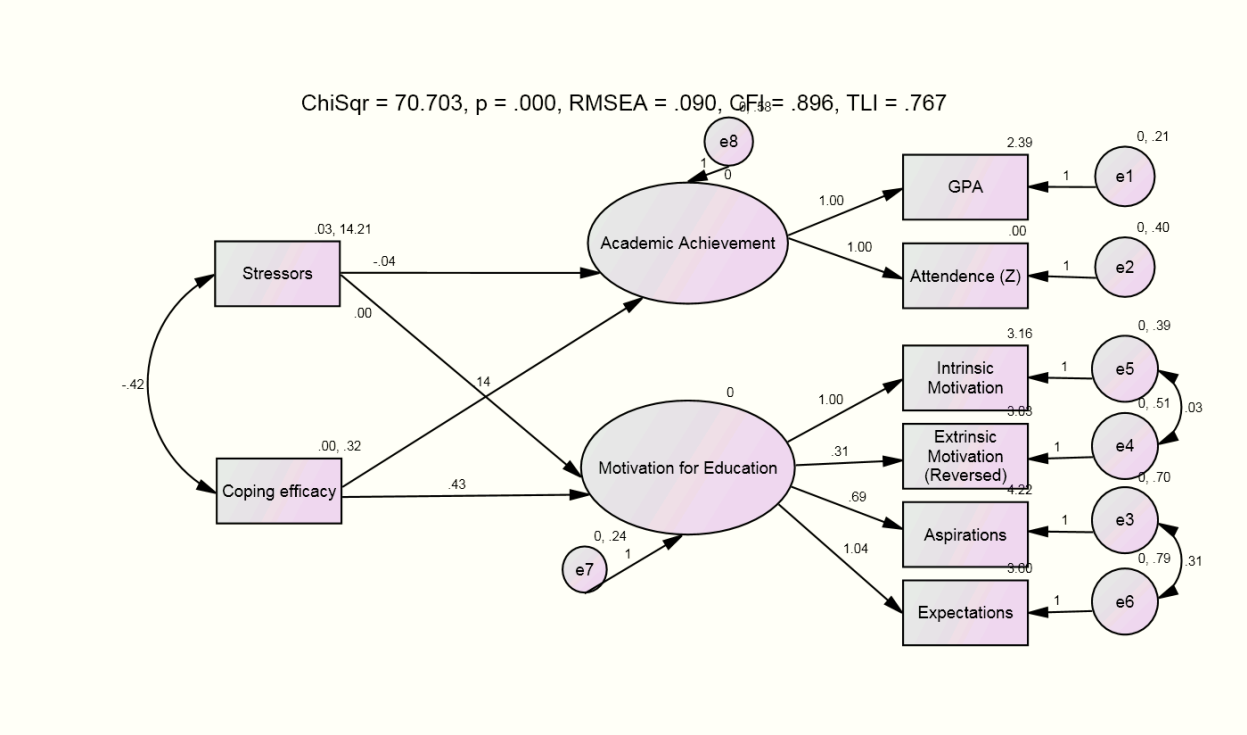

Figure 9. Structural regression model 1 without moderators or mentoring variables.

Based on the fact that trimming the model did not improve fit, the best fitting model with all of the variables was retained (see Figure 6). In this model, more stressors predicted slightly lower academic achievement (r = -.04, p = .001), partially supporting Hypothesis 1a, that total stressors endorsed will predict poorer academic outcomes, as measured by GPA, attendance, academic aspirations and expectations, and academic motivation. Higher coping efficacy predicted higher motivation for education (r = .43, p<.001), and there was a trend that higher coping efficacy predicted higher academic achievement (r = .15, p=.054). These findings partially support Hypothesis 1b, that coping efficacy will be associated with better academic outcomes, as measured by GPA, attendance, academic aspirations and expectations, and

academic motivation. The findings do not support Hypothesis 1c, that more mentors identified by participants will be associated with better academic outcomes, as measured by GPA, attendance, academic aspirations and expectations, and academic motivation. The findings also do not support Hypothesis 1d and 1e, that coping efficacy and number of mentors will serve as moderators of the relationship between the number of stressors and academic outcomes.

Next, in order to conduct structural equation modeling for Theoretical Model 2 (see Figure 2), Bollen's 2-step approach was used. Initially a measurement model was developed based on the theoretical model and tested to see whether the items loaded properly on the latent factor. However, the measurement model resulted in model fit indices over 1.0, indicating a problem with the model. In order to do address this, a median split was used to divide participants into a high stress group and a low stress group, and a multiple group analysis was conducted in AMOS in order to determine if there were differences in how the model fit the two groups. The measurement model fit the data adequately ($\chi 2$ = 1.521, p = .218 RMSEA = .035, CFI = .948, TLI = .685).

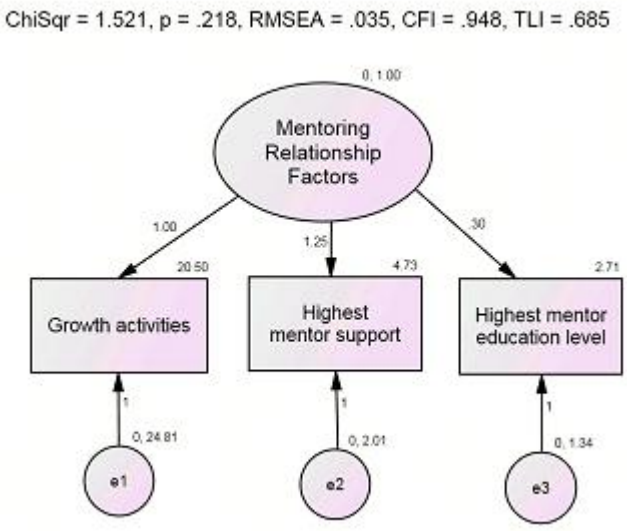

Figure 10. Measurement model for theoretical model 2.

Next, the structural model was examined to determine whether the groups differed on this model. This initial model resulted in a Heywood case. In order to address the Heywood case, the errors were correlated, but the model still resulted in a Heywood case. Next the model was trimmed in order to address the Heywood case. The best fitting model ($\chi 2$ = 59.749, p = .008 RMSEA = .041, CFI = .899, TLI = .843) compared high and low stress participants and included only relationship factors and motivation for education. The $\chi 2$ value comparing the fit of the two models was non-significant ($\chi 2$ = 24.091, df = 23, p = .399), indicating no difference in model fit for the two groups. This model had no significant paths, indicating no significant relationship between the latent variables.

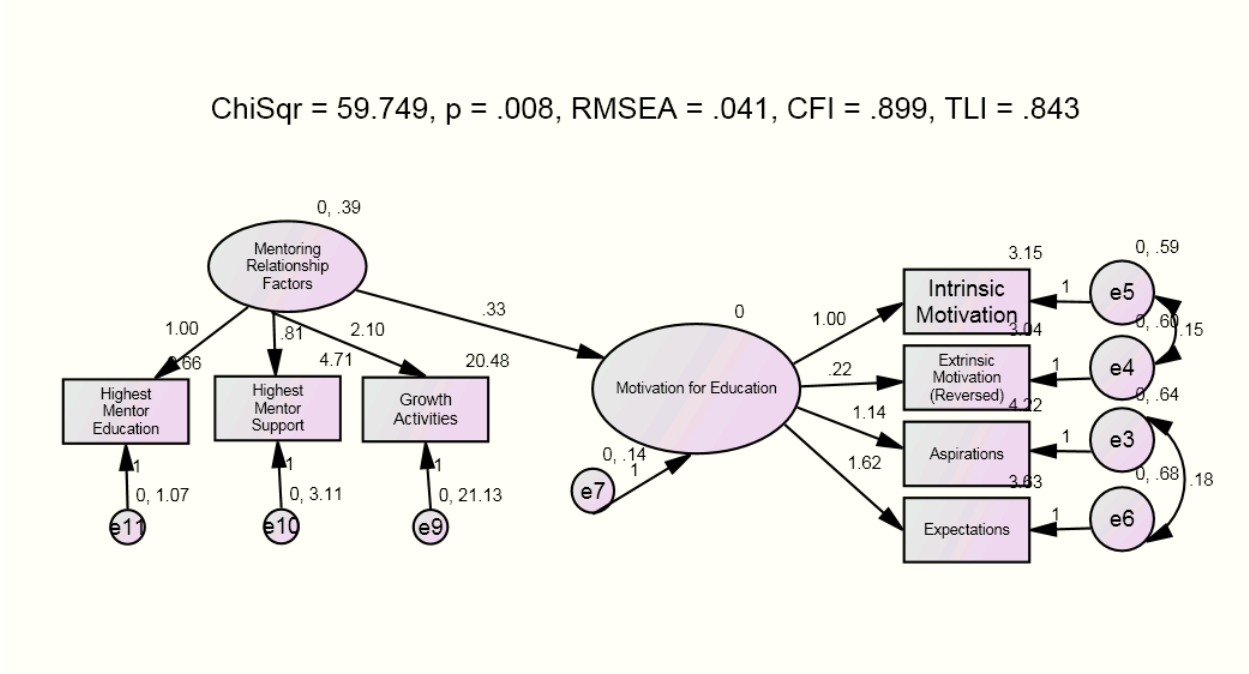

Figure 11. Trimmed structural regression model 2.

CHAPTER IV

DISCUSSION

The current study sought to examine the roles of stressors, natural mentoring relationships and coping efficacy in the academic outcomes of a sample of urban, low-income Latino adolescents. Latinos are both the largest ethnic/racial minority group enrolled in U.S. schools, and the group that currently has the lowest educational and occupational attainment (Huber et al., 2000). Researchers have found that one of the factors that plays a negative role in the academic achievement of youth is the experience of stressors, which was examined in the current study. Using a resiliency framework (Rutter, 1990; Wright & Masten, 2005; Fergus & Zimmerman, 2005), the roles of natural mentoring relationships and coping efficacy were investigated to determine not only the potentially positive role in Latino youth's academic outcomes, but to study whether they attenuated the negative effects of stressors. The study hypotheses were partially supported. Coping efficacy was positively associated with academic outcomes, but did not buffer the effects of the stressors experienced by youth. Natural mentoring was not associated with positive academic outcomes.

Experience of Stressors

Study findings support previous research indicating that urban, low-income, Latino youth experience a variety of stressful life experiences. Research indicates that impoverished children are more likely than non-impoverished children to be exposed to family turmoil, violence, separation from their families, instability, and chaotic households (Evans, 2004). When asked about stressful events that had occurred over the last three months, almost one-third of participants in this study reported that a close family member died, over ¼ of students reported

that one of their parents lost their job, and approximately 1/5 of students reported that their parents separated or divorced.

Research has demonstrated that youth in inner city neighborhoods are exposed to high levels of violence (Gorman-Smith & Tolan, 1998; Youngstrom et al., 2003). Over one-third of participants in this study reported having something of value stolen from them, and almost one-third reported that other kids tried to fight them within the last three months.

Previous studies have found that Latino youth may be particularly vulnerable to stressors that are associated with their ethnic background, such as stressors associated with acculturation, immigration, and discrimination (Vega, Zimmerman, Gil, Warheit, & Apospori, 1993; Gil, Vega & Dimas, 1994; Suarez-Orozco & Suarez-Orozco, 2002). Although the MESA is not designed to specifically address acculturation or immigration stressors, it does have a discrimination subscale. Over one-third of participants reported that in the last three months they saw another student who was treated badly or discriminated against because of his/her race or ethnicity, and almost one-quarter of participants reported that in the last three months they heard others making jokes about their racial/ethnic group. This is particularly notable because most participants attended a largely ethnically homogenous school in a fairly ethnically homogenous neighborhood.

This study provided limited support for the hypothesis that more stressors lead to negative academic outcomes in youth (e.g., Alva & Reyes, 1999; Cunningham et al., 2002; Gonzalez et al., 2001). When examining a model including all participants, more stressors significantly predicted slightly poorer outcomes on an “academic achievement” variable, which was composed of GPA and attendance. This finding supports previous research that experiencing more stressful life events is associated with having a lower GPA (Cunningham et al., 2002;

DuBois et al., 1992; Gonzalez et al., 2001; Prelow et al., 2007). Interestingly, more stressors did not predict outcomes on motivation for education, a variable comprised of academic motivation and educational aspirations and expectations. This is surprising given that past research has demonstrated an impact of marginalization and poverty on educational aspirations and expectations, often increasing educational aspirations and decreasing educational expectations (MacLeod, 1987; Qian and Blair, 1999; Roderick, 2003). One factor that may explain these findings is that aspirations and expectations are not always tied to performance in low-income youth (MacLeod, 1987, Ogbu, 1993; Yowell, 2002; Feuer, 2009). Youth who experience high levels of stressors may continue to hold high expectations and aspirations, even if they become unrealistic. It is also possible that some of the nuanced impact on aspirations and expectations may have been cancelled out by including them in the same latent construct. Future research could use multiple measures of aspirations and expectations, or measures with more items in order to be able to separate out the constructs.

Natural Mentoring

Approximately 70% of participants in the current study reported having at least one natural mentor. This is consistent with Spencer's (2007) review, which reported that between 53 and 85 percent of youth report having a natural mentor. Over 75% of natural mentors named in this study were familial, which is a much higher percentage than found in Spencer's review of the mentoring literature, but is similar to the 75% found in Sanchez et al.'s (2008) examination of natural mentoring relationships among low-income urban Latino youth. Almost half of participants reported having at least three natural mentors (which is the most that they were able to name), while approximately 12% named one mentor and 14% named two mentors. This

reinforces Zimmerman and colleagues' (2005) recommendation that future studies should allow the opportunity for adolescents to identify more than one natural mentor.

The role of natural mentoring in academic outcomes

When examining a model including all participants, there was no association between number of mentors reported and academic outcomes, and number of mentors did not moderate the relationship between stress and academic outcomes. Therefore, the data do not support viewing presence or number of mentors as a compensatory or protective factor in resilience. There are several reasons that number of mentors may not have played a more important role in academic outcomes, despite previous research demonstrating that natural mentors are often helpful in achieving academic success (e.g., Collins et al., 2010; DuBois & Silverthorn, 2005a; Erikson et al., 2009; Sanchez et al., 2008). First, the vast majority of mentors named were familial, with many in the role of older siblings. Previous research has shown that having non-familial mentors is associated with better academic outcomes than having familial mentors (Sanchez et al., 2008). Additionally, Packard et al. (2000) found that mentors at school or in the community were more likely to provide youth with instrumental support for their education. Siblings in particular may be facing similar challenges and stressors as the participants, and they may be less able to help them negotiate these stressors. Many previous studies have not allowed youth to name older siblings as natural mentors (DuBois & Silverthorn, 2005a, Zimmerman et al., 2002), which may explain some of the differences in outcomes. Additionally, most youth in this study who endorsed having a mentor named three mentors. This is very different than the findings of Sanchez et al., 2008, where youth were most likely to name one mentor, and least likely to name three mentors. Perhaps youth felt compelled to fill all three slots, and therefore named people who did not truly fit the role of a natural mentor.

Additionally, among the non-familial mentors named, most were older friends, rather than teachers, pastors/ministers/priests, or other adults at school. In fact, on average, natural mentors in this study had obtained less education than participants aspired to or expected to obtain, perhaps making it more difficult for them to guide participants in their academic pursuits. Previous research found that higher mentor educational level was associated with higher GPA's and higher educational aspirations and expectations in Latino youth (Sanchez et al., 2008). Furthermore, previous research demonstrates that having teachers as mentors may be particularly helpful for disadvantaged youth (Erikson et al., 2009), and in this study less than 5% of natural mentors named were teachers. In order to better understand the impact of various facets of the mentoring relationship on academic outcomes, I next examined just the subset of youth who reported having at least one mentor, and explored the impact of certain mentoring relationship factors on academic outcomes, in the context of stressors.

Impact of mentoring factors on academic outcomes

In order to examine the specific mentoring factors that might play a role in protecting against stressors, participants who reported having at least one natural mentor were examined in a separate model. Despite the finding that the number of mentors did not impact educational outcomes, it was expected that certain aspects of the mentoring relationship might play a role on these outcomes. In the final trimmed model, the impact of mentoring relationship factors (i.e., mentor support for education, highest mentor education, and educational activities with mentors) on motivation for education (i.e. intrinsic motivation, extrinsic motivation, aspirations, and expectations) was examined for participants who experienced high and low levels of stress. In this model, mentor relationship factors did not significantly predict motivation for education. This is surprising, given that researchers have by-in-large found a positive impact of mentoring

on psychosocial outcomes (e.g., Werner & Smith, 1982; Werner, 1989; Rhodes et al., 1992; Rhodes et al., 1994, Zimmerman et al., 2002). One reason for this finding is that these authors examined psychosocial outcomes (e.g., symptoms of depression and anxiety), rather than academic outcomes. It is possible that mentoring plays a slightly different role when examining academic outcomes. It is also possible that other factors in the mentoring relationship (e.g., quality, general support, proximity, frequency) may play a more important role than the specific education-related aspects of the relationship.

Unfortunately, this study was not able to examine whether mentoring relationship factors moderated the relationship between the experience of stressors and academic outcomes, due to difficulties finding a model that fit the data well.

The role of coping efficacy on academic outcomes

It was expected that coping efficacy would predict higher motivation for education and academic achievement, and that coping efficacy would moderate the relationship between experience of stressors and those variables. As hypothesized, when examining a model including all participants, higher coping efficacy predicted higher motivation for education, and there was a trend that higher coping efficacy predicted higher academic achievement. These findings provide some support for understanding coping efficacy using the compensatory model of resilience. Although coping efficacy has been associated with better psychological adjustment (Cummings et al., 1994), fewer depressive symptoms (Prelow et al., 2006), and reduced psychological distress (Manne & Glassman, 2000), this is the first study to my knowledge to find an association between coping efficacy and educational outcomes. The current research suggests that coping efficacy may provide some youth with a buffer that lessens the negative effects of stressors on academic achievement. However, there was no support for the hypothesis that coping efficacy

would serve as a moderator of the relationship between experience of stressors and academic outcomes. Therefore, the data does not support a protective factors model of resilience.

Strengths, limitations, and future directions

Strengths

This study has several strengths that should be noted. It is the first study to examine the relationship between stressors, coping efficacy, mentoring, and academic outcomes in low-income Latino youth. In fact, it is one of the only studies to examine coping efficacy in Latino youth, and one of the only studies to examine the impact of coping efficacy on academic outcomes. This study is also one of the first to examine the impact of mentor education level, mentor support for education, and the educational activities that mentors and mentees engage in among Latino youth.

This study is also one of the first to examine the impact of stressors, mentoring, and coping efficacy on both objective and subjective academic outcomes, rather than simply objective outcomes, such as GPA or dropout rates. This provides a more nuanced view of the impact of these factors on youth's outcomes.

This study also uses structural equation modeling so that the unique contribution of each variable can be explored in the context of all other variables.

Limitations of study

This study also had several limitations that should be noted. Although the MESA has been used with low-income urban youth, it is not a measure specific to a Latino population, and therefore may not address specific stressors of that community, including acculturative stressors and immigration stressors. Additionally, the survey only included one measure of stressors and one measure of coping efficacy. This study would have been stronger if I had used several measures of stressors and several measures of coping efficacy.

Additionally, this study only examines youth at one time-point, rather than looking at the role of coping efficacy and mentoring over time. This makes it difficult to draw conclusions about causality. Therefore, results of this study should be seen as exploratory, and further research should be conducted to replicate these results.

One other limitation of this study is the way that youth were asked to respond to the scale about educational activities they participate in with their mentors. Rather than asking about each mentor individually, youth were asked to think about all of their natural mentors. A participant who engages in many educational activities with one of their mentors but none with their other mentor may have been confused about how to respond. Additionally, a participant who engages in many educational activities with one mentor but none with their others may appear to have lower scores than a participant who only names one mentor, with whom they engage in many educational activities.

Finally, the survey was conducted in a classroom environment, and not all youth in the classroom had consented to participate in the survey. This created an environment that was at times loud and distracting, and may have influenced the ability of participants to concentrate on the survey.

Recommendations for future research

This exploratory study suggests that coping efficacy may play a role in predicting academic outcomes. Future research should continue to examine the impact of coping efficacy on academic and psychosocial outcomes. Longitudinal research would help to establish causality between these variables. Additionally, future research should examine stressors and coping efficacy using several different measures, so as to establish a more robust construct. Future research should also continue to examine other facets of mentoring relationship (including

quality, closeness, familial vs. non-familial, duration, and proximity) to examine the impact of these factors on academic outcomes. Future research might also use other subjective and objective academic outcomes, such as dropout rates and perceived value of education. Future qualitative research might also help to better understand the intricacies of how factors such as coping efficacy and aspects of natural mentoring play a role in facilitating better academic outcomes.

Recommendations for future interventions

This study also found coping efficacy to be associated with positive academic outcomes, which has not been studied previously. Interventions aimed at increasing coping skills among low-income youth, such as ACT and ADAPT (Connor-Smith, Polo, Jensen, & Weisz, 2002) and Behavioral and Affective Skills in Coping (BASIC; Weisz & Bearman, 2010), might increase youth's sense of their own efficacy in coping with the difficult stressors they face, which may in turn improve their academic outcomes.

Conclusion

In conclusion, this study supports viewing coping efficacy as a compensatory factor of resilience, but does not support viewing natural mentoring as a compensatory factor. To the best of my knowledge, this is the first study to find that coping efficacy impacts academic outcomes. Natural mentors in this study were generally familial or similar-aged peers, which may explain why they did not protect youth against negative academic outcomes.

This study does not support viewing coping efficacy or natural mentoring as protective factors for low-income Latino youth. While these factors can be helpful for youth, in this study they do not change the relationship between the experience of stressors and academic outcomes. This may be because the relationship between stressors and academic outcomes was not very

strong, making it difficult to detect a difference. Future research should continue to examine these relationships using different measures, and should continue to examine aspects of the mentoring relationship that may play a role in promoting positive outcomes. This research supports promoting interventions that increase coping efficacy and that increase the educational support and focus of mentoring relationships in Latino youth.

CHAPTER V

SUMMARY

This paper used Resiliency theory to examine natural mentoring and coping efficacy as protective factors that may buffer the negative impact of stressors on academic and psychosocial outcomes in urban, low-income, Latino youth. Research has demonstrated that natural mentoring may serve a protective role for youth who are experiencing high levels of stressors, and that coping efficacy may correlate with positive outcomes. The present study used Structural Equation Modeling to test the compensatory and protective factors models of resilience to examine the ways in which stress, coping efficacy and natural mentoring interact to predict a variety of academic outcomes for 422 urban, low income Latino youth.

Results demonstrated support for viewing coping efficacy as a compensatory factor, but do not support viewing natural mentoring as a compensatory factor, or viewing coping efficacy or natural mentoring as protective factors. These results address gaps in the literature on the characteristics of natural mentoring relationships that predict positive academic outcomes, and on the role of coping efficacy in promoting positive academic outcomes.

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APPENDIX A
Demographics

Gender

What is your gender? □ Male □ Female

Age

What is your birth date? _____, _____, 19_____

M

Race/Ethnicity

What is your race/ethnicity? (CHECK ALL THAT APPLY)

□ Latino(a) (Puerto Rican)
□ Latino(a) (Mexican)
□ Latino(a) (other – please specify _____)
□ African American/Black
□ Asian/Pacific Islander (please specify _____)
□ American Indian/Native American
□ White/Caucasian
□ Other (please specify) _____

Generational Status

Where was each person born? Circle one number for each.

	Outside the U.S. (**please write the country**)	Illinois	Other U.S state	don't know
1.You	1 _____	2	3	4
2.Your mother	1 _____	2	3	4
3.Your mother's mother	1 _____	2	3	4
4.Your mother's father	1 _____	2	3	4
5. Your father	1 _____	2	3	4
6.Your father's mother	1 _____	2	3	4
7.Your father's father	1 _____	2	3	4

Experience of Stressors

Now we would like to ask about personal experiences you have had.
DIRECTIONS*:* For the items listed below, circle whether these situations happened to you in the past 3 months.

1.	Your parent lost his/her job	**YES**	**NO**
2.	You had a serious problem with a teacher or principal	**YES**	**NO**
3.	You were threatened with a weapon	**YES**	**NO**
4.	Your parents separated or divorced	**YES**	**NO**
5.	You did poorly on an exam or school assignment	**YES**	**NO**
6.	You were excluded from a group because of your race, ethnicity, or culture	**YES**	**NO**
7.	Close family member was seriously ill or injured	**YES**	**NO**
8.	Kids made fun of you because of the way you look	**YES**	**NO**
9.	A teacher or principal criticized you in front of other students	**YES**	**NO**
10.	You were unfairly accused of something because of your race or ethnicity	**YES**	**NO**
11.	A close family member died	**YES**	**NO**
12.	You saw a student who was treated badly or discriminated against	**YES**	**NO**
13.	You moved far away from family and friends	**YES**	**NO**
14.	Your parent(s) remarried	**YES**	**NO**
15.	You had something of value (valued over $5) stolen	**YES**	**NO**
16.	You were pressured to do drugs or drink alcohol	**YES**	**NO**
17.	You heard other people making jokes about your ethnic or racial group	**YES**	**NO**
18.	You were attacked by someone not in your family	**YES**	**NO**
19.	You were pressured against your will to join a gang	**YES**	**NO**
20.	Someone broke into your home or damaged it	**YES**	**NO**
21.	Friends criticized you for hanging out with other racial/ethnic groups	**YES**	**NO**
22.	Someone threatened to beat you up	**YES**	**NO**
23.	You were called a racial name that was a put down	**YES**	**NO**
24.	You had an argument or fight with a friend	**YES**	**NO**
25.	Someone put you down for practicing the traditions or customs of your race, ethnicity, culture, or religion	**YES**	**NO**
26.	Other kids tried to fight with you	**YES**	**NO**
27	Close friend died	**YES**	**NO**

Coping Efficacy

DIRECTIONS: Everyone deals with problems all the time. Sometimes things people do to handle their problems work really well to make the situation better and sometimes they don't work at all to make the situation better.

	Not at all Good 0	A Little Good 1	Pretty Good 2	Very Good 3
1. Overall, how well do you think that the things you did during the last month worked to make your problems better?	❑	❑	❑	❑
2. Overall, how well do you think that the things you did during the last month worked to make you feel better?	❑	❑	❑	❑
3. Overall, how satisfied are you with the way you handled your problems during the last month?	❑	❑	❑	❑
4. Overall, compared to other kids, how good do you think that you have been in handling your problems during the last month?	❑	❑	❑	❑
5. In the future, how good do you think that you will usually be at handling your problems?	❑	❑	❑	❑
6. Overall, how do you think that you will be at making things better when problems come up in the future? .	❑	❑	❑	❑
7. Overall, how good do you think you will be at handling your feelings when problems come up in the future?	❑	❑	❑	❑

Educational Level of Mentor

How far did this person go in school?

- ❑ Less than a high school graduate
- ❑ High school graduateor GED
- ❑ Technical school or 2-year college (associate's degree)
- ❑ 4-year college (bachelor's degree)
- ❑ More than a 4-year college degree (example, Master's, doctoral, law)
- ❑ I don't know

Educational Support Provided by Mentors

How does this person support and guide you <u>in your education</u>? (CHECK ALL THAT APPLY)

- ☐ Gives me things for school (for example, money, clothes, food)
- ☐ Emotional support around school issues (for example, encouragement, listening, cares for me)
- ☐ Directive guidance in school (for example, gives advice, asks questions, tutors or teaches)
- ☐ Role modeling (watching his/her behavior guides me)
- ☐ Shares specific information about education or his/her life's experiences in education
- ☐ Physical assistance (shares tasks with me) on school things
- ☐ By doing fun and social activities with me (for example, go to the movies)
- ☐ Other (please explain): _____

Educational and Growth-Oriented Activities with Mentor

What you do

Directions: This section asks what you do when you see your Important Adult(s). For each item, please say how often you do it by choosing a number from the scale below.

1 **Never**	2 **Less than half the time**	3 **Half the time**	4 **More than half the time**	5 **Every time**

1. Talk about how you are doing at school?	1 2 3 4 5
2. Talk about how to behave well and stay out of trouble (self-control, making better decisions, etc.)?	1 2 3 4 5
3. Learn about things that interest you (Interests are things you like or things that can keep your attention).	1 2 3 4 5
4. Work on school assignments or projects together?	1 2 3 4 5
5. Talk about how to be a good person (being honest, responsible, etc.)?	1 2 3 4 5
6. Do activities that teach you something or make you think (like reading, puzzles, educational games, etc.)?	1 2 3 4 5

Educational Aspirations and Expectations

If it were up to you how far would you like to go in school?

- ☐ Less than a high school graduate
- ☐ High school graduate
- ☐ Technical school or 2-year college (associate's degree)
- ☐ 4-year college (bachelor's degree)
- ☐ More than a 4-year college degree (example, Master's, doctoral, law)
- ☐ I don't know

Some people do not get as much education as they would like, but other people get the level of education they would like. What is the highest level of schooling you *really think* you will finish?

- ☐ Less than a high school graduate
- ☐ High school graduate
- ☐ Technical school or 2-year college (associate's degree)
- ☐ 4-year college (bachelor's degree)
- ☐ More than a 4-year college degree (example, Master's, doctoral, law)
- ☐ I don't know

Academic Motivation

HOW YOU FEEL ABOUT SCHOOL

Directions: Please circle the one answer that best describes how true each statement is for you. There is no wrong or right answer.

	Not at all true for me				**Very true for me**
1. I like hard work because it's a challenge.	1	2	3	4	5
2. I like to learn as much as I can in school.	1	2	3	4	5
3. I like to go on to new work that's at a more difficult level.	1	2	3	4	5
4. I like those school subjects that make me think pretty hard and figure things out.	1	2	3	4	5
5. I like difficult problems because I enjoy trying to figure them out.	1	2	3	4	5
6. I like difficult schoolwork because I find it more interesting.	1	2	3	4	5
7. I ask questions in class because I want to learn new things.	1	2	3	4	5

8. I do extra projects because I can learn about things that interest me.	1	2	3	4	5
9. I read things because I am interested in the subject.	1	2	3	4	5
10. I do my schoolwork to find out about a lot of things I've been wanting to know.	1	2	3	4	5
11. I work really hard because I really like to learn new things.	1	2	3	4	5
12. I work on problems to learn how to solve them.	1	2	3	4	5
13. I like to try to figure out how to do school assignments on my own.	1	2	3	4	5
14. When I don't understand something right away I like to try to figure it out by myself.	1	2	3	4	5
15. When I make a mistake I like to figure out the right answer by myself.	1	2	3	4	5
16. If I get stuck on a problem I keep trying to figure out the problem on my own	1	2	3	4	5
17. I like to do my schoolwork without help.	1	2	3	4	5
18. I don't like to figure out difficult problems.	1	2	3	4	5
19. I like to learn just what I have to in school.	1	2	3	4	5
20. I don't like difficult schoolwork because I have to work too hard.	1	2	3	4	5
21. I like easy work that I am sure I can do.	1	2	3	4	5
22. I like to stick to the assignments which are pretty easy to do.	1	2	3	4	5
23. I like school subjects where it's pretty easy to just learn the answers.	1	2	3	4	5
24. I read things because my teacher wants me to.	1	2	3	4	5
25. I do my schoolwork because teacher tells me to.	1	2	3	4	5
26. I work on problems because I'm supposed to.	1	2	3	4	5
27. I ask questions because I want the teacher to notice me.	1	2	3	4	5

28. When I don't understand something right away I want the teacher to tell me the answer.	1	2	3	4	5
29. I like to have the teacher help me with my schoolwork.	1	2	3	4	5
30. When I make a mistake I like to ask the teacher how to get the right answer.	1	2	3	4	5
31. If I get stuck on a problem I ask the teacher for help.	1	2	3	4	5
32. I like the teacher to help me plan what to do next.	1	2	3	4	5
33. I like to ask the teacher how school assignments should be done.	1	2	3	4	5

AM – Lepper et al. (2005)