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# Natural Mentoring Relationships Among Latinx Youth: The Role of Trust and Stressors

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Natural Mentoring Relationships Among Latinx Youth:  
The Role of Trust and Stressors

A Thesis

Presented in

Fulfillment of the

Requirements for the Degree of

Master of Arts

By Lidia Yanelli Monjaras-Gaytan

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Department of Psychology

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### **Biography**

Lidia Yanelli Monjaras-Gaytan was born in San Luis Potosi, Mexico on March 14, 1990. She graduated from University City High School in San Diego, California. She received her Associate of Arts degree in Psychology from San Diego Mesa Community College in 2013, and her Bachelor of Arts degree in Psychology from San Diego State University in 2014. Lidia began the Community Psychology Ph.D. program at DePaul University in 2017.

## DEVELOPING NATURAL MENTORING RELATIONSHIPS

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### **Abstract**

Mentoring is one avenue to support Latinx adolescents in their positive development. The current study aimed to (a) identify profiles of Latinx adolescents based on their interpersonal trust of adults, and (b) examine the roles of adult trust and stressors in the development and quality of natural mentoring relationships (NMRs). Participants were 347 Latinx adolescents who were surveyed in their 9th and 10th grades. Using cluster analysis, two adult trust profiles were identified: (a) Higher Trusting and (b) Less Trusting. Analyses demonstrated that there was a significant association between Higher Trust profiles in 9th grade and developing a new NMR and relationship quality in 10th grade. However, there were no significant associations between stressors and the formation or quality of mentoring relationships. Although there are likely other factors that contribute to the development and quality of NMRs, this study provides support that youth trust of adults influences these relationships.

## Introduction

The Latinx population is one of the youngest and fastest growing ethnic minority populations in the U.S and will account for a large number of our future families, workers, voters, and leaders (Flores, 2017). However, Latinx youth face social inequalities that impede them from becoming adults who can achieve their educational and career goals. For example, Latinx students may experience significant roadblocks that prevent them from succeeding in higher education, such as having to work outside of school to support their family or being undocumented (Contreras, 2009; Witkow, Huynh & Fuligni, 2015). As a result, these educational barriers may prohibit Latinx youth from pursuing their career goals. Therefore, it is important to investigate how to support Latinx youth to develop into healthy and successful adults.

One way to support Latinx youth is to provide mentorship to them. Mentoring has been found to promote positive youth development (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011). Specifically, natural mentoring relationships (NMRs) are associated with positive outcomes, such as higher educational expectations (Sánchez, Esparza, & Colón, 2008), improved grades (Hurd, Tan, & Loeb, 2016) and psychological well-being (Hurd & Zimmerman, 2014), among marginalized youth. However, research on the predictors of NMRs is limited, and little is known about the factors that may promote or inhibit mentoring relationship formation (Berardi, 2012; Hagler, Raposa, & Rhodes, 2017).

Rhodes' (2005) Model of Youth Mentoring provides a framework for the development of effective mentoring relationships. Rhodes theorizes that *trust*, *empathy*, and *mutuality* are necessary ingredients for flourishing relationships between youth and adults (Rhodes, 2005). Additionally, researchers posit that trust is important to the formation and maintenance of



interpersonal relationships (Rotenberg, 2010). Although researchers highlight the foundational role of trust in developing relationships, there has not been a published study to date, to my knowledge, that examines trust as a predictor of the formation of NMRs. Therefore, research is needed about the onset of NMRs to inform interventions focused on fostering NMRs among Latinx youth.

### **Natural Mentoring Relationships**

NMRs are supportive, long-term relationships that develop organically between youth and nonparental adults (e.g., family members, coaches, teachers) in youth's social networks, in contrast to formally matched mentoring relationships (Zimmerman, Bingenheimer, & Behrendt, 2005). Research has demonstrated the positive role of NMRs in the lives of youth (Van Dam et al., 2018). For example, having a natural mentor is associated with better academic outcomes, psychological well-being, and a lower likelihood to engage in delinquent behavior among minority youth (Hurd & Zimmerman, 2010; Sánchez et al., 2008). Furthermore, Van Dam and colleagues (2018) conducted a meta-analysis of 30 NMR studies and found that the presence of a natural mentor was associated with positive academic, vocational, social-emotional, physical, and psychosocial outcomes. Additionally, results indicated that the relationship quality between natural mentors and youth had stronger effects on outcomes compared to simply the presence of a NMR (Van Dam et al., 2018). This meta-analysis demonstrates the importance of examining both the presence of a natural mentor and relationship quality.

### **Theoretical Frameworks to Explain the Role of Trust in the Formation of NMRs**

Researchers have used Attachment Theory to examine the development of intimate relationships (Mikulincer & Shaver, 2007), including mentoring relationships (Rhodes, Contreras, & Mangelsdorf, 1994). According to Attachment Theory, people who develop an

intimate and secure bond with their caregiver during infancy are more likely to form close relationships as adults (Ainsworth & Bowlby, 1991). Additionally, researchers have suggested that a child's level of interpersonal *trust* begins from the intimate relationship they develop with their caregiver (Cohn, 1990; Mikulincer, 1998). Interpersonal trust is defined as an individual's expectation that other individuals are good and honest, will not harm them, and are safe and reliable (Rotenberg, 2018). Another component of youth's trust of adults is how sensitive they toward adult behaviors (Hirsch, Deutsch, & DuBois, 2011), particularly their negative beliefs and disposition towards adults (e.g., belief that adults are unfriendly, critical). Although Attachment Theory explains the root of a child's interpersonal trust towards others, the Bases, Domain, Theory (BDT) Framework helps explain how trust may evolve throughout one's life (Griffith, 2014; Rotenberg, 2010). The BDT Framework posits that an individual's level of interpersonal trust may increase or decrease throughout their life based on their past social experiences (Rotenberg, 2010). For example, if a youth has a history of trusting relationships with adults in their personal life, they will be more trusting of other adults in general. Thus, past positive experiences with adults allow youth to be more trusting of adults; they may be more likely to form relationships and have higher quality relationships with adults.

Studies have noted that trust is an important factor in the sustainability of existing mentoring relationships (Donlan, McDermott, & Zaff, 2017; Levine, 2016; Spencer, 2006; Spencer, 2007), but no studies have specifically examined trust as an antecedent of the formation of mentoring relationships. Although studies that examine trust during an existing NMR are important, it is essential to examine trust before the onset of these relationships to inform interventions that promote the development of NMRs.

Youths' trust of adults may be an important catalyst to interacting with adults and the formation of NMRs. A study of adolescents' formation of trust with adults across nine out-of-school-time programs found that youths' initial trust in adults facilitated their relationships with adults (Griffith, 2014). Researchers state that this may be due to the fact that youth who trust adults may perceive that adults are there to help them, and as a result, may be more likely to develop NMRs with adults (Griffith & Larson, 2016). In addition, a recent qualitative study examined how mentoring relationships are developed between mentors and mentees in a youth development program. In separate focus groups of mentors and mentees, participants reported that if trust was not developed at the early stages of a relationship between a youth and an adult, then a mentoring relationship did *not* form (Donlan et al., 2017). These studies suggest that trust may be a foundation to the formation of a NMR. Furthermore, not only may trust influence the development of NMRs, but also the quality of these relationships.

### **Mentoring Relationship Quality**

Research has indicated that the quality of a mentoring relationship may be a better indicator of positive outcomes than simply the presence of a mentor (Van Dam et al., 2018). Relationship quality has been measured through multiple components, such as relationship duration, frequency, feelings of closeness, and social support (Deutsch & Spencer, 2009; Nakkula & Harris, 2013). A qualitative study examining long-lasting NMRs among high-risk youth (i.e., at risk for delinquency, teen pregnancy, criminal activity, and substance abuse) noted that many mentees who perceived having a good connection with their mentors had frequent contact and received instrumental and relational support (Spencer, Tugenberg, Ocean, Schwartz, & Rhodes, 2016). A recent study also found that frequency of contact and relational closeness predicted lasting relationships among underrepresented college students (Negrete, Griffith, &

Hurd, 2018). Similarly, Wittrup et al. (2016) found that relational closeness buffered the negative effects of school-based discrimination on academic engagement among Black adolescents. Lastly, a study found that high quality mentoring was associated with increased self-esteem, lower depression and fewer alcohol problems compared to low quality NMR among adolescents (Whitney, Hendricker, & Offutt, 2011). These studies show that not only does relationship quality play a role in the length of NMRs but also youth outcomes. A gap in the mentoring literature is that few researchers have examined the predictors of mentoring quality. An important precursor of relationship quality is *trust* (Nakkula & Harris, 2013).

A qualitative study that explored why mentoring relationships failed indicated that one reason was mentees' lack of trust in their mentors (Spencer, 2007). Mentees in failed relationships reported feeling they could not talk to their mentors about their problems due to a lack of trust (Spencer, 2007). In this case, a lack of trust played a role in mentoring relationship quality and ended the relationships. Another investigation noted that when youth trust adults, they are more likely to express themselves via body language, which may help adults gather information when interacting with youth (Donlan et al., 2017). The authors further found that when youth trusted adults they were more likely to accept support from adults, which increased the level of support that adults provided to youth (Donlan et al., 2017). Most of the research to date shows the importance of youth's trust in adults in forming relationships with them and in the quality of their relationship. However, most of this work has been qualitative and little has been done to quantitatively test the association between adolescents' trust in adults and the formation of new NMRs over time. Further, little is known about the contextual factors that may influence the association between youth trust in adults and their mentoring relationships. Thus, the study also aimed to understand the role of stressors in the quality of NMRs.

### **The Role Stressors in the Formation of NMRs**

Barreras' (1988) support mobilization model suggests that during times of stress people seek social support. Adolescents who experience stressors may seek the support of a natural mentor. In fact, a longitudinal study that examined the relationship among stress, coping strategies and depression in a sample of high school students found that adolescents' perceived stress in the last 30 days predicted social support seeking a year later (Galaif, Sussman, Chou, & Wills, 2003). In addition, in a literature review of 19 studies of help-seeking strategies of young people, it was noted that trust played a role in who young people sought support from during times of stress (Rickwood, Deane, Wilson, & Ciarrochi, 2005). The authors noted that because trust was an important factor in who young people approached for help, they tended to seek "informal" support from people within their networks, such as friends and family (Rickwood et al., 2005). A focus group study of 80 adolescents also found that teens seek social support from family and friends during times of stress (Camara, Bacigalupe, & Padilla, 2017). These study findings suggest that adolescents may cope with stress in their lives by seeking social support from friends or family, and as a result, might develop NMRs.

Although researchers have examined the relationship between stress and support seeking, only one study has examined how stress is associated with the acquisition of a NMR. Hagler et al. (2017) examined how psychosocial factors predict the formation of a NMR among 4th-through 9th-grade youth who were waitlisted for Big Brothers Big Sisters (BBBS). They found that at low levels of stress, more peer-directed prosocial behavior predicted a lower likelihood of NMR acquisition among youth (Hagler et al., 2017). However, contrary to their hypothesis, there was no significant association between youths' prosocial peer engagement and acquiring a natural mentor during high levels of stress. However, given that there is only one study that examined the role of stress in the formation of new mentoring relationships, more research is

needed to understand whether stressors influence the association between youths' trust in adults and the development of NMRs.

### **The Current Study**

Given the importance of trust in the quality and sustainability of youth mentoring relationships (Donlan et al., 2017; Spencer, 2007) this study addressed a gap in this literature by being the first study, to my knowledge, to examine the role of Latinx adolescents' trust towards adults in the formation of new NMRs. Because of the limited understanding of Latinx youth's trust in adults, I used a person-centered approach to examine whether there were profiles of trust based on participants' responses to two subscales of adult trust: one on youth's general trust of adults and another on their negative sensitivity towards adults.

Few studies have examined the predictors of NMRs, and hence, it is also important to investigate in what contexts youth may be more likely to develop NMRs. Studies have demonstrated that during times of stress, adolescents may seek social support, particularly from people they *trust* (Rickwood et al., 2005). Therefore, youth who encounter stressors may be more likely to depend on important people in their lives, such as mentors. This may increase the closeness between a mentee and their mentor(s). However, there is limited evidence on the role of youth trust in adults in the association between experiencing stressors and the quality of their NMR(s).

First, I expected that there would be distinct trust profiles that emerge in the sample using two subscales that measure Latinx adolescents' trust and negative sensitivity towards adults (Hypothesis 1). Second, I hypothesized that trust profiles and stressors during 9th grade would predict the development of new NMRs in 10th grade (Hypothesis 2). Third, I hypothesized that trust profiles and stressors would predict relationship quality in 10th grade, among participants

who report developing new NMRs in 10th grade (Hypothesis 3). Fourth, I expected that trust profiles in 9th grade would moderate the association between youth stressors in 9th grade and the development of new NMRs in 10th grade (Hypothesis 4). Specifically, among youth with more trusting profiles, the association between stressors and the development of a new NMR(s) would be stronger, compared to youth with less trusting profiles. Lastly, it was expected that trust profiles in 9th grade would moderate the association between youth stressors in 9th grade and relationship quality in 10th grade (Hypothesis 5). Specifically, I hypothesized that there would be a stronger association between stressors and relationship quality among youth with more trusting profiles, compared to youth with less trusting profiles.

## Method

### Participants

The participants in this study were 347 Latinx students who were recruited from two public high schools in a major city in the Midwest. Research assistants gave presentations about the study in both Spanish and English in 9th-grade classrooms. Parental consent and youth assent forms were distributed to all students in both English and Spanish. Youth were informed of their rights as participants, the risks and benefits of the study, and the compensation they would receive. Students were told that their participation was voluntary, that they could decline to participate at any time and that all their information would be kept confidential. If students returned completed consent and assent forms, then they were given a compensation award, regardless of whether they volunteered to participate in the study. The incentive included a candy bar and entry into raffle ticket to win either an iPod Touch or movie tickets.

Participants were 47.3% male ( $n = 164$ ) and 52.7 % female ( $n = 183$ ). The mean age of participants during 9th grade was 15 years old ( $SD = .58$ ). Participants were able to check multiple races/ethnicities, and the majority identified as Mexican/Mexican-American ( $n = 324$ ,

93.4%). The remaining participants identified as Puerto Rican ( $n = 19$ , 5.5%), other Latinx ( $n = 18$ , 5.2%; e.g., Guatemalan, Salvadoran), and some participants also identified as African American ( $n = 7$ , 2%), Native American ( $n = 1$ , .29%), or White ( $n = 6$ , 1.7%). The sample was 22.5% first-generation immigrants ( $n = 78$ ; participant was foreign-born), 61.7% second-generation ( $n = 214$ ; at least one parent was foreign-born), 6.9% were at least third-generation ( $n = 24$ ; participant and parents were born in the U.S. and at least one grandparent was foreign-born), and 8.9% of participants' generation status could not be determined ( $n = 31$ ). Most participants (58.2%;  $n = 128$ ) reported that their mothers had received less than a high school diploma, 33.6% ( $n = 74$ ) had their high school diploma or General Educational Development (GED), and 8.2% ( $n = 18$ ) completed at least some college. The majority of participants (59.5%;  $n = 113$ ) also reported that their fathers had received less than a high school diploma, 33.7% ( $n = 64$ ) had their high school diploma or GED, and 6.4% ( $n = 12$ ) completed at least some college.

### **Procedures**

Research assistants administered surveys during school hours. Participants were given the opportunity to take the survey in either English or Spanish. To accommodate participants with varying reading capabilities, a research assistant read the survey out loud in English as the participants completed the survey. Participants were surveyed once during 9th grade and again during 10th grade. Students received a \$10 gift card when they completed each survey.

### **Measures**

**Demographics.** Participants were asked to report their age, gender, race/ethnicity, parents' level of education, and generational status. Generational status was calculated using information about the place of birth of participants, their parents, and their grandparents (in or outside of the U.S.).



**Adult Trust.** Trust in adults was measured by administering the Interpersonal Trust Scale for Adolescents (IT; Hirsch et al., 2011) in 9th grade. The measure includes two subscales, the Adult Trust subscale and the Adult Sensitivity subscale, and consists of five items each. The adult sensitivity subscale was adapted from the Interpersonal Sensitivity Scale of the SCL-90 (Derogatis, Lipman, & Covi, 1973). The Adult Trust subscale measures the extent of an adolescents' trust in adults. Adult Sensitivity assess youths' feelings of sensitivity in their relationships with adults. Responses are on a 5-point Likert-type scale (1 = *Not at All*, 2 = *A Little Bit*, 3 = *Moderately*, 4 = *Quite a Bit*, 5 = *Extremely*). A sample item for the Adult Trust subscale is: "You feel that most adults can be trusted." A sample item for the Adult Sensitivity subscale is: "Your feelings are easily hurt by adults." Both the adult trust subscale ( $\alpha = .73$ ) and the adult sensitivity subscale ( $\alpha = .71$ ) demonstrated adequate internal consistency. A mean score for each subscale was calculated for every participant. A higher score indicates being more trusting or more sensitive.

**Ecological Stressors.** Ecological stressors were measured by administering a shortened version of the Multicultural Events Schedule for Adolescence (MESA; Gonzales, Gunnoe, Jackson, & Samaniego, 1995) in 9th grade. This instrument consists of 27 items that assesses whether or not participants experienced specific stressful life events within the past three months related to discrimination, economic hassles, school hassles, family trouble, trouble with peers, and violence. A sample item is "You were threatened with a weapon." For each item, participants reported whether or not they experienced the event by indicating yes (1) or no (0). A total sum score of stressors was calculated for each participant, with scores ranging from 0 to 27.

**Development of NMR.** NMRs were assessed in both 9th and 10th grade. Participants were asked to report whether they had a non-parental adult who is at least 18 years of age and

more experienced, who provided them with support and guidance in their lives. Participants were instructed that this person is someone who: a) they could count on to be there for them, b) believes in them and cares deeply about them, c) inspires them to do their best, d) has really influenced what they do and the choices they make, e) and who is *not* a parent or romantic partner (Rhodes et al., 1994; Sánchez et al., 2008). Participants reported whether they had this type of relationship by indicating yes (1) or no (0). If participants indicated “yes,” then they were allowed to list up to three people who fit these criteria and rank them from most important to least important. Participants reported demographic characteristics for each natural mentor, such as race/ethnicity, age, educational attainment, and relationship type. Participants were considered to have developed a new NMR in 10th grade if they reported no NMRs in 9th grade and then reported having at least one NMR in 10th grade, or if they reported a NMR in 9th but reported a new NMR in 10th grade. The development of a new NMR in 10th grade was measured as Yes (1) or No (0).

**Mentoring Relationship Quality.** If participants reported having a NMR in 10th grade, then they completed The Youth Mentoring Survey (YMS) to assess mentoring relationship quality (Harris & Nakkula, 2005). Youth who reported more than one mentor were asked to think about all listed mentors as they answered the questions. The measure has two subscales: relational quality and instrumental quality. The relational quality subscale (16 items) assesses the degree to which participants felt happy, close, and satisfied in their relationship with their mentor(s) (e.g., “My important adult(s) knows what is going on in my life”). The instrumental quality subscale (8 items) assesses the extent to which youth perceived there to be growth-oriented benefits from the relationship with their mentor(s) (e.g., “I have learned a lot from my important adult(s)”). Responses are on 4-point Likert-type scale (1 = *Not at all true* to 4 = *Very*

*True*). Both the relational subscale ( $\alpha = .84$ ) and the instrumental subscale ( $\alpha = .86$ ) demonstrated good internal consistency. A mean score was computed for each subscale, such that higher scores indicated higher relational or instrumental quality.

## Results

### Preliminary Analysis and Descriptive Statistics

The majority of the participants reported at least one natural mentor in 9th grade (74.6%,  $n = 258$ ) and 10th grade (65.1%,  $n = 224$ ). Furthermore, the majority (61.7%,  $n = 214$ ) of participants developed a new NMR from 9th grade to 10th grade. Descriptive statistics for measures were calculated, and bivariate Pearson correlations were conducted of the key study variables. As shown in Table 1, adult trust in 9th grade was positively and significantly associated with developing a NMR in 10th grade and with relational and instrumental relationship quality in 9th and 10th grade. Adult sensitivity in 9th grade was negatively and significantly associated with relational and instrumental relationship quality in 9th and 10th grade, but was not significantly associated with developing a NMR in 10th grade. Stressors in 9th grade were not significantly associated with developing a NMR in 10th grade or with relational and instrumental relationship quality in 10th. However, the number of stressors in 9th grade was negatively and significantly associated with relational and instrumental relationship quality in 9th grade.

The data were first examined for outliers. A box plot indicated that there was an extreme outlier in the stressors variable. This outlier was removed from the remaining analyses. Second, to confirm that the distribution of data for each measure was normally distributed, the skewness and kurtosis for each variable was examined. The data showed that the stressors measure was positively skewed and had high kurtosis ( $Skewness = 1.236$ ,  $Kurtosis = 1.493$ ), and thus the

variable was transformed using log-10 transformation. All other variables had normally distributed data.

### **Trust Profiles**

Cluster Analysis is a statistical approach that groups individuals who have similar scores across multiple dimensions (Henry, Tolan, & Gorman-Smith, 2005). To compensate for weaknesses in each clustering method, a combination of hierarchical and non-hierarchical cluster analyses was conducted to test the first hypothesis. To examine if there were distinct trust profiles in the sample, the adult trust and adult sensitivity variables were used. Before conducting Cluster Analysis, both variables were standardized to eliminate the effects of differences in variance.

To explore the number of clusters in the data, a Hierarchical Cluster Analysis was conducted using the Wards method (Henry et al., 2005; Punj & Stewart, 1983) and a Squared Euclidean distance (Aggarwal, Hinneburg, & Keim, 2001). A cluster dendrogram was explored in order to examine if there were distinct groups that formed in the data across the two variables (adult trust and adult sensitivity; Mandara, 2003). The cluster dendrogram indicated that there were two larger clusters and four smaller clusters in the data. Due to the sample size and the small number of variables being used to create the clusters, it was determined that the following K-Means Cluster analysis would be configured to create two clusters.

To classify cases into two clusters, a K-Means Cluster Analysis was conducted. This analysis was conducted using the Iterate and Classify method and running 10 iterations. An Analysis of Variance (ANOVA) was added to the analysis and a new cluster membership variable was created. The cluster membership variable indicates which profile each participant is

grouped with; 165 participants were grouped into one cluster and 177 were grouped in the other cluster. These clusters are depicted in Figure 1.

As recommended by the literature (Mandara, 2003), the clusters were validated using two approaches. In the first approach, the sample was randomly split and analyzed using the previous cluster analyses. The cluster analysis results from the split sample was similar to the results of the larger sample. A cluster dendrogram in the split sample indicated that there were still two clusters. In the second approach, two independent t-tests were conducted to compare the trust profiles on the original variables (adult trust and adult sensitivity). Results showed that the trust profiles significantly differed on adult trust and adult sensitivity (see Table 2). Specifically, participants in the more trusting profile had higher scores in adult trust and lower scores in adult sensitivity compared to participants in the less trusting profiles.

### **Associations Among Trust Profiles and Mentoring**

A Hierarchical Logistic Regression was conducted to test the role of participants' trust towards adults in 9th grade on the likelihood that youth would develop a NMR in 10th grade, while controlling for presence of a natural mentor in 9th grade (Hypothesis 2). The logistic regression model was statistically significant,  $\chi^2(2) = 53.281, p = .000$ . The model explained 19.6% (Nagelkerke  $R^2$ ) of the variance in developing a NMR and correctly classified 71.6% of cases. Students with the More Trusting profile in 9th grade were 1.85 times more likely to develop a new NMR than those who had the Less Trusting Profile ( $\beta = .616, p = .011$ ).

Two separate Hierarchical Linear Regression Analyses were conducted to determine if the trust profiles predicted relationship quality (Hypothesis 3). Only participants ( $n = 214$ ) who developed a new NMR in 10th grade were included in the analyses. One test examined the association between trust profiles in 9th grade and *relational quality* in 10th grade, and another

tested the association between trust profiles in 9th grade and *instrumental quality* in 10th grade, while controlling for presence of a natural mentor in 9th grade. The hypothesis was supported; the more trusting profile significantly predicted higher *relational quality* ( $\beta = .17, p = .003$ ) and explained 3.4% of the variance ( $F(2, 209) = 4.66, p < .01$ ). Additionally, the more trusting profile significantly predicted higher *instrumental quality* ( $\beta = .18, p = .01$ ) and explained 3% of the variance ( $F(2, 209) = 1.89, p < .01$ ).

### **Associations Among Stressors and Mentoring**

A Hierarchical Logistic Regression was conducted to test the role of stressors in 9th grade on the likelihood that youth would develop a NMR in 10th grade, while controlling for presence of a natural mentor in 9th grade (Hypothesis 2). The logistic regression model was statistically significant,  $\chi^2(2) = 46.02, p = .000$ , and the model explained 17.1% (Nagelkerke  $R^2$ ) of the variance in developing a NMR and correctly classified 67.5% of cases. However, stressors did not significantly increase the likelihood of developing a new NMR ( $\beta = -.61, p = .11$ ).

Two separate Hierarchical Linear Regressions were conducted to test if stressors predicted relationship quality (Hypothesis 3). Only participants ( $n = 214$ ) who developed a NMR relationship in 10th grade were included in the analyses. One analysis examined the association between youth stressors in 9th grade and *relational quality*, and another tested the association between youth stressors in 9th grade and *instrumental quality* in 10th grade, while controlling for presence of a natural mentor during 9th grade. Contrary to the hypothesis, youth stressors in 9th grade did not significantly predict *relational quality* in 10th grade ( $\beta = -.09, p = .25$ ). The results indicated that youth stressors explained 14.6% of the variance ( $F(2, 174) = 16.00, p < .000$ ).

Further, youth stressors in 9th grade did not significantly predict *instrumental quality* in 10th

grade ( $\beta = -.01, p = .91$ ). The number of stressors explained 12.7% of the variance ( $F(2,174) = 13.80, p < .000$ ).

### **Trust as a Moderator of the Association between Stressors and Mentoring**

A Moderated Regression was conducted with PROCESS macro for SPSS (Hayes, 2013) to evaluate if the trust profiles moderated the association between stressors and developing a new NMR (Hypothesis 4), while controlling for presence of a mentor in 9th grade. The model was tested using bias-corrected bootstrapping with 5,000 iterations and a 95% confidence interval. The model explained 21% (Nagelkerke  $R^2$ ) of the variance in developing a NMR. The trust profiles in 9th grade significantly moderated the association between the number of stressors in 9th grade and the development of a NMR in 10th grade ( $\beta = -1.7$ , BCa 95% CI [-3.25, -.07],  $\chi^2(4) = 54.18, p < .00$ ), but not in the hypothesized direction. The relationship between stressors and developing a NMR was significantly and negatively associated among participants with more trusting profiles in 9th grade ( $p = .04$ ). In contrast, the association between stressors and developing a NMR among students with less trusting profiles in 9th grade was not significant (see Figure 2).

Two separate Moderated Regressions were conducted with PROCESS macro for SPSS to evaluate trust profiles in 9th grade as a moderator in the association between stressors in 9th grade and relationship quality in 10th grade (Hypothesis 5), while controlling for the presence of a natural mentor in 9th grade. Only participants who developed a NMR relationship in 10th grade ( $n = 214$ ) were included in the analyses. Bootstrapping using 5,000 iterations and a bias-corrected 95% confidence interval was used in the analyses. The first model examined whether trust profiles in 9th grade moderated the association between the number of stressors in 9th grade and relational quality. The hypothesis was not supported, and there was not a significant

interaction ( $\beta = .21$ , BCa 95% CI [-.14, .56],  $F(4) = 8.81$ ,  $p < .00$ ). The second model examining whether youth trust profiles in 9th grade moderated the association between stressors in 9th grade and *instrumental quality* in 10th grade, and the model explained 14% of the variance. However, there was not a significant interaction ( $\beta = -.05$ , BCa 95% CI [-.49, .40],  $F(4) = 7.04$ ,  $p < .00$ ).

### **Discussion**

Although the association between NMRs and positive youth outcomes is well established (Van Dam et al., 2018), the mechanisms underlying the process of forming these relationships have rarely been examined. A few studies have explored factors that predict the presence of a natural mentor (Berardi, 2012; Hagler et al., 2017; Rhodes et al., 1994), but none have specifically examined whether Latinx adolescents' trust of adults plays a role in forming NMRs. However, qualitative studies have noted that trust is essential to the sustainability and quality of mentoring relationships (Donlan et al., 2017; Levine, 2016; Spencer, 2007). These quantitative studies shows the importance of trust of adults in forming NMRs and in the quality of these relationships.

### **Developing New Mentoring Relationships**

Few studies have specifically examined what predicts the development of naturally occurring mentoring relationships; however, research on youth-adult relationships in out-of-school-time settings reveals that trust is essential to these relationships (Griffith, 2014; Griffith & Larson, 2016). In fact, both adults and youth have reported that trust is foundational in their mentoring relationships (Donlan et al., 2017; Levine, 2016; Spencer, 2007). In accordance with the literature, the current study supported the hypotheses that youths' trust of adults in 9th grade is associated with the development of NMRs in 10th grade. Having a higher trust profile in 9th



grade was associated with developing a NMR in 10th grade. These findings are also consistent with the BDT framework, which suggests that trust is an important factor in forming relationships. A recent qualitative study that explored Youth Initiated Mentoring (YIM) relationships among system-involved youth (first-time youth in the juvenile justice system) found that a major factor that attracted youth to certain mentors was *trust* (Spencer, Gowdy, Drew, & Rhodes, 2019). The present study posits that adolescents' previous positive experiences with adults may have helped them to develop a more trusting disposition towards adults in general, which enabled them to later form mentoring relationships with other adults in their networks.

Based on past literature, it was hypothesized that youth stressors would lead to developing new NMRs due to youth seeking informal sources of social support (Barrera, 1988; Galaif et al., 2003). However, study results did not support the hypothesis that stressors in 9th grade would be associated with the development of NMRs in 10th grade. It could be that youth *are* turning to other sources of support, such as their previous, long-term natural mentors, rather than forming new mentoring relationships with adults. Further, youth may be turning to other sources of support (e.g., peers, teachers, parents) that are not mentoring relationships (Kenny, Gallagher, Alvarez-Salvat, & Silsby, 2002). Additionally, it was assumed that adolescents would seek new mentoring relationships as a coping mechanism, but research has shown that youth may also engage in other coping strategies when experiencing stressors, such as avoiding the stressors or problem-solving (Galaif et al., 2003). Hence, study participants may have coped with stressors in various ways besides seeking support from new mentors.

Although inconsistent with the study hypothesis, the data showed that there was a significant interaction between trust profiles and stressors on the development of NMRs.

Specifically, participants who had higher trusting profiles and reported more stressors in 9th grade was significantly less likely to develop a new NMR in 10th grade. There are a few possible reasons why this may have occurred. First, youth who are experiencing stressors may turn to their already existing support system instead of developing new relationships, especially for youth who are experiencing traumatic stressors such as violence in their lives. Second, it may be that developing or interacting with other adults in their life is not a priority to them when they are experiencing certain stressors (e.g., family stressors).

### **Trust as a Predictor of Mentoring Relationship Quality**

As supported by the literature (e.g., Donlan et al., 2017; Spencer, 2007), the results in the current study indicate that Latinx adolescents' with more trusting profiles in 9th grade was associated with higher relational and instrumental quality in 10th grade. Research suggests that when youth trust adults they are more open to talking with mentors and supportive adults about their problems (Griffith & Johnson, 2019; Spencer, 2007). In addition, studies have shown that youth who trust adults may be more likely to express themselves via body language (Donlan et al., 2017). Study participants who had more trusting profiles may develop closer and more intimate relationships with their mentors, which may have led to higher relational quality mentoring relationships. Further, youth who trust adults may be more likely to accept and request support from adults (Donlan et al., 2017; Griffith & Johnson, 2019); thus, Latinx adolescents with more trusting profiles may have been more willing to accept the growth-oriented and problem solving support that their mentors were providing, which enabled them to have higher instrumental quality relationships.

Results in the current study, however, did not support the hypotheses that stressors in 9th grade would be associated with relationship quality in 10th grade. It was initially hypothesized

that youth would seek support from natural mentors during times of stress and that this may create a stronger relationship. However, researchers have shown that experiencing stressors is associated with depression (Anyan & Hjemdal, 2016), which may influence individuals to isolate themselves rather than seek social support.

### **Strengths, Limitations, and Future Directions**

This study was not without limitations. First, participants who reported having a natural mentor in their life were limited to three mentors. It is possible that those who reported multiple NMRs in 9th grade might have had the same mentors in 10th grade but they were not in the top three. Future studies should examine the development of NMRs longitudinally and ask participants more questions about when and how those relationships were developed and became significant. Second, stressors were examined as a predictor of forming a NMR and relationship quality under the assumption that youth were seeking social support; however, youth could have used other stress-coping strategies. Future studies may want to examine help-seeking behaviors as a mediator between stressors and the presence of a new mentor and relationship quality. Lastly, examining additional individual factors (e.g., personality) that predict the formation of these relationships may allow mentoring practitioners and researchers to identify which youth are less likely to form these relationships, in order to determine which youth may benefit from interventions. It is also important to examine how other environmental factors influence whether Latinx youth will be more or less likely to develop NMRs. For example, will youth be more likely to develop NMRs in settings where they feel more welcomed or have feel a greater sense of belonging?

Despite these limitations, there are a number of strengths that make this investigation an important contribution to the youth mentoring literature. First, this study addressed a gap in the

literature on what factors influence the development of NMRs. Second, we examined the development of new natural mentoring relationships from 9th to 10th grade rather than simply examining the presence of a mentor. Lastly, this study provided quantitative support to previous qualitative studies have shown that trust is important in mentoring relationships. Given the positive trajectory of youth who have natural mentoring relationships (e.g., DuBois & Silverthorn, 2005) future interventions focused on Latinx adolescents should focus on providing additional support and resources to those who are less trusting of adults so that they too can benefit from the opportunities and rewards from these relationships.

## References

- Aggarwal, C. C., Hinneburg, A., & Keim, D. A. (2001). On the surprising behavior of distance metrics in high dimensional space. In *International conference on database theory* (pp. 420-434). Springer, Berlin, Heidelberg.
- Ainsworth, M. S., & Bowlby, J. (1991). An ethological approach to personality development. *American psychologist*, *46*(4), 333. doi:10.1037/0003-066X.46.4.333
- Barrera, M. (1988). Models of social support and life stress: Beyond the buffering hypothesis. In L.H Cohen (ed.), *Life events and psychological functioning: Theoretical and methodological issues*, (211-236). Newbury Park, CA: Sage.
- Berardi, L. (2012). *The First Year College Experience: Predictors of Natural Mentoring Relationships & Students' Academic Outcomes* (Unpublished doctoral dissertation). DePaul University, Chicago IL.
- Camara, M., Bacigalupe, G., & Padilla, P. (2017). The role of social support in adolescents: are you helping me or stressing me out? *International Journal of Adolescence and Youth*, *22*(2), 123-136. doi:10.1080/02673843.2013.875480
- Cohn, D. A. (1990). Child-mother attachment of six-year-olds and social competence at school. *Child Development*, *61*(1), 152-162.
- Compas, B. E., Connor-Smith, J. K., Saltzman, H., Thomsen, A. H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: problems, progress, and potential in theory and research. *Psychological bulletin*, *127*(1), 87.
- Contreras, F. (2009). Sin papeles y rompiendo barreras: Latino students and the challenges of persisting in college. *Harvard Educational Review*, *79*(4), 610-632. doi:10.17763/haer.79.4.02671846902gl33w

- Derogatis, L.R., Lipman, R.S., & Covi, L. (1973). SCL-90: An outpatient psychiatric rating scale – preliminary report. *Psychopharmacology Bulletin*, 9, 13–28.
- Deutsch, N. L., & Spencer, R. (2009). Capturing the magic: Assessing the quality of youth mentoring relationships. *New Directions for Youth Development*, 2009(121), 47-70. doi: 10.1002/yd.296
- Donlan, A. E., McDermott, E. R., & Zaff, J. F. (2017). Building relationships between mentors and youth: Development of the TRICS model. *Children and Youth Services Review*, 79, 385-398. doi:10.1016/j.chilyouth.2017.06.044
- DuBois, D. L., & Karcher, M. J. (2005). Youth mentoring. In: DuBois, DL.; Karcher, ML., editors. *Handbook of Youth Mentoring*, (pp. 2-11). Thousand Oaks, CA: Sage.
- DuBois, D. L., Portillo, N., Rhodes, J. E., Silverthorn, N., & Valentine, J. C. (2011). How effective are mentoring programs for youth? A systematic assessment of the evidence. *Psychological Science in the Public Interest*, 12(2), 57-91. doi:10.1177/1529100611414806
- DuBois, D. L., & Silverthorn, N. (2005). Natural mentoring relationships and adolescent health: Evidence from a national study. *American Journal of Public Health*, 95(3), 518-524.
- Flores, A. (2017). How the U.S. Hispanic population is changing. *Pew Research Center*. Retrieved from <http://www.pewresearch.org/fact-tank/2017/09/18/how-the-u-s-hispanic-population-is-changing/>
- Galaif, E. R., Sussman, S., Chou, C., & Wills, T. A. (2003). Longitudinal relations among depression, stress, and coping in high risk youth. *Journal of Youth and Adolescence*, 32(4), 243-258. doi:10.1023/A:1023028809718

- Gonzales, N. A., Gunnoe, M. L., Jackson, K. M., & Samaniego, R. Y. (1995, June). *Validation of a multicultural events scale for urban adolescents*. In Biennial Conference of the Society for Community Research and Action, Chicago, IL.
- Griffith, A. (2014). *The formation of adolescents' trust in adult leaders at project-based youth programs* (Doctoral dissertation). Retrieved from <https://www.ideals.illinois.edu/handle/2142/49699>
- Griffith, A. N., & Johnson, H. E. (2019). Building trust: Reflections of adults working with high-school-age youth in project-based programs. *Children and Youth Services Review, 96*, 439-450.
- Griffith, A. N., & Larson, R. W. (2016). Why trust matters: How confidence in leaders transforms what adolescents gain from youth programs. *Journal of Research on Adolescence, 26*(4), 790-804. doi:10.1111/jora.12230
- Hagler, M., Raposa, E. B., & Rhodes, J. (2017). Psychosocial profiles of youth who acquire a natural mentor during a school year. *Applied Developmental Science, 1-9*. doi:10.1080/10888691.2017.1342539
- Henry, D. B., Tolan, P. H., & Gorman-Smith, D. (2005). Cluster analysis in family psychology research. *Journal of Family Psychology, 19*(1), 121. doi:10.1037/0893-3200.19.1.121
- Hirsch, B. J., Deutsch, N. L., & DuBois, D. L. (2011). *After-school centers and youth development: Case studies of success and failure*. New York: Cambridge University Press.
- Hurd, N., & Zimmerman, M. (2010). Natural mentors, mental health, and risk behaviors: A longitudinal analysis of African American adolescents transitioning into adulthood.

*American Journal of Community Psychology*, 46(1-2), 36-48. doi:10.1007/s10464-010-9325-x

Hurd, N. M., & Zimmerman, M. A. (2014). An analysis of natural mentoring relationship profiles and associations with mentees' mental health: Considering links via support from important others. *American Journal of Community Psychology*, 53(1-2), 25-36. doi:10.1007/s10464-013-9598-y

Hurd, N. M., Tan, J. S., & Loeb, E. L. (2016). Natural mentoring relationships and the adjustment to college among underrepresented students. *American Journal of Community Psychology*, 57(3-4), 330-341. doi:10.1002/ajcp.12059

Kenny, M. E., Gallagher, L. A., Alvarez-Salvat, R., & Silsby, J. (2002). Sources of support and psychological distress among academically successful inner-city youth. *Adolescence*, 37(145), 161.

Levine, M. (2016). *Experiences of trust in longer-lasting formal youth mentoring relationships* (Doctoral dissertation). University of Massachusetts Boston.

Mandara, J. (2003). The typological approach in child and family psychology: A review of theory, methods, and research. *Clinical Child and Family Psychology Review*, 6(2), 129-146. doi:10.1023/A:1023734627624

Mikulincer, M. (1998). Attachment working models and the sense of trust: An exploration of interaction goals and affect regulation. *Journal of Personality and Social Psychology*, 74(5), 1209.

Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. New York: Guilford Press.



- Nakkula, M. J., & Harris, J. T. (2013). Assessing mentoring relationships. In D. DuBois & M. Karcher (Eds.), *Handbook of youth mentoring*, (pp. 45-62). Thousand Oaks, CA: Sage.
- Negrete, A., Griffith, A. N., & Hurd, N. M. (2018). Factors contributing to the retention of natural mentors among underrepresented students across the first year of college. *Mentoring & Tutoring: Partnership in Learning*, 26(1), 70-90.  
doi:10.1080/13611267.2018.1445434
- Punj, G., & Stewart, D. W. (1983). Cluster analysis in marketing research: Review and suggestions for application. *Journal of Marketing Research*, 134-148.
- Rickwood, D., Deane, F. P., Wilson, C. J., & Ciarrochi, J. (2005). Young people's help-seeking for mental health problems. *Advances in Mental Health*, 4(3), 218–251. doi: 10.5172/jamh.4.3.218
- Rhodes, J. E. (2005). A model of youth mentoring. In: DuBois, DL.; Karcher, ML., editors. *Handbook of Youth Mentoring*, (pp. 30-43). Thousand Oaks, CA: Sage.
- Rhodes, J.E., Contreras, J.M., & Mangelsdorf, S.C. (1994). Natural mentor relationships among Latina adolescent mothers: Psychological adjustment, moderating processes, and the role of early parental acceptance. *American Journal of Community Psychology*, 22, 211–227.  
doi:10.1007/BF02506863
- Rotenberg, K. J. (2010). The conceptualization of interpersonal trust: A basis, domain, and target framework. In K. J. Rotenberg (Ed.), *Interpersonal trust during childhood and adolescence* (pp. 8–27). New York: Cambridge University Press.
- Rotenberg, K. J. (2018). *The Psychology of Trust*. Routledge.
- Rosenberg, M. (1957). *Occupations and values* (pp. 25-35). Glencoe, IL: Free Press.

- Sánchez, B., Esparza, P., & Colón, Y. (2008). Natural mentoring under the microscope: An investigation of mentoring relationships and Latino adolescents' academic performance. *Journal of Community Psychology, 36*(4), 468-482. doi:10.1002/jcop.20250
- Smith-Morris, C., Morales-Campos, D., Alvarez, E. A. C., & Turner, M. (2013). An anthropology of familismo: On narratives and description of Mexican/immigrants. *Hispanic Journal of Behavioral Sciences, 35*(1), 35-60.
- Spencer, R. (2006). Understanding the mentoring process between adolescents and adults. *Youth & Society, 37*(3), 287-315. doi:10.1177/0743558405278263
- Spencer, R. (2007). "It's not what I expected" a qualitative study of youth mentoring relationship failures. *Journal of Adolescent Research, 22*(4), 331-354.  
doi:10.1177/0743558407301915
- Spencer, R., Gowdy, G., Drew, A. L., & Rhodes, J. E. (2019). "Who Knows Me the Best and Can Encourage Me the Most?": Matching and Early Relationship Development in Youth-Initiated Mentoring Relationships with System-Involved Youth. *Journal of Adolescent Research, 34*(1), 3-29.
- Spencer, R., Tugenberg, T., Ocean, M., Schwartz, S. E., & Rhodes, J. E. (2016). "Somebody Who Was on My Side" A Qualitative Examination of Youth Initiated Mentoring. *Youth & Society, 48*(3), 402-424. doi:10.1177/0044118X13495053
- Van Dam, L., Smit, D., Wildschut, B., Branje, S. J. T., Rhodes, J. E., Assink, M., & Stams, G. J. J. M. (2018). Does Natural Mentoring Matter? A Multilevel Meta-analysis on the Association Between Natural Mentoring and Youth Outcomes. *American Journal of Community Psychology, 1*-18. doi:10.1002/ajcp.12248

- Whitney, S. D., Hendricker, E. N., & Offutt, C. A. (2011). Moderating factors of natural mentoring relationships, problem behaviors, and emotional well-being. *Mentoring & Tutoring: Partnership in Learning*, *19*(1), 83-105. doi:10.1080/13611267.2011.543573
- Wittrup, A. R., Hussain, S. B., Albright, J. N., Hurd, N. M., Varner, F. A., & Mattis, J. S. (2016). Natural Mentors, Racial Pride, and Academic Engagement Among Black Adolescents: Resilience in the Context of Perceived Discrimination. *Youth & Society*. doi:10.1177/0044118X16680546
- Witkow, M. R., Huynh, V., & Fuligni, A. J. (2015). Understanding differences in college persistence: A longitudinal examination of financial circumstances, family obligations, and discrimination in an ethnically diverse sample. *Applied Developmental Science*, *19*(1), 4-18. doi:10.1080/10888691.2014.946030
- Zimmerman, M. A., Bingenheimer, J. B., & Behrendt, D. E. (2005). Natural mentoring relationships. In: DuBois, DL.; Karcher, ML., editors. *Handbook of youth mentoring*, (pp. 143-157). Thousand Oaks, CA: Sage.

Table 1

*Means, standard deviations, and correlations*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Stressors – 9th grade	5.20	3.93							
2. Adult Sensitivity – 9th grade	2.33	.78	.201**						
3. Adult Trust – 9th grade	3.54	.77	-.239**	-.284**					
4. RQ- Relational – 10th grade	3.22	.41	-.124	-.150*	.262**				
5. RQ- Instrumental – 10th grade	3.30	.51	-.065	-.160*	.266**	.732**			
6. RQ- Relational – 9th grade	3.13	.45	-.129*	-.179**	.453**	.394**	.347**		
7. RQ- Instrumental – 9th grade	3.23	.56	-.136*	-.148*	.528**	.361**	.354**	.738**	
8. Developed NMR – 10th grade	.62	.49	-.076	-.063	.223**	-.127	-.065	.198**	.210**

*Note.* *M* and *SD* are used to represent mean and standard deviation, respectively. \* indicates  $p < .05$ . \*\* indicates  $p < .01$ .

Table 2

*Differences in the Trust Profile Groups in Adult Trust and Adult Sensitivity.*

	More Trusting	Less Trusting	
	<i>M (SD)</i>	<i>M (SD)</i>	t-test results
Adult Trust	4.11 (.48)	2.93 (.49)	$t(340) = -22.333, p < .000$
Adult Sensitivity	1.97 (.65)	2.72 (.73)	$t(340) = 10.053, p < .000$

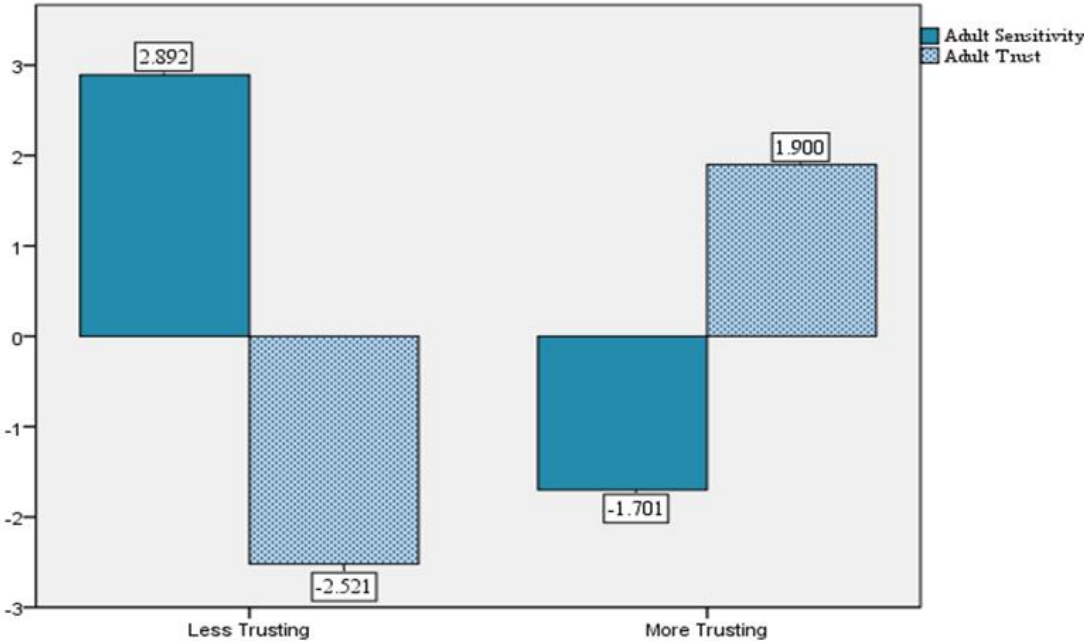


Figure 1. Two-cluster solution (standardized) of trust profiles.

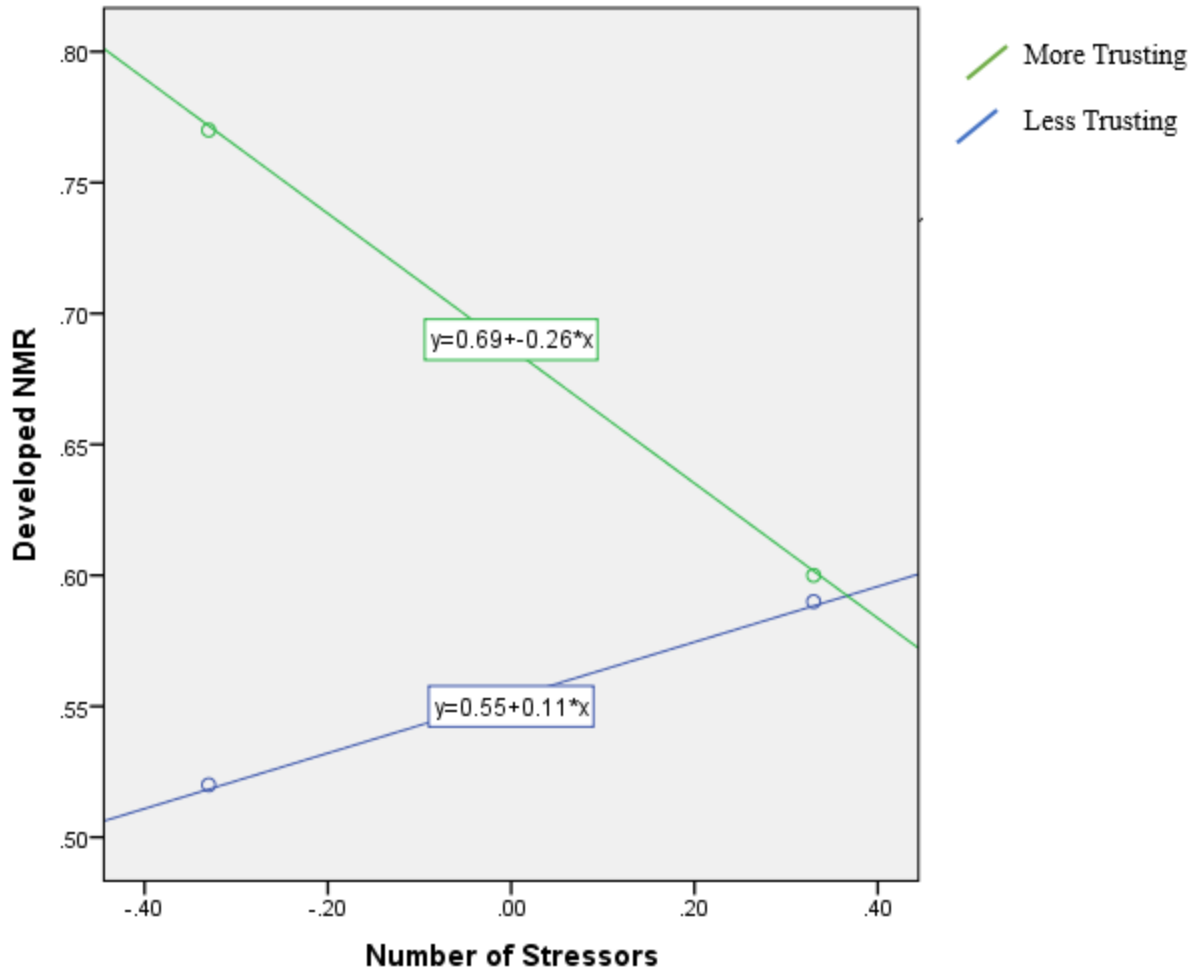


Figure 2. Youth trust profile as a moderator of the association between the number of stressors and the development of a NMR.

**Appendix A**



## Original Thesis Proposal

### Introduction

The Latinx population is one of the youngest and fastest growing ethnic minority populations in the U.S and will account for a large number of our future families, workers, voters, and leaders (Flores, 2017). However, Latinx youth face social inequalities that impede them from becoming adults who can achieve their educational and career goals. For example, Latinx students may experience significant roadblocks that prevent them from succeeding in higher education, such as having to work outside of school to support their family or being undocumented (Contreras, 2009; Lopez, 2009; Witkow, Huynh & Fuligni, 2015). As a result, these educational barriers may prohibit Latinx youth from pursuing their career goals. Therefore, it is important to investigate how to support Latinx youth develop into healthy and successful adults.

One way Latinx youth can be supported is by providing mentorship to them. Mentoring has been found to be an avenue to promote positive youth development (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011). Specifically, natural mentoring relationships (NMRs) have been found to have positive developmental outcomes, such as higher educational expectations (Sánchez, Esparza, & Colón, 2008), improved grades (Hurd, Tan, & Loeb, 2016) and psychological well-being (Hurd & Zimmerman, 2014), among marginalized youth. However, research on the predictors of NMRs is limited, and thus little is known about the factors that may promote or inhibit mentoring relationship formation (Berardi, 2012; Hagler, Raposa, & Rhodes, 2017).

Rhodes' (2005) Model of Youth Mentoring provides a framework for the development of effective mentoring relationships. Rhodes theorizes that *trust*, *empathy*, and *mutuality* are

necessary ingredients for flourishing relationships between youth and adults (Rhodes, 2005). Additionally, researchers posit that trust is important to the formation and maintenance of interpersonal relationships (Rotenberg, 2010). Although researchers highlight the foundational role of trust in developing relationships, there has not been a published study to date, to my knowledge, that examines trust as a predictor of the formation of NMRs. Therefore, research is needed about the onset of NMRs to inform interventions focused on fostering NMRs among Latinx youth.

### **Natural Mentoring Relationships**

A mentoring relationship is defined as a trusting relationship between a non-parental adult who is typically older and more experienced (mentor) and someone who is younger and less experienced (mentee; DuBois & Karcher, 2005). Typically, the mentor provides the mentee with support and guidance (DuBois & Karcher, 2005). Although the term ‘mentoring relationship’ is usually thought of as a formal relationship developed through a structured program between a mentor and a mentee, a study using a national sample showed that many (73%) adolescents reported a NMR (DuBois & Silverthorn, 2005).

NMRs are informal mentoring relationships that develop organically between youth and nonparental adults (e.g. family members, coaches, teachers) in youth’s social networks, in contrast to formally matched mentoring relationships (Zimmerman, Bingenheimer, & Behrendt, 2005). These adults provide guidance and support to mentees. Because NMRs develop in youth’s social networks, these relationships are more likely to last longer (Zimmerman et al., 2005). Because longer lasting mentoring relationships may have greater positive outcomes on youth, it is important to examine these relationships (Rhodes, Spencer, Keller, Liang, & Noam, 2006). In addition, natural mentors come from youth’s social networks, they are typically from a similar

race/ethnicity (Sánchez, Colón-Torres, Feuer, Roundfield, & Berardi, 2014). Sharing a similar background with a mentor may have greater benefits for ethnic-minority youth (Albright, Hurd, & Hussain, 2017) such as making mentors more relatable and therefore causing youth to trust them more.

Existing research has demonstrated the positive role of NMRs in the lives of youth (Van Dam et al., 2018). For example, studies have shown that having a natural mentor is associated with better academic outcomes, psychological well-being, and a lower likelihood to engage in delinquent behavior among minority youth (Hurd & Zimmerman, 2010; Sánchez et al., 2008). Furthermore, Van Dam and colleagues (2018) conducted a meta-analysis of 30 NMR studies and found that the presence of a natural mentor was associated with positive academic, vocational, social-emotional, physical, and psychosocial outcomes. Additionally, results indicated that the relationship quality between natural mentors and youth had stronger effects on outcomes compared to simply the presence of a NMR (Van Dam et al., 2018). This meta-analysis indicates the importance of examining both the presence of a natural mentor and their relationship quality.

Research on the predictors of NMRs is limited, and thus, little is known about the factors that may promote or inhibit relationship formation (Berardi, 2012; Hagler et al., 2017) and a limitation of past research on the predictors of NMRs is that they have been retrospective. However, The Model of Youth Mentoring (Rhodes, 2005) points to factors that are important in the development of effective mentoring relationships. Rhodes theorizes that without *trust* a relationship between a youth and adult will likely not flourish (Rhodes, 2005). Furthermore, studies have demonstrated that trust is essential in throughout a mentoring relationship. However, little is know about how youth's initial or general trust of adults influence their development of these relationships. Thus, more research is needed about the onset of NMRs to

inform interventions focused on fostering NMRs among Latinx youth and to help practitioners identify which youth may benefit by being matched with a formal mentor.

### **Theoretical Frameworks to Explain the Role of Trust in the Formation of NMRs**

Researchers have used Attachment Theory to examine the development of intimate relationships (Mikulincer & Shaver, 2007), including mentoring relationships (Rhodes, Contreras, & Mangelsdorf, 1994). According to Attachment Theory, people who develop an intimate and secure bond with their caregiver during infancy will be more likely to form close relationships as adults (Ainsworth & Bowlby, 1991). Additionally, researchers have suggested that a child's level of interpersonal *trust* begins from the intimate relationship they develop with their caregiver (Cohn, 1990; Mikulincer, 1998). Interpersonal trust is defined as an individual's expectation that other individuals are good and honest, will not harm them, and are safe and reliable (Rotenberg, 2018). Although Attachment Theory explains the root of a child's interpersonal trust towards others, the Bases, Domain, Theory (BDT) Framework helps explain how trust may evolve throughout one's life. The BDT Framework posits that an individual's level of interpersonal trust may increase or decrease throughout their life based on their "social histories" or past social experiences (Rotenberg, 2010). For example, if a youth has a history of trusting relationships with adults in their personal life, they will be more trusting of other adults in general. Thus, past positive experiences with adults allow youth to be more trusting of adults; they may be more likely to form and have higher quality relationships with adults.

Studies have noted that trust is an important factor in the sustainability of existing mentoring relationships (Donlan, McDermott, & Zaff, 2017; Levine, 2016; Spencer, 2006; Spencer, 2007), but no studies have specifically examined trust as an antecedent of the formation of mentoring relationships. Although studies that examine trust during an existing NMR are

important, it is essential to examine trust before the onset of these relationships to inform interventions that promote the development of NMRs.

Youths' trust of adults may be an important catalyst to interacting with adults and the formation of NMRs. A study that examined adolescents' formation of trust with adults across nine youth out-of-school-time programs found that youths' initial trust in adults facilitated relationships with adults (Griffith, 2014). Researchers state that this may be due to the fact that youth who trust adults may perceive that adults are there to help them, and as a result, may be more likely to develop NMRs with adults (Griffith & Larson, 2016). In addition, a recent qualitative study examined how mentoring relationships are developed between mentors and mentees in a youth development program. In separate focus groups of mentors and mentees, participants reported that if there was no initial trust between a youth and an adult, then there was no mentoring relationship (Donlan et al., 2017). These studies suggest that trust may be a foundation to the formation of a NMR. Furthermore, not only may trust influence the development of NMRs, but also the quality of the relationship that adolescents develop with their natural mentors.

### **Mentoring Relationship Quality**

Research has indicated that the quality of a mentoring relationship may be a better indicator of positive outcomes than simply the presence of a mentor (Van Dam et al., 2018). Relationship quality has been measured through multiple components, such as relationship duration, frequency, feelings of closeness, and social support (Deutsch & Spencer, 2009; Nakkula & Harris, 2013). A qualitative study examining long-lasting NMRs among high-risk youth (i.e., at risk for delinquency, teen pregnancy, criminal activity, and substance abuse) noted that many mentees who perceived having a good connection with their mentors, had frequent

contact, and received instrumental and relational support (Spencer, Tugenberg, Ocean, Schwartz, & Rhodes, 2016). A recent study also found that frequency of contact and relational closeness predicted lasting relationships among underrepresented college students (Negrete, Griffith, & Hurd, 2018). Similarly, Wittrup et al. (2016) found that relational closeness buffered the negative effects of school-based discrimination on academic engagement among Black adolescents. Lastly, a study found that high quality mentoring was associated with increased self-esteem, lower depression and fewer alcohol problems compared to low quality NMR among adolescents (Whitney, Hendricker, & Offutt, 2011). These studies show that not only does relationship quality play a role in the length of NMRs but also youth outcomes. A gap in the mentoring literature is that few researchers have examined the predictors of mentoring quality. An important precursor of relationship quality is *trust* (Nakkula & Harris, 2013).

A qualitative study that explored why mentoring relationships failed indicated that one reason was mentees' lack of trust in their mentors (Spencer, 2007). Mentees in failed relationships reported feeling they could not talk to their mentors about their problems due to a lack of trust (Spencer, 2007). In this case, a lack of trust played a role in mentoring relationship quality and ended the relationships. Another investigation noted that when youth trust adults, they are more likely to express themselves via body language, which may help adults gather information when interacting with youth (Donlan et al., 2017). The authors further found that when youth trusted adults they were more likely to accept support from adults, which increased the level of support that adults provided to youth (Donlan et al., 2017). Most of the research to date shows the importance of youth's trust in adults in forming relationships with them and in the quality of their relationship. However, most of this work has been qualitative and little has been done to quantitatively test the association between adolescents' trust in adults and the formation

of new NMRs over time. Further, little is known about the contextual factors that may influence the association between youth trust in adults and their mentoring relationships. Thus, the study also aimed to understand the role of stressors in the quality of NMRs.

### **The Role Stressors in the Formation of NMRs**

Barreras' (1988) support mobilization model suggests that during times of stress people seek social support. Adolescents who experience stressors may seek the support of a natural mentor. In fact, a longitudinal study that examined the relationship between stress, coping strategies and depression among a sample of high school students found that adolescents' perceived stress in the last 30 days predicted social support seeking a year later (Galaif, Sussman, Chou, & Wills, 2003). In addition, in a literature review of 19 studies of help-seeking strategies of young people, it was noted that *trust* played a role in who young people sought support from during times of stress (Rickwood, Deane, Wilson, & Ciarrochi, 2005). The authors also noted that because trust was an important factor in who young people approached for help, they tended to seek "informal" support from people within their networks, such as friends and family (Rickwood et al., 2005). A focus group study of 80 adolescents also found that teens seek social support from family and friends during times of stress (Camara, Bacigalupe, & Padilla, 2017). These studies demonstrate that during times of stress adolescents may seek social support and may be more likely to seek support from people they trust. This indicates that adolescents may cope with stress in their lives by seeking social support from friends or family and, as a result, develop NMRs.

Although researchers have examined the relationship between stress and support seeking, only one study has examined how stress is associated with the acquisition of a NMR. Hagler et al. (2017) examined how psychosocial factors predict the formation of a NMR among 4<sup>th</sup> through 9<sup>th</sup> grade youth who were waitlisted for Big Brothers Big Sisters (BBBS). The results indicated

that at low levels of stress, more peer-directed prosocial behavior predicted less likelihood of NMR acquisition among youth (Hagler et al., 2017). However, contrary to their hypothesis, there was no significant association between youths' prosocial peer engagement and acquiring a natural mentor during high levels of stress. Because the sample was recruited from the BBBS waitlist, it could be that the youth who reported a natural mentor acquired one via another mentoring program. Given that there is only one study that examined the role of stress in the formation of new mentoring relationships, more research is needed to understand whether stressors influence the association between youths' trust in adults and the development of NMRs.

### **Rationale**

Given the importance of trust in the quality and sustainability of youth mentoring relationships (Donlan et al., 2017; Spencer, 2007) this study addressed a gap in this literature by being the first study, to my knowledge, to examine the role of Latinx adolescents' general trust towards adults in the formation of new NMRs. To take a person-centered approach, we explored if there were distinct profiles of adult trust using two measures, one that assesses youth's trust of adults and another that determines how sensitive they are of adults.

Because few studies have examined the predictors of NMRs, it is also important to investigate in what contexts youth may be more likely to develop NMRs. Studies have demonstrated that during times of stress, people will use various coping strategies, such as seek social support (Galaif et al., 2003). Further, research shows that when adolescents are stressed, they seek social support from people who they *trust* (Rickwood et al., 2005). Therefore, youth who encounter stressors may be more likely to depend on important people in their lives, such as mentors. This may increase the closeness between a mentee and their mentor(s). However, there



remains limited evidence to demonstrate the role of youth' trust in adults on the association between youth experiencing stressors and their quality of their NMR(s).

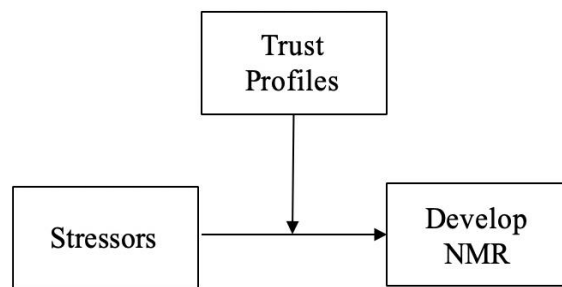
The current study explored if there were distinct profiles of youths' trust of adults (higher trust profile vs. lower trust profile). Second, trust profiles and stressors were tested as predictors of the development of NMRs and higher relationship quality. Third, this study examined whether trust profiles moderate the relationship between stressors and the formation of a NMR. Fourth, this study examined whether trust profiles moderate the association between stressors and mentoring relationship quality.

### **Statement of Hypotheses**

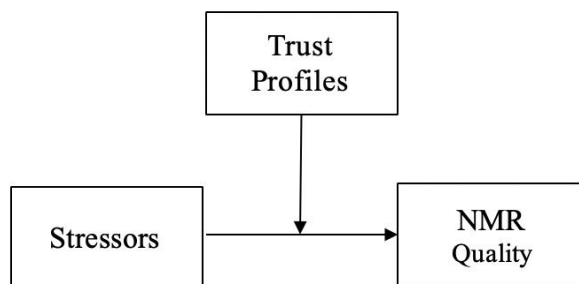
1. There will be distinct trust profiles that emerge in the sample using two subscales that measure Latinx adolescents' trust and sensitivity towards adults.
2. The odds of developing a new NMR in 10th grade will be higher for every unit increase in participants with more trusting profiles in 9th grade, while controlling for the presence of NMR(s) in 9th grade.
3. Trust profiles will predict NMR quality in 10th grade, while controlling for mentoring quality in 9th grade, among participants who report developing new NMRs in 10th grade.
4. The odds of developing a new NMR in 10th grade are higher for every unit increase in stressors during 9th grade, while controlling for the presence of NMR(s) in 9th grade.
5. Stressors will predict NMR quality in 10th grade, while controlling for quality in 9th grade, among participants who report developing new NMRs in 10th grade.
6. Trust profiles in 9th grade will moderate the association between youth stressors in 9th grade and the development of new NMRs in 10th grade. Specifically, among youth with

more trusting profiles, the association between stressors and the development of a new NMR(s) will be stronger, compared to youth with less trusting profiles (see Figure 1).

7. Trust profiles in 9th grade will moderate the association between youth stressors in 9th grade and relationship quality in 10th grade. Specifically, among youth with more trusting profiles, the association between stressors and the relationship quality will be stronger, compared to youth with less trusting profiles (see Figure 2).



*Figure 1.* Proposed Moderation Model of Trust Profiles in the Relationship Between Stressors and Developing a NMR.



*Figure 2.* Proposed Moderation Model of Trust Profiles in the Relationship Between Stressors and NMR Quality.

## Method

### Participants

The participants in this study were 347 Latinx students who were recruited from two public high schools in a major city in the Midwest. Research assistants gave presentations about the study in both Spanish and English in 9th-grade classrooms across both schools. Parental consent and youth assent forms were distributed to all students in both English and Spanish. Youth were informed of their rights as a participant, the risks and benefits of the study, and the compensation they would receive. Students were told that their participation was voluntary, that they could decline to participate at any time and that all their information would be kept confidential. If students returned completed consent and assent forms, then they were given a compensation award, regardless of whether they volunteered to participate in the study. The incentive included a candy bar and entry into raffle ticket to win either an iPod Touch or movie tickets.

Participants were 47.3% male ( $n = 164$ ) and 52.7 % female ( $n = 183$ ). The mean age of participants during 9<sup>th</sup> grade was 15 years old ( $SD = .58$ ). Participants were able to check multiple races/ethnicities, and the majority identified as Mexican/Mexican-American ( $n = 324$ , 93.4%). The remaining participants identified as Puerto Rican ( $n = 19$ , 5.5%), African American ( $n = 7$ , 2%), Native American ( $n = 1$ , .29%), White ( $n = 6$ , 1.7%), and/or Other Latinx ( $n = 18$ , 5.2%; e.g., Guatemalan, Salvadoran). The sample was 22.5% first-generation immigrants ( $n = 78$ ), 61.7% second generation ( $n = 214$ ), 6.9% were at least third generation ( $n = 24$ ), and 8.9% of participants' generation status could not be determined ( $n = 31$ ). Participants reported that 58.2% ( $n = 128$ ) of their mothers had received less than a high school diploma, 33.6% ( $n = 74$ ) had their high school diploma or General Educational Development (GED), and 8.2% ( $n = 18$ ) completed at least some college. Participants reported that 59.5% ( $n = 113$ ) of their fathers had

received less than a high school diploma, 33.7% ( $n = 64$ ) had their high school diploma or GED, and 6.4% ( $n = 12$ ) completed at least some college.

### **Procedures**

Research assistants administered surveys during school hours. Participants were given the opportunity to take the survey in either English or Spanish. To accommodate participants with varying reading capabilities, a research assistant read the survey out loud as the participants completed the survey. Participants were surveyed once during 9<sup>th</sup> grade and again during 10<sup>th</sup> grade. Students received a \$10 gift card when they completed each survey.

In order to decrease attrition, several attempts were made to locate students who were no longer enrolled at their high school during the second year. A follow-up team, comprised of trained research assistants, was in charge of finding participants no longer enrolled at the high schools. Members of the follow-up team met participants in a location that was convenient for the participant and administered the survey. The retention rate of participants from 9th-grade to 10th-grade was 86.67%.

**Demographics.** Participants were asked to report their age, gender, race/ethnicity, parents' level of education, and generational status. Generational status was calculated using information about 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 both parents and the student were born in the U.S. Students were considered fourth generation if the student, their parents, and all their grandparents were born in the U.S.

**Adult Trust.** Trust in adults was measured by administering the Interpersonal Trust Scale for Adolescents (IT; DuBois, 2006) in 9th grade. This scale is a modified version of the Faith in People Scale (Rosenberg, 1957). The measure includes two subscales, the Adult Trust subscale and the Adult Sensitivity subscale, and consists of five items each. The Adult Trust subscale measures the extent of a adolescents' trust in adults and the Adult Sensitivity subscale measures how sensitive youth are of adults. Responses are on a 5-point Likert-type scale (1 = *Not at All*, 2 = *A Little Bit*, 3 = *Moderately*, 4 = *Quite a Bit*, 5 = *Extremely*). A sample item for the Adult Trust subscale is: "You feel that most adults can be trusted." A sample item for the Adult Sensitivity subscale is: "Your feelings are easily hurt by adults." Both the adult trust subscale ( $\alpha = .73$ ) and the adult sensitivity subscale ( $\alpha = .71$ ) demonstrated adequate internal consistency. A mean score for each subscale was calculated for every participant. A higher score indicates being more trust or more sensitivity.

**Ecological Stressors.** Ecological stressors were measured by administering a shortened version of the Multicultural Events Schedule for Adolescence (MESA; Gonzales, Gunnoe, Jackson, & Samaniego, 1995) in 9th grade. This instrument consists of 27 items that assesses whether or not participants experienced specific stressful life events within the past three months related to discrimination, economic hassles, school hassles, family trouble, trouble with peers, and violence. A sample item is "You were threatened with a weapon." For each item, participants reported whether or not they experienced the event by indicating yes (1) or no (0). To capture the cumulative effects of ecological stressors, a sum score of stressors was calculated for each participant, with scores ranging from 0 to 27.

**Development of NMR.** NMRs were assessed in both 9<sup>th</sup> and 10<sup>th</sup> grade. Participants were asked to report whether they had a non-parental adult who is at least 18 years of age, more

experienced, and who provided them with support and guidance in their lives. Participants were instructed that this person is someone who: a) they could count on to be there for them, b) believes in them and cares deeply about them, c) inspires them to do their best, d) has really influenced what they do and the choices they make, e) and who is not a parent or romantic partner (Rhodes et al., 1994; Sánchez et al., 2008). Participants reported whether or not they had this type of relationship by indicating yes (1) or no (0). If participants indicated “yes”, then they were allowed to list up to three people who fit these criteria. Participants reported demographic characteristics for each natural mentor listed, such as ethnicity, age, educational attainment level, and relationship type. Participants were considered to have developed a new NMR in 10th grade if they reported no NMRs in 9th grade and then reported having at least 1 NMR in 10th grade, or if they reported a NMR in 9th but reported new NMRs in 10th grade based on the characteristics they reported about the mentor. The development of a new NMR in 10<sup>th</sup> grade was measured as Yes (1) or No (0).

**Mentoring Relationship Quality.** If participants reported having a NMR in 10th-grade, then they completed The Youth Mentoring Survey (YMS) to assess mentoring relationship quality (Harris & Nakkula, 2005). Youth who reported more than one mentor were asked to think about all listed mentors as they answered the questions. The measure includes two subscales: relational quality and instrumental quality. The relational quality subscale has 16 items that assess the degree to which participants felt happy, close, and satisfied in their relationship with their mentor(s) (e.g., “My important adult(s) knows what is going on in my life”). The instrumental quality subscale has eight items that assess the extent to which youth perceived there to be instrumental benefits from the relationship with their mentor(s) (e.g., “I have learned a lot from my important adult(s)”). Responses are on 4-point Likert-type scale (1 =

*Not at all true* to 4 = *Very True*). Both the relational subscale ( $\alpha = .84$ ) and the instrumental subscale ( $\alpha = .86$ ) demonstrated good internal consistency. A mean score was computed for each subscale, such that higher scores indicated higher relational or instrumental quality.

## References

- Ainsworth, M. S., & Bowlby, J. (1991). An ethological approach to personality development. *American psychologist*, 46(4), 333. doi:10.1037/0003-066X.46.4.333
- Albright, J. N., Hurd, N. M., & Hussain, S. B. (2017). Applying a Social Justice Lens to Youth Mentoring: A Review of the Literature and Recommendations for Practice. *American journal of community psychology*, 59(3-4), 363-381. doi:10.1002/ajcp.12143
- Barrera, M. (1988). Models of social support and life stress: Beyond the buffering hypothesis. In L.H Cohen (ed.), *Life events and psychological functioning: Theoretical and methodological issues*, (211-236). Newbury Park, CA: Sage.
- Berardi, L. (2012). *The First Year College Experience: Predictors of Natural Mentoring Relationships & Students' Academic Outcomes* (Unpublished doctoral dissertation). DePaul University, Chicago IL.
- Camara, M., Bacigalupe, G., & Padilla, P. (2017). The role of social support in adolescents: are you helping me or stressing me out? *International Journal of Adolescence and Youth*, 22(2), 123-136. doi:10.1080/02673843.2013.875480
- Cohn, D. A. (1990). Child-mother attachment of six-year-olds and social competence at school. *Child development*, 61(1), 152-162.
- Contreras, F. (2009). Sin papeles y rompiendo barreras: Latino students and the challenges of persisting in college. *Harvard Educational Review*, 79(4), 610-632. doi:10.17763/haer.79.4.02671846902gl33w
- Deutsch, N. L., & Spencer, R. (2009). Capturing the magic: Assessing the quality of youth mentoring relationships. *New Directions for Youth Development*, 2009(121), 47-70. doi:10.1002/yd.296



- Donlan, A. E., McDermott, E. R., & Zaff, J. F. (2017). Building relationships between mentors and youth: Development of the TRICS model. *Children and Youth Services Review, 79*, 385-398. doi:10.1016/j.chilyouth.2017.06.044
- DuBois, D. (2006). Interpersonal Trust Scale for Adolescents (Unpublished measure).
- DuBois, D. L., & Karcher, M. J. (2005). Youth mentoring. In: DuBois, DL.; Karcher, ML., editors. *Handbook of youth mentoring*, (pp. 2-11). Thousand Oaks, CA: Sage.
- DuBois, D. L., Portillo, N., Rhodes, J. E., Silverthorn, N., & Valentine, J. C. (2011). How effective are mentoring programs for youth? A systematic assessment of the evidence. *Psychological Science in the Public Interest, 12*(2), 57-91.  
doi:10.1177/1529100611414806
- DuBois, D. L., & Silverthorn, N. (2005). Natural mentoring relationships and adolescent health: Evidence from a national study. *American journal of public health, 95*(3), 518-524.  
doi:10.2105/AJPH.2003.031476
- Galaif, E. R., Sussman, S., Chou, C., & Wills, T. A. (2003). Longitudinal relations among depression, stress, and coping in high risk youth. *Journal Of Youth And Adolescence, 32*(4), 243-258. doi:10.1023/A:1023028809718
- Gonzales, N. A., Gunnoe, M. L., Jackson, K. M., & Samaniego, R. Y. (1995, June). *Validation of a multicultural events scale for urban adolescents*. In Biennial Conference of the Society for Community Research and Action, Chicago, IL.
- Griffith, A. (2014). *The formation of adolescents' trust in adult leaders at project-based youth programs* (Doctoral dissertation). Retrieved from <https://www.ideals.illinois.edu/handle/2142/49699>

- Griffith, A. N., & Larson, R. W. (2016). Why trust matters: How confidence in leaders transforms what adolescents gain from youth programs. *Journal of Research on Adolescence, 26*(4), 790-804. doi:10.1111/jora.12230
- Hagler, M., Raposa, E. B., & Rhodes, J. (2017). Psychosocial profiles of youth who acquire a natural mentor during a school year. *Applied Developmental Science, 1-9*. doi:10.1080/10888691.2017.1342539
- Harris, J. T., & Nakkula, M. J. (2003). *Youth Mentoring Survey (YMS)* (Unpublished measure). Fairfax, VA: Applied Research Consulting.
- Hurd, N., & Zimmerman, M. (2010). Natural mentors, mental health, and risk behaviors: A longitudinal analysis of African American adolescents transitioning into adulthood. *American journal of community psychology, 46*(1-2), 36-48. doi:10.1007/s10464-010-9325-x
- Hurd, N. M., & Zimmerman, M. A. (2014). An analysis of natural mentoring relationship profiles and associations with mentees' mental health: Considering links via support from important others. *American Journal of Community Psychology, 53*(1-2), 25-36. doi:10.1007/s10464-013-9598-y
- Hurd, N. M., Tan, J. S., & Loeb, E. L. (2016). Natural mentoring relationships and the adjustment to college among underrepresented students. *American journal of community psychology, 57*(3-4), 330-341. doi:10.1002/ajcp.12059
- Flores, A. (2017). How the U.S. Hispanic population is changing. *Pew Research Center*. Retrieved from <http://www.pewresearch.org/fact-tank/2017/09/18/how-the-u-s-hispanic-population-is-changing/>

- Levine, M. (2016). Experiences of trust in longer-lasting formal youth mentoring relationships (Doctoral dissertation). University of Massachusetts Boston
- Lopez, M. H. (2009). Latinos and education: Explaining the attainment gap. Pew Hispanic Center. Washington, D.C. Retrieved from [www.pewhispanic.org](http://www.pewhispanic.org)
- Mikulincer, M. (1998). Attachment working models and the sense of trust: An exploration of interaction goals and affect regulation. *Journal of personality and social psychology*, 74(5), 1209.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. New York: Guilford Press.
- Nakkula, M. J., & Harris, J. T. (2013). Assessing mentoring relationships. In D. DuBois & M. Karcher (Eds.), *Handbook of youth mentoring*, (pp. 45-62). Thousand Oaks, CA: Sage.
- Negrete, A., Griffith, A. N., & Hurd, N. M. (2018). Factors contributing to the retention of natural mentors among underrepresented students across the first year of college. *Mentoring & Tutoring: Partnership in Learning*, 26(1), 70-90.  
doi:10.1080/13611267.2018.1445434
- Rickwood, D., Deane, F. P., Wilson, C. J., & Ciarrochi, J. (2005). Young people's help-seeking for mental health problems. *Advances in Mental Health*, 4(3), 218–251. doi: 10.5172/jamh.4.3.218
- Rhodes, J. E. (2005). A model of youth mentoring. In: DuBois, DL.; Karcher, ML., editors. *Handbook of youth mentoring*, (pp. 30-43). Thousand Oaks, CA: Sage.
- Rhodes, J.E., Contreras, J.M., & Mangelsdorf, S.C. (1994). Natural mentor relationships among Latina adolescent mothers: Psychological adjustment, moderating processes, and the role

- of early parental acceptance. *American Journal of Community Psychology*, 22, 211–227.  
doi:10.1007/BF02506863
- Rhodes, J. E., Spencer, R., Keller, T. E., Liang, B., & Noam, G. (2006). A model for the influence of mentoring relationships on youth development. *Journal of community psychology*, 34(6), 691-707. doi:10.1002/jcop.20124
- Rotenberg, K. J. (2010). The conceptualization of interpersonal trust: A basis, domain, and target framework. In K. J. Rotenberg (Ed.), *Interpersonal trust during childhood and adolescence* (pp. 8–27). New York: Cambridge University Press.
- Rotenberg, K. J. (2018). *The Psychology of Trust*. Routledge.
- Rosenberg, M. (1957). *Occupations and values* (pp. 25-35). Glencoe, IL: Free Press.
- Sánchez, B., Colón-Torres, Y., Feuer, R., Roundfield, K.E., & Berardi, L. (2014). Race, ethnicity, and culture in mentoring relationships. *Handbook of youth mentoring*, 2, 145-158.
- Sánchez, B., Esparza, P., & Colón, Y. (2008). Natural mentoring under the microscope: An investigation of mentoring relationships and Latino adolescents' academic performance. *Journal of Community Psychology*, 36(4), 468-482. doi:10.1002/jcop.20250
- Spencer, R. (2006). Understanding the mentoring process between adolescents and adults. *Youth & Society*, 37(3), 287-315. doi:10.1177/0743558405278263
- Spencer, R. (2007). “It's not what I expected” a qualitative study of youth mentoring relationship failures. *Journal of Adolescent Research*, 22(4), 331-354.  
doi:10.1177/0743558407301915

- Spencer, R., Tugenberg, T., Ocean, M., Schwartz, S. E., & Rhodes, J. E. (2016). "Somebody Who Was on My Side" A Qualitative Examination of Youth Initiated Mentoring. *Youth & Society*, 48(3), 402-424. doi:10.1177/0044118X13495053
- Van Dam, L., Smit, D., Wildschut, B., Branje, S. J. T., Rhodes, J. E., Assink, M., & Stams, G. J. J. M. (2018). Does Natural Mentoring Matter? A Multilevel Meta-analysis on the Association Between Natural Mentoring and Youth Outcomes. *American journal of community psychology*, 1-18. doi:10.1002/ajcp.12248
- Whitney, S. D., Hendricker, E. N., & Offutt, C. A. (2011). Moderating factors of natural mentoring relationships, problem behaviors, and emotional well-being. *Mentoring & Tutoring: Partnership in Learning*, 19(1), 83-105. doi:10.1080/13611267.2011.543573
- Wittrup, A. R., Hussain, S. B., Albright, J. N., Hurd, N. M., Varner, F. A., & Mattis, J. S. (2016). Natural Mentors, Racial Pride, and Academic Engagement Among Black Adolescents: Resilience in the Context of Perceived Discrimination. *Youth & Society*. doi:10.1177/0044118X16680546
- Witkow, M. R., Huynh, V., & Fuligni, A. J. (2015). Understanding differences in college persistence: A longitudinal examination of financial circumstances, family obligations, and discrimination in an ethnically diverse sample. *Applied developmental science*, 19(1), 4-18. doi:10.1080/10888691.2014.946030
- Zimmerman, M. A., Bingenheimer, J. B., & Behrendt, D. E. (2005). Natural mentoring relationships. In: DuBois, DL.; Karcher, ML., editors. *Handbook of youth mentoring*, (pp. 143-157). Thousand Oaks, CA: Sage.