The association Between Maternal attachment Quality and Symptoms of Anxiety in Mexican American Adolescents

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ABSTRACT

THE ASSOCIATION BETWEEN MATERNAL ATTACHMENT QUALITY AND SYMPTOMS OF ANXIETY IN MEXICAN AMERICAN ADOLESCENTS

Kathryn J Steiningher, M.S.
Applied Human Development and Family Sciences
Northern Illinois University, 2022
DeAnna Harris-McKoy and Lin Shi, Co-Directors

Hispanic youth have been recognized as a large population struggling with mental illness. There has been little investigation surrounding the relationship between Hispanic adolescents and anxious tendencies, despite being the second highest population experiencing symptoms. The current study aims to explain the prevalence of symptoms of anxiety in Mexican American adolescents by examining maternal attachment quality. Data from a sample of 432 Mexican American adolescents from the ages of 13 to 21 was analyzed to determine the relationship between maternal attachment quality and symptoms of anxiety. Adolescents demonstrated greater symptoms of anxiety when they had lower maternal attachment quality. After comparing the means, female adolescents reported a greater mean score of anxiety than males, whereas males reported greater mean maternal attachment quality than females.

Keywords: maternal attachment quality, anxiety, Mexican American adolescents
THE ASSOCIATION BETWEEN MATERNAL ATTACHMENT QUALITY
AND SYMPTOMS OF ANXIETY IN MEXICAN
AMERICAN ADOLESCENTS

BY
KATHRYN J STEININGER
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MASTER OF SCIENCE

APPLIED HUMAN DEVELOPMENT AND FAMILY SCIENCES

Thesis Co-Directors:
DeAnna Harris-McKoy, Ph.D.
Lin Shi, Ph.D.
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DEDICATION

For my previous adolescent Mexican American clients that inspired this research.
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CHAPTER 1

INTRODUCTION

In 2019, over 15% of adults in the United States experienced mild, moderate, or severe symptoms of anxiety within a two-week period (Centers for Disease Control [CDC], 2020). Of these adults, women were more likely to experience anxiety than men, at any severity. Although non-Hispanic Whites were the most likely to experience any severity of anxiety, Hispanic adults were the next most likely to experience moderate anxiety, compared to non-Hispanic Blacks, and non-Hispanic Asians (CDC, 2020). Furthermore, only 34 percent of Hispanic adults are seeking services due to culture specific barriers like language, stigma, legal status, poverty, and lack of health insurance coverage, compared to 45 percent of the national average of adults (Anxiety and Depression Association of America [ADAA], 2022; National Alliance on Mental Illness [NAMI], n.d.). Although these statistics only include adults, Hispanic youth are more likely to have a mental illness compared to their peers (just behind the Native American adolescent population) (Ramirez et al., 2017). There has been little investigation about the relationship between Hispanic adolescents and anxious tendencies, despite being the second highest population experiencing symptoms. Hispanic individuals serve as a particular interest due to their likelihood of symptomology, but also their lack of availability to mental health resources due to a language barrier, poverty, and cultural stigma surrounding mental illness (Ayón, 2013).
In an effort to mitigate symptoms of anxiety transitioning into adulthood, researchers have focused on symptomology in adolescents and children in order to gain a better understanding of an individual’s source of anxiety (e.g., Buist et al., 2004; Cassidy et al., 2009; Cooper et al., 1998; Kenny, 1987; Kenny, 1990; Larose & Boivan, 1998). Adolescence is a period where many life changes take place, specifically developmental, and they begin discovering a sense of autonomy from parental figures (Buist et al., 2004; Vivona, 2000). Adolescence is often a time when an individual’s role is renegotiated within their families, all while attempting to maintain a healthy relationship with their parents (Liable et al., 2000). An important determinant in the outcome of the adolescent’s renegotiation is the quality of attachment that they have with their parents (Buist et al., 2004). Previous research has long studied the importance of secure attachment for successful development into late adolescence, specifically involving adjustment to college (Lapsley et al., 1990; Larose & Boivan, 1998; Rice et al. 1995) interpersonal relationships with peers (Kenny 1987, 1990) and career development later in life (Blustein et al., 1991).

Attachment Theory as a Framework

Developed by John Bowlby (1958), Attachment Theory focuses on the main theme that infants form a unique bond with their primary caregiver and rely on them for comfort when they are in distress. This unique relationship is known as attachment, and the way that an infant perceives their caregiver’s (or primary attachment figure’s) availability and responsiveness influences their attachment style – both as an infant and often into adulthood. Individuals begin developing what Bowlby (1958) coined the internal working model (IWM) in their first year of life. This model is a mental representation of how an individual should behave when they are in
distress, seeking security in the form of emotional support and connection. The IWM is thought to be made up of two components: 1) a model of self, which is determined by an individual’s sense of lovability and worthiness; and 2) a model of the social world, which is an individual’s sense of dependability and trustworthiness in prominent figures in their life (Ainsworth & Bowlby, 1991; Bretherton, 1992; Lopez & Brennan, 2000). As an individual grows up, their internal working model influences the way they behave and respond to their own needs in relation to others (Bowlby, 1969; Bowlby, 1973; Siegel, 1999). Based on the attachment figure’s pattern of responses to the infant over time, the infant learns to anticipate a certain response when in emotional distress. As the infant grows into a child, it develops a reaction to its own emotional needs – for example, if their caregiver was often dismissive of their emotions, they learn to minimize their own emotions in order to avoid unmet attachment needs. An individual that demonstrates a high quality of attachment would likely see themselves as worthy of love and feel trusting of the dependability of their close relationships. In contrast, someone that demonstrates a low quality of attachment would be more likely to view themselves as unworthy of love and their social environment as untrustworthy and unreliable (Buist et al., 2004; Cassidy et al., 2009; Cooper et al., 1998; Vivona, 2000).

Since the original infant attachment study assessing infant and toddlers’ attachment styles, known as “The Strange Situation” (Ainsworth et al., 1978), attachment styles have been recognized as impacting relationships in adolescents and adults as well. Hazan and Shaver (1987) translated the three discovered attachment styles in the Strange Situation into adult versions and were the first to study these relationships and how individuals’ IWM impacted their sense of self in relation to others. They now classified these three categories of attachment styles
as secure, anxious/ambivalent, and avoidant. These attachment styles can help an individual understand what their internal working model says about themselves based on their early relationship with an attachment figure and how this model contributes to the way they behave in their adult relationships.

In Hazan and Shaver’s (1987) research, based on previous child-focused attachment, attachment styles are classified as secure and insecure (either insecure-anxious/ambivalent or insecure-avoidant). An individual with a secure attachment style sees their primary caregiver as a secure base, in which they can return to after exploring their environment to know they are safe. They have little worry about abandonment or fear of others getting too close to them in relationships. They are comfortable with the idea of becoming close to and relying on other people. On the other hand, individuals with an anxious/ambivalent or avoidant attachment style had a compromised relationship with their attachment figure. Those with anxious/ambivalent attachment styles often want others to be more attached or more emotionally intimate with someone than the other person is comfortable with – they fear that those they love will not stay around. Lastly, an individual with an avoidant attachment style fears relying on others too much as well as are afraid of getting too close to others; they find it difficult to trust others and that others often want to be closer to them than they are comfortable being.

The relationship that individuals have with their primary attachment figure plays a large role in their understanding of self, which is essential in developing social skills and relationships later in life (Buist et al., 2004; Larose & Boivin, 1998). Cooper and colleagues (1998) found that insecurely attached adolescents are likely to be more poorly adjusted than their securely attached peers and have a more difficult time with emotion recognition and regulation. Because of this,
those with insecure attachment styles can struggle maintaining both friendships and romantic relationships due to their difficulty with regulating negative emotions and displaying high symptomatology. Understanding the impact of a relationship with a primary caregiver is of significance especially in the clinical application of working with adolescents with symptoms of anxiety. Assisting adolescent clients with emotion regulation and understanding their internal working model may help them to improve their adjustment and future attachments into adulthood.

Insecure Attachment and Anxiety Symptoms

Insecure attachment styles described by Hazan and Shaver (1987) are classified by fear and anxiety related to the sense of self and in turn can contribute to fear and anxiety in relationships. Given the unconscious nature of attachment styles, they are typically a schema that individuals live with for most of their lives, unless they become aware of it. Living with this fear and anxiety of being unworthy of love and feeling alienated for an extended period seems it could create symptoms of anxiety beyond relationships with intimate partners or close friends – manifesting a feeling of generalized anxiety in other aspects of life. For example, an individual living in fear that their attachment figure will abandon them may begin to believe that they are not worthy of consistency in relationships in their life – this is their internal working model at work. Previous research has made it seem possible that prolonged symptoms of anxiety due to insecure attachment styles could lead to the development of Generalized Anxiety Disorder (Cassidy et al., 2009; Hale et al., 2006; Jakobsen et al., 2011; Shaker & Homeyli, 2011; van Eijck et al., 2012; Warren et al., 1997).
Mexican American Population

In Spanish speaking cultures, there is often a stigma surrounding mental illness (Mascayano et al., 2016), causing difficulty in discussing emotions because of the belief that positive emotions are more desirable and appropriate than negative ones (Shen et al., 2021). Due to this stigma, individuals in the Spanish speaking cultures may develop an internal model that negative emotions are to be avoided and should not be expressed. They may come to believe that if they have negative emotions or share them, then they are weak, lesser than, and in extreme cases, should be punished, as displayed in Stein and colleagues (2020) research on maternal acceptance of children’s negative emotions and negative parenting behaviors. In viewing their attachment figure’s response to their negative emotions, a child may learn that expressing negative emotions results in a negative consequence or their attachment figure distancing themselves. Furthermore, if children are raised in a culture where emotions are not often talked about, it is possible they would be highly unlikely to feel comfortable sharing their emotional distress with an attachment figure, like their mother. If an individual cannot seek comfort or emotional stability in their primary caregiver, it is likely that they could have trouble discussing these struggles with other close individuals, according to the beliefs of attachment theory (Bowlby, 1969). Based on their internal working model, individuals learn to believe that comfort and emotional stability are not available to them, thus holding on to strong feelings of anxiety, or inadequacy, and fearing the inability to confide in other people (Bowlby, 1969).

Previously researchers have studied the relationship between anxiety symptoms and attachment in adolescents (Buist et al., 2004; Cassidy et al., 2009; Jakobsen et al., 2011; Muris et al., 2001; van Eijck et al., 2012), but there is a gap in research when it comes specifically to the
Hispanic adolescent population. The present study aims to investigate the association between maternal attachment quality and symptoms of anxiety among Mexican American adolescents.
CHAPTER 2

REVIEW OF LITERATURE

Attachment Styles in Adolescents

Attachment theory is identified as a framework linking several factors of adolescent psychosocial functioning to the emotional bond they have with their primary caregiver – some of these factors include identity development (Kobak & Sceery, 1988; Lapsley et al., 1990; Samoulis et al., 2001), emotion regulation (Cooper et al., 1998), and adjustment (Cooper et al., 1998; Lapsley et al., 1990; Vivona, 2000). Collectively, studies have recognized that an adolescent’s attachment quality to their primary caregiver can impact their sense of self and ability to recognize and control their own emotions. Several studies, focusing on late adolescents transitioning to college life, examined the impact of attachment on an individual’s sense of self when leaving home and becoming more independent from caregivers. Anxiously attached individuals viewed themselves as less socially competent than their avoidant or secure counterparts, and avoidantly attached adolescents reported perceiving friend and family relationships as less supportive and feeling higher levels of loneliness (Kobak & Sceery, 1988).

Previous research suggests that insecurely attached individuals are less well-adjusted (exhibiting more symptomology, less academic achievement, and lower sense of autonomy), than those that are securely attached (Cooper et al., 1998; Laible et al., 2000; Vivona, 2000). In a study using data of a subset of 2,011 Caucasian and African American adolescents, researchers measured psychological symptoms, self-concept, and risky or behavior problems as they related
to attachment style (Cooper et al., 1998). Adolescents that reported anxious attachment reported the highest levels of depression, anxiety, and hostility, which differed significantly from both the avoidant and secure groups. Securely attached adolescents also reported more positive self-concepts than insecurely attached adolescents. Overall, researchers found that adolescents with anxious attachment styles were the most poorly adjusted of their peers and reported the highest symptom levels, as well as highest levels of problematic behaviors. Comparatively, in a study of Black and White adolescents, ages 13 to 19, the avoidantly attached adolescents were less hostile and depressed than their anxious peers and less involved in delinquent behaviors, although securely attached adolescents reported superior functioning (Cooper et al., 1998). Similarly, in a study of late adolescent undergraduate students, the secure group reported less anxiety and depression than the insecure groups (Vivona, 2000). In analyzing the association between adjustment and peer and parental attachment, Laible and colleagues (2000) found that adolescents with high scores on both parent and peer attachment had the lowest scores on depression and aggression, and the highest scores of sympathy, whereas those with low scores in both categories had the lowest scores all around.

Secure attachment has been found to be associated with fewer internalizing and externalizing behaviors. In at-risk adolescents, between the ages of 14 and 18, secure attachment was associated with fewer self-reported symptoms of internalizing problems such as depression, anxiety, and social withdrawal but was also negatively associated to peer and maternal reports of externalizing symptoms. Conversely, insecurely attached adolescents reported higher levels of internalizing symptoms (Allen et al., 1998). In a longitudinal study of 285 Dutch adolescents with a mean age of 13.5, the participants demonstrated stable internalizing and externalizing
problem behavior with regards to attachment over the span of three years. Adolescents with higher quality of attachment showed lower levels of both internalizing and externalizing behaviors a year after the first measurement (Buist et al., 2004). Furthermore, Raja and colleagues (1992) found that, out of the 1,029 adolescents studied, those with lower perceived attachment to their parents exhibited greater problems with conduct, inattention, and depression, encompassing both internalizing and externalizing problems.

**Age and Maternal Attachment**

As Bowlby considered in his last theoretical works, the impact of peers compared to parental attachment in later adolescent development is inconclusive and researchers continue to explore these roles (Bowlby, 1988). As children grow into adolescents and spend more time outside of their home, away from a primary caregiver, they receive a strong influence from peers when it comes to emotional development and the perpetuation of their IWM (Nickerson & Nagle, 2005). A study of 584 Chinese adolescents examined attachment quality of peers and parents at different ages across adolescence (Song et al., 2009). Of the 584 participants, 200 adolescents were in junior high school (early adolescence), 114 in high school (middle adolescence), and 270 in college (late adolescence). Song and colleagues (2009) observed that in early adolescence, both maternal and peer attachment were significantly related to the adolescents’ self-evaluations of self-liking and self-competence. However, in middle adolescence, peer attachment was the only significant predictor of self-evaluation scores and in late adolescence both maternal and paternal attachments were the only significant predictors of the adolescents’ self-evaluation. This research demonstrates how different attachments impact the development of an adolescent as they age. Conversely, Gorrese and Ruggieri (2012) reported
a non-significant correlation between age and peer attachment in their meta-analysis, suggesting that of the 19 studies examined, the findings were not significant enough to demonstrate an association between age and peer attachment. The researchers claim that further longitudinal studies are necessary in order to provide significant evidence of the relationship between age and attachment.

**Gender Differences in Attachment Styles**

Although early research on infant and childhood attachment did not find gender differences to be an important variable to study (Ainsworth et al., 1978), researchers now recognize the importance of an adolescent’s attachment style to their social functioning and how gender expectations can play a role (Kenny & Rice, 1995). It is believed that both biological factors and societal gender expectations lead girls to develop a sense of self which is defined by relationships with others, which is not as much the case for boys. Researchers have found that an adolescent’s quality of attachment is more important for the development of a female’s psychological well-being (Kenny & Donaldson, 1991) and identity achievement (Benson et al., 1992) than it is for males. Though it is acknowledged that attachment quality may be more impactful for woman than men, the literature on gender differences and specific attachment styles widely varies and yields contrary results.

In a study of late adolescent college students, male and female participants reported no significant difference in attachment quality to both their mother and their father (Lapsley et al., 1990). Similar findings of no gender differences have been reported when using the Parental Attachment Questionnaire (PAQ), which measures parental reports of attachment quality as compared to self-reports (Kenny, 1994). Various other researchers have come to similar results
in that the same proportion of men and women made up each attachment style classification (Allen & Hauser, 1996; Kobak & Sceery, 1988; Vivona, 2000).

Conversely, other studies have found significant gender differences in looking at maternal attachment quality. Benson and colleagues (1992) as well as Song and colleagues (2009) found that adolescent girls had higher levels of attachment quality to mothers than their male counterparts using self-reports (Benson et al., 1992; Song et al., 2009); the same was found in parental reports of attachment quality (Kenny, 1990; Kenny & Donaldson, 1991). A Turkish study of university students, ages 18 to 25, found incongruent results in that male students perceived themselves as more secure than female students and that females perceived themselves as more anxiously attached compared to males (Karaırmak & Oguz Duran, 2008). Cooper and colleagues (1998) also determined that males were more likely to present themselves as secure in comparison to females, but the females in their study were more likely than males to present as avoidantly attached, differing from data collected by Karaırmak and Oguz Duran (2008). However, Cooper and colleagues (1998) utilized a modified version of Hazan and Shaver’s (1987, 1990) attachment questionnaire, while Karaırmak and Oguz Duran (2008) measured attachment using the Relationship Scales Questionnaire (Bartholomew & Horowitz, 1991). Although both studies utilized self-report measures, their items differed significantly, therefore it is not possible to compare the two. Due to the inconsistencies in the literature about the role that gender plays in attachment styles, further research is necessary to determine a relationship.
Symptoms of Anxiety in Adolescents

In taking a deeper look at symptoms of anxiety in adolescents, researchers examined the association between attachment styles and the presence of anxiety symptoms, potentially leading to an anxiety disorder. Warren et al. (1997) found that anxiously attached infants, measured by the Strange Situation, were predicted to have anxiety disorders in late adolescence. Muris and colleagues (2001) found results similar to that of studies examining adjustment and internalizing problems in adolescents – insecurely attached adolescents reported higher levels of both anxiety and depression. Along with this symptomology, researchers found that those adolescents often experienced low levels of trust and communication, as well as high feelings of alienation by their parents and peers – signifying a low quality of attachment. In studying adults with Generalized Anxiety Disorder (GAD), results showed that they demonstrated significantly higher childhood rejection, neglect, and enmeshment as well as lower experiences of being loved by their primary caregiver than did nonanxious control participants (Cassidy et al., 2009). Examining the risk of developing an anxiety disorder associated with parent/child attachment, researchers conducted a longitudinal study of 948 New Zealand participants (Jakobsen et al., 2011). They concluded that children who demonstrated symptoms of anxiety or withdrawal, ages 7 to 9, had an increased risk for depression or an anxiety disorder as an adult. Those that showed positive parent-child attachment in adolescence had a reduced risk of internalizing disorders. Other researchers concluded that adolescents’ GAD symptoms were only longitudinally predicted by perceived attachment quality with their mother, and not their fathers – meaning adolescents with lower perceived attachment quality exhibited higher levels of GAD symptoms (van Eijck et al., 2012). Two years after the initial study, it was found that adolescents who had reported higher levels of
GAD symptoms also perceived a lower quality of attachment with both parents. Correspondingly, other researchers found that when examining the relationship between attachment and GAD symptoms, adolescents who experienced more parental rejection, over-control, and alienation reported higher levels of symptoms (Hale et al., 2006; Viana & Rabian, 2008).

**Gender Differences in Symptoms of Anxiety**

In examining symptoms of anxiety, research clearly suggests that women tend to exhibit more symptoms of anxiety than men (Cooper et al., 1998; van Eijck et al., 2012; Vivona, 2000). In a longitudinal study of attachment, emotion regulation, and adjustment, researchers found that females reported higher levels of anxiety than males independent of their attachment styles, however, the difference was especially significant in anxiously attached adolescents. Females in the study also reported elevated levels of psychological distress across all attachment groups (Cooper et al., 1998). In later research, results showed that women, again, reported more anxiety than men (Vivona, 2000) as well as greater symptoms of GAD (van Eijck et al., 2012). Other longitudinal studies determined that as children grew from infants to age five (Barnett et al., 1991; Bögels & Brechman-Toussaint, 2006) and into adolescence (Bosquet & Egeland, 2006), elevated anxiety was exhibited in girls but not in boys. Although previous research uses the term “gender differences”, this study will be using “biological sex differences” for the results.

**Hispanic Population**

Although sparsely studied, the Hispanic population is the largest ethnic subgroup in the United States (United States Census Bureau, 2019) with 62 percent being Mexican American
(Pew Research Center, 2019). As noted, attachment is essential to not only identity development of individuals (Kobak & Sceery, 1988; Lapsley et al., 1990; Samoulis et al., 2001), but also to psychological well-being (Allen et al., 1998; Buist et al., 2004; Raja et al., 1992). Due to the importance of attachment, it is necessary to examine how it impacts all cultures in their own unique context. Different cultures hold different beliefs about important aspects of attachment, specifically the expression of emotions. While the understanding of the importance of emotion expression is becoming more widespread (Keltner et al., 2019), many cultures do not believe that emotions have an influence in an individual’s everyday functioning. A study of 77 Hispanic mothers of children ages 5 to 12 (85% of Mexican origin, 12.5% from the United States, 1.25% from Honduras, and 1.25% from Costa Rica) explored maternal acceptance of negative emotions. The study found that Hispanic mothers’ symptomology was significantly related to acceptance of their child’s negative emotions – so that the greater symptomology, the less acceptance of emotion (Stein et al., 2020). This appears to be similar in cultures other than that of Hispanic origin: research from Germany, Japan, and Israel found attachment patterns of higher proportions of insecurely attached infants than American samples of infants (Fracasso et al., 1994; Grossman et al., 1985; Miyake et al., 1985; Sagi et al., 1985; Takahashi, 1986). A meta-analysis further measured a greater frequency of avoidant attachment in Germany and anxious attachment in Japan and Israel (van Ijzendoorn & Kroonenberg, 1988).

In a study of two samples of adolescents, ages 11 to 18, including non-Hispanic Whites, Hispanics, and African Americans, Glover and colleagues (1999) found that students who reported higher symptoms of anxiety were predominantly Mexican American and born outside of the United States. Given the limited amount of research on the Hispanic population and
attachment, as well as the importance that attachment has on an individual’s functioning, future research is necessary to determine whether low quality Hispanic maternal attachment is predictive of symptoms of anxiety; the current study aims to explore this relationship. Findings may help clinicians further understand the Hispanic adolescent population and as well as potential implications for clinical interventions.
CHAPTER 3

METHODS

Participants

Participants came from the public-use portion of the National Longitudinal Study of Adolescent Health (Add Health; Harries & Udry, 2022). This study utilized three waves of data collection; however, the current study is focused on the first wave of data, collected between 1994 and 1995 with participants in grades 7 to 12. The data was collected through questionnaires and interviews with participants at 132 different high schools. Participants and their parents completed both in-school and at-home questionnaires. The first wave of the public use portion of the study included 6,504 participants (48.4% male and 51.6% female, M age = 16.04, 66% Caucasian, 25% African American, 1% Native American, 4% Asian/Pacific Islander, 5% Other). Of the total participants, 11% of the sample was of Hispanic origin with Mexican American and Chicano/a adolescents accounting for 432 of the participants in the data set. For the sake of this study, the data of the Mexican American and Chicano/a adolescents will be the only data analyzed in order to focus on the population of interest. The Add Health study was performed in compliance by Code of Ethics of the World Medical Association and the University of North Carolina School of Public Health Institutional Review Board.
Measures

Demographics

Items used to measure demographics were taken from the *General Introductory* scale (Harris & Udry, 2022). Items of importance to the identity of the participants for the sake of this research were (1) “What is your birth date? [month and year],” (2) “Are you of Hispanic or Latino origin?”, and (3) “What is your Hispanic or Latino background?” For question one, ages were determined based on the date given by the participants for their birth dates; ages ranged from 13 to 21 years of age. Answers were “yes” or “no” for question two. Participants could choose multiple options for question three including “Mexican/Mexican American,” Chicano/Chicana,” “Cuban/Cuban American,” “Puerto Rican,” “Central/South American,” and “Other Hispanic”. Only participants that chose “Mexican/Mexican American” and/or “Chicano/Chicana” were included in the study.

Maternal Attachment

Although attachment was not measured directly, several items on the *Personality and Family* scale appeared to assess similar themes of the quality of a participant’s relationship with their primary maternal figure (Harris & Udry, 2022). Maternal attachment in adolescence was measured in Wave I of the data. On the *Personality and Family* measure items used include (1) “Most of the time, your mother is warm and loving toward you,” (2) “You are satisfied with the way your mother and you communicate with each other,” (3) “Overall, you are satisfied with your relationship with your mother,” and (4) “How close do you feel to your (mother/adoptive mother/stepmother/foster mother/etc.)?” Participants’ answers range from 1 = *strongly agree* to
5 = strongly disagree for the first three items and from 1 = not at all to 5 = very much for the last item. All items were reverse coded except for the final question so that when the items were added together, a composite score with higher numbers would indicate greater quality of attachment. Utilizing the same measure, both Hahm and colleagues (2003) and Shen et al. (2021) found these items to have high construct validity and high internal consistency (with Cronbach’s $\alpha = 0.90$ and $\alpha = 0.87$ respectively).

**Anxiety Scale**

Six items that measured physiological symptoms of anxiety were assessed in the General Health measure (Harris & Udry, 2022). The items included (1) “feeling hot all over suddenly, for no reason,” (2) “cold sweats,” (3) “chest pains,” (4) “fearfulness,” (5) “a stomachache or an upset stomach,” and (6) “trouble relaxing”. Participants were able to rate the frequency that they experienced these symptoms, ranging from “never” to “every day,” again with potential “refused” or “don’t know” options. Although these items do not specifically ask about anxiety, they encompass general physiological symptoms of anxiety. The items are summed for a total score. Higher scores indicate higher symptoms of anxiety. This measure was used in Jacobsen & Newman (2016) with adequate internal consistency ($\alpha = .62$).

**Planned Analysis**

Correlation and hierarchical multiple regression analyses were conducted in SPSS to examine the extent to which levels of symptoms of anxiety are explained by Mexican American maternal attachment. An independent samples t-test was also conducted to analyze biological sex differences in means of maternal attachment quality and anxiety.
CHAPTER 4

RESULTS

Table 1 shows the descriptive statistics for participants’ ages, anxiety, and quality of maternal attachment. Analysis of participant demographics show that of the 432 Mexican American and Chicano/a participants, there were slightly more females than males (49.1% male and 50.9% female). At the time of data collection participants ranged from 13 to 21 years of age with the mean being 16 years old ($M = 16.01$, $SD = 1.86$). Maternal attachment scores range from four to 20, with 21 indicating the highest levels of maternal attachment ($M = 17.04$, $SD = 3.22$). Symptoms of anxiety levels range from 0 to 23 with a mean of 3.6 and standard deviation of 2.66 ($M = 3.6$, $SD = 2.66$).

Table 1

Descriptive Statistics

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<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>16.01</td>
<td>1.86</td>
<td>13-21</td>
</tr>
<tr>
<td>Maternal Attachment</td>
<td>17.04</td>
<td>3.22</td>
<td>4-20</td>
</tr>
<tr>
<td>Anxiety Symptoms</td>
<td>3.6</td>
<td>2.66</td>
<td>0-23</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>50.9% (220)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>49.1% (212)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2 shows correlations between the independent, dependent, and control variables – age and biological sex. Biological sex is weakly and negatively correlated with age \((r = -.10, p < 0.05)\) and weakly positively correlated with anxiety \((r = .22, p < 0.01)\). The participants’ biological sex is also weakly negatively correlated with maternal attachment quality, \(r = -.16, p < 0.01\). The correlations between age and anxiety as well as age and maternal attachment, are not statistically significant. Finally, anxiety and maternal attachment are significantly negatively correlated, \(r = -.22, p < 0.01\), so that there is a weak association between symptoms of anxiety and maternal attachment.

<table>
<thead>
<tr>
<th>Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>1. Biological Sex</td>
</tr>
<tr>
<td>2. Age</td>
</tr>
<tr>
<td>3. Anxiety</td>
</tr>
<tr>
<td>4. Maternal Attachment</td>
</tr>
</tbody>
</table>

*Note* \(*p < 0.05, **p < 0.01 (N = 400)\)

A hierarchical multiple linear regression was used to test if maternal attachment quality significantly predicts symptoms of anxiety. Table 3 displays regression for each variable, in step one with just the independent and dependent variables and then including the control variables in step two. The control variables, age and biological sex, were analyzed together in the second block. Results show that anxiety was significantly explained by maternal attachment \((R^2 = .04, F\)
(1, 398) = 19.60, $\beta = 0.18, p < 0.00$) and furthermore, remain significantly associated despite accounting for participants’ age and biological sex ($R^2 = .07, F (3, 396) = 10.75, p < 0.00$).

Table 3

<table>
<thead>
<tr>
<th>Regression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Step 1</td>
</tr>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>Anxiety</td>
</tr>
<tr>
<td>Maternal Attachment</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Biological Sex</td>
</tr>
</tbody>
</table>

$F(399) = 19.55 \ p < 0.00$  
$F(399) = 10.75 \ p < 0.00$

Note *$p < 0.05$, **$p < 0.01 (N = 401)$

An independent samples t-test was conducted to compare biological sex means for both maternal attachment quality and symptoms of anxiety. Table 4 displays a significant difference between boys and girls on both maternal attachment quality and anxiety scores. Girls reported greater mean scores of anxiety ($M = 4.18, SD = 2.98$) than boys ($M = 3.04, SD = 2.14$), $t(394.70) = -4.57, p < 0.00; d = 0.44$, whereas boys demonstrated greater mean scores of maternal attachment quality ($M = 17.58, SD = 2.77$) than girls ($M = 16.54, SD = 3.52$), $t(389.95) = 3.30, p < 0.001; d = 0.33$. These results suggest that the females’ mean anxiety scores are greater than boys’ and that boys’ mean maternal attachment quality scores are greater than girls’.
Specifically, this suggests that female adolescents experience greater levels of anxiety than boys, but that boys have a greater quality relationship with their mothers than girls.

Table 4

Independent Samples t-test – Biological Sex Differences

<table>
<thead>
<tr>
<th>Logistic Parameter</th>
<th>Males</th>
<th>Females</th>
<th>t</th>
<th>df</th>
<th>p</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal Attachment</td>
<td>17.58</td>
<td>2.77</td>
<td>16.54</td>
<td>3.52</td>
<td>3.30**</td>
<td>.001</td>
</tr>
<tr>
<td>Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>3.04</td>
<td>2.14</td>
<td>4.18</td>
<td>2.98</td>
<td>-4.57**</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note *p < 0.05, **p < 0.01 (N = 401)
CHAPTER 5

DISCUSSION

Summary of Analysis

The current study aimed to investigate the extent that maternal attachment predicted symptoms of anxiety in Mexican American adolescents. In general, the results support the hypotheses: symptoms of anxiety are influenced by maternal attachment quality. Results show that the greater the quality of maternal attachment that an adolescent reported, the fewer symptoms of anxiety they experienced. Adolescents’ quality of attachment was predictive of 4% of their symptoms of anxiety. This relationship is still true, even after considering the participants’ age and biological sex. Although the relationship is not statistically significant, anxiety and age are weakly and negatively correlated, so that as adolescents’ ages increased, their anxiety decreased. A similar non-statistically significant relationship was found between age and maternal attachment – as an adolescent’s age increases, the quality of their relationship with their mother decreases.

Although maternal attachment quality explained a small percentage of anxiety symptoms, the results of this study are consistent with previous research that indicates that low maternal attachment quality is associated with higher symptoms of anxiety (Cassidy et al., 2009; Muris et al., 2001; van Eijck et al., 2012). The correlation was weak but still significant. These findings suggest that physical symptoms of anxiety in adolescents, such as chest pains, fearfulness, an upset stomach, trouble relaxing, etc., can be partially explained by a lower relationship quality
with their mothers. Although many previous studies examined attachment styles compared to attachment quality, many researchers found similar results – adolescents that had a secure attachment to their mothers were more likely to be well-adjusted than their insecure peers (Cooper et al., 1998; Laible et al., 2000; Vivona, 2000). The weak correlation might be explained by previous research conducted by Song and colleagues (2009), suggesting that parental attachment has less influence in middle adolescence, the stage which most participants of this study were in, averaging about 16 years old. Current and previous research indicate that the safer an adolescent feels with their mother, the more likely they are to be well-adjusted. Therefore, an adolescent that feels their mother is there to support them emotionally and physically will be less likely to struggle with issues like anxiety. This research emphasizes the importance of a child’s/adolescent's relationship with their mother on their overall functioning.

Similar to earlier research, female adolescents demonstrated higher levels of anxiety than their male counterparts (Bosquet & Egeland, 2006; Cooper et al., 1998; van Eijck et al., 2012; Vivona, 2000) and males reported an overall higher quality relationship with their mothers. Previous research about gender differences in attachment quality has been inconsistent: many studies found no significant difference in attachment between boys and girls (Allen & Hauser, 1996; Kenny et al., 1994; Kobak & Sceery, 1988; Lapsley et al., 1990; Vivona, 2000) despite many other studies finding that adolescent girls reported higher levels of attachment quality (Benson et al., 1992; Kenny, 1987, 1990; Kenny & Donaldson, 1991; Lapsley et al., 1989; Lopez et al., 1989a, 1989b; Song et al., 2009; Troll & Bengston, 1979) and others claiming that boys reported higher levels (Karaimak & Oguz Duran, 2008) or were more securely attached than girls (Cooper et al., 1998).
Female means for anxiety may be greater than males’ scores because of biological factors and societal gender expectations which lead girls to develop a sense of self that is defined more by relationships with other people, as compared to boys (Kenny & Rice, 1995). As stated in reviewing the literature, an adolescent’s quality of attachment has been found to be more important for a female’s development of psychological well-being (Kenny & Donaldson, 1991) and identity achievement (Benson et al., 1992). This potentially means that females have more anxiety when it comes to developing and maintaining social relationships, which they might view as reflective of their sense of self and worth. This anxiety may contribute to seeking greater social relationships and closer attachment to those individuals.

Limitations

Although the results were significant, there were several limitations in this study that may have contributed to a weaker relationship between maternal attachment and symptoms of anxiety than expected. Primarily, the data used for this study is secondary data used from a public use data set. Because of this, survey questions were already predetermined and not able to be catered to a more specific research question. Relevant questions from the measures in the study were compiled to create measures of symptoms of anxiety and maternal attachment, which were determined to have high construct validity (for maternal attachment) and internal consistency (for both maternal attachment and symptoms of anxiety) by previous researchers (Hahm et al., 2003; Jacobsen & Newman, 2016; Shen et al., 2021) but may not be as strong as if the data were collected firsthand with more specific questions. The data was also collected in 1995 and may not represent the more modern population of adolescents during the time of the current research. Although the data provided some limitations, the data set also allowed for a large sample of
specifically Mexican American adolescents, a population that has not commonly been focused on in research.

Clinical Implications

When working with adolescents that present to therapy with anxiety, it is important to take the family context into consideration. In doing so, the therapist might get a better assessment of the adolescent’s relationship with their primary caregiver, typically their mother (Morris et al., 2007). Taking the current research into consideration, it would be necessary to repair the parent-child relationship and assist the mother and adolescent in better understanding one another. The Handbook of Clinical Family Therapy addresses the need to work through repairing insecure attachment using Attachment Based Family Therapy (ABFT), which asks the therapist to help the family reframe their relationships and move forward by facilitating conversations about their feelings towards one another (Lebow, 2005). This often revolves around fears of abandonment and the adolescent’s concerns about the attachment figure’s emotional and physical availability to them, helping the adolescent to rewrite their internal working model. ABFT also focuses on integrating treatment for loss and trauma, which can be beneficial for minority populations that face more adverse life events, like the Hispanic population focused on in the current research (Lebow, 2005). In reviewing outcomes from using ABFT, Diamond and colleagues (2016), found that in the first randomized pilot study, after six months, 87% of the individuals showed significant reductions in symptoms of depression, anxiety and overall negative family functioning. These results demonstrate the promising nature of the use of ABFT for adolescents struggling with anxiety related to family relationships.
Zerrate Parra and colleagues (2020) suggested an evidence-based and culturally competent intervention when working with minority young adults experiencing anxiety. Researchers recommended the use of culturally competent Cognitive Behavioral Therapy (CBT) in order to help both clients and their families understand and challenge the difficulties they are facing. An emphasis is placed on building a therapeutic relationship based on trust and respect, making sure not to invalidate a client’s experience while attempting to challenge negative thoughts they might have. It is necessary to maintain a culturally relevant context for the client as well as utilize empathy, if the therapist is not able to understand the client’s experiences firsthand due to being from different cultural backgrounds. Recognizing innumerable barriers minority groups face when seeking help, researchers proposed several solutions. They recommend assessing the client’s acculturation level (if they have immigrated from another country), addressing stigma related to mental illness in treatment, and psychoeducation about mental illness. All these factors will help a clinician provide more culturally competent care to clients of varying minority groups.

Future Directions

Future research might focus on factors that contribute to or further explain the relationship between maternal attachment quality and symptoms of anxiety. It would be beneficial to attempt to replicate the current research, using primary data and with more succinct measures of maternal attachment quality and symptoms of anxiety. Specifically looking at Mexican American adolescents, it is important to take cultural factors and values into consideration and potentially explore how these might contribute to the relationship that adolescents have with their mothers. A future study looking to build on the current research
might include a cultural value aspect that examines how strongly families identify with Hispanic beliefs like *familismo* and *simpatia*, as Varela and colleagues (2019) studied. The term *familismo* refers to a strong emotional bond with immediate family, often having a strong sense of loyalty towards family members (Staples & Mirande, 1980; Marin & Marin, 1991). *Simpatia* is the concept of behaving in a way that leads to favorable outcomes in the eyes of the family even if it causes personal sacrifices (Marin & Marin, 1991). Varela and colleagues (2019) concluded that a strict observance of both *familismo* and *simpatia* was associated with greater anxiety in Latino children. This was also the case when poor emotional awareness was displayed. These results demonstrate the cultural factors that may influence Hispanic adolescents to experience greater anxiety in relation to their family than adolescents of other cultural backgrounds that do not have similar beliefs. In further examining cultural factors, it may become clearer as to what role values that differentiate Hispanic cultures from others play in adolescent anxiety and family relationships. It is ideal to explore how and why anxiety in adolescents differs based on different cultural and ethnic factors, similar to previous studies that found that Hispanic adolescents were more likely to report higher levels of anxiety than their Caucasian or African American counterparts (Ginsberg & Silverman, 1996; McCauley Ohannessian et al., 2017; McLaughlin et al., 2007).

Another aspect worth considering building upon is emotional expression (or suppression) and how it might contribute to symptoms of anxiety in adolescents, in the context of their families. Varela and colleagues (2019) studied a similar concept of poor emotional awareness (which may contribute to poor emotion regulation) and found that it was a significant factor in Hispanic families that contributed to adolescent anxiety. Previous researchers have concluded
that the suppression of emotions can lead to higher levels of negative affect, lower levels of positive affect, poorer social adjustment, and decreased well-being (Campbell-Sills et al., 2006a; Gross & John, 2003). Emotional suppression may also contribute to the development and maintenance of mental illness such as anxiety and mood disorders (Campbell-Sills et al., 2006b; Clear et al., 2020; Hayes et al., 2004; Kahn & Garrison, 2004). Because of previous research, it is worth considering if emotional expression/suppression is a significant factor in the functioning of Hispanic adolescents.

Finally, it is important to further consider the importance of both maternal and paternal attachment as an adolescent ages and becomes a young adult. The current study specifically focused on maternal attachment and did not look at paternal attachment or peer attachment. Although previous research has not concluded the impact of these relationships on an adolescents’ symptoms of anxiety, differentiating between and examining these different relationships may prove to be beneficial in understanding the impacts of an adolescents’ social environment on experienced anxiety. In their study on parental and peer attachment, Nickerson and Nagle (2005) concluded that adolescents that felt their relationship with their parents was not secure tended to turn towards peers to fulfill attachment needs. This suggests that parents and peers could have a complementary role for an adolescent’s attachment needs. As previously indicated in an earlier study, peer attachment was the only significant predictor of self-evaluation scores in middle adolescence, but in late adolescence both maternal and paternal attachments were the only significant predictors of the adolescents’ self-evaluation (Song et al., 2009). Laible and colleagues (2000) determined that adolescents that reported high scores on both parental and peer attachment also reported the lowest scores of depression and aggression, as well as the
highest scores of sympathy. Given the conflicting results of the current study compared to previous research, more research is necessary to understand different attachment relationships and how they contribute to adolescent functioning at different points in their development.

Conclusion

In summary, this study provides a foundation for understanding the association between maternal attachment quality and symptoms of anxiety in Mexican American adolescents. The results demonstrated that lower attachment quality with a maternal figure in adolescents may contribute to greater symptoms of anxiety, especially in females. Current interventions include Attachment-Based Family Therapy (ABFT) and culturally competent Cognitive Behavioral Therapy (CBT). ABFT is a trauma informed approach that takes the family context into account while culturally competent CBT aims to challenge intrusive negative thoughts. Future research should continue to examine this relationship and further the results with different samples of Hispanic adolescents, taking culture into consideration. Specific cultural values of interest in Hispanic culture include familismo, simpatia, and poor emotional awareness. These aspects might contribute to adolescents’ feelings of anxiety and a potential inability to share their emotions with their family.
REFERENCES


