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The Relationship Between the Poor Parenting in Childhood and Current Adult Symptoms of  
Anxiety and Depression: Attachment as a Mediator

Kayla Lynn Burningham

A thesis submitted to the faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Master of Science

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## ABSTRACT

### The Relationship Between the Poor Parenting in Childhood and Current Adult Symptoms of Anxiety and Depression: Attachment as a Mediator

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Both anxiety and depression have been shown to be a result of early negative attachment experiences. The quality of parenting is one variable that affects attachment security, therefore correlating with the development of anxiety and depression in adulthood. The purpose of this study was to examine the mediating effect of attachment in the relationship between mother and father's parenting in childhood and adult symptoms of anxiety and depression. The study focused on 680 married or remarried heterosexual couples that took the RELATE questionnaire between 2011 and 2013. Results indicated insecure attachment mediates the relationship between poor parenting and symptoms of anxiety and depression for men and women. In addition, results showed a partner effect between a wife's attachment security and her husband's anxiety. Clinical implications include assessing for attachment insecurity when clients exhibit symptoms of anxiety and depression. Individual and couple-specific interventions are discussed.

Keywords: anxiety, attachment, depression, marriage, parenting

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## Introduction

Anxiety disorders are the most common form mental illnesses, affecting 40 million adults age 18 and older, representing 15% of the general population (Kessler et al., 2009). Anxiety disorders cost the U.S. more than \$42.3 billion a year, representing one-third of the country's \$148 billion total mental health bill (Greenberg et al., 1999). Depression is the leading cause of disability for people aged 15-44 years in the United States (Greenberg et al., 2015). In year 2000, the estimated annual cost of depression in the United States was \$81.5 billion (Kessler, Chiu, Demler, & Walters, 2005). Adjusting for inflation, in 2010 that cost rose to an estimated \$210.5 billion annually, an increase of \$129 billion (Greenberg et al., 2015).

It has been theorized that one possible cause of adult anxiety and depression is insecure attachment (Bowlby, 1977). Support for this notion is found in the literature that identifies the child-parent relationship as a common predictor of anxiety and depression (Reitman & Asseff, 2010; Moran, Bailey, & DeOliveira, 2008; Bifulco et al., 2006; Rapee, 1997; Burbach & Bourdin, 1986). Generally, parenting that is negative is associated with an increased chance of a child developing anxiety and depression in adulthood. For example, parenting characterized by control and rejection has been shown to be associated with the development of anxiety in adulthood (Reitman & Asseff, 2010; Rapee, 1997). Moreover, it has been found that parenting including hostility, criticism and coerciveness are attributing factors to both anxiety and depression (Bifulco et al., 2006), and parental rejection, insensitivity, and unresponsiveness are associated with an increased vulnerability to depression (Moran, Bailey, & DeOliveira, 2008); Rapee, 1997). The purpose of this study was to confirm that insecure attachment serves as a mediator of the relationship between the child-parent relationship in childhood and adult symptoms of anxiety and depression.

## **Theoretical Underpinnings**

Attachment theory (Bowlby, 1982; Bowlby, 1977) helps explain the link between the quality of parenting children receive and developing anxiety or depression in adulthood. According to attachment theory, children reach out to their parent or primary caregiver to have basic needs met. How the parent has an influence on how the child understands the world, self, and others through a developed internal working model based on the security of the child-parent relationship. Internal working models, a central tenet of attachment theory, are mental representations that consist of expectations about the self and others. When parents are typically responsive and nurturing, a secure attachment between a children and parents is achieved. Thus, through this secure relationship, children develop internal working models stating that their needs will be met and the world and others are generally safe. Comparatively, infants and children with an insecure attachment to their parents have not learned that their needs will be met and generally see the world and others as unsafe. Child-parent attachment is believed to have an impact on subsequent development (Ainsworth, 1989), with securely attached individuals responding better under stress, forming better relationships with others, and being more independent. Insecurely attached individuals tend to be more inconsistent in their relationships, feel less capable in times of stress, and have lower self-esteem (Bowlby, 1977).

The unavailability of an attachment figure and the perception of insecurity in relationships have later cognitive, emotional, and social consequences that increase vulnerability to anxiety and depression (Bowlby, 1982; Bowlby, 1977). Indeed, markedly and moderately insecure attachment to parents has been found to be prevalent in adults with anxiety and depression (Bifulco et al., 2006).

## **Parenting and Anxiety and Depression**

There is a significant body of research linking early parenting and adulthood anxiety and depression. Emphasis has been on how the quality of the child-parent relationship is related to the onset of anxiety and depression in adulthood (Schimmenti & Bifulco, 2013; Morley & Moran, 2011). Parenting predictors of later anxiety include rejection, criticism, negative interactions (Schimmenti & Bifulco, 2013), being unloving (Chambless, Gillis, Tran, & Steketee, 1996), and control (Cassidy et al., 2009). These effects have been found in the parenting of both mothers and fathers (Reitman & Asseff, 2010).

Similar to anxiety, parenting predictors of later depression include a lack of consistent care, nurturance, and support (Blatt & Zuroff, 1992), as well as rejection or control (Reitman & Asseff, 2010), marked by excessive authority, criticism, and disapproval (Blatt & Zuroff, 1992). A landmark qualitative study conducted by Schmid et al. (2011) interviewed 314 participants for 19 years and showed that a lacking mother-child bond (e.g. vocal, facial, and motor responsiveness) is associated with higher risk of depression in the child from infancy through adulthood. Additionally, parenting quality from mothers and fathers has been linked to depression (Parker, Hadzi-Pavlovic, Greenwald, & Weissman, 1995; Rikhye et al., 2008).

Generally, parenting that is negative is associated with anxiety and depression adulthood. Although the aforementioned parenting behaviors have been linked with anxiety and depression, this study did not seek to measure those specific behaviors. Rather, this study used more global indicators to measure attachment in the child-parent relationship. For example, one of the items participants were asked to respond to on a Likert scale is “My mother showed physical affection to me by appropriate hugging and/or kissing”. Although this specific item does not measure

rejection for example, the child might interpret a lack of appropriate physical affection in the child-parent relationship to mean the child is unwanted.

### **Attachment Style as a Mediator**

The link between the child-parent relationship and anxiety and depression may be explained by the developing attachment style of the child. Attachment style has been linked to anxiety and depression. Insecure attachment has been shown to mediate the relationship between childhood maltreatment and adult anxiety and depression (Bifulco et al., 2006; Hankin, 2006). Additionally, a recent meta-analysis specifically studying anxiety (Colonnesi et al., 2011) reviewed 46 studies that examined the relationship between insecure attachment and anxiety. The results indicate that there is a moderate relationship between insecure attachment and anxiety.

It has been suggested that early experiences in insecure attachment relationships place an individual at risk for developing a cognitive framework that increases their vulnerability to depression following stressful life events (Morley & Moran, 2011). Thus, due to internal working models developed in early insecure attachment relationships (e.g. child-parent relationship) a person will more likely have a negative view of the self, world, and others and tend to selectively focus on disappointing aspects of a situation. Repeating this pattern over time, these experiences may solidify to create negative self-schema that makes that person more vulnerable to depression. Moreover, there have also been studies specifically examining attachment as a mediator between parenting and depression, though these have been in samples that have experienced childhood maltreatment (Rikhye, 2008; Hankin, 2006), rather than a more general population. Thus, this study examined whether attachment insecurity in a more general

population mediates the relationship between the parenting received in childhood and symptoms of anxiety and depression in adulthood.

### **Current Study**

Research has linked parenting quality in childhood to anxiety and depression in adulthood (Schimmenti & Bifulco, 2013; Moran, Bailey & DeOliveira, 2008; Reitman & Asseff, 2010). Attachment theory suggests this is due to insecure attachment, which has been linked both to parenting quality (Rapee, 1997) and mental health symptoms (Colonna et al., 2011; Morley & Moran, 2011). The purpose of this study was to examine the mediating effect of attachment in the relationship between mother and father's parenting in childhood and adult symptoms of anxiety and depression. The research question that guided our investigation was: Does attachment insecurity mediate the relationship between poor parenting in childhood and symptoms of anxiety and depression in adulthood?

## **Methods**

### **Procedure**

The data for analysis were taken from the Relationship Evaluation Questionnaire (RELATE; Busby, Holman, & Taniguchi, 2001). RELATE is an on-line assessment of individual, couple, and contextual factors associated with relationship functioning. Couples were recruited from community advertising, university classes and referrals from therapeutic professionals. The survey was taken online and couples were provided with their results after completion. All participants consented to the use of their data for research purposes, and an institutional review board at an accredited university approved procedures.

## Participants

This study used a paired sample ( $N= 680$ ) of married or remarried, heterosexual couples that volunteered to take RELATE between 2011 and 2013. The mean age for males was 33.25, and the mean age for females was 31.36. For relationship length, participants reported using ranges. The median length of marriage was 1 to 2 years for both males and females. For men, 32.4% reported being married 0 to 1 years, 18.5% for 1 to 2 years, 13.9% for 3 to 5 years, 12.4% for 6 to 10 years, and 22.7% for 11 years or more. For women, 31.6% reported being married 0 to 1 years, 19.3% for 1 to 2 years, 14.7% for 3 to 5 years, 11.6% for 6 to 10 years, and 23.1% for 11 years or more. Most (90.7%) male participants were in their first marriage and 9.3% were in a remarriage. Similarly, 90.3% of female participants were in their first marriage and 9.7% were in a remarriage.

For education, 6.5% of men had High School or less education; 39.0% had some college; 7.6% had an Associate's degree; 21.5% had a Bachelor's degree; and, 25.5% were in the process of earning or had already received a graduate or professional degree. For women, 1.8% had High School or less education; 41.2% had some college; 12.6% had an Associate's degree; 21.2% had a Bachelor's degree; and, 23.2% were in the process of earning or had already received a graduate or professional degree.

For ethnicity, the majority of the sample was Caucasian. For men, 86.0% reported being Caucasian with 4.0% African/Black, 4.1% Latino, 2.1% Mixed/Biracial, 1.8% Asian, and 2.0% Native American or Other. For women, 84.3% reported being Caucasian with 3.2% African/Black, 4.3% Latino, 3.5% Asian, 2.5% Mixed/Biracial, and 2.2% Native American or Other.

## Measures

The measures included in RELATE have been shown both valid and reliable (Busby, Holman, Taniguchi, 2001). For this study, latent constructs were fit for all variables of interest, and measurement model information is in the preliminary results section.

**Mother's parenting.** Mother's parenting was measured using three items. Participants responded about their mother on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) to the following statements: "My mother showed physical affection to me by appropriate hugging and/or kissing," "My mother and I were able to share our feelings on just about any topic without embarrassment or fear of hurt feelings," and "My mother participated in enjoyable activities with me." Items were reverse scored so that higher scores indicated poorer mothering. Cronbach's alpha was .77 for men and .85 for women.

**Father's parenting.** Father's parenting was measured in the same way mother's parenting was. "My father" replaced "my mother" for all statements. Again, items were reverse scored so that higher scores indicated poorer fathering. Cronbach's alpha was .76 for men and .83 for women.

**Attachment.** Attachment was a latent construct measured using the avoidant and anxious attachment subscales of the Adult Attachment Questionnaire, or AAQ (Simpson, Rholes, & Nelligan, 1992; Simpson, Rholes, & Phillips, 1996). Items for each subscale were mean scored and subscales were used as indicators of the attachment latent construct. For avoidance, participants responded on a 7-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree) to eight items, such as "I find it relatively easy to get close to others" and "Others want me to be more intimate than I feel comfortable being." For anxiety, participants used the same response scale for nine items, such as "I often worry that my partner(s) don't

really love me” and “The thought of being left by others rarely enters my mind.” All items were scored such that higher scores indicate more avoidant and anxious attachment. For avoidance, Cronbach’s alpha was .84 for men and .84 for women. For anxiety, Cronbach’s alpha was .83 for men and .85 for women.

**Anxiety.** Symptoms of anxiety were measured using four items. This measure has been used in numerous studies and has been shown to be valid and reliable (Busby, Holman, Taniguchi, 2001). Using a 5-point Likert scale from 1 (Never) to 5 (Very Often), participants responded how much the following words described them: fearful, tense, nervous, worrier. Cronbach’s alpha was .79 for men and .77 for women.

**Depression.** Symptoms of depression were measured using three items. This measure has been used in numerous studies (Busby, Holman, Taniguchi, 2001). Using a 5-point Likert scale from 1 (Never) to 5 (Very Often), participants responded how much they following words or phrases described them: sad and blue, feel hopeless, and depressed. Cronbach’s alpha was .86 for men and .85 for women.

### **Analytic Strategy**

Because the data come from couples and attachment is likely to be related to one’s own and partner’s symptoms of anxiety and depression, the data analyzed are considered non-independent. The Actor-Partner Interdependence Model (APIM; Kenny, Kashy, & Cook, 2006) addresses this non-independence by assuming that partners’ variables are predictive of each other. Thus, we fit an APIM, which allows for both actor effects (e.g., the effect of one’s attachment on own symptoms) and partner effects (e.g., the effect of the spouse’s attachment on own symptoms).

Preliminary analyses were conducted in SPSS to examine univariate and bivariate statistics for the measured variables in the study (SPSS, 2011). Then, the hypothesized APIM model (see Figure 1) was examined as a Structural Equation Model (SEM) using Mplus, version 7.1 (Muthén & Muthén, 2009). SEM tests the full model, estimating each path while controlling for the effects of the others. It also removes measurement error by creating latent constructs that underlie observed, measured variables (Kline, 2010). Additionally, because it was a test of mediation, bootstrapping was used to test indirect effects.

## Results

### Preliminary Results

We fit a measurement model for the hypothesized mediation model, allowing latent constructs to covary. As part of analyses, we tested for measurement invariance between men and women using chi-square difference tests. Results indicated that constructs were partially invariant for husbands and wives (only factor loadings were equal). The final measurement model showed excellent model fit:  $\chi^2(364) = 649.56, p < .001$ , CFI = .97, TLI = .96, RMSEA = .03, 90% CI: .03 .038,  $p = 1.0$  (see Table 1 for factor loadings).

Univariate and Bivariate statistics for latent construct indicators can be found in tables 2 and 3 and indicate that on average, the sample reported moderate to high parenting quality, low symptoms of depression and anxiety, relatively secure attachment style, and relatively secure perceived attachment behaviors from the partner. Correlations were generally moderate in strength.

**Research Question: Does attachment insecurity mediate the relationship between poor parenting in childhood and symptoms of anxiety and depression in adulthood?**

We fit the hypothesized main effects model (see Figure 1). To test for the indirect effects of mother and father parenting on anxiety and depression, we used bootstrapping. The model had excellent fit to the data ( $\chi^2 [464] = 889.11, p < .001$ ; CFI = .95; TLI = .94, RMSEA = .04,  $p = 1.0$ ). Coefficients for direct and indirect effects are reported in Table 4. For husbands, there was no direct effect of mother's or father's parenting on depression or anxiety; however, mother's and father's poor parenting was related to higher attachment insecurity. Husbands' attachment insecurity was also related to their own depressive symptoms and anxiety symptoms. The indirect effects of mother's and father's poor parenting on depression and anxiety symptoms were all significant, such that more poor parenting was associated with more symptoms. The model explained 18.5% of the variance in husbands' attachment insecurity. It also explained 53.7% of the variance in depressive symptoms and 48.7% of the variance in symptoms of anxiety for husbands.

The pattern of results for wives was the same as that found for husbands. There was no direct effect of mother's or father's parenting on symptoms of anxiety or depression; however, mother's and father's poor parenting were related to higher attachment insecurity. Additionally, attachment insecurity was associated with higher symptoms of depression and anxiety. The indirect effects of mother's and father's poor parenting were all significant, such that poor parenting was associated with more symptoms (see Table 4). Additionally, there was one significant partner effect, from wife's attachment insecurity to husband's anxiety ( $b = -.18, SE = .08, 95\% \text{ CI: } [-.31, -.06], p = .019$ ). The model explained 14.5% of the variance in women's attachment insecurity. It also explained 39% of the variance in depressive symptoms and 27.8% of the variance in symptoms of anxiety for wives.

## Discussion

Research suggests that the quality of parenting experienced as a child can lead to depression and anxiety in adulthood (Moran, Bailey & DeOliveira, 2008; Reitman & Asseff, 2010). Attachment theory (Bowlby, 1977; Ainsworth, 1989) suggests insecure attachment is one explanation for that link. Thus, this study sought to determine the mediating effect of attachment in the relationship between mother and father's parenting in childhood and adult symptoms of anxiety and depression.

Results of the hypothesized mediation model indicate that insecure attachment mediates the relationship between poor parenting and symptoms of anxiety and depression for men and women. These results are consistent with previous research stating that an insecure child-parent attachment can predict attachment insecurity (Zeifman & Hazan, 2008), which can lead to adult anxiety (Reitman & Asseff, 2010) and depression (Morley & Moran, 2011). Because there was no direct effect between poor parenting and anxiety and depression, results provide support for the notion that the poor parenting influences a child's internal working model, which places him/her at risk for later mental health symptoms.

This finding may be explained by the internal working model. As stated earlier, according to attachment theory, internal working models are mental representations developed through early attachment relationships (e.g. parents) that affect the ways a person views oneself and others. Inconsistent and unsupportive parenting may result in developing internal working models that cause a person to interpret events negatively (Morley & Moran, 2011). These individuals tend to have lower self-esteem, are more inconsistent in relationships, and feel less capable in times of stress (Bowlby, 1977). For example, a person with internal working models developed through an insecure attachment relationship may view a failure as a result of being an

inadequate person rather than attributing failure to a challenging or competitive situation.

Research suggests that repeating these patterns over time reinforces a negative self-schema, placing a person at risk for later mental health symptoms (Hertel & Brozovich, 2010). Thus, unsupportive parenting would be linked to mental health symptoms via negative internal working models (which are characteristic of insecure attachment).

Additionally, this study showed a partner effect between a wife's attachment security and her husband's anxiety. Higher attachment insecurity in wives was related to lower anxiety in husbands. One explanation for our finding is that anxiously attached individuals are typically hypervigilant of possible rejection. There is a pervasive worry that the partner may leave the relationship (Simpson & Overall, 2014) thus, the anxiously attached individual engages in behaviors to maintain proximity to the partner. In highly distressed couples, these behaviors are demanding/pursuing and can cause relational problems; however, it is possible that in our sample of relatively non-distressed couples, such behaviors are reassuring for the husband and result in fewer individual symptoms of anxiety. It is also possible that lower individual symptoms of anxiety are a manifestation of the withdrawing behavior that is characteristic of those with a pursuing partner (Christensen et al., 2006). Moreover, avoidantly attached individuals usually react differently than those who are anxiously attached. Avoidant attachment is characterized by distrust for others and by having a difficult time depending on significant others during times of need. Being that men tend to withdraw more (Christensen et al., 2006), it is possible that the wife's avoidance, which also places less demand on the husband, gives him space so that he is less anxious.

## **Clinical Implications**

With the rising popularity of attachment-oriented therapy approaches (e.g., Emotionally Focused Therapy; Johnson, 2004), the practice of assessing attachment style has become more common. The current findings underscore that this is an important step when individuals report symptoms of depression and anxiety, particularly if they indicate problematic child-parent relationships growing up. Because there is some evidence that attachment insecurity is stable across time (Johnson et al., 2016), intervening on the effects perceived parenting received in childhood would likely not yield much. Thus, our findings indicate that interventions should be focused on treating attachment insecurity, particularly when clients report a suboptimal child-parent relationship.

One way to clinically treat attachment insecurity is to work with the client in modifying their internal working models. Bowlby (1988) believed that the internal working models developed in early attachment relationships set a trajectory for the life course but that these can be altered by life changing events, such as entering therapy. Two interventions therapists can use to help the client change internal working models are: 1) Establishing and strengthening attachment bonds in the client's life to serve as secure bases for new internal working models to develop (e.g. the therapeutic alliance and/or marital relationship) and 2) Addressing cognitive distortions that may exist in the content of internal working models, such as memory biases or current experiences inconsistent with these models (Cobb & Davila, 2010).

Strengthening attachment bonds, such as maintaining a strong therapeutic alliance and working toward establishing and strengthening relationships in the client's life, provides a secure base to facilitate modifying existing internal working models. Bowlby (1988) stated that it is important to attain a secure base prior to exploring past and present attachment. It is unlikely that

the client will explore perceptions, biases, and expectations about the self and others if the client feels it will threaten attachment security. In essence, a secure base helps insecurely attached clients increase their awareness about their internal working models (Cobb & Davila, 2010). This awareness can lead to later recognition regarding behaviors and reactions stemming from these internal working models that affect current situations and relationships.

With secure attachment relationships as a foundation to work from, therapists can then help insecurely attached clients recognize and challenge cognitive distortions (Burns, 1999) existing within internal working models (Cobb & Davila, 2010). For example, during an enactment, a frustrated spouse might request more help with chores around the house. An insecurely attached partner may demonstrate distorted thinking that causes them to interpret this scenario incorrectly. A client with a fear of abandonment may jump to conclusions (Burns, 1999) by thinking the marriage is almost over. In addition, this same client could disqualify all the positive statements (Burns, 1999) or compliments the spouse has provided the client. The therapist can make this tendency explicit and highlight statements, attributes, and experiences that can help the client view themselves and others in a more secure manner (Cobb & Davila, 2010), thus changing internal working models established by an insecure child-parent attachment.

There are also therapy approaches beyond attachment-focused ones that can nonetheless intervene on the kinds of attachment-related problems identified in this study. For instance, narrative therapy states that many problems a client encounters are through the belief of problem-saturated stories (Dallos, 2006). In our case, for example, a client who had a poor child-parent relationship and now deals with anxiety or depression has probably developed internal working models stating that relationships are not safe, that the client is unworthy of love, and so

forth. The problem-saturated stories that clients tell themselves can be self-fulfilling prophecies as they withdraw from others or continually doubt the intentions of others, especially significant others. Belief in these narratives can cause them to lose relationships, or at least strain them, simply by believing the stories they tell themselves.

Narrative therapy includes certain techniques to help clients challenge and change the stories they tell themselves about who they are, why the relationships they had with their parents are poor, and the trajectory of their relationships. Rather than viewing problems as arising from individual deficits or distrust in all relationships (Dallos, 2006), clients can begin to see the bigger picture and learn to believe new stories (e.g. “Mom and dad hated me; they never spent time with me” versus “Mom and dad had a really bad marriage and they fought a lot. I don’t think they had much time for anything, but that doesn’t mean they didn’t love me”).

Our study showed a partner effect between a wife’s attachment insecurity and lower symptoms of anxiety in the husband. This likely represents dynamics in relatively non-distressed couples, as those in our sample are. Thus, it would be important for clinicians to assess levels of distress and attachment insecurity so that they can work to establish and maintain a healthy level of engagement between couples. When wives report low to moderate levels of attachment insecurity, as did those in our sample, clinicians can help promote both healthy boundaries and distance as well as healthy levels of engagement for both partners.

### **Limitations and Future Directions**

This study has several limitations that should be considered in future research. First, because the data used for the study are cross-sectional and non-experimental, we cannot assert causation or the temporal order of the variables as presented. For example, symptoms of anxiety and depression may influence how someone perceives their relationships, leading them to report

more insecure attachment styles and poor child-parent relationships. Only longitudinal data would be able to test which direction of effects is most plausible.

Furthermore, gender differences in parenting were unaccounted for. The same questions were used to report on both mother and father parenting. For example, a person might expect a mother to be more open to sharing feelings and score a mother differently than a father in this regard. Certainly these are gender generalizations, however a future study might consider different expectations in parenting according to gender.

Another limitation to this study is that all data were collected by retrospective, self-report measures. Relying on the individual's report to assess the child-parent relationship, attachment insecurity, and anxiety and depressive symptoms may introduce bias and provide a less than accurate description of these variables. For example, there is extensive research regarding the tendency of depressed individuals to more easily recall negative events than positive events, indicating memory bias (Hertel & Brozovich, 2010). A study in which the quality of the child-parent relationship is observed and assessed by a third party, or minimally including parent report, may provide a more unbiased evaluation of the relationship.

Additionally, we used global indicators of negative parenting rather than measuring specific parenting behaviors. People interpret events differently, and although it can be assumed that many people would interpret in childhood a parent's lack of physical affection to mean that the parent is somewhat disapproving of them, this does not take into account other variables that may not deem such events as distressing. For example, a child might grow up in a family where a lack of physical affection is normal and acceptable, and therefore might never attribute a parent's lack of hugging or kissing to mean anything negative. A future study using follow-up questions

about the global indicators to determine if, for example, a lack of affection from one's parents was distressing would be the next step to determine reliability.

Lastly, our sample is homogenous in measures of distress and diversity. The majority of participants in the study are securely attached, well-functioning adults. Additionally, the sample primarily consists of Caucasian, highly educated adults who took a questionnaire voluntarily. This sample lacks generalizability to the general population. Though the main effects of some demographic factors were controlled, future research with a clinical sample could examine whether the patterns identified here are consistent across more diverse groups of ethnicity, race, SES, relationship status, and sexual orientation. Using a more diverse, clinical sample for future research would test that these results are accurate reflections of clinical participants.

### **Conclusion**

This paper examined whether attachment insecurity mediated the relationship between poor parenting and symptoms of anxiety and depression. We found that attachment insecurity fully mediated the relationship between poor mother and father parenting and symptoms of anxiety and depression for both men and women. In working with individuals that present symptoms of either anxiety or depression, it is important to assess the parenting received and for attachment insecurity. Attachment-based approaches focused on modifying internal working models through strengthening current relationships in the client's present life and challenging possible cognitive distortions within these models may be useful. Additionally, a partner-effect was found between a wife's attachment insecurity and her husband's anxiety, indicating that higher attachment insecurity in wives is related to lower anxiety in husbands. Using narrative therapy techniques to help insecurely attached individuals adopt new narratives about the child-

parent relationship while helping the spouse learn different coping mechanisms and self-soothing methods might be beneficial in working with couples where one spouse is insecurely attached.

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Table 1

*Unstandardized and Standardized Factor Loadings for Latent Measurement Model*

	Men		Women	
	b (SE)	$\beta$ (SE)	b	$\beta$ (SE)
<b>Depression</b>				
Sad and blue	1.00	.86 (.01)	1.00	.84 (.01)
Feel hopeless	.96 (.03)	.76 (.02)	.96 (.03)	.74 (.02)
Depressed	1.09 (.03)	.85 (.01)	1.09 (.03)	.86 (.01)
<b>Anxiety</b>				
Fearful	1.00	.67 (.02)	1.00	.62 (.02)
Tense	1.07 (.06)	.68 (.02)	1.07 (.06)	.67 (.02)
Nervous	1.08 (.05)	.70 (.02)	1.08 (.05)	.68 (.02)
Worrier	1.36 (.07)	.76 (.02)	1.36 (.07)	.72 (.02)
<b>Attachment Insecurity</b>				
Avoidant	1.00	.50 (.03)	1.00	.56 (.03)
Anxious	1.24 (.09)	.61 (.04)	1.24 (.09)	.62 (.03)
<b>Father Parenting</b>				
Physical affection	1.00	.71 (.02)	1.00	.79 (.02)
Enjoyable activities	.88 (.04)	.68 (.02)	.88 (.04)	.75 (.02)
Share feelings	1.11 (.05)	.77 (.02)	1.11 (.05)	.77 (.02)
<b>Mother Parenting</b>				
Physical affection	1.00	.82 (.02)	1.00	.76 (.02)
Enjoyable activities	1.15 (.04)	.80 (.02)	1.15 (.04)	.73 (.02)
Share feelings	.93 (.03)	.82 (.02)	.93 (.03)	.70 (.02)

*Note.* All factor loadings are significant at  $p < .001$ .

Table 2

*Descriptive Statistics of Observed Study Variables*

	Men		Women	
	<i>N</i>	<i>M (SD)</i>	<i>N</i>	<i>M (SD)</i>
<b>Mother parenting</b>				
Mother physical affection	680	4.25 (1.11)	679	4.06 (1.26)
Mother shared feelings	680	3.54 (1.25)	679	3.47 (1.42)
Activities with mother	680	4.06 (1.07)	679	4.10 (1.19)
<b>Father parenting</b>				
Father physical affection	680	3.40 (1.38)	680	3.65 (1.40)
Father shared feelings	680	2.84 (1.34)	680	2.76 (1.44)
Activities with father	680	3.90 (1.28)	679	3.78 (1.31)
<b>Attachment</b>				
Anxious	680	2.81 (1.05)	680	2.88 (1.18)
Avoidant	680	3.05 (1.03)	680	3.01 (1.03)
<b>Depression Symptoms</b>				
Sad and blue	679	2.33 (.80)	679	2.56 (.78)
Feel hopeless	680	2.09 (.88)	680	2.28 (.89)
Depressed	680	2.15 (.87)	680	2.30 (.84)
<b>Anxiety Symptoms</b>				
Fearful	680	2.28 (.80)	680	2.65 (.84)
Tense	680	2.89 (.84)	680	3.06 (.84)
Nervous	680	2.65 (.82)	680	2.88 (.83)
Worrier	680	2.89 (.99)	680	3.53 (.97)

Table 3

*Bivariate Correlations of Observed Variables- Males & Females*

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Mother physical affection	1.00	.65**	.69**	.46**	.24**	.32**	-.13**	-.22**	.17**
2. Mother shared feelings	.52**	1.00	.64**	.28**	.24**	.18**	-.13**	-.24**	.11**
3. Activities with mother	.51**	.54**	1.00	.32**	.23**	.37**	-.15**	-.20**	.15**
4. Father physical affection	.42**	.23**	.26**	1.00	.67**	.66**	-.17**	-.19**	.18**
5. Father shared feelings	.18**	.30**	.25**	.51**	1.00	.64**	-.17**	-.21**	.17**
6. Activities with father	.30**	.23**	.41**	.51**	.51**	1.00	-.20**	-.22**	.18**
7. Anxious	-.10**	-.13**	-.19**	-.13**	-.17**	-.13**	1.00	.36**	-.42**
8. Avoidant	-.19**	-.18**	-.15**	-.26**	-.20**	-.15**	-.30**	1.00	-.24**
9. Sad and blue	-.12**	-.13**	-.14**	-.09*	-.14**	-.14**	.38**	.25**	-.31**
10. Feel hopeless	-.12**	-.11**	-.11**	-.12**	-.11**	-.14**	.39**	.34**	-.31**
11. Depressed	-.16**	-.19**	-.21**	-.10*	-.16**	-.16**	.37**	.29**	-.29**
12. Fearful	-.06	-.06	-.05	.01	-.04**	-.06**	.26**	.15**	-.15**
13. Tense	-.05	-.05	-.11**	-.03	-.08*	-.08*	.29**	.28**	-.23**
14. Nervous	-.04	-.06	.00	.01	-.06	-.01	.29**	.22**	-.17**
15. Worrier	-.07	.04	-.05	-.05	-.11**	-.09**	.31**	.21**	-.19**

Table 3 continued

	10.	11.	12.	13.	14.	15.	16.	17.	18.
1. Mother physical affection	.22**	.21**	-.86*	-.99**	-.16**	-.56**	-.11**	-.03	-.02
2. Mother shared feelings	.14**	.13**	-.10**	-.13**	-.17**	-.05	-.11**	-.07	-.04
3. Activities with mother	.19**	.16**	-.11**	-.11**	-.18**	-.05	-.09	-.03	-.02
4. Father physical affection	.22**	.22**	-.10**	-.11**	-.16**	-.09*	-.10**	-.11**	-.04
5. Father shared feelings	.22**	.20**	-.11**	-.12**	-.13**	-.11**	-.14**	-.12**	-.05**
6. Activities with father	.25**	.27**	-.15**	-.15**	-.16**	-.08*	-.14**	-.06	-.05
7. Anxious	-.47**	-.50**	.33**	.36**	.33**	.24**	.20**	.21**	.22**
8. Avoidant	-.20**	-.26**	.26**	.34**	.35**	.20**	.30**	.18**	.18**
9. Sad and blue	-.28**	-.29**	1.00	.62**	.73**	.38**	.38**	.34**	.34**
10. Feel hopeless	-.27**	-.27**	.64**	1.00	.62**	.40**	.42**	.30**	.38**
11. Depressed	-.30**	-.32*	.74**	.63**	1.00	.37**	.41**	.33**	.32**
12. Fearful	-.19**	-.16**	.43**	.41**	.41**	1.00	.38**	.46**	.43**
13. Tense	-.23**	-.23**	.42**	.39**	.41**	.36**	1.00	.47**	.50**
14. Nervous	-.18**	-.16**	.35**	.37**	.33**	.56**	.44**	1.00	.50**
15. Worrier	-.16**	-.19**	.48**	.47**	.43**	.48**	.55**	.53**	1.00

*Note.* \* $p < .05$ , \*\* $p < .01$ . Male correlations are on the lower left half below the diagonal and female correlations are on the upper right half above the diagonal.

Table 4

*Direct and Indirect Effects of Parenting on Symptoms of Anxiety and Depression*

	Men	95% CI		95% CI	Women	95% CI		95% CI	
	b (SE)		$\beta$		b (SE)		$\beta$		
<b>Direct Effects</b>									
Father parenting -> Anxiety	-.04 (.05)	[-.12, .03]	-.07	[-.20, .06]	.01 (.03)	[-.03, .06]	.03	[-.07, .12]	
Father parenting -> Depression	-.01 (.06)	[-.11, .08]	-.02	[-.14, .11]	.00 (.04)	[-.10, .06]	.00	[-.09, .09]	
Father parenting -> Attachment insecurity	.13 (.05)**	[.05, .21]	.22	[.05, .21]	.15 (.04)***	[.10, .21]	.25	[.10, .21]	
Mother parenting -> Anxiety	-.12 (.06)	[-.21, -.02]	-.16	[-.30, -.03]	-.04 (.03)	[-.10, .02]	-.07	[-.18, .03]	
Mother parenting -> Depression	-.02 (.07)	[-.14, .09]	-.03	[-.15, .10]	-.02 (.04)	[-.10, .04]	-.02	[-.11, .06]	
Mother parenting -> Attachment insecurity	.19 (.06)**	[.09, .28]	.28	[.09, .23]	.13 (.04)**	[.05, .20]	.20	[.05, .20]	
Attachment insecurity -> Anxiety	.86 (.15)***	[.61, 1.12]	.82	[.61, 1.12]	.47 (.09)***	[.32, .62]	.55	[.32, .62]	
Attachment insecurity -> Depression	1.04 (.18)***	[.74, 1.34]	.78	[.74, 1.34]	.66 (.11)***	[.47, .84]	.60	[.47, .84]	
<b>Indirect Effects</b>									
Father parenting -> Attachment insecurity -> Anxiety	.11 (.05)*	[.04, .19]	.18 (.08)*	[.06, .31]	.07 (.02)**	[.03, .11]	.14 (.04)**	[.07, .20]	
Father parenting -> Attachment insecurity -> Depression	.13 (.06)*	[.04, .23]	.18 (.07)*	[.05, .30]	.10 (.03)**	[.05, .15]	.15 (.04)**	[.08, .22]	
Mother parenting -> Attachment insecurity -> Anxiety	.16 (.06)**	[.06, .26]	.23 (.08)**	[.10, .36]	.06 (.03)*	[.02, .10]	.11 (.04)*	[.04, .18]	
Mother parenting -> Attachment insecurity -> Depression	.19 (.07)**	[.08, .31]	.22 (.08)**	[.09, .34]	.08 (.03)*	[.03, .14]	.12 (.05)*	[.04, .20]	

Note. \* $p < .05$ , \*\* $p < .01$ .

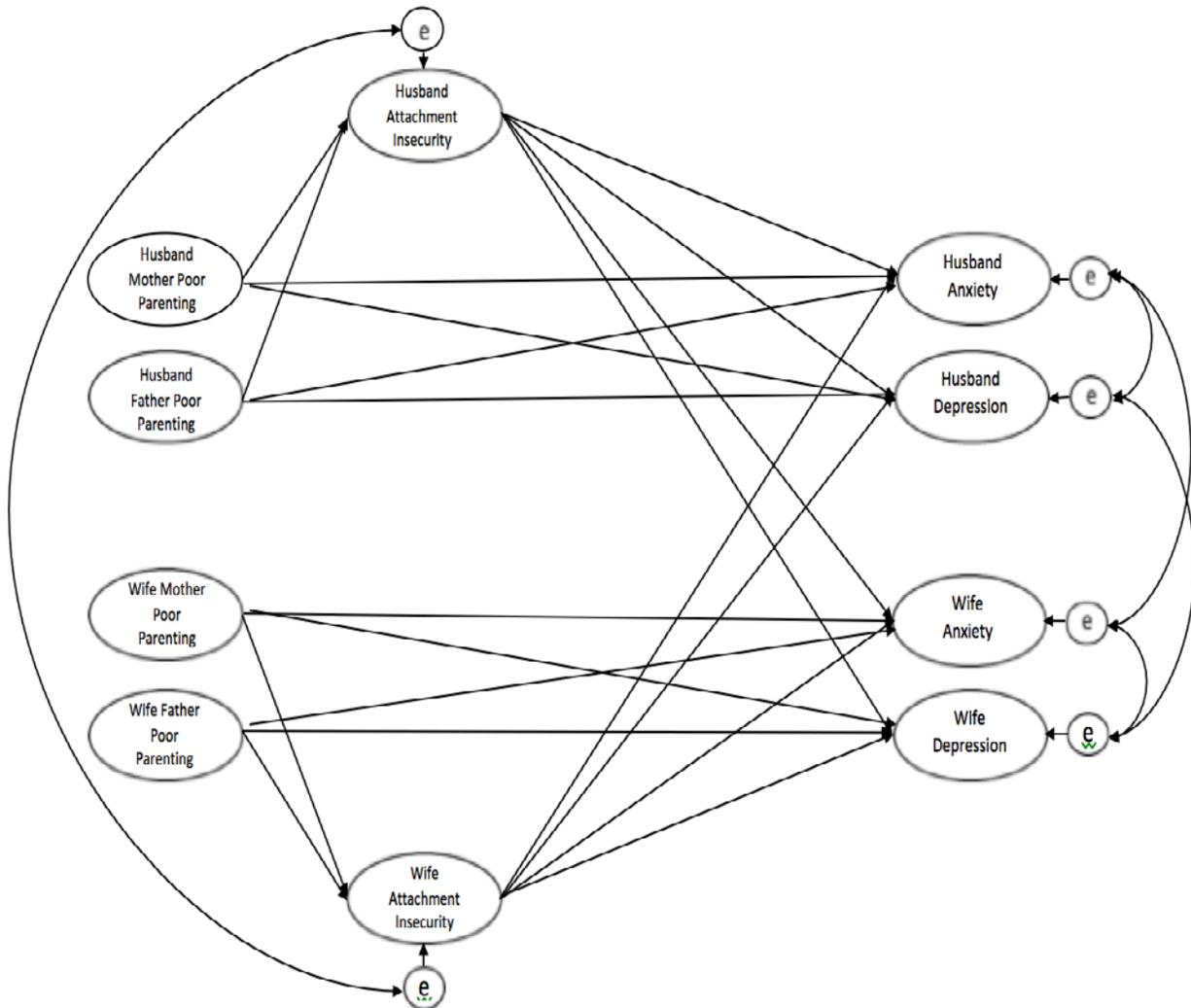


Figure 1. Hypothesized Mediation Model

## Appendix

### Literature Review

#### Parenting and Anxiety and Depression

There is a significant body of research linking early parenting and adulthood anxiety and depression. Emphasis has been on how the quality of the child-parent relationship is related to the onset of anxiety and depression in adulthood. A 2013 study (Schimmenti & Bifulco) used interviews of a high-risk sample of 160 adolescents and young adults to determine the relationship between childhood experiences of neglect and abuse and the development of anxiety disorders. Results suggest that cold, critical parenting envisaged as emotional neglect do lead to anxious attachment and a fear of separation and rejection. This low self-image and anxiety in relationships may then lead to the development of anxiety disorders. The primary limitation of this study is the assumption that anxious attachment predates the anxiety disorder. However, significant life events and relationships can cause changes in attachment style. Thus, the mediation can only be viewed as preliminary. Another article summarized the findings of several longitudinal studies that followed participants from infancy to adulthood in order to determine the role attachment relationships have on cognitive vulnerabilities to depression (Morley & Moran, 2011). While most of the literature on this topic is comprised of self-report measures when individuals are adults, few studies actually follow the individual across several stages of development. This article highlighted the influence early experiences in non-secure attachment relationships have on developing a cognitive framework that increases their vulnerability to depression. These two studies place emphasis on early attachment experiences, particularly in the child-parent relationship, and the vulnerability to depression and anxiety later in life.

Several studies have focused on specific parenting behaviors that contribute to the development of anxiety in adulthood, such as rejection, criticism, negative interactions, being

unloving, and showing affectionless control. A 1996 study by Chambless and colleagues administered the Parental Bonding Instrument (PBI) to 87 outpatient adults and 42 of their parents before and after exposure treatment for various anxiety disorders. Results showed that poor parental bonding is a general precursor to psychopathology, including anxiety disorders. The primary limitation to this study is its retrospective nature. The patients and parents did not agree on the quality of parenting administered, and patients may have inflated the degree to which they received bad parenting due to their own personality characteristics and interpersonal difficulties. Another study, this one by Cassidy and colleagues, focused on early attachment experiences and their possible effects on the development of Generalized Anxiety Disorder (GAD). GAD clients about to begin therapy reported less maternal love in childhood, greater maternal rejection/neglect, and more maternal role reversal/enmeshment than did the control group. For this study, 138 participants (sixty-nine diagnosed with GAD and sixty-nine non-anxious) were recruited through media and announcements. Childhood attachment and the participant's current state of mind in regards to attachment were assessed using 8 subscales of the Perceptions of Adult Attachment Questionnaire (PAAQ). A large majority of the participants in the study were female and white, which make findings difficult to generalize to the population. A similar limitation this study shares with aforementioned studies is that it is retrospective in nature, perhaps generating bias. It also focuses solely on maternal influence and does not seek to explore the possible paternal impact on anxiety. Lastly, a 2010 study by Reitman and Asseff studied parenting practices and trait anxiety in children. This study is notable for incorporating both maternal and paternal influence in the model. Two hundred introductory college students and their parents ( $n=263$ ) participated. Each participant responded to questionnaires (State-Trait Anxiety Inventory, Parental Bonding Instrument, and The Children's Report of Parenting Behavior Inventory). This study showed that for both males and females, perceptions of maternal control and paternal acceptance have the strongest relations with

student anxiety. Several limitations to this study include retrospective interviewing, lack of generalizability (a majority of the sample is Caucasian), and recruiting procedures that may have generated responses from parents who have a high level of interest in their children.

Similar to anxiety, parenting predictors of later depression include a lack of consistent care, nurturance, support, excessive authority, criticism, and disapproval (Blatt & Zuroff, 1992). This article reviews studies of both clinical and nonclinical samples focused on investigating interpersonal relationships and depression, specifically the child-parent relationship. It was found across the literature that highly dependent and highly self-critical individuals have demonstrated different responses to themes of abandonment, loss, rejection, failure, and criticism. This helps to explain variance in individuals who become depressed in adulthood and those showing more resiliencies to developing depressive symptoms. A landmark qualitative study by Schmid and colleagues interviewed 314 participants for 19 years and showed that a lacking mother-child bond (e.g. vocal, facial, and motor responsiveness) is associated with higher risk of depression in the child from infancy to adulthood. However, 99% of participants were of European descent, reducing generalizability to the overall population. Another limitation of this study is that it is solely focused on a mother's influence and did not attempt to study the paternal role in developing depression.

However, despite the lack of research on paternal and maternal effects on the development of depression in offspring, one study in particular did find that the quality of parenting from both mothers and fathers has been linked to depression (Parker, Hadzi-Pavlovic, Greenwald & Weissman, 1995). In this study, data on parental style was gathered from 3,684 respondents at a one-year follow up. Results showed that low parental care is a risk factor for later depression. However, one limitation to this study is that females were significantly overrepresented in the major depression group and underrepresented in the heterogeneous diagnostic group. Thus, further research is needed to determine the effects of maternal and paternal parenting on both sexes.

### **Attachment Style as a Mediator**

The link between the parent-child relationship and anxiety and depression may be explained by the developing attachment style of the child. Attachment style has been linked to anxiety and depression. Insecure attachment has been shown to mediate the relationship between childhood maltreatment and adult anxiety and depression (Bifulco et al., 2006). In this study, 154 high-risk community women were assessed and then followed up with four years later to test the role of insecure attachment style in predicting new episodes of anxiety and/or major depressive disorder. 55% of the women had at least a one new episode of a diagnosable disorder in the follow-up period. Results from this study suggest a dysfunctional interpersonal style arising from childhood may perpetuate vulnerability to affective disorders. However, because this sample only consisted of high-risk women, these results may not be general to the overall population. In a recent meta-analysis specifically studying anxiety (Colonnesi et al., 2011) 46 studies comprising of a total of 8,907 children were reviewed that examined the relationship between insecure attachment and anxiety. The results indicate that there is a moderate relationship between insecure attachment and anxiety. However, this correlation was strongest in cross-sectional studies conducted in Europe, making these findings less general to the overall population.

One explanation for the link between the parent-child relationship and depression has been that internal working models of those who experience poor parenting are actually cognitive vulnerabilities that put people at risk for depression (Morley & Moran, 2011; Ingram, Overbey & Fortier, 2001; Blatt & Homann, 1992). Morley and Moran reviewed several studies that followed individuals from infancy and examined evidence that early attachment experiences contribute to these cognitive processes. These studies suggest that early experiences in non-secure attachment relationships increase vulnerability to depression following stressful life events. However, they noted that there are still substantial gaps in the research. For example, there is very weak empirical support

for the link between early attachment representations and helpless responses to failure, which then lead to a vulnerability to depression. In another study, Ingram and colleagues examined the role maternal bonding and automatic thinking have in cognitive development that may increase the risk for depression. Two samples were used ( $n=500$ ,  $n=171$ ) of university students. Each participant was administered assessments to evaluate parental bonding in the first sixteen years of life and then assessed for current anxiety and depressive symptoms. The findings suggest that poor maternal bonding was associated with more dysfunctional thinking, which then predisposes them to affective disorders. Again, the greatest limitation to this study, however, is that paternal bonding was not tested. Lastly, Blatt & Homann (1992) reviewed the findings of three approaches to the study of parent-child interactions and the formation of a vulnerability to depression in adulthood. A major conclusion from all three methodologies is that internal working models of attachment in caregiving relationships are frameworks in understanding cognitive vulnerabilities to depression. Blatt and Homann noted that the research reviewed suggests anxious or ambivalent attachment may lead to depression focused on dependency, loss, and abandonment, whereas avoidant attachment results in depression focused on self-worth, self-criticism, and anger.

There have also been studies specifically examining attachment as a mediator between parenting and depression, though these have been in samples that have experienced childhood maltreatment, rather than a more general population. In two separate studies, Hankin (2006) tested attachment style as a mediator between childhood histories of emotional maltreatment and cognitive risk factors for depression. In the first study ( $n=562$ ) and the second study ( $n=75$ ), young adults completed self-report measures assessing their childhood history before age fourteen. In addition, participants in both studies were assessed regarding anxiety and depressive symptoms at two separate times within ten weeks apart. Support was found for attachment as a mediating process. One limitation to this study, however, is that child and adolescent psychopathology was not assessed. It is

unknown if child and adolescent psychopathologies were mediators for young adult symptoms of anxiety and depression. In another study, Rikhye and colleagues compared the effects of parental rearing in adults who reported a high degree of childhood maltreatment (n=72) and those who reported no significant events in childhood (n=69). Results suggest that the effects of childhood maltreatment on quality of life in adulthood are linked with the quality of childhood paternal care and the occurrence of depressive in adulthood. However, the retrospective judgments about parental behavior, especially given the wide age range of participants (18-65), are a limitation to this study. Thus, this study examines whether attachment style in a more general population mediates the relationship between mothers and fathers parenting and symptoms of anxiety and depression in adulthood.

Current Study. Research has linked parenting quality in childhood to anxiety and depression in adulthood (Schimmenti & Bifulco, 2013; Moran, Bailey & DeOliveira, 2008; Reitman & Asseff, 2010). Attachment theory suggests this is due to insecure attachment, which has been linked both to parenting quality (Rapee, 1997) and mental health symptoms (Colonnesi et al., 2011; Morley & Moran, 2011). The purpose of this study is to examine the mediating effect of attachment in the relationship between mother and father's parenting in childhood and adult symptoms of anxiety and depression.

Research Question: Does attachment style mediate the relationship between poor parenting and symptoms of anxiety and depression.