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**Parents' Joint Attachment Representations and Caregiving:  
The Moderating Role of Marital Quality**

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**Parents' Joint Attachment Representations and Caregiving:  
The Moderating Role of Marital Quality**

**by**

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## **Abstract**

### **Parents' Joint Attachment Representations and Caregiving: The Moderating Role of Marital Quality**

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This study examined how mothers' and fathers' joint attachment representations, assessed prenatally, predict parent's caregiving behavior with their 8-month olds. Adults' representations of their relationships with their parents during childhood have been shown to influence the quality of care they provide their infants. Also, the attachment statuses of both partners in a couple, considered jointly, have been associated with the couple's marital quality. Less is known about the effect of couples' joint attachment representations on their individual caregiving quality. The influence of the spouse's attachment security on a parent's caregiving might be direct via modeling. It is also possible that sensitive care provided by the spouse will motivate an insecure parent to reflect on negative experiences during his or her own childhood, thus enabling that parent to provide more sensitive care with his or her own child. The spouses' joint attachment status might also affect marital quality, which in turn could influence caregiving. Direct associations between couples' joint attachment status and each parent's caregiving quality as well as the extent to which marital quality moderates

relations between parents' joint attachment security and their caregiving behaviors were examined.

Participants were followed over the transition to first-time parenthood and included 116 families. Prenatally, each parent was administered the Adult Attachment Interview (AAI). To assess their marital quality, couples were videotaped for 30 minutes discussing sources of disagreement. When infants were 8 months old, mothers and fathers were videotaped separately for 30 minutes each playing, feeding and changing their infant's clothes, to assess caregiving quality.

Based in their AAI scores, couples were placed into an attachment pairing group: Secure-Secure, mother Secure-father Insecure, mother Insecure-father Secure, and Insecure-Insecure. Results indicated mothers' caregiving was not affected by pairing, but father's was. Marital quality also differed by pairing. No moderation was found through the interaction of marital quality and attachment pairings predicting parents' caregiving.

Findings underscore the value of looking at joint rather than individual attachment representations when examining the relation of parents' attachment representations to fathers' caregiving during infancy and marital quality.

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## Chapter 1: Introduction

Drawing on family systems and attachment theory, this study seeks to understand how adults' representations of their past parent-child relationships affect their caregiving. Adults' representations of their relationships with their parents during childhood, assessed using the Adult Attachment interview, have been shown to influence the quality of care they provide their child; secure mothers show greater sensitivity than those who are insecure (Crowell & Feldman, 1988; Crugnola et al., 2013; Hsiao, Koren-Karie, Bailey & Moran, 2015; Leerkes et al., 2015). Despite this less is known about the effects of parents' *joint* attachment status on caregiving. Assessing the implications of each parent's attachment jointly captures the interdependence and interconnectedness of parents in the family system. It may be the case that one partner's insecure attachment status affects the other's caregiving directly, through modeling poor caregiving characteristic of the insecure partner. It is also possible and likely that a partner's attachment status affects caregiving indirectly as a result of the quality of support they provide each other. Hence, the present study will examine the effect of couple's joint attachment on caregiving directly as well as the extent to which this effect is moderated by marital quality.

This study draws on ideas from attachment theory to understand how parents' representations of their relationship with their own parents during childhood may affect the quality of their current relationships with their partners and children. The central tenets set forth by attachment theorists are based in evolutionary theory. Attachment Theory was pioneered by John Bowlby (1969), who theorized that attachment security develops through interactions with early caregivers who are available and supportive in times of need, increasing the infant's chance of surviving. Infants internalize this early

relationship which then provides them the security needed to explore their environment and develop greater emotion regulation skills, and later, the capacity to care for others (Bowlby, 1973). Hence, attachment security is thought to promote positive models of the self and others that are internalized in the form of mental representations and affect future relationships (Bowlby, 1980). As a result of receiving sensitive and supportive care, secure infants develop an internal working model of others as loving and of the self as worthy. The internal working model is developed early in childhood and is carried with one throughout life and contributes to personal relationships along the way. Although usually stable throughout life, there is evidence that one's internal working model is alterable and that interfering events may transform attachment representations (Booth-LaForce et al., 2014). Regardless of whether the adult model is based on what actually happened during childhood (since retrospective memories may not be accurate), adults' current state of mind with respect to their relationship with their parents during childhood have been shown to influence their caregiving behavior (Crowell & Feldman, 1988; Crugnola et al., 2013; Hsiao, Koren-Karie, Bailey & Moran, 2015; Leerkes et al., 2015) and interactions with their partner (Creasey, 2002; Gao, Crowell, O'Connor, & Waters, 1996; Mikulincer, Dover & Shaver, 2004; Van Ijzendoorn & Bakermans-Kranenburg, 1996).

#### **ADULT ATTACHMENT REPRESENTATIONS**

Attachment security in adulthood has been based on assessing adults' representations of their relationship with their parents during childhood using the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985). The interview is conducted using a narrative approach, asking attachment-related questions such as how the adult's relationship was with their own parents during childhood, what happened when they were

sick or ill, and how they responded to being separated from and united with the parent. Adults are placed into one of three groups, one of which is secure and two are insecure (Dismissing and Preoccupied). These classifications are based on the interviewee's coherence of discourse throughout the entire interview. The secure (Autonomous) classification is given when the interviewee values attachment relationships and describes them in a coherent manner. A classification of Dismissing is given when the interviewee minimizes the effects of negative experiences with their parents, by idealizing the parents and failing to support their positive memories and/or failing to recall what happened during childhood. A classification of Preoccupied is given when the interviewee shows difficulty managing heightened emotions and becoming angrily involved recounting their parents' wrongdoings or rambling extensively, losing track of the interview context. Finally, adults are also rated on a 9-point Unresolved/disorganized scale if they show disorganized speech during discussion of trauma stemming from loss or abuse as evidenced by a brief lapse in the monitoring of reasoning (e.g. belief that a person who died 20 years ago is still alive) or discourse (e.g. long silences). Transcripts given a rating of 6 or higher on the Unresolved/disorganized scale are considered Unresolved, those scoring below 5 are not placed in the Unresolved group and the rater makes a decision for transcripts scored a 5 based on the discourse context. Hence, adults classified as Unresolved also have a secondary Autonomous, Dismissing or Preoccupied attachment classification.

### **The AAI and Parental Caregiving**

Research in attachment has uncovered aspects of parental caregiving that are stronger or weaker in quality, with respect to the parent's attachment coherence. Secure-Autonomous mothers have been found to be warm, supportive, and give clear and helpful

assistance to their young children (Crowell & Feldman, 1988; Leerkes et al., 2015). They display highly sensitive guidance and can coherently co-construct dialogue with their toddlers (Hsiao et al., 2015). In a study examining mother-infant styles of regulation and play, secure mothers had a greater duration of positive and attuned play, and a greater capacity to move from non-attuned to attuned play, greater involvement in play with objects, and more adequate dyadic attention and emotion regulation, than mothers of other attachment classifications (Crugnola et al., 2013).

Insecure-Dismissing mothers show less emotionally supportive, helpful behavior and more controlling behavior with their children than secure mothers (Crowell & Feldman, 1988). They have a cool and remote task-oriented style of interaction with their children (Crowell & Feldman, 1988). When recalling emotional events with their toddlers, their dialogue lacks organization (Hsiao et al., 2015). Dismissing mothers are less involved in play with their children, and have greater durations of negative and non-attuned play (Crugnola et al., 2013).

Insecure-Preoccupied mothers are less helpful and supportive to their children than secure mothers. Specifically, they have difficulty giving direction and suggestions to their children (Crowell & Feldman, 1988). When recalling emotional events with their toddlers, they display role reversal and disorganization in their dialogue (Hsiao et al., 2015). Preoccupied mothers spend more time in negative and non-attuned play states with their children and are less able to repair non-attuned states than secure mothers (Crugnola et al., 2013).

Unresolved mothers, haunted by past trauma(s), sometimes demonstrate “frightening behaviors” (e.g., speaking in a spooky, haunted voice) or appear frightened (e.g., gasping and quickly drawing away as the infant approaches) (Jacobvitz, Leon, & Hazen, 2006). Unresolved mothers display blunted amygdala responses, a neural

indication of mothers' disengagement, when cued by their own infants' sadness as compared to happiness (Kim, Fonagy, Allen & Strathearn, 2014). When recalling emotional events with their toddlers, Unresolved mothers' quality of contribution to the dialogues is lower compared to the quality of their child's contributions (Hsiao et al., 2015). Another study found mothers' Unresolved tendencies are associated with less adequate dyadic attention and emotion regulation with their children, and otherwise resemble insecure mothers (Crugnola et al., 2013).

Most research using AAI classifications to determine caregiving have primarily included mothers because mothers have often been the primary caregiver for a child. The research surrounding father caregiving and its relation to his attachment representation is scarce. The studies that do include fathers indicate that although similar in quality, mothers and fathers do not display equivalent caregiving behaviors (Papp, Goeke-Morey, & Cummings, 2004). For example, compared to mothers, fathers engage in more "rough-and-tumble" play (i.e. physical play like wrestling) and have different effects on their child's adjustment, playing an important role in social competence (Fagan, Day, Lamb & Cabrera, 2014).

The few studies on attachment and fathering have found that secure fathers are more sensitive, supportive, and appropriately challenging during play with their toddlers as well as with their 6-year-olds (see Grossman et al., 2002 for a review). More specifically, one study found secure fathers were sensitive caregivers, and hostile caregiving was related to fathers' Dismissing and Unresolved attachment. Furthermore, emotional disengagement and role-reversed caregiving were both related to fathers' Unresolved attachment (McFarland-Piazza et al., 2012).

### ***Attachment Pairings and Parental Caregiving***

This study builds on the existing research of individual attachment representations by examining mothers' and fathers' joint attachment representations, as pairs, and how they relate to parental caregiving. Drawing on a family systems approach, it is possible that one parent might be influenced by the other parent's attachment history. Since relationships in the family system are known to be interconnected and interdependent, it is possible that interaction effects may exist between two adults' attachment representations. For example, a secure parent might be sensitive and empathic to his or her child, raising their insecure spouse's awareness of what might have been missing in his or her own childhood. In turn, this may allow him or her to provide more adequate care to their child. Hence, I expect that an insecure parent will provide more sensitive care to their child if married to a secure spouse (vs. an insecure spouse).

To our knowledge, only one study has looked at the contribution of parents' joint attachment status on each parent's caregiving behavior. Cohn, Cowan, Cowan and Pearson examined 27 couples and their preschool-aged children and found that insecure mothers married to insecure men displayed the least warm and structured behavior with their children in comparison to mothers in insecure/secure or secure/secure dyads (1992). Children appear to benefit from having two secure parents over two insecure parents. In a study of 49 Finnish families, parents' secure/secure (S/S) joint attachment during the child's first year of life forecast higher levels of empathy, and lower levels of social and thought problems in preadolescence compared to their peers (Kuovo and Silven, 2010). To understand whether a parent's attachment status is influenced by their partner's attachment status, it is important to examine pairs of mixed attachment classification (i.e., secure/insecure) and identify the dynamics separately when the mother vs. the father is secure in the dyad. Since mothers are typically the primary caregivers and often play a

gatekeeping function regulating the amount of contact their partner has with their infant (Kulik & Tsoref, 2010), I expect that secure mothers will be less influenced than secure fathers by their partner's attachment status.

Kuovo and Silven (2010) did not uncover a contribution of a partner's attachment status when one is secure and the other is insecure likely because there were only 9 couples in the secure/insecure group and they did not examine secure mother/insecure father (SM/IF) vs. secure father/insecure mother (SF/IM) separately. The only other study I am aware of to date on the contribution of parents' joint attachment to caregiving examined the effects of prenatal couple pairings on marital quality and family alliances in the triad (the extent to which either both parents were aligned with one another against the child, or one parent and the child were aligned together against the other parent) when their child was 24 months old (Paley et al., 2005). Paley and colleagues (2005) assessed negative emotional escalation in the marriage, which is the extent to which one parent followed the other parent's negative behavior with his or her own negative behavior. They then examined relations among couples' joint attachment status, negative emotional escalation (at 3 and 12 months) and family alliances with their child at 24 months. For secure/insecure couples, greater negative emotional escalation predicted greater family alliances. However, for couples in which both partners were insecure (I/I), negative marital escalation did not appear to have much association with family alliances. For S/S couples, there were fewer alliances in the family but only when there were higher levels of postnatal negative marital escalation. In order to explain this, the authors theorize that S/S couples' have a unique ability to successfully resolve differences, or engage in "constructive conflict", and in turn negative marital escalation provides them an opportunity to work out their differences. This allows them to turn to their spouse rather than their child when in need avoiding the formation of family alliances. Findings such as

these illustrates the importance of examining the joint effects of attachment as it effects couple's ability to resolve conflict and has implications for whole family dynamics.

Finally, Talbot, Baker, & McHale (2009) examined co-parenting adjustment in early infancy in relation to parents' joint attachment and found that pairings could predict co-parenting cohesion and conflict. However, neither this study nor the others examined how parents' joint attachment status is related to caregiving. It remains unclear if the *quality of care* a parent provides their child, especially at an early age, is affected by the parents' joint attachment representations. The proposed study will investigate the relationships between parents' joint attachments, marital quality, and each parent's relationship with their 8-month-old infant.

#### **THE MARITAL RELATIONSHIP AND PARENTAL CAREGIVING**

Parents' joint attachment status may affect caregiving directly or indirectly as a result of the quality of support they receive from their spouse. The marital quality literature provides over three decades of research demonstrating a consistent and robust relationship between marital quality and children's adjustment (Erel & Burman, 1995; Kouros, Papp, Goeke-Morey, & Cummings, 2014). Along with parents' attachment representation, the marital relationship is a strong predictor of parental caregiving quality. Family systems theory suggests that the marital relationship plays a key role in family functioning (Bowen, 1978; Minuchin, 1974). Erel & Burman (1995) conducted a meta-analysis on the link between marital quality and parent-child relations with a compilation of 68 studies that employed one of three marital quality measures: (1) marital satisfaction (general positive or negative marital quality, e.g., harmony, global quality, satisfaction, or tension not classified as overt conflict); (2) overt conflict (the frequency or intensity of physical and verbal aggression in the marital dyad), or (3) marital coalition (the unity of

the marital dyad in comparison with the unity of the parent-child dyad). The meta-analysis found that marital quality had profound effects on parent-child interactions and on children's emotion regulation and expression. In another cardinal study, marital quality was shown to relate to the entirety of children's functioning, including social and emotional well-being, cognitive functioning, physical health and even biological functions such as sleep (Kouros et al., 2014).

Mechanisms posited to underlie the effect of marital quality on parent-child relationships include triangulation among family members and the spillover and compensatory hypotheses. Family systems theorists consider dyadic relationships to be unstable systems that inevitably experience bouts of tension or anxiety (Bowen, 1978). Spillover refers to negative affect, tension, or conflict in the marital relationship that is transferred to the parent-child relationship (Cox, Paley, & Harter, 2001). It can occur when irritation or hostility felt in the marriage causes parents to be irritable and less patient with their child, or too emotionally drained from their marital problems to engage in sensitive and responsive caregiving (Cox et al., 2001). Research has shown this may be especially true for fathers, as conflict in the marriage is associated with a more intrusive, less sensitive father-infant interaction quality and less father involvement with infants (Cox, Paley, Payne, & Burchinal, 1999). Further evidence for stronger marital effects on fathering is the basis for what is known as the *fathering vulnerability hypothesis* (Goeke-Morey & Cummings, 2007).

The compensatory hypothesis refers to emotional or physical compensating behaviors displayed by a parent who is unsatisfied, for whatever reason, in their marital relationship. The parent may compensate for their marital dissatisfaction by devoting more time and energy into caregiving (Belsky, Youngblade, Rovine, & Volling, 1991). Although they seem positive, compensatory behaviors are not always beneficial. For

instance, they can lead to enmeshment and boundary disturbances between the parent and child, which predict to later depression, anxiety, and attention-deficit/hyperactivity disorder in middle childhood (Jacobvitz, Hazen, Curran, & Hitchens, 2004). As noted earlier, Paley et al. (2005) found that parent-child alliances are more prevalent for secure/insecure joint attachment pairings with higher emotional negativity in the marriage. This study will not examine specific mechanisms by which marital quality affects caregiving but, given the effects of marital quality on caregiving, this study will examine whether the effect of couple's joint attachment status on caregiving is moderated by qualities of the marriage measured by marital affect.

### **The AAI and Marital Quality**

If the relationship between parents' attachment status and caregiving is moderated by marital affect, it is important to understand how joint attachment pairings are related to qualities of the marriage. When Bowlby developed the theory of Attachment, a person's attachment history was thought to have an important influence on marriage, the primary adult relationship (Bowlby, 1979). Adults are likely to turn to their partners when they are distressed, ill, or sick and thus attachment may continue to serve the biological function of protection.

A meta-analysis of attachment representations in families found that secure men marry secure women and Unresolved men marry Unresolved women at significantly higher rates than other combinations (Van Ijzendoorn & Bakermans-Kranenburg, 1996). Using the AAI, researchers have pinpointed facets of marital relationships that are stronger and/or weaker with respect to the spouses' attachment coherence. Individuals categorized as secure provide more clarity and detail when confiding in their spouse and are less rejecting and more supportive when listening to their spouses (Creasey, 2002).

Secure individuals also display more recognition and understanding of their spouse's distress and show more availability (Gao, Crowell, O'Connor, & Waters, 1996). Insecure-Dismissing individuals display a general distrust of others and feel uncomfortable with close relationships, while those who are insecure-Preoccupied worry that their spouse will not be available or supportive in times of need (Mikulincer, Dover & Shaver, 2004).

### *Attachment Pairings and Marital Quality*

In theory, there is a reciprocal relationship between attachment representation and marital quality: attachment representation influences partners' marital functioning, leading to adjustment and adaptation of their internal working model of attachment (Bowlby, 1988). To our knowledge, there are five studies in existence that examined how adult joint attachment pairings, using the AAI, are related to qualities of romantic relationships. All studies show that S/S pairs have the most positive interactions. For example, S/S couples display more synchrony and less dominance than all other pairs (Bouthiller, Julien, Dube, Belanger, & Hamelin, 2002). Mixed findings have been obtained with the few studies that examined mixed AAI pairings (one secure and one insecure partner). Cohn et al. (1992) observed couple interactions and found that if there is a secure woman in the pair, more positive behavior is exhibited. However, there is also more negative behavior when the husband is insecure. Other studies found insecure husbands increase negativity regardless of the wife's attachment status. Specifically, insecure husbands married to secure wives engage in the highest levels of marital conflict (Creasey, 2002; Wampler, Shi, Nelson, & Kimball, 2003). A previous dissertation by Cris Booher (2000) utilized the dataset that will also be used in this study to examine joint attachment pairs in relation to three dyadic marital communication scales of self-

reflection, flexibility and emotional responsiveness (Booher, 2000). Booher collapsed the three dyadic marital scales into one variable due to high correlations among the three scales. Her results show S/S pairs had more positive marital communication than secure wife/insecure husband pairs (Booher, 2000). The mixed joint attachment pairs might display more marital discord than I/I pairs due to a mismatch of relationship expectations, causing subsequent dissatisfaction and tension, that is imply not present in I/I pairs. It is hypothesized that the secure wife/insecure husband pairs in the current study will display less positive marital affectivity and greater instances of negative marital affectivity in the marital interactions. This study will build on these findings to examine marital affect specifically and whether qualities of the marriage moderate relations between AAI pairings and caregiving.

## **RATIONALES**

### **Attachment Pairings**

Due to the small sample sizes of most studies examining attachment pairings, little is known about their relation to marriage and only one has examined parental caregiving behavior. Subject sizes in studies that include couple pairings have ranged from 27 to 49 couples, with the exception of the Paley et al. (2005) study, which had 138 couples. In studies with samples under 100, when separating couple pairings into three or more categories (i.e. secure/secure, secure/insecure, insecure/insecure), each additional category decreases the power of the analyses. The prevalence of some pairs is infrequent and often consist of just one or two couples, if any. As a result, most studies were unable to separate pairs based on gender (i.e, secure wife/insecure husband, or insecure wife/secure husband), when conducting statistical analyses. These separate gender categories could shed light on nuances, such as who (wife or husband) and how the AAI

classifications are affecting the marital relationships. Furthermore, the studies have been examining different outcome variables, adding to the inconclusiveness of the attachment pairing literature.

Examining pairs may be difficult or unfeasible for some researchers, but it is an asset that allows for great insight. For instance, the Paley et al. (2005) study resulted in the surprising finding that couples with two secure partners had fewer family alliances when there was *more* negative escalation in the marriage. As noted earlier, the S/S couples' unique ability to successfully strategize in order to solve differences may have been a buffer against alliance formations. Findings such as these shed light on just how dynamic the family system is, and thus the importance of examining the joint effects of attachment. This study will extend attachment and family systems research by exploring the complex relationships between the intergenerational effects of attachment, marital affect, and caregiving.

Whereas most studies of parent attachment representation and parental caregiving have only collected mothers' reports, the proposed study will investigate both fathers and mothers. This will allow for an examination of the joint contribution of mother and father attachment representations, as pairs. Little is known about partners' joint attachment representations and examining this joint contribution is important, especially with the knowledge of its implications, as evidenced in previous studies. Furthermore, the present study will take into account both the gender and attachment representation of each parent when creating the pairings, in order to determine whether it is the mother or father who is most influenced by the other in their marriage or parenting. Previous studies examining these relationships have been largely unable to decipher joint attachment pairings' effects or the differences between the mother and father contributions, due to study limitations, notably sample size. To measure marital quality, this study will include observed marital

communication (oral and physical body language) patterns via ratings of positive and negative marital affect. Couples are not always aware of how their actions affect their partner and the dynamics of their relationship, and thus an observational measure may provide an unbiased and more whole view than a self-report questionnaire. Finally, the proposed study will utilize data from a longitudinal study. This will provide the ability to investigate whether parents' individual characteristics and marital affect, prior to the birth of their child, predict the quality of infant caregiving at 8 months of age.

### **Infant Caregiving**

This study will focus on predicting caregiving after 7 months of age, because it is not until between 4 – 7 months of age that infants begin to identify how a caregiver will respond to their needs and begin to prefer a caregiver to a stranger (Sroufe, 1988). Thus, parenting behaviors become particularly salient after this age range. Another important contributing factor to examining 8 month caregiving is that it falls before the development of a classifiable infant-caregiver attachment bond, usually occurring at 12 months of age (Ainsworth, Blehar, Waters, and Wall, 1978), which can have implications throughout the infant's life (Sroufe, Egeland, Carlson & Collins, 2005). The coding scheme used in this study to assess parental caregiving is observational ratings of parental sensitivity, hostility, role reversal and emotional disengagement during ongoing parent-child interactions (Hazen, 1997). The items on the observational rating scales come from Ainsworth et al. (1978) assessment of maternal sensitivity, which is grounded in attachment theory. Investigations of the precursors to infant-caregiver attachment are necessary for preventative interventions aimed at increasing positive caregiving associated with a secure infant-caregiver bond.

## **Marital Affect**

The present study will utilize observed marital interaction and communication, rather than relying on self-reports. From the literature surrounding marital quality, we know that wide ranges of marital constructs are related to parent-child relationship qualities (Erel & Burman, 1995). Studies examining observations of couples' marital interactions and communication have noted that escalation of negativity, or the extent to which each spouse reciprocates the other's negativity, is a strong predictor of marital dissolution and processes that compromise a family's development (Gottman, 1994; Paley et al., 2005). There are also findings suggesting that both husbands' and wives' marital withdrawal is associated with disturbances in their own parenting, respectively (Cox, Paley, Payne, & Burchinal, 1999; Katz & Gottman, 1996). By virtue of these constructs' relation to family functioning and parenting, the current study will utilize marital affect coding schemes that can measure aspects of escalation and withdrawal, among others things. Furthermore, these coding schemes are consistent with the present study, since discourse and communication are central constructs assessed by the adult attachment interview used in the study.

## **SUMMARY**

The primary purpose of the present study is to understand how adult representations of past parent-child relationships, assessed using the Adult Attachment Interview, affects caregiving, with marital affect as a moderator. Within the family system, research has shown that the quality of the marital relationship has great implications on family functioning, especially caregiving and children's development. Predicting marital quality is thus an important task. Researchers have gained valuable insight into couple interactions and marital quality by examining partners' attachment state of mind. While research using AAI to predict marital interactions is plentiful, the

research using joint attachment pairings is extremely limited. Since we know that each individual's attachment representation brings a host of characteristics to a relationship, such as support and emotional engagement or lack thereof, certain combinations of attachment representation may interact and have their own unique characteristics. One's attachment representation is a product of their internal working model and thus a framework for their marital relationship, which has an affective component and is a context for parental caregiving. In a family consisting of a married couple with children, the combinations of AAI classifications have even greater implications and importance, considering the links to parenting and caregiving. The research on the fathering vulnerability hypothesis and the little research in existence on joint attachment pairs indicate that partners can affect one another in specific and unique ways that carry over and affect other relationships within the family. In order to better understand the dynamics and nuances of adult attachment representations and the family system, research acknowledging the important influence of partners' attachment representation pairings on the marriage and caregiving needs to be conducted, especially since only one study has done so with caregiving outcomes. Finally, the longitudinal design of the present study allows pre-birth predictions of later family functioning, which is critical for both prevention and intervention with families.

## **Chapter 2: Hypotheses**

### **QUESTION 1**

Is one parent's interaction quality with the infant influenced by the other parent's adult attachment security?

**Hypothesis 1a**

Wives who are secure will not be affected by their husband's attachment classification, in regards to their caregiving quality.

**Hypothesis 1b**

Wives who are insecure will show higher caregiving quality if they are married to a secure husband versus an insecure husband.

**Hypothesis 1c**

Husbands who are secure will show lower caregiving quality if they are married to a wife who is insecure versus a secure wife.

**Hypothesis 1d**

Husbands who are insecure will have higher caregiving quality if they are married to a wife who is secure versus an insecure wife.

**QUESTION 2**

How will each pairing of couple's adult attachment representations differ in positive and negative marital affectivity observed in the marital interaction?

**Hypothesis 2a**

Secure/secure attachment pairs will score highest on positive affectivity and lowest on negative affectivity compared to all other dyads.

**Hypothesis 2b**

After the secure/secure pairs, the secure husband/insecure wife pairs will show the second highest positive affectivity and second lowest negative affectivity.

**Hypothesis 2c**

After the secure husband/insecure wife pairs, the insecure/insecure pairs will show the third highest positive affectivity and third lowest negative affectivity.

**Hypothesis 2d**

The secure wife/insecure husband pairs will score the lowest on positive affectivity and highest on negative affectivity out of all the pairs.

**QUESTION 3**

Does the quality of the marriage moderate the relationship between adult attachment pairings and each parent's caregiving behavior with the infant?

**Hypothesis 3**

Negative and positive affectivity in the marriage are expected to moderate the relationship between couple AAI pairings and each parents' caregiving quality. Specifically, for all AAI pairings, lower levels of negative marital affectivity and higher levels of positive marital affectivity in the marriage will enhance the quality of care each parent provides their child. Conversely, for all AAI pairings, higher levels of negative marital affectivity and lower levels of positive marital affectivity in the marriage will reduce the quality of care each parent provides their child. However, based on the fathering vulnerability hypothesis, it is expected that finding a moderating influence of the marriage on caregiving will be more likely to occur for fathers than mothers because the fathering vulnerability hypothesis suggests that fathers are more affected by qualities of the marriage.

## Chapter 3: Methods

### **PARTICIPANTS & RECRUITMENT**

As part of a longitudinal study following 125 couples over the transition to first-time parenthood (Jacobvitz, Hazen, Curran, & Hitchens, 2004; Riggs & Jacobvitz, 2002), 114 mothers, fathers, and their first-born 8-month-olds participated in this study. Couples were recruited during the wives' third trimester of pregnancy from birthing classes, public service radio announcements, newspaper press releases, and flyers distributed at maternity stores within the greater Austin area. To ensure a representative sample, couples were recruited from birthing classes at hospitals serving indigent populations as well as those serving middle class families. Moreover, about half the sample was recruited from small classes in rural areas that were not associated with a hospital. Finally, 15% of the sample responded to public service announcements advertising that participants would be paid for their participation.

In the original sample ( $n = 125$ ), mothers ranged in age from 16 to 41 years ( $M = 29$ ) and fathers ranged in age from 19 to 51 ( $M = 31.55$ ). Most couples were married (91%), most were Caucasian (82%), and the rest were Hispanic (7%), African American (2%), or Native American, Middle Eastern, or Indian (8%). The median family income was \$30,000 – \$45,000. Income level varied widely with 9% reporting family earnings at the poverty level and 17% just above poverty. In contrast, 23% reported earning above \$60,000. Sixty percent reported earning a Bachelor's or graduate degree and another 30% reported some college or trade/business school coursework.

Between the prenatal visit and the 8-month visit, 4 of the 125 couples dropped out of the study. Of these 4 couples, 2 moved away from the area, 1 mother could not be located, and 1 declined to participate further. In addition, five audiotapes from the prenatal visit were inaudible. The subjects for whom data were missing ( $n = 9$ ) did not

differ demographically from the original 125 families in the study. In return for their participation in the study, each family received a \$50 savings bond for their child at the completion of each of the three phases of data collection (for a total of \$150 in savings bonds), bimonthly project newsletters, a T-shirt for their infant, and an audiotape of lullabies. At the end of the study parents were sent copies of the videotaped interactions with their child.

## **PROCEDURE**

The data that will be used in the present study were collected in the first and second waves of the Austin Longitudinal Project, which included seven sessions of data collection. Couples were visited twice during the first wave when they were expecting their child. The first session took place in a laboratory at the University of Texas at Austin. Each partner completed consent forms, a demographic questionnaire, and the Adult Attachment Interview (George et al., 1985), which was separately administered to each partner. During the second prenatal session, couples completed several questionnaires and were video recorded participating in the marital communication task, which included three structured discussion episodes and lasted a total of approximately 30 minutes.

During the second wave, which took place eight months after the birth of their child, couples were visited in their homes for a third session. Each parent interacted with the infant in 30-minute dyadic play sessions. The play sessions were video recorded for each parent and consisted of play, feeding, and a clothes change.

## **Assessment Instruments**

The Adult Attachment Interview (George, Kaplan, & Main, 1985; Appendix A) was used to assess the quality of mothers' and fathers' attachment representations and

assign them classifications of Autonomous, Dismissing, Preoccupied, or Unresolved. Adult Attachment Interviews were coded according the procedure described in *The Adult Attachment Interview: A Coding System* (Main & Goldwyn, 1994). The affect observed in the marital interactions was assessed with Dr. Deborah Jacobvitz's coding criteria for positive and negative marital affectivity (Jacobvitz; Appendix B). The parent-child interactions were coded using the *Infant Caregiving Scales (ICS)* (Hazen, 1997; Appendix C).

### ***Adult Attachment Representations***

The Adult Attachment Interview is a semi-structured interview in which adults are asked to describe childhood relationships with their parents, including experiences of separation, loss, and trauma. The AAI is designed to assess the adult's current state of mind regarding attachment. The interview takes approximately 60-90 minutes to complete and includes frequent probes to aid recall. Dr. Deborah Jacobvitz and graduate students trained by Dr. Jacobvitz, who is a certified AAI trainer by Dr. Mary Main and Dr. Erik Hesse, administered all interviews. Interviews were audiotaped, transcribed verbatim, and rated by graduate students. Either Dr. Deborah Jacobvitz or Dr. Mary Main resolved disagreements between coders. Interrater agreement using the four-way classification system (Autonomous, Dismissing, Preoccupied, and Unresolved) was 81% ( $k = .67$ ).

Several studies have demonstrated that the Adult Attachment Interview is a reliable and valid instrument. The test-retest reliability of the AAI ranges from 77%-90%, with the intervening time period ranging from 1 to 15 months. (van Ijzendoorn & Bakermans-Kranenburg, 1996). Furthermore, AAI classifications have been found to be

independent of IQ, autobiographical memory, personality, and narrative style when discussing other topics (Van Ijzendoorn, 1995).

### *Marital Affect*

During the second prenatal session of data collection, each couple was videotaped completing three, 10-minute long discussion tasks. First, the couple discussed how their relationship had changed since the pregnancy. Second, each partner independently wrote down responses to questions about their relationship. Based on these responses, the experimenter steered their discussion in the second task toward areas of significant conflict or attachment-related issues. The couple was asked to either discuss an agreed-upon area of greatest difference, or to come to an agreement about the greatest source of disagreement in their marriage. Finally, in the third task, the couple was instructed to plan an activity to do together. During each discussion task, the experimenter left the room so that the couple would feel free to discuss personal topics.

The other coding system developed by Dr. Jacobvitz included positive and negative marital affectivity (Jacobvitz, 2005). Two coders blind to all other assessments on the project coded all of the marital interactions on two 7-point scales: positive affectivity and negative affectivity. The positive marital affectivity scale assessed warm within the relationship. High scorers shared a pleasant, warm and enjoyable interaction and seem to enjoy one another and the task. They compromised in outcomes and shared in offered solutions. Fun and joking was supportive and not hurtful. Low scorers did not demonstrate apparent personal regard or enjoyment of the shared task. Smiles, compliments, eye contact and physical affection were not present. If couples joked with each other, it was primarily for tension reduction and jokes were often hurtful. One

couple spent most of the observed interaction laughing and touching one another affectionately. They did not demonstrate any tension or negativity.

The negative marital affectivity score assess negativity in the marriage. High scorers were assigned to couple interactions characterized by anger, personal attacks, whining, tension and unpleasantness. For example, one couple in the study was observed while the husband sat with a pained expression on his face, arms crossed across the sofa from his wife as she lambasted him with a raised voice for various things she felt were evidence of his flawed character. This couple had a palpable tension and dynamic of negative affectivity. Low scorers demonstrated very few, if any, signs of lingering tension or conflict and are characterized by relaxed security. For each dyadic scale, ratings for the two coders were averaged. Disagreements (more than 2 point differences) were resolved by a third coder. The intraclass coefficient between the two raters was  $\alpha = .82$  for positive affectivity, and  $\alpha = .78$  for negative affectivity.

### ***Infant Caregiving***

When the infants were 8 months of age, mothers and fathers were independently videotaped in their homes playing, feeding and changing their baby's clothes for 30 minutes. The interactions were rated on the Infant Caregiving Scales (ICS) developed by Hazen (1997). Items were derived from examples of sensitive and insensitive caregiving described in Ainsworth's global scales for assessing sensitivity, acceptance, and cooperation (Ainsworth et al., 1978). The ICS includes 90 items, each rated on a 7-point scale. Four caregiving scales were developed: sensitivity, hostility, disengagement, and role reversal, using a criterion sort method (Waters & Deane, 1984). Seven expert judges rated each of the 90 items according to the extent to which they were diagnostic of each of the four caregiving constructs. Items which judges agreed were highly diagnostic of a

particular caregiving construct were used to create a scale to assess that construct. Ratings on the items that made up each scale were averaged to create scores for each scale (see Appendix C for items in each scale). Cronbach's alphas for the four caregiving scales were 0.94 for sensitivity, 0.95 for role reversal, 0.91 for hostility, and 0.71 for emotional disengagement.

The sensitivity scale assessed the extent to which parents responded quickly and appropriately to their infant. Examples included, 'Parent responds to baby when he or she cries' and 'Parent's actions are finely tuned to the baby's wishes'. The role reversal scale assessed the extent to which parents turned toward their infants to meet their own emotional needs. Examples included, 'Parent becomes annoyed or anxious when baby does not comply with her wishes' and 'Parent does not respect baby as an autonomous person'. The hostility scale assessed the extent to which parents expressed negative emotions toward their infants, either verbally or physically. Examples included, 'Parent calls the baby unflattering names' and 'Parent handles baby in a physically hostile manner'. The disengagement scale assessed the extent to which parents withdrew emotionally or physical from their infant. Examples included, 'Parent and baby's interaction seem flat and disengaged' and 'Parent seems to have his/her mind elsewhere'. Five coders rated each parent on all 90 items. Coding was done based on the entire 30-minute videotaped parent–infant interaction. Two coders rated 102 of the 118 tapes (86%) for reliability, and seven tapes with low inter-rater reliability were coded by a third coder. The ratings were averaged across all coders. Inter-rater reliability, assessed using intra-class correlations, was 0.64 for sensitivity, 0.65 for role reversal, 0.64 for disengagement, and 0.74 for hostility.

## **ANALYSIS PLAN**

First, descriptive statistics will be reported for all variables. Percentages of subjects in each AAI category as well as in each joint attachment pair will be reported. The means, standard deviations, and ranges for ratings for the ICS and positive/negative marital affectivity will be reported. All descriptive statistics will be reported separately for mothers and fathers, joint attachment pairs, and the sample as a whole. Chi Square tests of independence will determine any significant associations of AAI classifications amongst mother, fathers and the joint attachment pairs. Additionally, a Chi Square test will be performed to examine sample differences in regards to attachment classification frequencies compared to those reported in the meta-analysis by van IJzendoorn & Bakermans-Kranenburg (1996).

Four couple pairings were created: secure/secure (S/S), secure mother /insecure father (SM/IF), secure father /insecure mother (SF/IM), and insecure/insecure (I/I). Adults were categorized according to their best fitting 4-way attachment classification (Autonomous, Dismissing, Preoccupied and Unresolved) and then paired down to a 2-way attachment classification (secure vs. insecure) such that secure adults are Autonomous and insecure adults are Dismissing, Preoccupied, or Unresolved. Those labeled Cannot Classify were put into their best fitting alternative category. A correlation test will be administered in order to examine if scales from the ICS and positive/negative marital affectivity correlate significantly. In all analyses, family income (at wave 1 and 2) and parental depression (at wave 1 and 2) served as control variables since both are known to be related to marital quality and caregiving.

**Question 1: Is one parent's interaction quality with the infant influenced by the other parent's adult attachment security? & Question 2: How will each pairing of couple's adult attachment representations differ in positive and negative affectivity observed in the marital interaction?**

Hypotheses regarding adult attachment representations and their relations to caregiving at 8 months and marital quality were tested using MANOVAs, given the categorical nature of the predictor variable (AAI classifications) and the likely moderate correlation of the dependent variables (DV; within the caregiving scales) (Bray & Maxwell, 1985). If the scales for each DV show high or low correlation, but not moderate, separate ANOVAs will be conducted instead.

**Question 3: Does the quality of the marriage moderate the relationship between adult attachment pairings and each parent's caregiving behavior with the infant?**

Finally, hypotheses regarding the interaction of adult attachment and marital affect as they predict to caregiving were tested with hierarchical multiple regressions. The independent variables were each marital affect scale, couple pairings, and the interaction between marital affect and couple pairings. The outcome variables were each of the caregiving scales. There were separate sets of regressions for each caregiving scale. Specifically, for each regression, marital affect scale will be entered in the first step, along with control variables. Next, the couple pairings will be entered. In the third and final step, the interaction variables of each dummy-coded joint attachment pairing (other than S/S, which is the reference group) multiplied by marital affect were entered.

## **Chapter 4: Results**

This study was designed to examine the complex relationships of adult attachment classification in the family system and how they might interact with marital affect to affect parents' caregiving quality. As discussed in the methods section, the current study included 114 families. Some background information and measures included different

amounts of participation from subjects and thus each analysis will include its specific number of subjects. First, descriptive statistics for the sample and measures used will be reported, followed by the results from analyses in reference to each hypothesis.

## DESCRIPTIVE STATISTICS

### Adult Attachment Interview

Parents' joint adult attachment classifications acted as independent variables throughout this study's analyses. Table 1 displays frequencies of major classifications for husbands and wives with Unresolved and Cannot Classify as separate categories.

Table 1: Frequencies of Adult Attachment Major Classifications for Husbands and Wives

	Secure	Dismissing	Preoccupied	Unresolved	Cannot Classify
Husbands (N = 117)	54 (46.2%)	37 (31.6%)	6 (5.1%)	13 (11.1%)	7 (6%)
Wives (N = 120)	72 (60%)	15 (12.5%)	7 (5.8%)	25 (20.8%)	0

A Chi square test of homogeneity revealed significant differences in the distributions of major attachment classification for husbands and wives [ $X^2(3, N = 266) = 17.8, p < .0005$ ]. The current sample was compared to a normal sample from a meta-analysis of adult attachment studies of men and women (van IJzendoorn et al., 1996). There were no statistically significant differences amongst the wives, but for husbands there was a significant difference in the distribution of attachment classification in the current study as compared to the meta-analytic sample [ $X^2(3, N = 348) = 19.41, p < .001$ ].

This indicates gender differences in the current study sample not evident in a normative sample.

Table 2: Comparison of current sample to meta-analysis of normative samples for husbands and wives

		Secure	Dismissing	Preoccupied	U & CC
Current Sample	Wives (N=120)	72 (60%)	15 (13%)	7 (6%)	25 (21%)
	Husbands (N=117)	54 (46%)	37 (32%)	6 (5%)	10 (17%)
Normative Sample	Wives (N=487)	269 (55%)	80 (16%)	44 (9%)	94 (19%)
	Husbands (N=241)	138 (57%)	36 (15%)	27 (11%)	40 (17%)

The purposes of this study lend to a simple categorization of parents as either secure or insecure, due to the small group sizes of joint pairings and for comparison between results in this study with those in previous studies examining joint attachment pairings. Categorization was done so that those with a secondary classification of Unresolved were included in the insecure category and those labeled Cannot Classify were forced into their next best fitting group (see Table 3).

Table 3: Frequencies of Adult Attachment Classification: Secure vs Insecure for Husbands and Wives (based on 4-way categorization)

	Secure	Insecure
Wives (N=114)	61 (53.5%)	53 (46.5%)
Husbands (N=114)	50 (43.9%)	64 (56.1%)

Couples' joint attachment classification pairings were also created using the 4-way classification system described above. The frequencies of pairings are shown below, in Table 4.

Table 4: Frequencies of Joint Attachment Pairings (based on 4-way categorization)

	Secure Father	Insecure Father
Secure Mother	30 (26.3%)	31 (27.2%)
Insecure Mother	20 (17.5%)	33 (29.0%)

Using the data on couple's attachment pairings from van IJzendoorn et al.'s (1996) meta-analysis, a Chi Square test of homogeneity was performed with the current sample and the normative meta-analysis sample. There was no statistically significant difference between the distributions of couple pairings [ $X^2(3, N = 266) = 6.66, NS$ ] (see Table 5).

Table 5: Comparison of current sample to meta-analysis of normative samples for Couple Pairings (based on 4-way categorization)

	Secure/Secure	Secure mother/Insecure father	Secure father/Insecure mother	Insecure/Insecure
Current Sample (N= 114)	30 (26.3%)	31 (27.2%)	20 (17.5%)	33 (29.0%)
Normative Sample (N=152)	55 (36.2%)	36 (23.7%)	34 (22.4%)	27 (17.7%)

### Positive & Negative Marital Affectivity

The second main independent variable in the current study is positive and negative marital affect, which is used to measure marital quality. A Pearson correlation test found both affectivity scales to be highly negatively correlated with one another (see Table 6). Thus, they were combined by reverse coding the negative affectivity scale and adding it to the positive affectivity scale to create a single combined positive marital affectivity scale.

Table 6: Prenatal Marital Affectivity Scales: Descriptive Statistics & Correlations

	Mean $\pm$ S.D.	N	Range	1	2
1. Positive	4.66 $\pm$ 1.15	119	1-7	1	
2. Negative	2.99 $\pm$ 1.42	119	1-7	-.84**	1

Note: \*\* $p < .01$  (2-tailed).

### Infant Caregiving

The dependent variable in the current study is parental caregiving at 8 months of age including the four caregiving scales (sensitivity, hostility, disengagement, and role reversal) used in this study. Descriptive statistics for the ICS scales are reported in Table 7.

Table 7: Descriptive Statistics for Caregiving Scales at 8 months

	Mothers			Fathers		
	Mean $\pm$ S.D.	N	Range	Mean $\pm$ S.D.	N	Range
Sensitivity	4.43 $\pm$ .90	18	1.82-6.18	4.44 $\pm$ .83	19	1.65-6.00
Hostility	2.87 $\pm$ .86	18	1.10-4.95	2.89 $\pm$ .94	19	1.10-5.60
Disengagement	3.16 $\pm$ 1.00	19	1.29-5.86	3.60 $\pm$ .61	19	1.50-4.93
Role Reversal	2.81 $\pm$ 1.12	19	1.00-5.56	2.92 $\pm$ 1.05	19	1.11-6.00

A Pearson correlation test was run and most caregiving scales were highly correlated for both mothers and fathers (see Table 8).

Table 8: Correlations for Mothers' & Fathers' Caregiving Scales at 8 months

	1.	2.	3.	4.	5.	6.	7.	8.
1. Mothers' Sensitivity	1							
2. Mothers' Hostility	-.69**	1						
3. Mothers' Diseng.	-.85**	.71**	1					
4. Mothers' R.R.	-.72**	.86**	.74**	1				
5. Fathers' Sensitivity	-	-	-	-	1			
6. Fathers' Hostility	-	-	-	-	-.79**	1		
7. Fathers' Diseng.	-	-	-	-	-.56**	.50**	1	
8. Fathers' R.R.	-	-	-	-	-.83**	.89**	.53**	1

Note: \*\* $p < .01$  (2-tailed); Diseng. = disengagement; R.R. = role reversal

## TESTS OF HYPOTHESES

### Question 1: Is one parent's interaction quality with the infant influenced by the other parent's adult attachment security?

In the analysis plan it was stated that if the Infant Caregiving Scales (ICS) were highly correlated, separate ANOVAs would be run for each scale instead of a MANOVA, as per recommendations of Bray & Maxwell (1985). As most caregiving scales were highly correlated for both mothers and fathers (see Table 8), ANOVAs were run to answer this research question. The results from ANOVAs performed with joint attachment pairings (IV) and mothers' caregiving (DV) proved insignificant, however

mothers' sensitive and role reversed caregiving had marginal statistical significance in regards to differences amongst joint attachment pairings ( $p=.058$  &  $p=.056$ , respectively) (see Appendix D). Fathers' sensitivity [ $F(3, 103) = 3.85, p=.012$ ], hostility [ $F(3, 103) = 3.46, p=.019$ ], and role reversed caregiving [ $F(3, 104) = 3.38, p=.021$ ] all showed statistically significant differences amongst joint attachment pairings (see Appendix D). Fathers' disengaged caregiving was not related to joint attachment pairings. A post hoc Tukey test for fathers' caregiving found that in SM/IF pairs fathers displayed less sensitivity ( $p=.010$ ), more hostility ( $p=.016$ ), and more role reversed caregiving ( $p=.015$ ) than those in S/S pairs. Additionally, in I/I pairs fathers displayed less sensitivity, hostility, and role reversed caregiving than those in secure/secure pairs, at marginal significance.

**Question 2: How will each pairing of couple's adult attachment representations differ in positive and negative affectivity observed in the marital interaction?**

ANOVA results for the combined marital positive affectivity scale indicated statistically significant differences amongst the joint attachment pairings [ $F(3, 104) = 3.66, p=.015$ ] (see Appendix D). A post hoc Tukey test showed that the SM/IF pairs scored significantly lower in positive affectivity than the S/S pairs ( $p=.017$ ), while all other pairs scored lower at marginally significant levels.

**Question 3: Does the quality of the marriage moderate the relationship between adult attachment pairings and each parent's caregiving behavior with the infant?**

Multiple hierarchical regressions were performed to answer this research question. Hierarchical regression analyses were run with all four caregiving scales (sensitivity, hostility, disengagement, and role reversal) as dependent variables, for both mothers and fathers, for a total of eight multiple hierarchical regression analyses. Before analyses were run, each couple joint attachment pairing was dummy-coded with S/S as

the reference group. Next, the combined positive marital affect scale was centered and multiplied by each dummy-coded joint attachment pair to create the interaction terms.

### ***Mothers' Caregiving***

In the first step of each hierarchical regression, mothers' depression scores at 8 months postpartum, family income at 8 months postpartum, and positive marital affect was entered. Second, all dummy-coded joint attachment variables were entered (except for that of the S/S reference pair). Third, all interaction terms between joint attachment and positive marital affect were entered (except for that of the S/S reference pair). After the first step, none of the additional steps accounted for significant changes in the variance for any of the caregiving scales for mothers. For mothers' sensitive caregiving, step 1 revealed positive marital affect was a significant predictor ( $p < .01$ ) of increased sensitivity and maternal depression at 8 months postpartum was a marginally significant predictor of decreased sensitivity [ $F(3, 96) = 4.794$   $p = .004$ ] (see Appendix E). Step 1 accounted for 10.6% of the variance in maternal sensitivity. For hostile and disengaged caregiving, the first step was only marginally significant (see Appendix F & G, respectively). No steps were significant for mother's role reversed caregiving (see Appendix H).

### ***Fathers' Caregiving***

In the first step of the multiple regression, fathers' depression scores at 8 months postpartum, family income at 8 months postpartum, and positive marital affect was entered. Second, all dummy-coded joint attachment variables were entered (except for that of the S/S reference pair). Third, all interaction terms between joint attachment and positive marital affect were entered (except for that of the S/S pair). After the first step, none of the additional steps accounted for significant changes in the variance for any of

the caregiving scales for fathers. For fathers' sensitive caregiving, positive marital affect ( $p < .001$ ) was a significant predictor of increased sensitivity and paternal depression at 8 months postpartum was a marginally significant predictor of increased sensitivity [ $F(3, 96) = 5.128, p = .003$ ] (see Appendix I). Step 1 accounted for 11.6% of the variance in paternal sensitivity. For fathers' hostile caregiving, positive marital affect ( $p < .001$ ) and paternal depression at 8 months postpartum ( $p < .001$ ) were both significant predictors of decreased hostility [ $F(3, 96) = 12.830, p = .003$ ] accounting for 27.4% of the variance (see Appendix J). For fathers' disengaged caregiving, paternal depression at 8 months postpartum was a significant predictor ( $p < .05$ ) of decreased disengagement and family income at 8 months postpartum was a marginally significant predictor of decreased disengagement [ $F(3, 96) = 3.864, p = .012$ ]. Step 1 accounted for 8.4% of the variance in paternal disengagement (see Appendix K). For role reversed caregiving, positive marital affect ( $p < .001$ ) and paternal depression at 8 months postpartum ( $p < .01$ ) were significant predictors, both of decreased role reversal [ $F(3, 96) = 9.651, p = .000$ ] and accounted for 21.6% of the variance (see Appendix L).

## **Chapter 5: Discussion**

The present study examined couples' prenatal joint attachment classifications and how they relate to each parent's caregiving quality at 8 months postpartum, with prenatal marital affect as a potential moderator. The study found trends of direct relationships between couples' joint attachments and fathers', but not mothers', subsequent caregiving quality at 8 months postpartum, as well as with couples' prenatal marital affect, such that the pairings of secure mother/insecure father predicted the poorest paternal and marital functioning. However, when analyzing these relationships in hierarchical multiple regressions the study found no interaction effects between joint attachment and marital

affect predicting caregiving quality. Instead, the contextual variables of prenatal marital affect and parental postpartum depression appear to account for the most variance in caregiving quality at 8 months. The findings, potential explanations and implications are discussed below.

## **CAREGIVING QUALITY: DIRECT RELATIONSHIPS**

### **Mothers' Caregiving**

Although not significant, there was a promising association between joint attachment and the caregiving scales of maternal sensitivity and role reversal. The direct relationships between joint attachment and mothers' sensitive and role-reversed caregiving were just short of reaching significance, which is likely a product of the small sample size created by separating couples into four different joint attachment pairs. On the other hand, mothers' hostile and disengaged caregiving at 8 months does not appear to be affected by her spouse's attachment representation. Since post-hoc tests were unable to be performed it is not known which pairings might differ from those in the S/S pair, but descriptive statistics show the mean of the S/S pair is highest on sensitivity and lowest on role reversal and the SM/IF pairs are lowest on sensitivity and highest on role reversal. The SM/IF pair is also the lowest on positive affectivity in the marriage suggesting that the lack of support may impede mothers' ability to provide sensitive care. This is in contrast with the finding from Cohn et al.'s study on joint attachment and maternal behavior that mothers in the I/I pairs display the least warm and structured behavior with their preschool children (1992). However, Cohn et al. were unable to separate the mixed pairings (insecure/secure) by gender, which likely washed out any effect of the SM/IF pairs in their sample. Replicating analyses with a larger sample is important in order to determine whether differences between pairs actually exist.

## **Fathers' Caregiving**

A significant relationship was found in the direct relationships between couples' joint attachments and fathers' sensitive, hostile and role-reversed caregiving were significant. In accordance with hypotheses, fathers in the S/S pair displayed the best caregiving quality. Interestingly, and not as hypothesized, fathers in the SM/IF pairing displayed the least sensitivity and highest hostility and role reversed behavior out of any other fathers. It should be noted that fathers in I/I pairings displayed similar results to those in the SM/IF pair but with marginal significance. A possible explanation for this surprising finding is that the secure mothers in the SM/IF pairs, adept at sensing the insecure father's low caregiving competence, enact greater gatekeeping tendencies to ensure the baby is not exposed to a subpar caregiver. As described earlier in the literature review, maternal gatekeeping refers to the act of regulating the amount of contact the father has with the infant (Kulik & Tsoref, 2010). Literature on maternal gatekeeping supports this possible explanation with evidence that mothers' dissatisfaction with the father's involvement in childcare is a contributing factor to gatekeeping behavior (Kulik & Tsoref, 2010). Since gatekeeping limits the amount of contact the father has with the baby it likely hinders his ability to practice and gain comfort with childcare. Specifically, research has found that maternal gatekeeping is detrimental to fathers' parental self-efficacy (Tremblay & Pierce, 2011) and ability to provide competent care for his baby (Fagan & Barnett, 2003). This phenomenon may play a role in the explanation behind the current study's finding of poorest paternal caregiving quality in the SM/IF pairing. Thus, it was unfortunately not found that an insecure father's caregiving quality benefitted from marrying a secure wife. Albeit, it appears that a secure father's ability to provide sensitive care is not disadvantaged by an insecure mother. One potential reason for this opposing finding might be related to the gatekeeping phenomenon as well. In the SF/IM pairs, the

insecure mother likely appreciates the secure father's help with childcare, noticing his apparent aptitude, or at the least, does not engage in detrimental gatekeeping in the same way that a secure mother married to an insecure husband might. In turn, the secure father's caregiving competence is not compromised.

The Infant Caregiving Scale of disengaged caregiving behavior was not related to joint attachment or positive marital affect. This is quite perplexing as disengagement was highly correlated with the other caregiving scales for mothers and moderately correlated with those for fathers. The failure of disengagement to be associated with joint attachment and marital affect may be due to its source being unrelated to those examined in the present study. The disengagement scale is comprised of items related to observed parental disengagement with the infant, such as stiffness, the mind appearing to be elsewhere and/or seemingly ingenuine behavior. It is possible that these may actually be symptoms of nervousness, anxiety and self-consciousness or other unnatural behavior caused by being observed and therefore not predictable by joint attachment or marital affect. While participants were filmed in their own homes and given minimal instruction in order to mitigate problems with participant reactivity and data validity, it is possible that such effects may still exist. The limitations associated with the use of video-recording in behavioral studies include intrusiveness of the researcher and equipment, potential for participant reactivity, and potential loss of the larger environmental context outside the view of the lens (Haidet, Tate, Divirgilio-Thomas, Kolanowski & Happ, 2009).

#### **MARITAL AFFECT: DIRECT RELATIONSHIPS**

In accordance with hypotheses and previous literature, the current study found couples with an S/S categorization demonstrated the highest levels of positive marital

affect, followed by those in the I/I pair (marginal significance), the SF/IM pair (marginal significance), and lastly, the SM/IF displayed the lowest positive marital affect. The study's significant finding of an association between decreased positive marital affect in the SM/IF pairs upholds previous study findings on joint attachment pairs. Specifically, insecure husbands married to secure wives have been found to engage in the highest levels of marital conflict (Creasey, 2002; Wampler, Shi, Nelson, & Kimball, 2003). A previous dissertation by Cris Booher (2000) utilized the dataset also used in this study and found that SM/IF pairs engaged in the lowest quality dyadic marital communication. This is likely a result of the couples in the mixed pairs (secure/insecure) experiencing mismatched expectations and subsequent dissatisfaction that those in insecure/insecure pairs simply are not. In the SM/IF pair, the secure wife should theoretically fully comprehend what sensitive and nurturing care looks like, from her experiences in the past, and thus may be even more cognizant of her insecure husband's shortcomings in the marital relationship. Researchers of adult romantic relationships have found that women tend to be more negatively impacted by tension in interpersonal relationships than men (Birditt & Fingerman, 2003; Wanic & Kulik, 2011). The mismatch of expectations in the SM/IF pair may ignite conflict within the marriage that the wife capitalizes on, in turn causing negative marital affect. The reverse, negative marital affect in SF/IM pairs, is not evident in this study perhaps since the husbands do not have the same tendency to capitalize on interpersonal tension, like women tend to, in ways that create marital discord.

#### **JOINT ATTACHMENT & CAREGIVING: THE MODERATION OF POSITIVE MARITAL AFFECT**

This study's hypotheses regarding moderation, or an interaction effect, of marital affect on the relationship between joint attachment and caregiving at 8 months were not

supported. Although significantly related in direct relationships, hierarchical multiple regressions show that above and beyond parental depression and positive marital affect, joint attachment pairings did not account for more of the variance in parents' caregiving quality. It appears that the effect of a spouse's attachment classification on the other's ability to provide a child with quality care is simply too small and insignificant in comparison to other contextual variables. The small effect of spousal attachment classification might be the reason so few studies using joint attachment pairings have been published, and very likely the reason why none examine caregiving quality as an outcome variable.

Hierarchical multiple regressions did show that prenatal positive marital affect in the marital dyad was predictive of higher sensitivity and lower hostility and role reversal in fathers' caregiving with their 8 month old infants. These findings are in line with the literature on father-child relationships, which depicts fathers to be more negatively influenced by outside variables, such as marital quality, than mothers are when it comes to the quality of the parent-child relationship. Specifically, research has shown that conflict in the marriage is associated with a more intrusive, less sensitive father-infant interaction quality and less father involvement with infants (Cox, Paley, Payne, & Burchinal, 1999). Furthermore, mothers' conflict behavior towards fathers has been directly linked to father's role reversal with the child (Macfie, Houts, Pressel & Cox, 2008). Evidence for stronger marital effects on fathering is the basis for what is known as the *fathering vulnerability hypothesis* (Goeke-Morey & Cummings, 2007).

Additionally, father's depression at 8 months postpartum was found to be associated with decreased hostility, disengagement and role-reversal. This finding is unexpected in light of research on paternal depressive symptoms. Depressive symptoms in fathers at 9 months postpartum are negatively associated with instances of positive

enrichment activity with the child (reading, singing songs, and telling stories) (Paulson, Dauber & Leiferman, 2006). Similarly, major depression is negatively associated with fathers' engagement in parent-child activities and positively associated with paternal aggravation in parenting (Bronte-Tinkew, Moore, Matthews & Carrano, 2007). Upon closer examination of fathers' depression scores in the current sample, it appears that only a handful of fathers scored at or above a clinical level of depression. Thus, the "mild" depressive characteristics of fathers in the study may not be equivalent in symptomology to those fathers diagnosed with clinical levels of depression included in studies of paternal depression and caregiving consequences.

#### **STUDY LIMITATIONS & FUTURE DIRECTIONS**

Attachment theory has brought a myriad of knowledge to multiple fields of research and clinical practice and attachment classifications have proven their immense predictable power for over thirty years. Nonetheless, the effects of couples' joint attachments have proven difficult to capture with the current study methodology. While the sample utilized in this study possessed many valuable qualities, containing data from mothers as well as fathers and both observational and longitudinal methodology, the sample proved rather small, especially after categorizing couples into four different joint attachment pairs. Small sample size is likely one explanation for the marginally significant results found for mothers' caregiving quality.

In light of the current study's inability to find significant relationships between joint attachment and caregiving, with marital affect as a moderator, methodology was considered as a possible limitation. The prospect of mediation was explored in an attempt to understand the complexity of joint attachment and its implications. It is entirely possible that rather than moderation, which is an influence on the strength of a

relationship between two other variables, mediation is a better method to describe the relationship of interest as it *explains* the relationship between two other variables (Baron & Kenny, 1986). Baron & Kenny state, “whereas moderator variables specify when certain effects will hold, mediators speak to how or why such effects occur” (p. 1176; 1986). In other words, poorer marital affect may not always influence the strength of the relationship between joint attachment pairing and caregiving, as is structured in a moderation analysis. For instance, a S/S couple with marked negative marital affect may not experience a detriment in their caregiving quality—as was originally hypothesized in this study. Instead, a mediation analysis posits that if a parent is in fact scoring lower in caregiving quality the reason is related to the negative affectivity in their marital relationship. Performing mediation analyses is beyond the scope of the current study, but future studies might examine mediation rather than moderation when studying joint attachment in the family system. Although complex, future research should further investigate joint attachment pairings, as it is a valid construct of the family system that others have found to be associated with the domains of preadolescent psychosocial outcomes (Kuovo and Silven, 2010), marital discord (Creasey, 2002; Wampler, Shi, Nelson, & Kimball, 2003) and family alliances (Paley et al., 2005). Studying the effects of couples’ joint attachments on each parents’ caregiving quality promises to shed light on relations among relationships within the same family and their effects on young children.

## Appendices

### APPENDIX A: AAI

#### Adult Attachment Interview (Revised Prenatal Version)

1. Could you start by helping me get oriented to your early family situation, and where you lived and so on? If you could start out with where you were born, whether you moved around much, and what your family did at various times for a living?

-Did you see much of your grandparents when you were little? (If some died before birth)- How old was s/he when s/he died? Did your parents tell you much about this grandparent?

-Were there brothers and sisters living in the house, or anybody besides your parents?

you remember ever having felt rejected in childhood.

-How old were you when you first felt this way, and what did you do?

-Why do you think your parent did those things?- Do you think she realized she was rejecting you?

-Do you remember ever being worried or frightened as a child?

9. Were your parents ever threatening with you in any way? Maybe for discipline, or maybe just jokingly?

-Some parents have told us for example, that their parents would threaten to leave them or send them away from home. A few of our parents have some memories of some kind of abuse.

-Did anything like this ever happen to you, or in your family? How old were you at the time? Did it happen frequently?

-Do you feel this experience affects you now as an adult? Do you think it will influence your approach to your own child?

10. How do you think these experiences with your parents have affected your adult personality? Are there any aspects to your early experiences that you feel were a setback in your development?

11. Why do you think your parents behaved as they did during your childhood?

12. Were there any other adults with whom you were close, like parents, as a child? Or any other adults who were especially important to you, even though not parental?

13. Did you experience the loss of a parent or other close loved one while you were a young child?

-Can you tell me about what happened and how old you were? How did you respond at the time? Was this death sudden or expected? Can you recall your feelings at the time? Were you allowed to attend the funeral? What was this like for you? What would you say was the effect on (parent or household)? How did this change over the years?

-Would you say this loss has had an effect on your adult personality?

-How do you think this will affect your approach to your own child?

13 a&b. Did you lose any other important persons during your childhood? Other close persons in adult years? How about pets? (Same probes as above for each loss).

14. Have there been many changes in your relationship with your parents since childhood? I mean from childhood through until the present.
15. What is your relationship with your parents like for you now as an adult?
16. Now I'd like to ask you a different type of question. Let's imagine that the child you are expecting is now 1 year old. How do you imagine you will feel when you separate from your child?
17. If you had 3 wishes for your child 20 years from now, what would they be? I mean, what kind of future would you like to see for your child? I'll give you a minute to think about this one.
18. Is there any particular thing which you feel you learned above all, from your own childhood experiences? What would you hope your child might have learned from his/her experiences of being parented?

## **APPENDIX B: POSITIVE & NEGATIVE AFFECTIVITY IN MARITAL INTERACTIONS**

### **Positive Affectivity**

This scale assesses the emotional climate of the relationship in terms of shared *warmth and caring (personal regard)* and *fun*.

**High personal regard:** Warm voice tones, eye contact with smiles, proud compliments, affectionate physical contact (casual & noninclusive)

**Fun:** Take account of fun in two areas: 1) Having fun in sharing the task; & 2) Having fun in being together. In the 2<sup>nd</sup> type, jokes are not made about what “we are currently doing” but refer to either “what we did before” or “how we do things”.

*Laughter* must be carefully evaluated for its functions. This may range from positive, high sharing, enhancement of working on the task together to jokes that become “expensive” to someone. That is, one partner may laugh but another may feel pain & criticism. This type of laughter has a less clear connection to “fun,” and the tension-reducing laughter does not feel *warm*.

### **Scale points**

#### **1- No positive affect**

- No evidence of personal regard or fun.
- The task is a burden--Somber expressions, no warmth.

#### **2- Low positive affect**

- One or two jokes (tension-reducing or hurtful jokes only).
- Low evidence of personal regard, no fun, no compliments, or compliments said without warmth, as though to control the partner.
- Interaction may be courteous but without fun or personal regard.

#### **3- Mild positive affect**

- Personal regard is jeopardized by conflict.

- High fun, but low personal regard: No compliments, high interaction with many jokes often at personal expense.
- Moderate personal regard with low or no fun. Caring is evident but conflict has potential hostility

#### **4- Moderate positive affect**

- Moderate positive regard, moderate fun, enjoyment is intermittent.
- Caring is evident but fleeting and broken off quickly or interrupted by conflict.

#### **5- High positive affect**

- Moderate positive regard, high fun. This fun is not hurtful but is characterized by stylized “need for reassurance”. Personal regard is evident but superseded by need for fun.
- OR, high personal regard and caring, low fun. Responsive, caring, serious quality, but fun is rare. Process may be quite subdued (perhaps due to task anxiety translated to task seriousness).

#### **6- Very high positive affect**

- High personal regard, moderate fun. Here the fun may be mixed: fun in the task and/or fun with each other.

#### **7- Extremely high positive affect**

- High personal regard and high fun: Shared process in task (compromises, outcomes, etc.) and fun with partner (compromises, solutions offered, etc.)

### **Negative Affectivity**

This is another indicator of the emotional climate of the relationship, indicating the amount of negative affectivity that characterizes the relationship in general. Look for signs that point to the ongoing level of negative feeling. An important technique to use is

*a subjective appraisal of how it feels to be in this relationship.* Ask yourself: Is it hard work? Is it painful? Does it leave me sad? Glad to escape?

The primary component of negative affectivity is *tension*, so the high end is *high tension/anxiety*, and the low end is *relaxed security*. At the high end, a quality of painfulness is obvious. This is not negative affect in the sense of conflict. Although conflicts are often tense, conflicts may occur under quite relaxed circumstances and in relationships that are not otherwise characterized by tension.

**Behaviors to watch for:** Stiff positions; guarded positions; holding on to face, neck, arms, or wrists; biting lips; wringing hands; lack of eye contact; covering ears or mouth; tics (e.g., blinking); sighing; wiping brow; use of humor to relieve tension; avoidance of interaction; relief at being alone; jokes that cause pain; voice tones indicating irritability, criticism, being judgmental, sarcasm, sadness, or anger; signs of uncertainty, insecurity, ambiguity, or competitiveness.

*Task anxiety* is not considered to usually characterize *relationships* and must be evaluated as a separate phenomenon.

## **Scale Points**

### **1- No negative affectivity**

No sign of tension. Couple may have a few differences of opinion that are not resolved, but the differences do not create tension or lingering conflict.

### **2- Low negative affectivity**

- slight task anxiety in an otherwise relaxed and confident relationship system
- slight apprehension
- slight discomfort at partner's behavior
- high interaction, high provocativeness, high fun, with very slight element of alarm

### **3- Mild negative affectivity**

- clear task anxiety that may impede relationship dynamics somewhat
- a mixture of task anxiety and mild relationship tension
- Interaction may be somewhat suppressed; individuals may check each other out frequently and a slight sense of caution is present. There may be mild lingering anger after conflict.
- mild unorganized or abrasive style that does not affect overall interaction quality

#### **4- Moderate negative affectivity**

- The interaction process is hard work. Signs of anxiety are not numerous, but are present.
- Some acute instances of conflict occur which are not fully resolved.
- A wandering insecure process without high tension, but with occasional attacks.
- Some lack of connection; interaction is hard work due to lack of experience working together.
- There must be some sign of tension, in voice, movement, etc., and little success in resolving that tension.

#### **5- High negative affectivity**

General diffused tension that creates a distinct quality that it is hard to be in this interaction. It is more than hard work; it is hard to be together. This may result from:

- Unresolved, ongoing conflict (usually not directly addressed)
- An unsatisfactory state of affairs dealt with by use of high humor (usually of a cynical nature).
- High withholding.
- Unproductive conflictual interaction styles. The pain level is not high, but the tension level is high. There may be a high number of anxiety symptoms.

#### **6- Very high negative affectivity**

At this point, interaction is both tense and unpleasant. This may occur in cases in which:

- High humor is usual and many negative comments are made, a hopeless laughingly cynical, rejecting style. OR, an unproductive, unfocused, demanding, unrelenting style.
- An unsatisfactory state of affairs dealt with by use of high humor (of a cynical nature).
- A conflictual, negativistic, style is ongoing (may be directed at interaction task).
- Withholding to a painful degree.

#### **7- Extremely high negative affectivity**

“It is quite painful to be here” characterizes this level.

- an attacking, unrelenting, whining style.
- an attacking, negativistic, angry style.

an attacking, personally offensive, out-of-control style

**APPENDIX C: ICS**

**Infant Caregiving Scales**

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**Instructions:** All items are rated 1-7, based on the scale below. Write the number of the chosen rating for each item in the designated space according to how much each item describes behavior that is like vs. unlike the parent, baby, or dyad (whichever is specified by the item).

Very Very much unlike like		Somewhat unlike	Mixed	Somewhat like	
1.....	2.....	3.....	4.....	5.....	6.....
.....7					
Very low Very high		Somewhat low		Somewhat high	

\_\_\_\_1. Parent seems annoyed or frustrated when baby shows it has a will of its own.

Low-- Parent values and accepts baby's attempts at autonomy.

\_\_\_\_2. Parent supports and encourages baby's exploration.

Low-- Parent restricts baby's exploration unnecessarily; or may seem hurt or annoyed if explorations lead baby away from parent.

\_\_\_\_3. Parent shows physical affection to baby, e.g., tender kisses, strokes baby's hair, etc.; without interfering with baby's wishes.

Low-- Parent is predominantly either cool and aloof or hostile and rejecting to baby.

Middle-- Parent shows affection to baby but in a way that sometimes interferes with baby's wishes. Parent may be intrusive or overstimulating in his displays of affection; baby may turn away.

\_\_\_\_4. Parent shows annoyance or hurt feelings when baby does not respond to parents' initiations; e.g., when baby does not want to play with a toy parent offers, or eat food parent offers.

Low-- Parent is accepting of baby's own interests and feelings.

\_\_\_\_5. Parent and baby share joy in their interaction; they get obvious pleasure from being together.

Low-- Parent and baby are predominantly disengaged or seem tense and uncomfortable in their interactions.

\_\_\_\_6. Parent displays positive affect to the baby which seems false or overbright. Parent seems to be trying to create an impression of being affectionate, but the affection does not seem genuine.

Low-- Parent's expression of affection is genuine.

Middle-- Parent does not display much affect, either overbright or genuine.

\_\_\_\_7. Parent displays predominantly genuine positive affect to the baby through a tender vocal tone, gentle physical contact, and frequent smiles.

Low-- Parent displays some negative affect (harsh tone, abrupt movements, frowns, negative comments) that is not in the context of predominantly positive affect.

Middle-- Parent displays predominantly flat affect or phony (overbright) positive affect.

\_\_\_\_8. Parent responds promptly and with tenderness to baby's bids for comfort or affection (e.g., raising arms to be held).

Low-- Parent does not respond to baby's bids.

Middle-- Parent responds to baby's bids eventually, but at first may misinterpret them or be too involved in another activity to respond promptly.

\_\_\_\_9. Parent responds promptly and with genuine interest when baby initiates play (e.g., shows parent a toy, initiates a game).

Low-- Parent ignores or even rejects baby's initiation.

Middle-- Parent is slow to respond or misinterprets baby's meaning.

\_\_\_\_10. Parent sets arbitrary limits on baby's actions (limits not necessary for baby's health or safety, or to prevent accidents or damage to equipment); e.g., parent prohibits baby's playing with food or certain toys.

Low-- Parent only limits baby when necessary (e.g., limits play with camera).

Middle-- Parent sets limits that he or she thinks may be needed in context of the study (e.g., tries to keep baby in camera range; tries to keep baby playing with toys when he's getting tired).

\_\_\_\_11. Parent constantly opposes baby's wishes; e.g., tries to force baby to eat when baby doesn't want to, to play with toys it doesn't want, to stay in a confined area, to play a certain way, etc.

Low-- Parent respects baby's autonomy as a separate person and tries to help baby achieve its goals when this is reasonable.

\_\_\_\_12. Parent verbally expresses annoyance or resentment concerning the baby to the experimenter; criticizes the baby. (e.g., "Thank goodness for day care. I don't know what I'd do if I couldn't get away from him everyday"; "He has such a nasty temper")

Low-- Parent makes believable positive comments about the baby.

Middle-- Parent doesn't comment about the baby.

\_\_\_\_\_13. Parent acts like a long-suffering martyr in interactions with the baby; e.g., pseudo-patient, passive, sighs, interest in baby does not seem genuine.

Low-- Parent shows definite positive engagement with the baby.

\_\_\_\_\_14. Parent verbally expresses his annoyance with baby to baby. (e.g., "You're tiring me out"; "That wasn't nice!")

Low-- Parent verbally praises baby.

\_\_\_\_\_15. Parent sometimes uses harsh, sharp, or sarcastic voice tone to baby.

Low-- Parent's voice is cheerful or soft and soothing, appropriate to the situation.

\_\_\_\_\_16. Parent's vocalizations to the baby are overstimulating, e.g., he/she often talks too much, too loudly, too quickly, or in an overly animated way.

Low--Parent's vocalizations are appropriate to the baby's mood.

\_\_\_\_\_17. Parent shows veiled hostility in interactions with baby through sarcastic comments, derisive laughter, or teasing.

Low-- Parent shows no form of hostility to the baby.

\_\_\_\_\_18. Parent calls baby unflattering names (e.g., "Stinker" "Fatso").

Low-- Parent never acts in a derisive way towards baby.

\_\_\_\_\_19. Parent shows veiled hostility to baby by using abrupt, jerky movements when handling him.

Low-- Parent is gentle when handling baby.

Middle-- Parent is sometimes abrupt when handling baby, but his demeanor is otherwise positive and does not seem to indicate veiled hostility.

\_\_\_\_\_20. Parent is patient and calm in interactions with baby.

Low-- Parent shows clear impatience with baby.

\_\_\_\_\_21. Parent and baby show strong positive engagement and shared focus of interest.

Low-- Parent and baby are mostly disengaged.

Middle-- Parent and baby share focus of interest but engagement is more neutral than strongly positive.

\_\_\_\_\_22. Parent does not try to "punish" or retaliate toward baby when baby opposes parent's wishes.

Low-- Parent tries to "teach baby a lesson" when baby opposes parent's wishes, e.g., taking a toy away, giving a sharp verbal response, slapping baby's hand, jerking baby away, deliberately ignoring baby.

\_\_\_\_\_23. When baby opposes or ignores parent's wishes, parent seems hurt or makes comment indicating he or she believes that baby has rejected him.

Low-- Parent does not take it personally when baby pursues its own interests, but rather, follows baby's lead.

\_\_\_\_\_24. Parent says positive things about baby to the observer. (e.g., "He's so affectionate.")

Low-- Parent says negative things about baby to observer.

Middle-- Parent says nothing about baby, or makes both positive and negative observations.

\_\_\_\_\_25. Parent and baby's interaction seems flat and disengaged.

Low-- Parent and baby are strongly positively engaged.

\_\_\_\_\_26. Parent seems tense and strained in interaction with baby.

Low-- Parent is relaxed with baby.

\_\_\_\_\_27. Baby seems relaxed and happy in interaction with parent.

Low-- Baby seems tense in interaction, may be fussy or avoidant.

\_\_\_\_\_28. Baby seems to want to avoid interaction with parent.

Low-- Baby seems to enjoy sharing his/her discoveries and activities with parent.

\_\_\_\_\_29. Baby becomes fussy and agitated in interaction with parent.

Low-- Baby is calm and relaxed throughout the interaction.

\_\_\_\_\_30. Parent tries not to interrupt baby's ongoing activities, but instead waits for a natural break before initiating a transition and initiates the transition in a way that capitalizes on the baby's interests.

Low-- Parent frequently interrupts baby's activities without regard for baby's ongoing activity, interests, and wishes.

\_\_\_\_\_31. Parent violates baby's space by frequently moving baby around abruptly and without warning, grooming baby abruptly and unnecessarily, and/or physically manipulating baby.

Low-- Parent respects baby's space.

\_\_\_\_\_32. Parent place unnecessary and unwanted physical restraints on baby (i.e., hold him on lap when he wants to crawl; restrains his arms).

Low-- Parent only physically restrains baby when absolutely necessary for his safety; instead of physical restraint, parent tries to divert baby or appeal to his interests (e.g., to keep him away from camera or in camera range).

\_\_\_\_\_33. Parent suddenly looms into baby's visual field, with his own body or with an object.

Low--Parent respects baby's space; moves so as not to startle baby or interfere with his activities.

\_\_\_\_\_34. Parent tries to force baby to eat.

Low-- Parent lets baby make decision about eating; if baby is not interested, parent does not persist trying to feed baby (though he/she may try a different type of food or feeding technique, such as giving baby its own spoon).

Middle-- Parent does not force-feed, but may "chase" baby with spoon and persist with feeding attempts when baby has clearly lost interest.

\_\_\_\_35. Parent tries to force baby to play with a particular toy, or to play the way parent wants to play.

Low-- Parent follows baby's lead in play, introducing new toys only when appropriate (e.g., when baby is getting bored or fussy, or is unoccupied). If baby does not show interest in the toy or mode of play, parent introduces, parent does not pursue it.

Middle-- Parent continues to try to get child to play with toy after baby has lost interest, but does not force the baby, and eventually changes his or her strategy.

\_\_\_\_36. Parent spends most of his time "at" baby, trying to instruct, train, or direct baby.

Low-- Parent's teaching and instruction are geared toward baby's interests.

\_\_\_\_37. Parent and baby have shared goals in play and feeding; they seem to understand each other; their actions seem co-determined.

Low-- Parent's goals are paramount.

\_\_\_\_38. Parent respects baby as an autonomous person whose wishes have a validity of their own.

Low-- Parent treats baby as an extension of himself; as parent's "possession".

\_\_\_\_39. Parent becomes anxious or annoyed when baby does not comply with parents' wishes.

\_\_\_\_\_40. Parent provides a voice for baby's wishes, e.g., when baby does not wish to eat, parent may say to the observer: "I think he's had enough. Are we almost done?" When baby does not wish to play: "He's pretty tired. Is it okay if we stop now?" Also, parents' voicing of baby's wishes seems congruent with baby's feelings.

Low-- Parent inaccurately voices baby's feelings; e.g., "Umm, that's yummy" when baby is resisting eating.

Middle-- Parent does not voice baby's feelings; or parent is sometimes accurate and sometimes inaccurate.

\_\_\_\_\_41. When parent needs to limit baby's actions, parent does so gently and in a way that minimizes interruption to ongoing activities, often by distracting baby and capitalizing on baby's interests.

Low-- Parent limits baby's actions abruptly, without regard to baby's ongoing interests.

\_\_\_\_\_42. Parent sets many arbitrary and unnecessary limits (e.g., prohibiting baby from play with a certain toy, from holding spoon, etc.)

Low-- Parent only sets limits when necessary (e.g., to prevent baby from hurting himself, others, or property (e.g., the camera)).

Middle-- Parent sets limits that are not arbitrary but also not necessary, e.g., limits that facilitate task completion. That is, parent may prohibit child from crawling around or playing with something other than toys because parent wants him to stay in camera range and complete the play task.

\_\_\_\_\_43. Parent plays by interacting with baby in a stereotyped and task-oriented way, e.g., building a block tower; shaking a rattle.

Low-- Parent follows baby's lead in play.

\_\_\_\_\_44. Parent overstimulates baby, e.g., by tickling, swinging, bouncing, playing "I'm gonna get you", even when baby is getting tired, frustrated, and overwhelmed.

Low-- Parent may do some physical play with baby, but is attentive to baby's affect regulation and careful not to overstimulate.

\_\_\_\_\_45. Parent tries to make baby do "tricks"; e.g., make a particular vocalization or perform a particular act, such as patty-cake.

Low-- Parent follows baby's lead in playing games such as imitating each others vocalizations or facial expression.

\_\_\_\_\_46. Parent is spontaneous in interactions with baby; he/she is willing to stop his ongoing activity, such as feeding or dressing the baby, to respond to baby's play initiations. E.g., if baby claps his hands during feeding, he/she claps in return and begins a patty-cake game in response to baby's interests.

Low-- Parent is unwilling to interrupt ongoing tasks to engage in spontaneous games.

\_\_\_\_\_47. Parent responds promptly to baby's social initiations.

Low-- Parent frequently does not respond to baby's initiations (keeping to his own agenda), and frequently responds only after a delay (e.g., after he/she completes his/her task, or when he/she finally gets the message.) For example, when baby pushes away the spoon, parent may still continue to try to feed baby the same food the same way for awhile; when baby shows interest in a different toy, parent continues to play with the toys he/she chose for baby.

Middle-- Parent's response is sometimes prompt and sometimes delayed.

\_\_\_\_\_48. Parent encourages baby's autonomy in play and feeding; e.g., lets baby hold spoon, offers finger food, permits exploration of food, permits freedom of movement, encourages baby to choose toy and mode of play.

Low-- Parent controls child's play and feeding.

\_\_\_\_\_49. Parent is task-oriented in interaction with baby rather than relationship oriented; parent's focus is in getting the baby to eat his food, or to play with toys in a particular way, with little concern for baby's mood or interests.

Low-- Parent is focused on relating to baby more than completing tasks in his interactions with baby.

\_\_\_\_\_50. Parent's interactions with baby are developmentally appropriate (matched to baby's developmental level).

Low-- Parent's interactions with baby are developmentally inappropriate; e.g., parent may present tasks or have expectations of baby that are beyond baby's developmental level, such as having table manners or nesting cups in the correct order; parent may also use sarcasm or other modes of interaction that are not developmentally appropriate.

\_\_\_\_\_51. Parent frequently misinterprets baby's cues; does not seem to understand baby's nonverbal communication.

Low-- Parent's responses to baby are finely tuned to baby's wishes; parent communicates well with baby and is in touch with what baby is feeling.

\_\_\_\_\_52. When baby is fussy, tired, or distressed, parent responds empathically by provided needed comfort and soothing.

Low-- When baby is fussy, tired, or distressed, parent responds with impatience or by overstimulating baby.

\_\_\_\_53. Parent talks to baby about his ongoing activities in ways that seem to accurately reflect baby's feelings; e.g., "You're not hungry right now, are you?" when baby turns away from spoon; "Oh, that's fun, isn't it!" when baby is enjoying a play interaction, etc.

Low-- Parent talks mostly about his own agenda (e.g., by giving instructions, "Put the cup here like Daddy did", or does not talk to baby.

\_\_\_\_54. Parent frequently checks with baby to verify baby's wishes, e.g., "Have you had enough to eat?", "Are you getting tired of this toy?"

\_\_\_\_55. Parent tries to empower and affirm baby's interests (e.g., "Let's turn the basket over so you can choose a toy", or nonverbally, when baby turns toward table to bang toy on it, parent shifts baby's position so baby can more easily reach the table).

\_\_\_\_56. Parent allows baby's agenda and interests to dominate the interaction.

Low-- Parent's own agenda dominates the interaction.

\_\_\_\_57. Parent is very familiar with baby's preferences and interests; parent knows how to engage baby, and how to redirect baby's interests when necessary.

Low-- Parent seems to be at a loss when it comes to knowing how to engage baby or redirect baby's interests.

\_\_\_\_58. Parent can effectively comfort baby when baby is fussy, tired, or distressed; or baby remains contented throughout the interaction and does not require comforting.

Low-- Parent does not try to comfort baby, or is incompetent in his or her attempts to do so.

\_\_\_\_59. Parent seems to have his or her mind elsewhere, is disengaged.

Low-- Parent is very aware of baby at all times, engaged and responsive.

Middle-- Parent is attentive to baby, but not consistently responsive and sensitive to baby's cues.

\_\_\_\_\_60. There is a calm flowing rhythm to parent's interactions with baby.

Low-- The flow of parent-baby interaction seems abrupt, discontinuous, and unpredictable.

\_\_\_\_\_61. Parent mirrors his baby's gestures and body movements.

\_\_\_\_\_62. Parent responds to each of baby's vocalizations or social gestures, no matter how subtle, with words, imitations, or expansion of sounds or gestures.

Low-- Parent is unresponsive, or rejecting of baby's vocalizations or social gestures.

\_\_\_\_\_63. In the context of following baby's lead, parent offers challenges to baby, e.g., placing toy just out of reach of a crawling baby. Parent offers challenges only as long as the baby is interested.

Low-- Parent is apathetic or overly directive in play.

\_\_\_\_\_64. When baby tests a limit, parent becomes involved in a power struggle.

Low-- When baby tests a limit, parent acknowledges this in a supportive way, sometimes in a joking way, then offers an acceptable alternative, avoiding a power struggle.

\_\_\_\_\_65. Parent responds to baby's attempts at autonomy (different toy, different activity, play with food) with tolerance and good humor.

Low-- Parent opposes baby's attempts at autonomy even when they cause no harm.

\_\_\_\_\_66. Parent and baby engage in reciprocal games (e.g., taking turns feeding each other raisins, taking turns winding up toy, parent opens box and baby closes box).

\_\_\_\_\_67. Parent waits to offer food or a toy until baby indicates an interest and is oriented.

Low-- Parent offers food or toys without regard to baby's ongoing activity.

\_\_\_\_\_68. Parent pushes to continue activities such as play or feeding after the time that the baby has lost interest in activity or become fatigued.

Low-- Parent is sensitive to when baby is bored or fatigued, and knows how to comfort or re-engage him.

\_\_\_\_\_69. Parent's responses are contingent with baby's cues.

Low-- Parent's actions have little to do with baby's cues; seem unconnected.

\_\_\_\_\_70. Parent expresses annoyance, frustration, or anxiety when baby does not respond to his wishes.

Low-- Parent responds with good humor and patience when baby does not respond to his wishes; does not take it personally.

\_\_\_\_\_71. Parent helps baby achieve success in play by guiding baby but not actually doing task for him, e.g., pointing to place where shape goes when playing with a shape sorter.

Low-- Parent is highly directive in play, determining what the baby does and completing tasks for him/her.

Middle-- Parent is not very involved in helping baby complete tasks.

\_\_\_\_\_72. Baby shows distress or discomfort due to parent's overstimulation by arching his back, turning away, etc., but parent does not back off.

Low-- Parent does not overstimulate baby.

Middle--When baby shows discomfort due to overstimulation, parent backs off .

\_\_\_\_73. Parent sets unrealistic and developmentally inappropriate limits (baby not mature enough to comply).

Middle-- Parent sets limits that are realistic but not necessary (e.g., not letting baby play with food or bang toy).

Low-- Parent set limits only when necessary; more often gain baby's cooperation by distracting baby and appealing to baby's interests.

\_\_\_\_74. The infant appears to be frightened by the parent at times.

\_\_\_\_75. The parent appears to be frightened by or nervous about the infant at times.

\_\_\_\_76. Parent uses a breathy, falling intonation (haunted sounding) when speaking to the baby.

\_\_\_\_77. The parent makes sudden, unexpected movements at the baby.

Low-- Parent does not grab at baby or loom at baby unexpectedly with his own body or with objects.

\_\_\_\_78. Parent pursues the baby until he becomes upset.

\_\_\_\_79. The parent gives mixed emotional messages to the baby, e.g., standing stiffly with arms crossed while cheerfully calling and smiling.

\_\_\_\_80. Parent grabs the baby in a frightening way, e.g., grabs him/her from behind, covers face or throat, etc.

Low-- Parent does not invade baby's space

\_\_\_\_81. Parent uses unusual speech content that implies that baby's action could have harmful consequences, including harsh, adult words (e.g., "You're going to kill everyone if you do that").

Low-- Parent's speech to baby is situationally and developmentally appropriate.

Middle-- Parent's speech to baby may at times be situationally or developmentally inappropriate (e.g., his expectations or language may be too advanced for the child to comprehend), but it is not frightening, bizarre, or ominous.

\_\_\_\_\_82. There is a clear lack of emotional connection between parent and baby.

Low-- Parent and baby are clearly emotionally engaged.

\_\_\_\_\_83. Parent shows, at different times, both overstimulation of baby (sometimes extreme enough to cause baby distress) and understimulation (sometimes to the point of merely performing robot-like behaviors with a dazed, distant composure).

Low-- Parent is neither overstimulating nor understimulating.

Middle-- Parent shows either a predominantly overstimulating, or predominantly understimulating, pattern.

\_\_\_\_\_84. Parent teases baby in a somewhat sadistic way, even though parent may attempt to disguise the sadism by seeming warm and in good spirits.

Low-- Parent does not tease baby.

Middle-- Parent's teasing is in fun, does not seem to have a sadistic element.

\_\_\_\_\_85. Parent seems timid, passive, or helpless in interactions with baby, e.g., may plead for baby's help or affection; may slump over, with head down slightly, hands in lap and be focused on baby with a disappointed, pleading look.

Low-- Parent seems confident in interactions with baby.

\_\_\_\_\_86. When playing games with baby, parent's voice tone or laughter sounds harsh, ominous, or frightening at times, even though he/she may be smiling and laughing.

\_\_\_\_\_87. Baby avoids eye contact with parent.

\_\_\_\_\_88. Baby's play seems passive or apathetic.

Low-- Baby is actively involved in play.

\_\_\_\_\_89. Parent shows restricted emotional expression or "stiffness"; such stiffness seems due to the inhibition of the expression of negative emotions.

Low-- Parent expresses emotions freely, but in an appropriate manner.

\_\_\_\_\_90. Parent shows sudden change in emotional expressivity at times; e.g., going from active play involving smiling & laughter (often overstimulating to baby), to passivity, lack of involvement, and a frozen expression.

Low-- Parent does not show abrupt changes in emotional expressivity; changes in expressivity seem predictable and appropriate to the situation.

### **Subscales for Infant Caregiving Scales**

The 9 subscales were derived by having the P&P faculty & students rate all 0 items on each of the 9 dimensions. Items for each construct were chosen based on high ratings (average of 6 or higher) across all faculty.

Here are the subscales:

Role-reversal: 1,4,22,23,38,39,64,70,& 85—**delete 38**

Restricting autonomy: 1,2R, 11,38R, 48R, 65R

Emotional disengagement: 3R, 5R, 6R,1R, 25, 59, 82, 89

Restrictive limit setting: 2R, 10, 11, 32, 42, 73

Task orientation: 46, 35, 36, 43, 45, 49

Frightened/frightening: 33, 74, 75, 76, 77, 78, 79, 80, 81, 83, 86, 90

Hostility: 20, 24, 7, 12, 14, 15, 17, 18, 19, 84 – **delete 20, 24, & 7**

Sensitivity: 51R, 8, 9, 16R, 40, 47, 50, 52, 54, 55, 57, 58, 61, 62, 63,66, 69

Interference: 31, 34, 44, 68, 72, 30R, 37R, 41R, 56R, 67R, 71

R indicates the item is reverse-scored for that scale. Items in bold were deleted due to results of the reliability analysis (items deleted had low item-total correlations).

**APPENDIX D: ANOVA TABLE**

*Analysis of Variance (ANOVA) with Couples' AAI Pairings, Marital Quality and Caregiving*

	Couple AAI Pairings				F	P	Effect Size
	Secure/ Secure	Secure Mother/ Insecure Father	Secure Father/ Insecure Mother	Insecure/ Insecure			
<u>Marital Quality</u>							
Combined	5.21 ± .85	4.25 ± 1.21*	4.38 ± 1.13 <sup>†</sup>	4.61 ± 1.08 <sup>†</sup>	3.66	.015	.096
Pos. Affect							
<u>Caregiving</u>							
<u>Mother</u>							
Sensitivity	4.88 ± .67	4.27 ± .82	4.36 ± 1.11	4.42 ± .92	2.57	.058	.069
Hostility	2.64 ± .60	3.09 ± .99	2.77 ± .77	2.77 ± .83	1.64	.185	.046
Diseng.	2.77 ± .90	3.25 ± .93	3.25 ± .98	3.18 ± 1.14	1.44	.235	.040
R.R.	2.41 ± .90	3.16 ± 1.24	2.87 ± 1.18	2.64 ± 1.01	2.61	.056	.071
<u>Father</u>							
Sensitivity	4.84 ± .64	4.18 ± .82*	4.58 ± .71	4.43 ± .88 <sup>†</sup>	3.85	.012	.101
Hostility	2.41 ± .80	3.11 ± .98*	2.81 ± .76	2.99 ± .93 <sup>†</sup>	3.46	.019	.092
Diseng.	3.37 ± .52	3.68 ± .63	3.64 ± .54	3.68 ± .72	1.63	.188	.045
R.R.	2.37 ± .82	3.16 ± 1.09*	2.84 ± .80	2.98 ± 1.09 <sup>†</sup>	3.38	.021	.090

<sup>†</sup> Moderately different from Secure/ Secure (p < .08; Tukey HSD post hoc testing)

\* Significantly different from Secure/ Secure (Tukey HSD post hoc testing)

Note. Effect size = partial ETA squared; Pos. = positive, Diseng. = disengagement, R.R. = role reversal.

**APPENDIX E: SUMMARY OF MULTIPLE HIERARCHICAL REGRESSION ANALYSIS FOR INTERACTIONS PREDICTING MOTHERS' SENSITIVE CAREGIVING (N = 114)**

*Moderation Predicting Mother's Sensitivity*

Step	Measurement	Unstandardized Coefficient		Standardized Coefficient	$\Delta F$	$P$	$R^2$	$\Delta R^2$
		$B$	$SE$	$\beta$				
1.	Maternal Depression	.003	.015	-.191†	4.794	.004	.106	.134
	Family Income	-.046	.076	-.020				
	PMA	.053	.040	.287**				
2.	Maternal Depression	-.031	.015	-.208*	1.618	.191	.123	.044
	Family Income	.001	.076	.001				
	PMA	.087	.041	.217*				
	SM/IF	-.410	.240	-.202†				
	SF/IM	-.487	.271	-.202†				
	I/I	-.449	.239	-.224†				
3.	Maternal Depression	-.027	.015	-.179†	1.194	.317	.129	.033
	Family Income	.007	.076	.009				
	PMA	-.030	.097	-.075				
	SM/IF	-.546	.260	-.269*				
	SF/IM	-.634	.289	-.269*				
	I/I	-.556	.258	-.278*				
	SM/IF X PMA	.056	.124	.061				
	SF/IM X PMA	.123	.131	.153				
	I/I X PMA	.204	.118	.296†				

Note. † $p < .10$ , \* $p < .05$ , \*\* $p < .01$ ;  $R^2$  = Adjusted; PMA = Positive Marital Affect, S/S = secure/secure, SM/IF = secure mother/insecure father, SF/IM = secure father/insecure mother, I/I = insecure/insecure,

**APPENDIX F: SUMMARY OF MULTIPLE HIERARCHICAL REGRESSION ANALYSIS FOR INTERACTIONS PREDICTING MOTHERS' HOSTILE CAREGIVING (N = 114)**

*Moderation Predicting Mother's Hostility*

Step	Measurement	Unstandardized Coefficient		Standardized Coefficient	$\Delta F$	$P$	$R^2$	$\Delta R^2$
		$B$	$SE$	$\beta$				
1.	Maternal Depression	.003	.014	.020	2.503	.064	.045	.075
	Family Income	-.097	.072	-.139				
	PMA	-.075	.037	-.208*				
2.	Maternal Depression	.003	.014	.023	.763	.518	.038	.023
	Family Income	-.107	.073	-.152				
	PMA	-.065	.039	-.180				
	SM/IF	.324	.232	.176				
	SF/IM	.068	.262	.032				
	I/I	.081	.231	.045				
3.	Maternal Depression	-.002	.014	-.017	1.045	.377	.039	.032
	Family Income	-.110	.073	-.157				
	PMA	-.036	.094	-.100				
	SM/IF	.376	.253	.204				
	SF/IM	.107	.281	.050				
	I/I	.084	.251	.046				
	SM/IF X PMA	.051	.119	.069				
	SF/IM X PMA	-.010	.126	-.012				
	I/I X PMA	-.118	.114	-.189				

Note. † $p < .10$ , \* $p < .05$ , \*\* $p < .01$ ;  $R^2$  = Adjusted; PMA = Positive Marital Affect, S/S = secure/secure, SM/IF = secure mother/insecure father, SF/IM = secure father/insecure mother, I/I = insecure/insecure,

**APPENDIX G: SUMMARY OF MULTIPLE HIERARCHICAL REGRESSION ANALYSIS FOR INTERACTIONS PREDICTING MOTHERS' DISENGAGED CAREGIVING (N = 114)**

*Moderation Predicting Mother's Disengagement*

Step	Measurement	Unstandardized Coefficient		Standardized Coefficient	$\Delta F$	<i>P</i>	<i>R</i> <sup>2</sup>	$\Delta R^2$
		<i>B</i>	<i>SE</i>	<i>B</i>				
1.	Maternal Depression	.008	.017	.048	2.377	.075	.041	.071
	Family Income	.013	.088	.015				
	PMA	-.116	.046	-.258*				
2.	Maternal Depression	.010	.017	.063	.835	.478	.036	.025
	Family Income	.004	.090	.004				
	PMA	-.093	.049	-.206†				
	SM/IF	.315	.284	.138				
	SF/IM	.360	.320	.135				
	I/I	.419	.282	.186				
3.	Maternal Depression	.003	.018	.020	1.324	.272	.046	.039
	Family Income	-.003	.090	-.003				
	PMA	.006	.115	.013				
	SM/IF	.445	.307	.195				
	SF/IM	.492	.341	.185				
	I/I	.491	.305	.217				
	SM/IF X PMA	-.037	.146	-.040				
	SF/IM X PMA	-.046	.155	-.045				
	I/I X PMA	-.226	.140	-.291				

Note. †*p* < .10, \**p* < .05, \*\**p* < .01; *R*<sup>2</sup> = Adjusted; PMA = Positive Marital Affect, S/S = secure/secure, SM/IF = secure mother/insecure father, SF/IM = secure father/insecure mother, I/I = insecure/insecure,

**APPENDIX H: SUMMARY OF MULTIPLE HIERARCHICAL REGRESSION ANALYSIS FOR INTERACTIONS PREDICTING MOTHERS' ROLE REVERSED CAREGIVING (N = 114)**

*Moderation Predicting Mother's Role Reversal*

Step	Measurement	Unstandardized Coefficient		Standardized Coefficient	$\Delta F$	<i>P</i>	<i>R</i> <sup>2</sup>	$\Delta R$ <sup>2</sup>
		<i>B</i>	<i>SE</i>	$\beta$				
1.	Maternal Depression	.023	.019	.124	1.969	.124	.029	.060
	Family Income	-.089	.099	-.094				
	PMA	-.073	.051	-.146				
2.	Maternal Depression	.024	.019	.128	1.500	.220	.045	.045
	Family Income	-.116	.099	-.121				
	PMA	-.048	.054	-.095				
	SM/IF	.632	.354	.249*				
	SF/IM	.403	.314	.136				
	I/I	.186	.312	.074				
3.	Maternal Depression	.016	.019	.088	1.102	.353	.048	.033
	Family Income	-.122	.099	-.127				
	PMA	-.064	.127	-.129				
	SM/IF	.638	.378	.252†				
	SF/IM	.399	.340	.135				
	I/I	.124	.338	.050				
	SM/IF X PMA	.134	.171	.133				
	SF/IM X PMA	.072	.162	.063				
	I/I X PMA	-.101	.155	-.117				

Note. †*p* < .10, \**p* < .05, \*\**p* < .01; *R*<sup>2</sup> = Adjusted; PMA = Positive Marital Affect, S/S = secure/secure, SM/IF = secure mother/insecure father, SF/IM = secure father/insecure mother, I/I = insecure/insecure,

**APPENDIX I: SUMMARY OF MULTIPLE HIERARCHICAL REGRESSION ANALYSIS FOR INTERACTIONS PREDICTING FATHERS' SENSITIVE CAREGIVING (N = 114)**

*Moderation Predicting Father's Sensitivity*

Step	Measurement	Unstandardized Coefficient		Standardized Coefficient	$\Delta F$	$P$	$R^2$	$\Delta R^2$
		$B$	$SE$	$\beta$				
1.	Paternal Depression	.023	.012	.182†	5.128	.003	.116	.145
	Family Income	.023	.066	.035				
	PMA	.116	.035	.328***				
2.	Paternal Depression	.023	.012	.184†	1.779	.157	.139	.049
	Family Income	.026	.066	.040				
	PMA	.100	.036	.282**				
	SM/IF	-.395	.211	-.224†				
	SF/IM	-.007	.240	-.003				
	I/I	-.312	.212	-.177				
3.	Paternal Depression	.024	.012	.186†	1.006	.394	.139	.028
	Family Income	.025	.066	.038				
	PMA	.054	.085	.152				
	SM/IF	-.456	.227	-.259*				
	SF/IM	-.073	.254	-.035				
	I/I	-.324	.228	-.184				
	SM/IF X PMA	.009	.108	.013				
	SF/IM X PMA	-.002	.114	-.003				
	I/I X PMA	.134	.105	.211				

Note. † $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p \leq .001$ ;  $R^2$  = Adjusted; PMA = Positive Marital Affect, S/S = secure/secure, SM/IF = secure mother/insecure father, SF/IM = secure father/insecure mother, I/I = insecure/insecure,

**APPENDIX J: SUMMARY OF MULTIPLE HIERARCHICAL REGRESSION ANALYSIS FOR INTERACTIONS PREDICTING FATHERS' HOSTILE CAREGIVING (N = 114)**

*Moderation Predicting Father's Hostility*

Step	Measurement	Unstandardized Coefficient		Standardized Coefficient	$\Delta F$	$P$	$R^2$	$\Delta R^2$
		$B$	$SE$	$\beta$				
1.	Paternal Depression	-.047	.013	-.329***	12.830	.003	.274	.297
	Family Income	-.016	.068	-.021				
	PMA	-.174	.036	-.434***				
2.	Paternal Depression	-.048	.013	-.331***	1.091	.357	.276	.025
	Family Income	-.018	.068	-.024				
	PMA	-.162	.038	-.403***				
	SM/IF	.323	.219	.161				
	SF/IM	-.008	.249	-.004				
	I/I	.235	.220	.118				
3.	Paternal Depression	-.048	.013	-.331***	1.071	.366	.278	.025
	Family Income	-.019	.068	-.025				
	PMA	-.249	.089	-.621**				
	SM/IF	.237	.236	.118				
	SF/IM	-.088	.264	-.308				
	I/I	.110	.237	.055				
	SM/IF X PMA	.150	.113	.189				
	SF/IM X PMA	.157	.119	.175				
	I/I X PMA	.036	.109	.050				

Note. † $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p \leq .001$ ;  $R^2$  = Adjusted; PMA = Positive Marital Affect, S/S = secure/secure, SM/IF = secure mother/insecure father, SF/IM = secure father/insecure mother, I/I = insecure/insecure,

**APPENDIX K: SUMMARY OF MULTIPLE HIERARCHICAL REGRESSION ANALYSIS FOR INTERACTIONS PREDICTING FATHERS' DISENGAGED CAREGIVING (N = 114)**

*Moderation Predicting Father's Disengagement*

Step	Measurement	Unstandardized Coefficient		Standardized Coefficient	$\Delta F$	$P$	$R^2$	$\Delta R^2$
		$B$	$SE$	$\beta$				
1.	Paternal Depression	-.020	.009	-.214*	3.864	.012	.084	.113
	Family Income	-.098	.050	-.198†				
	PMA	-.042	.027	-.159				
2.	Paternal Depression	-.018	.010	-.194†	1.214	.309	.090	.035
	Family Income	-.106	.051	-.214*				
	PMA	-.026	.028	-.098				
	SM/IF	.195	.162	.148				
	SF/IM	.268	.184	.175				
	I/I	.290	.163	.220†				
3.	Paternal Depression	-.019	.010	-.197†	.657	.581	.079	.019
	Family Income	-.102	.051	-.206				
	PMA	.006	.066	.024				
	SM/IF	.241	.176	.183				
	SF/IM	.290	.197	.189				
	I/I	.314	.176	.238†				
	SM/IF X PMA	.014	.086	.027				
	SF/IM X PMA	-.078	.089	-.131				
	I/I X PMA	-.061	.081	-.127				

Note. † $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p \leq .001$ ;  $R^2$  = Adjusted; PMA = Positive Marital Affect, S/S = secure/secure, SM/IF = secure mother/insecure father, SF/IM = secure father/insecure mother, I/I = insecure/insecure,

**APPENDIX L: SUMMARY OF MULTIPLE HIERARCHICAL REGRESSION ANALYSIS FOR INTERACTIONS PREDICTING FATHERS' ROLE REVERSED CAREGIVING (N = 114)**

*Moderation Predicting Father's Role Reversal*

Step	Measurement	Unstandardized Coefficient		Standardized Coefficient	$\Delta F$	$P$	$R^2$	$\Delta R^2$	
		$B$	$SE$	$\beta$					
1.	Paternal Depression	-.045	.015	-.280**	9.651	.000	.216	.241	
	Family Income	-.018	.078	-.021					
	PMA	-.180	.042	-.402***					
2.	Paternal Depression	-.045	.015	-.280**	.935	.428	.215	.023	
	Family Income	-.023	.079	-.027					
	PMA	-.164	.044	-.368***					
	SM/IF	.374	.254	.168					
	SF/IM	.048	.288	.019					
	I/I	.262	.255	.118					
3.	Paternal Depression	-.045	.015	-.281**	.505	.680	.201	.013	
	Family Income	-.021	.080	-.025					
	PMA	-.168	.103	-.376					
	SM/IF	.383	.276	.172					
	SF/IM	.054	.309	.021					
	I/I	.225	.277	.101					
	SM/IF X PMA	.060	.132	.068					
	SF/IM X PMA	.039	.139	.039					
	I/I X PMA	-.067	.128	-.083					

Note. † $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p \leq .001$ ;  $R^2$  = Adjusted; PMA = Positive Marital Affect, S/S = secure/secure, SM/IF = secure mother/insecure father, SF/IM = secure father/insecure mother, I/I = insecure/insecure,

## References

- Attachment between infant and caregiver. (n.d.). In *Encyclopædia of Children's Health online*. Retrieved from <http://www.healthofchildren.com/A/Attachment-Between-Infant-and-Caregiver.html>
- Ainsworth, M. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the Strange Situation*. Hillsdale, NJ: Erlbaum.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Belsky, J., Youngblade, L., Rovine, M. & Volling B. (1991). Patterns of marital change and parent-child interaction. *Journal of Marriage and the Family*, 487-498.
- Birditt, K. S., Fingerman, K. S. (2003). Age and gender differences in adults' descriptions of emotional reactions to interpersonal problems. *Journal of Gerontology: Psychological Sciences*, 58B, 237-245.
- Bernier, A., Matte-Gagné, C., Bélanger, M., & Whipple, N. (2014). Taking stock of two decades of attachment transmission gap: Broadening the assessment of maternal behavior. *Child Development*, 85(5), 1852-1865.
- Booher, C. M. (2000). *Communication within the marital dyad: An attachment theoretical perspective*. Unpublished dissertation, University of Texas at Austin.
- Booth-LaForce, C., Groh, A. M., Burchinal, M. R., Roisman, G. I., Owen, M. T., & Cox, M. J. (2014). The Adult Attachment Interview: Psychometrics, stability and

- change from infancy, and developmental origins: V. Caregiving and contextual sources of continuity and change in attachment security from infancy to late adolescence. *Monographs Of The Society For Research In Child Development*, 79(3), 67-84.
- Bouthillier, D., Julien, D., Dubé, M., Bélanger, I., & Hamelin, M. (2002). Predictive validity of adult attachment measures in relation to emotion regulation behaviors in marital interactions. *Journal Of Adult Development*, 9(4), 291-305.
- Bowen, M. *Family Therapy in Clinical Practice*. New York: Aronson, 1978
- Bowlby, J. (1969). Attachment and loss: Vol. 1. *Attachment*. New York: Basic Books.
- Bowlby, J. (1973). *Attachment and loss: Vol. 2: Separation*. Hogarth Press and the Institute of Psycho-Analysis.
- Bowlby, J. (1979). On knowing what you are not supposed to know and feeling what you are not supposed to feel. *The Canadian Journal of Psychiatry/La Revue canadienne de psychiatrie*.
- Bowlby, J. (1980). Attachment and loss, Vol. 3: *Loss, sadness and depression*. New York: Basic Books.
- Bowlby, J. (1988). Attachment, communication, and the therapeutic process. *A secure base: Parent-child attachment and healthy human development*, 137-157.
- Bray, J. H., & Maxwell, S. E. (1985). *Multivariate analysis of variance*. Newbury Park, CA: Sage Publications.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult romantic attachment: An integrative overview. In J. A. Simpson & W. S. Rholes

- (Eds.), Attachment theory and close relationships (pp. 46-76). New York: Guilford Press.
- Bronte-Tinkew, J., Moore, K. A., Matthews, G., & Carrano, J. (2007). Symptoms of major depression in a sample of fathers of infants sociodemographic correlates and links to father involvement. *Journal of family Issues, 28*(1), 61-99.
- Cohn, D., Cowan, P., Cowan, C., & Pearson, J. (1992). Mothers and fathers working models of childhood attachment relationships, parenting styles, and child behavior. *Development and Psychopathology, 4*(3), 417-431.
- Cohn, D. A., Silver, D. H., Cowan, C. P., Cowan, P. A., & Pearson, J. (1992). Working models of childhood attachment and couple relationships. *Journal of Family Issues, 13*(4), 432-449.
- Cox, M. J., Paley, B., & Harter, K. (2001). Interparental conflict and parent-child relations. In J. H. Grych & F. D. Fincham (Eds.), *Interparental conflict and child development: Theory, research, and applications* (pp. 249-272). New York, NY: Cambridge University Press.
- Cox, M. J., Paley, B., Burchinal, M., & Payne, C. C. (1999). Marital perceptions and interactions across the transition to parenthood. *Journal of Marriage and the Family, 61*1-625.
- Creasey, G. (2002). Associations between working models of attachment and conflict management behavior in romantic couples. *Journal Of Counseling Psychology, 49*(3), 365-375.

- Crowell, J. A., & Feldman, S. S. (1988). Mothers' internal models of relationships and children's behavioral and developmental status: A study of mother-child interaction. *Child Development, 59*(5), 1273-1285.
- Crugnola, C. R., Gazzotti, S., Spinelli, M., Ierardi, E., Caprin, C., & Albizzati, A. (2013). Maternal attachment influences mother–infant styles of regulation and play with objects at nine months. *Attachment & Human Development, 15*(2), 107-131.
- Curran, M., Hazen, N., Jacobvitz, D., & Feldman, A. (2005). Representations of Early Family Relationships Predict Marital Maintenance During the Transition to Parenthood. *Journal Of Family Psychology, 19*(2), 189-197.
- Dickstein, S., Seifer, R., & Albus, K. E. (2009). Maternal adult attachment representations across relationship domains and infant outcomes: The importance of family and couple functioning. *Attachment & Human Development, 11*(1), 5-27.
- Erel, O., & Burman, B. (1995). Interrelatedness of marital relations and parent-child relations: A meta-analytic review. *Psychological Bulletin, 118*(1), 108-132.
- Fagan, J., & Barnett, M. (2003). The relationship between maternal gatekeeping, paternal competence, mothers' attitudes about the father role, and father involvement. *Journal of Family Issues, 24*(8), 1020-1043.
- Fagan, J., Day, R., Lamb, M. E. and Cabrera, N. J. (2014), Should Researchers Conceptualize Differently the Dimensions of Parenting for Fathers and Mothers? *Journal of Family Theory & Review, 6*: 390–405.

- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item-response theory analysis of self report measures of adult attachment. *Journal of Personality and Social Psychology, 78*, 350-365.
- Gao, Y., Crowell, J., Pan, H., O'Connor, E., & Waters, E. (1996). *Are secure people better caregivers and care-seekers in marriage?* Paper presented at the biennial meetings of the International Society for the Study of Behavioral Development, Quebec, Canada.
- George, C , Kaplan, N, & Main, M. (1985). *Adult Attachment Interview*. Unpublished manuscript, University of California, Berkeley.
- Goeke-Morey, M. C., Cummings, E. M., & Papp, L. M. (2007). Children and marital conflict resolution: Implications for emotional security and adjustment. *Journal of Family Psychology, 21*(4), 744.
- Gottman, J. M. (1994). *What predicts divorce?: The relationship between marital processes and marital outcomes*. Hillsdale, NJ: Erlbaum.
- Grossmann, K., Grossmann, K. E., Fremmer-Bombik, E., Kindler, H., Scheuerer Englisch, H. and Zimmermann, A. P. (2002), The Uniqueness of the Child–Father Attachment Relationship: Fathers’ Sensitive and Challenging Play as a Pivotal Variable in a 16-year Longitudinal Study. *Social Development, 11*: 301–337.
- Haidet, K. K., Tate, J., Divirgilio-Thomas, D., Kolanowski, A., & Happ, M. B. (2009). Methods to improve reliability of video-recorded behavioral data. *Research in Nursing & Health, 32*(4), 465-474.

- Hazen, N. (1997). *Infant Caregiving Scales (ICS)*. Unpublished manuscript. University of Texas at Austin, Human Development and Family Sciences.
- Hsiao, C., Koren-Karie, N., Bailey, H., & Moran, G. (2015). It takes two to talk: Longitudinal associations among infant–mother attachment, maternal attachment representations, and mother–child emotion dialogues. *Attachment & Human Development, 17*(1), 43-64.
- Katz, L. F., & Gottman, J. M. (1996). Spillover effects of marital conflict: In search of parenting and co-parenting mechanisms. *New Directions for Child Development, 74*, 57–76.
- Kim, S., Fonagy, P., Allen, J., & Strathearn, L. (2014). Mothers' Unresolved trauma blunts amygdala response to infant distress. *Social Neuroscience, 9*(4), 352-363.
- Kulik, L., & Tsoref, H. (2010). The entrance to the maternal garden: Environmental and personal variables that explain maternal gatekeeping. *Journal of gender studies, 19*(3), 263-277.
- Jacobvitz, D (2005). *Couple Interaction Coding System*. Unpublished manuscript. University of Texas at Austin, Human Development and Family Sciences.
- Jacobvitz, D., Hazen, N., Curran, M. & Hitchens, K. (2004). Observations of early triadic family interactions: Boundary disturbances in the family predict symptoms of depression, anxiety, and attention-deficit/hyperactivity disorder in middle childhood. *Development and Psychopathology*, p. 577-592.

- Jacobvitz, D., Leon, K., & Hazen, N. (2006). Does expectant mothers' Unresolved trauma predict frightened/frighting maternal behavior? Risk and protective factors. *Development and Psychopathology*, p 363-379.
- Kouros, C. D., Papp, L. M., Goeke-Morey, M. C., & Cummings, E. M. (2014). Spillover between marital quality and parent-child relationship quality: Parental depressive symptoms as moderators. *Journal Of Family Psychology*, 28(3), 315-325.
- Kouvo, A. M., & Silven, M. (2010). Finnish mother's and father's attachment representations during child's first year predict psychosocial adjustment in preadolescence. *Attachment & Human Development*, 12(6), 529-549.
- Kulik, L., & Tsoref, H. (2010). The entrance to the maternal garden: Environmental and personal variables that explain maternal gatekeeping. *Journal of Gender Studies*, 19(3), 263-277.
- Main, M., & Goldwyn, R. (1985/1991). *Adult attachment scoring and classification system*. Unpublished manuscript, University of California, Berkeley.
- Leerkes, E. M., Supple, A. J., O'Brien, M., Calkins, S. D., Haltigan, J. D., Wong, M. S. and Fortuna, K. (2015), Antecedents of Maternal Sensitivity During Distressing Tasks: Integrating Attachment, Social Information Processing, and Psychobiological Perspectives. *Child Development*, 86: 94-111.
- Main, M. (1991). Metacognitive knowledge, metacognitive monitoring, and singular (coherent) vs. multiple (incoherent) model of attachment: Findings and directions for future research. In C. M. Parkes, J. Stevenson-Hinde, P. Marris, C. M. Parkes,

- J. Stevenson, Hinde, P. Marris (Eds.), *Attachment across the life cycle* (p. 127-159). New York, NY, US: Tavistock/Routledge.
- Macfie, J., Houts, R. M., Pressel, A. S., & Cox, M. J. (2008). Pathways from infant exposure to marital conflict to parent-toddler role reversal. *Infant Mental Health Journal, 29*(4), 297-319.
- McFarland-Piazza, L., Hazen, N., Jacobvitz, D., & Boyd-Soisson, E. (2012). The development of father-child attachment: Associations between adult attachment representations, recollections of childhood experiences and caregiving. *Early Child Development And Care, 182*(6), 701-721.
- Mikulincer M, Dolev T, Shaver PR. (2004). Attachment-related strategies during thought suppression: ironic rebounds and vulnerable self-representations. *Journal of Personality and Social Psychology. 87*: 940-956.
- Paley, B., Cox, M. J., Burchinal, M. R., & Payne, C. C. (1999). Attachment and marital functioning: Comparison of spouses with continuous-Secure, earned-Secure, Dismissing, and Preoccupied attachment stances. *Journal Of Family Psychology, 13*(4), 580-597.
- Paley, B., Cox, M. J., Kanoy, K. W., Harter, K. M., Burchinal, M., & Margand, N. A. (2005). Adult Attachment and Marital Interaction as Predictors of Whole Family Interactions During the Transition to Parenthood. *Journal Of Family Psychology, 19*(3), 420-429.
- Paulson, J. F., Dauber, S., & Leiferman, J. A. (2006). Individual and combined effects of postpartum depression in mothers and fathers on parenting behavior. *Pediatrics, 118*(2), 407-414.

118(2), 659-668.

Posada, Waters, Moran, Pederson, & Vaughn. "Mary Ainsworth, Ethology, and Maternal Sensitivity" *Measuring Attachment Psychometrics of Behavior, Mental Representations, and Biological Processes*. Ed. E. Waters and B. E. Vaughn. , 2011.

Riggs, S., Jacobvitz, D., & Hazen, N. (2002). Internal working models of attachment and previous therapy-seeking behavior among middle-class expectant couples. *Psychotherapy: Theory and Research*, 39, 283-296.

Sroufe LA. (1988). The role of infant-caregiver attachments in development. In: Belsky J, Nezworski T, editors. *Clinical Implications of Attachment*. Hillsdale: Erlbaum; pp. 18–38.

Sroufe, L. A., Egeland, B., Carlson, E., & Collins, W. A. (2005). Placing early attachment experiences in developmental context. In K. E. Grossmann, K. Grossmann, & E. Waters (Eds.), *The power of longitudinal attachment research: From infancy and childhood to adulthood*. (pp. 48-70) New York: Guilford Publications.

Steele, R. D., Waters, T. A., Bost, K. K., Vaughn, B. E., Truitt, W., Waters, H. S., & ... Roisman, G. I. (2014). Caregiving antecedents of secure base script knowledge: A comparative analysis of young adult attachment representations. *Developmental Psychology*, 50(11), 2526-2538.

Talbot, J. A., Baker, J. K., & McHale, J. P. (2009). Sharing the love: Prebirth adult attachment status and coparenting adjustment during early infancy. *Parenting:*

- Science And Practice*, 9(1-2), 56-77.
- Tremblay, S., & Pierce, T. (2011). Perceptions of fatherhood: Longitudinal reciprocal associations within the couple. *Canadian Journal Of Behavioural Science/Revue Canadienne Des Sciences Du Comportement*, 43(2), 99-110.
- Wampler, K. S., Shi, L., Nelson, B. S., & Kimball, T. G. (2003). The Adult Attachment Interview and observed couple interaction: Implications for an intergenerational perspective on couple therapy. *Family Process*, 42(4), 497-515.
- Wanic R. & Kulic, J. (2011). Toward an understanding of gender differences in the impact of marital conflict on health. *Sex Roles*, 65, 297-312.
- Waters, E. & Deane, K. (1985). Defining and assessing individual differences in attachment relationships: Q-methodology and the organization of behavior in infancy and early childhood. In I. Bretherton & E. Waters (Eds.), *Monographs of the Society for Research in Child Development*, 50, nos. 1-2. pp. 41-65.
- Waters, T. A., Brockmeyer, S. L., & Crowell, J. A. (2013). AAI coherence predicts caregiving and care seeking behavior: Secure base script knowledge helps explain why. *Attachment & Human Development*, 15(3), 316-331.
- van IJzendoorn M. H. (1995). Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. *Psychological Bulletin*, Vol 117, 387-403.
- Van IJzendoorn, M.H., Bakermans-Kranenburg, M.J. (1996). Attachment representations in mothers, fathers, adolescents, and clinical groups: A meta-analytic search for normative data. *Journal of Consulting and Clinical Psychology*, 64, 8-21.