This article is downloaded from

http://researchoutput.csu.edu.au

It is the paper published as:

Author: L. McFarland-Piazza, N. Hazen, D. Jacobvitz and E. Boyd-Soisson
Title: The development of father-child attachment: Associations between adult attachment representations, recollections of childhood experiences and caregiving
Journal: Early Child Development and Care ISSN: 0300-4430 1476-8275
Year: 2012
Volume: 182
Issue: 6
Pages: 701-721
Abstract: The association between fathers adult attachment representations and their recollections of childhood experiences with their caregiving quality with their eight-month-old infants and with father-infant attachment classification was examined in a longitudinal study of 117 fathers and their infants. Sensitive caregiving was related to secure-autonomous classification in the Adult Attachment Interview (AAI), hostile caregiving was related to fathers dismissing and unresolved attachment, and emotional disengagement and role-reversed caregiving were both related to fathers’ unresolved attachment. Childhood experiences of parental pressure to achieve were related to fathers’ hostile and role-reversed caregiving and low sensitivity, independent of AAI classification. However, fathers’ childhood experiences of maternal neglect were related to high-quality caregiving. It was also found that fathers’ secure-autonomous AAI classification was related to secure father-child attachment in the Strange Situation Paradigm, and this relation was mediated by sensitive caregiving.

DOI: http://dx.doi.org/10.1080/03004430.2011.573071

Author Address: lpiazza@csu.edu.au

CRO Number: 29154
Abstract

The association between fathers’ adult attachment representations and their recollections of childhood experiences to their caregiving quality with their 8-month old infants and to father-infant attachment classification was examined in a longitudinal study of 117 fathers and their infants. Sensitive caregiving was related to secure-autonomous classification in the Adult Attachment Interview (AAI), hostile caregiving was related to fathers’ dismissing and unresolved attachment, and emotional disengagement and role-reversed caregiving were both related to fathers’ unresolved attachment. Childhood experiences of parental pressure to achieve were related to fathers’ hostile and role-reversed caregiving and low sensitivity, independent of AAI classification. However, fathers’ childhood experiences of maternal neglect were related to high-quality caregiving. It was also found that fathers’ secure-autonomous AAI classification was related to secure father-child attachment in the Strange Situation Paradigm (SSP), and this relation was mediated by sensitive caregiving.

Key words: fathers, attachment, infants, caregiving, adult attachment
The Development of Father-Child Attachment: Associations Between Adult Attachment
Representations, Recollections of Childhood Experiences and Caregiving

Journal: Early Child Development and Care

Laura McFarland-Piazza
Charles Sturt University

Nancy Hazen, Deborah Jacobvitz
The University of Texas at Austin

Erin Boyd-Soisson
Messiah College

Contact Information:
Dr Laura McFarland-Piazza
Charles Sturt University
Murray School of Education
PO Box 789
Albury, NSW, 2640, Australia
61 (02) 6051 9413
lpiazza@csu.edu.au
The Development of Father-Child Attachment: Associations Between Adult Attachment Representations, Recollections of Childhood Experiences and Caregiving

According to attachment theory, adults’ current mental representations of attachment are stronger predictors of their parenting than their actual childhood experiences of being parented (Main, Kaplan, & Cassidy, 1985). However, studies on this topic have focused almost exclusively on mothers. Recent research has found that mothers and fathers may have very different roles to play in caring for their children (Grossmann, Grossmann, Fremmer-Bombik, Kindler, Scheuerer-Englisch, & Zimmermann, 2002; Paquette, 2004). Specifically, fathers are less likely than mothers to serve as primary caregivers who comfort the child in times of distress and more likely to provide challenging play opportunities. Thus, it may not be accurate to assume that father-child attachment and caregiving functions the same as for mothers. Therefore, the goal of this study was to examine fathers’ attachment representations and recollections of caregiving experiences in childhood as predictors of their caregiving behavior and quality of infant-father attachment in an effort to learn more about the unique workings of the father-child attachment system.

Attachment theory suggests that infants who are exposed to consistently sensitive caregiving during the first year of life will come to expect that their caregiver will be responsive to their needs and will develop a sense of security and trust with the caregiver (Bowlby, 1969). In contrast, infants who are exposed to inconsistent or insensitive care will develop a sense of mistrust. It is theorized that the development of the parent-infant attachment is intergenerational in nature, influenced by the adults’ internal working model of attachment and caregiving.
Individual differences in adults’ internal working models of attachment have been assessed using the Adult Attachment Interview (AAI) (George, Kaplan, & Main, 1985/1996; Main, Goldwyn, & Hesse, 1984/2002). Based on the coherence with which they describe their early attachment-related experiences with their parents, adults are assigned to one of three major attachment classifications: secure-autonomous, dismissing, or preoccupied. Secure-autonomous adults appear to value early attachment and provide coherent and objective descriptions about their attachment figures and experiences. Dismissing adults often claim that they cannot remember much about their childhood and seem to devalue attachment. They may idealize their parents as being perfect, but are not able to provide specific examples of their parents as being loving or supportive. Preoccupied adults speak in an incoherent manner about their early experiences and often seem confused and/or presently angry about their past experiences with caregivers. Both the dismissing and preoccupied categories are considered to be insecure forms of adult attachment, and insecure adults are believed to be at risk for repeating negative patterns of parenting. Adults may also be classified as unresolved for trauma, in conjunction with their best-fitting major classification, if they show signs of mental disorganization when discussing childhood experiences of abuse or the death of a loved one (Main, et al., 1984-2003).

Research has found that parents’ secure-autonomous working models of attachment predict secure parent-child attachment, as assessed by the Strange Situation Paradigm (SSP) (Hesse, 2008). However, one meta-analysis examining the intergenerational transmission of attachment found that this link is much stronger in mothers than in fathers (Van IJzendoorn, 1995). Van IJzendoorn (1995) found that the effect size for the relationship between maternal AAI classification and mother-child attachment for 656 mother-child dyads (r = .50) was
significantly different from the effect size for the relationships between paternal AAI classification and father-child attachment in 198 father-child dyads ($r = .35$).

Attachment theory suggests that the link between adults’ internal working models of attachment and parent-child attachment is mediated by caregiving quality. Parents’ representations of attachment are theorized to influence their responsiveness to their infants’ attachment signals (Main et al., 1985). A meta-analysis of 10 studies found that secure mothers were more positive, sensitive, and responsive to their infants compared to insecure mothers (van Ijzendoorn, 1995). This meta-analysis also examined three studies that included fathers, and the relation between adult AAI and caregiving was even stronger when these studies were included. Although fewer studies have investigated the association between fathers’ representations of attachment and their caregiving, these studies also indicate that secure-autonomous fathers are more sensitive than insecure fathers (Cohn, Cowan, Cowan, & Pearson, 1992; Grossman, Grossman, Fremmer-Bombik, Kindler, Scheuerer-Englisch & Zimmerman, 2002; van Ijzendoorn, 1995). In fact, the meta-analysis by van Ijzendoorn (1995) indicated that the relation of parents’ working models of caregiving and their sensitive responsiveness to their infants actually tended to be stronger for samples of fathers than for samples of mothers.

Research has found that sensitive caregiving mediates the relationship between parental secure-autonomous internal working model of attachment and secure parent-infant attachment for both mothers and fathers (van Ijzendoorn & De Wolff, 1997). However, the relation between sensitive caregiving and secure parent-child attachment appears to be much stronger for mothers than for fathers (De Wolff & van Ijzendoorn, 1997; Pederson, Gleason, Moran & Bento, 1998; Ward & Carlson, 1995). Two studies have found a relation between father sensitivity and secure
father-child attachment (Cox, Owen, Henderson & Margand, 1992; Goossens & van IJzendoorn, 1990). However, other studies have not replicated this finding (Caldera, Huston & O’Brien, 1995; Easterbrooks & Goldberg, 1984; Grossmann & Grossmann, 1992; Schneider Rosen & Rothbaum, 1993; Valling & Belsky, 1992). Thus, there appears to be a ‘transmission gap’ for fathers. The present study attempts to understand more fully this transmission gap by examining the links between fathers’ internal working models of attachment, their childhood experiences, specific types of paternal caregiving and father-child attachment.

Although they are assumed to be less sensitive than secure-autonomous parents, dismissing, preoccupied and unresolved parents are thought to differ in their particular styles of insensitive caregiving (van IJzendoorn, 1995). However, although studies have found that dismissing parents are more likely to have avoidant infants, preoccupied parents are more likely to have resistant infants, and unresolved parents are more likely to have disorganized infants (Main, et al, 1985; Main, 1995), there is a dearth of studies that have examined the relation of particular types of insecure working models of attachment to particular styles of insensitive caregiving. Dismissing parents are theorized to dismiss or devalue their infants’ attachment needs, resulting in rejecting or emotionally distancing behavior, and thus leading to a greater likelihood of forming insecure-avoidant attachment relationships with their infants. Although the caregiving styles of dismissing parents per se have not been examined, mothers of infants with avoidant attachments have been found to be rejecting and psychologically unavailable in their caregiving (Egeland & Farber, 1984; Belsky, Rovine & Taylor, 1984) and to avoid physical contact with their infants (Ainsworth, Blehar, Waters, & Wall, 1978). In addition, studies examining mothers’ representations of caregiving indicate that mothers of avoidant children are more rejecting and distancing (George & Solomon, 1996). Thus, we expected that dismissing
fathers may be more likely than other fathers to show hostile rejection or emotionally disengaged caregiving patterns. It is also possible that the link between fathers’ dismissing attachment and father-infant avoidant attachment is mediated by hostile or emotionally disengaged caregiving.

Preoccupied parents are theorized to be currently enmeshed with their own past attachment experiences, and thus not consistently responsive to their infants’ attachment needs, leading to resistant attachment. Again, the specific caregiving styles of preoccupied parents per se have not been examined, but mothers of children with resistant attachments have been found to be inconsistent in their responsiveness, or underinvolved and emotionally disengaged (Belsky et al., 1984; Egeland & Farber, 1984; Isabella, Belsky, & von Eye, 1989; Smith & Pederson, 1988). In addition, in studies assessing their representations of themselves as caregivers, mothers of resistant children describe role-reversed relationship patterns, often indicating that look to their child to meet their own attachment needs (George & Solomon, 1996). Thus, we expected preoccupied fathers to show greater role-reversed or disengaged patterns with their infants. It may also be the case that the link between fathers’ preoccupied attachment and father-infant resistant attachment is mediated by role-reversed or emotionally disengaged caregiving.

Finally, unresolved parents are theorized to experience fear as a result of past loss or trauma which manifests itself in odd, unpredictable, frightening caregiving behaviors, dissociated behaviors (e.g., trance-like staring), and/ or behaviors indicating that the parent may be frightened (Main & Hesse, 1990; Author, 2008). Infant disorganization is thought to result when the attachment figure is at the same time the source of their comfort and fear. Several studies have found empirical support for the link between mothers’ unresolved state of mind and maternal frightening behavior (Author, 2006; Abrams, Rifkin, & Hesse, 2006; Madigan, Moran, & Pederson, 2006; Schuengal, Bakermans-Kranenburg, van Ijzendoorn, & Blom 1999).
However, this link has not been replicated for fathers. In a recent study using the same longitudinal data set as that used in the present study, we focused specifically on examining the antecedents and consequences of fathers’ frightening behavior (Author, 2010). Our results indicated that fathers’ frightening behavior was not related to their representations of attachment or to having disorganized attachment relationships with their infants. Rates of frightening behavior were significantly higher in fathers than in mothers, but frightening behaviors were just as likely to be displayed by secure-autonomous fathers as by insecure and unresolved fathers.

Given that Abrams et al. (2006) found that only the dissociative subcategory of frightening behaviors was related to parents’ unresolved AAI status and to infants’ disorganized attachment, we also examined the relation of fathers’ AAI categories and infants’ disorganized attachment to each of the subcategories of frightening behavior, and still we found no differences. Interestingly, however, secure fathers were more likely than insecure and unresolved fathers to combine their frightening behaviors with sensitivity.

In what ways, then, might the caregiving of unresolved fathers differ from that of other fathers? Research by Lyons-Ruth and her colleagues (Lyons-Ruth, Bronfman, & Parsons, 1999) has found that mothers of disorganized infants show a broader set of maternal behaviors characterized not only by frightening behavior, but by disrupted affective communication with infant. Disrupted and inappropriate affective responses include responding to infant distress with marked emotional withdrawal and unavailability or with hostile reactions such as laughing at the distressed baby. In addition, mothers of disorganized children describe themselves as helpless caregivers who cannot control their children, and describe their children as being either wild and out of control, or exceptionally precocious and adult-like, able to care for themselves and even for the parent (George & Solomon, 1996). Given that disorganized children are more likely than
other children to have unresolved parents, it may be that unresolved fathers are more emotionally disengaged, role-reversing, and hostile than other fathers. If this is true, it may be that the link between fathers’ unresolved attachment and father-infant disorganized attachment is mediated by emotional disengagement, role-reversal, or hostility, rather than by fathers’ frightening behavior.

Adults can be classified as secure-autonomous regardless of the content of the childhood memories, as long as these memories are presented in a coherent, open and objective fashion. Thus, it is possible that adults’ recollections of childhood experiences might impact their caregiving independent of their own internal working model of attachment. Attachment researchers have not addressed how memories of particular childhood experiences might be related to particular caregiving styles, although Bakermans-Kranenburg and van IJzendoorn have recently suggested that researchers make more use of the continuous scales that assess childhood experience in the AAI (Bakermans-Kranenburg & van IJzendoorn, 2009). Recent research does indicate that mothers who reported negative childhood experiences on the AAI, yet have a currently secure working model of attachment according to their AAI classification, were just as likely to have to provide sensitive caregiving to their infants as were mothers who recalled positive childhood experiences and were classified as secure on the AAI (Pearson, Cohn, Cowan, & Cowan, 1994; Phelps, Belsky, & Crnic, 1997. Thus, we might expect that fathers’ AAI classifications should be stronger predictors of their caregiving and their attachment quality with their infants than their memories of childhood experiences. However, it may be that fathers’ recollections of childhood experience may predict aspects of their caregiving quality independent of their AAI classification.

In sum, this study had four primary goals: 1) To examine the association between fathers’ working models of attachment (secure, dismissing, preoccupied, and unresolved) and
different aspects of their caregiving quality (sensitivity, hostility, emotional disengagement, and early forms of role-reversed care); 2) to examine the relation of fathers’ working models of attachment and their attachment security with their infants; 3) to examine whether the relation between fathers’ working models of attachment and their attachment security with their infants is mediated by caregiving quality; and 4) to examine the extent to which fathers’ recollections of childhood experiences and their AAI classifications make unique contributions to predicting their caregiving quality with their infants.

Method

Participants

Participants were part of a longitudinal study investigating parenting and family relationships. Data from 117 fathers, from the larger sample of 125 couples, were used. Couples were recruited when the women were in their third trimester of pregnancy through birthing classes, public service radio announcements, newspaper press releases and flyers distributed at maternity stores in a metropolitan area and surrounding communities. Criteria for participation were that the couples were living together at the time of recruitment, were having their first child, and spoke English as their primary language. Each family received a $50 savings bond for their child at the completion of each of the three phases of data collection, bimonthly newsletters with updates on the project, a T-shirt for their child, and an audiotape of lullabies.

The median age of fathers was 30, ranging from 19-51. Most participants were Caucasian (82%); the remainder was Hispanic (9%), African-American (3%), or Native American, Middle Eastern, or Indian (6%). The median family income was $30,000 - $45,000. The combined income of 80% of the couples was $30,000 - $45,000 per year and 13% of the couples earned more than $45,000 per year. Families earning less than $15,000 per year comprised 7% of the
sample. Participants were well-educated; 69% had some college and 23% held an advanced degree. By the time infants were 8 months, 118 of the original 125 families remained in the study, and by 12-15 month SSP assessment, 112 families remained in the study. Eight families had moved away, two could not be located, and three declined to participate for personal reasons. Families who remained did not differ significantly in age or income from the original group. Seven fathers did not have AAI data and 7 fathers did not have SSP data. In each case, 5 fathers did not come to the lab to participate, and 2 more did not have usable data due to audio malfunction. Fathers who had missing data did not differ significantly in their caregiving scores from the other fathers.

**Procedure**

The AAI was administered separately to fathers and mothers when the mothers were in their third trimester of pregnancy. When the infants were 8 months old, mother-infant and father-infant interactions were videotaped in home visits during 30 minute interactions in which the parent was instructed to play with the infant as they ordinarily would, to change the infant’s clothes, and to feed the infant. No specific instructions were given on how to play or what should be played with. Although restricted to one particular room chosen by the families at a pre-scheduled time convenient to the families, it was left up to the mothers and fathers as to how they chose to play with their infant. A researcher who operated the video camera was present in the room during this 30 minute session. When infants were 12 and 15 months old, they were assessed for security of attachment with both mother and father using the Strange Situation Procedure (SSP). The order in which mothers and fathers were observed in the SSP with their infant was counterbalanced such that half of the infants were observed in this procedure with their fathers at 12 months of age and half at 15 months.
Measurement

**Fathers’ attachment representations.** Fathers’ representations of attachment were assessed using the Adult Attachment Interview (AAI) (George et al., 1985/1996), a semi-structured interview designed to assess adults’ current states of mind regarding attachment based on their recollections of their childhood relationships with their parents. Participants were asked to describe and evaluate attachment-related childhood experiences, including loss of attachment figures through death and threatening experiences such as abuse, and to discuss their current perceptions of the effects of these experiences on their development and why their parents may have behaved as they did. Several trained faculty members and graduate students conducted the AAI, memorizing the questions so they could use a relaxed conversational style. All interviews were completed by the third author, who is a certified AAI trainer, or by interviewers trained by the third author to administer the AAI. Training involved first being interviewed by the trainer, then interviewing the trainer and receiving feedback, and finally interviewing two pilot subjects and receiving feedback from the trainer on the audiotaped interviews. Interviews lasted from 60 to 90 minutes and included probes to increase the specificity of responses and facilitate recall.

Interviews were audiotaped and transcribed verbatim prior to coding. First, interviews were rated on two types of scales; childhood experience scales and state of mind scales. The childhood experiences scales consisted of Loving, Rejecting, Involving/Role Reversing, Pressure to Achieve, and Neglecting when Present. Scales range from 1 (low or absent) or 9 (high). Each of these scales is rated separately for the childhood experiences with mother and childhood experiences with father. The Loving scale rates the extent to which individuals experienced each parent as loving and supportive in childhood. The Rejecting scale represents the extent to which each parent appears to have rejected or avoided the individual’s bids for comfort and attention in
childhood. The Involving/Role Reversing scale assesses the extent to which each parent makes him or herself the object of the child’s attention, or depends on the child’s presence for the maintenance of his or her own sense of security. The Neglecting when Present scale assesses the extent to which parents were inattentive or psychologically inaccessible though physically nearby. The Pressure to Achieve scale reflects the extent to which a child felt pressured to achieve in terms of status or position, adult labor responsibilities, school grades, or performance in other areas such as music and sports.

Next, the interview was assigned an overall attachment classification of secure-autonomous, dismissing, or preoccupied, based largely on the ratings of the state of mind scales. The transcripts of secure-autonomous individuals are characteristically coherent and fluid, indicating autonomy, balance, and openness to the topics being discussed; thus, these individuals score high on the coherence of mind scale. In contrast, individuals who are assigned to one of the two insecure classifications (dismissing and preoccupied) share an inability to fully integrate their early memories in a coherent and believable manner. The narratives of dismissing adults typically lack coherence due to repeated insistence on a lack of memory, and either idealization or derogation of attachment figures; thus, they score high on the state of mind scales for lack of memory, idealization of attachment (scored separately for experiences with mother and with father), and/or derogation of attachment. The transcripts of preoccupied individuals are characterized by excessive and angry current involvement in relationships with attachment figures, and/or by confused, vague, or passive speech toward a parent, thus they receive high scores on the involving anger (scored separately for experiences with mother and with father) and/or passive speech state of mind scales. The unresolved category is assigned in conjunction with the best fitting overall category to individuals who show lapses in the monitoring of
reasoning or discourse during the discussion of loss and/or trauma, e.g., speaking of a dead attachment figure as if he or she were still alive. Adults receiving a score of 5 or higher on the unresolved loss or unresolved trauma state of mind scales were placed in the unresolved category. Finally, adults were placed into a “cannot classify” group when they showed a mix of secure-autonomous, dismissing and/or preoccupied strategies (Hesse, 2008). Thus, the state of mind scales largely overlap with final AAI classifications, whereas the childhood experience scales are more likely to be independent of AAI classifications; e.g., an individual classified as secure-autonomous must show a coherent state of mind but may recall any type of childhood experiences.

All of the interviews were coded by a by two graduate students who had successfully completed training and were certified to code the AAI. One of the students coded all of the AAIs and the second coded 28% of the interviews (N = 32) for reliability. The student coders were trained by the third author who was certified to conduct AAI training workshops by Mary Main. After completing a two week training workshop, both students were required to pass three tests taken at 6-month intervals, each of which consisted of about 10 transcripts. Exact agreement between the two coders on the 5-way AAI classification --secure-autonomous, dismissing, preoccupied, unresolved with respect to trauma, and cannot classify but not unresolved --was 88% (k = .85). Disagreements between the two coders were resolved by the third author. Intra-class correlations for all of the childhood experience and state of mind scales ranged from .88 to .65, except for Mother Rejecting (r = .42) and Father Involving/Role Reversing (r = .31), so these two scales were excluded from further analysis because of unacceptably low reliabilities.

The AAI categories were coded by the same graduate students who rated childhood experiences, and 28% of the AAI transcripts (N = 32) were double coded. Exact agreement between the two
coders on the 5-way classification --secure-autonomous, dismissing, preoccupied, unresolved with respect to trauma, and cannot classify but not unresolved --was 88% \( (k = .85) \).

Disagreements between the two coders were resolved by the third author.

**Father caregiving behaviors.** The 30 minute father-infant interactions comprised of play, feeding and a clothes change, were rated on the *Infant Caregiving Scales (ICS)* developed by two of the lead researchers. 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 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. Cronbach’s alphas for the four caregiving scales were .94 for sensitivity, .95 for role reversal, .91 for hostility, and .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 fathers on all 90 items. Coding was done based on the entire 30 minute videotaped father-infant interaction. Two coders rated 102 of the 118 tapes (86%) for reliability, and 7 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 .64 for sensitivity, .65 for role reversal, .64 for disengagement, and .74 for hostility.

**Quality of attachment in infancy.** The Strange Situation Procedure (SSP) (Ainsworth et al., 1978) was used to assess infant’s attachment security with both mothers and fathers. Videotapes were coded for the following attachment patterns: secure (B), insecure-avoidant (A), and insecure-resistant (C). Infants were classified as secure if they used their parent as a secure-base, seeking comfort when distressed by a brief separation, and the comfort received successfully reducing their distress, such that they explored and played again. Infants were classified as avoidant if they avoided proximity or eye contact with the mother upon reunion, and as resistant if they mixed seeking proximity-seeking with angry resistance. Infants whose behavior in the SSP showed a mix of behaviors were designated as “cannot classify”. In addition, the Strange Situations were coded on a 9 point Likert-type disorganized/disoriented (D) scale (Main & Solomon, 1990). This scale assessed apprehensive, trancelike, or sequential or simultaneous contradictory behavior occurring anytime in the presence of the parent. Infants were placed in a disorganized group if they scored above 5 on the 9-point scales. If infants were assigned a score of 5 the coder decided whether the behavior warranted placement into the disorganized category. Infants were also assigned a secondary classification.
Classification of organized (secure, avoidant, and resistant) attachment was based on Ainsworth et al.’s (1978) coding system, and classification of disorganized attachment was based on Main and Solomon’s (1990) system. Interrater reliability was obtained using two trained coders who had achieved high reliability ($r > .90$) on 30 test cases. One key coder first coded all of the videotapes for A, B, C, and D. Next, three expert coders classified a subset of the videos again for reliability, such that ultimately every Strange Situation was coded by two people. The primary coder’s inter-rater reliability with the three other coders on the 3-way classification (A, B, C categories) was $k = .88$. The reliability between the two coders for the 4-way classification (A, B, C, or D) was $k = .60$, $p < .001$. The coder trainer resolved disagreement on 15 particularly difficult cases, many of which could not be classified (called “Cannot Classify or CC”).

**Results**

**Descriptive Statistics**

The means and standard deviations for the childhood experience and caregiving scales are reported in Table 1. On the AAI, 54 fathers were classified as secure-autonomous (46%), 36 as dismissing (31%), 4 as preoccupied (3%), 17 as unresolved (14%), and 7 as cannot-classify (CC) (6%). Of the unresolved fathers, 6 had a secondary classification as secure-autonomous, 6 as dismissing, and 5 as preoccupied. The distribution of secure-autonomous and unresolved AAI classifications in this sample is similar to that found in a meta-analysis of the AAI classifications of a multi-national sample of 13 studies of fathers ($N = 439$), which found 50% secure-autonomous, 24% dismissing, 11% preoccupied, and 15% unresolved or CC fathers (Bakermans-Kranenburg & van IJzendoorn, 2009). Although the percentage of dismissing fathers is somewhat higher in our sample, it was not significantly different from the percentage of fathers found in the multi-national sample, according to a z-test for two proportions. However, the
proportion of preoccupied fathers in our sample was significantly lower than in the multi-national sample, \( z = 2.47, p < .05 \).

In the Strange Situation, 58 infants were classified as having secure attachment with father (55.2%), 12 as avoidant (11.4%), 14 as resistant (13.3%), 14 as disorganized (13.3%), and 7 as cannot-classify (CC) (6.7%). When disorganized and CC infants were placed into their best-fitting alternative category, 68 were secure (64.8%), 16 avoidant (15.0%), and 22 resistant (21%). Compared to the distribution of classifications from a meta-analysis of nearly 2000 Strange Situations from a multi-national sample of 18 studies (70% secure, 23% avoidant, and 14% resistant) (van IJzendoorn & Kroonenberg, 1988), our sample has similar proportions of secure vs. insecure infants, but a significantly lower proportion of infants classified as avoidant, \( z = 1.80, p < .05 \), and a higher proportion of those classified as resistant (\( z = 1.86, p < .05 \)). The proportion of infants classified as disorganized in our sample does not differ from the average of about 15% found in studies done in North American and Europe (Author, 2008).

Preliminary analysis was done to determine if family income level or fathers’ age was significantly related to any of the study variables: AAI classification, fathers’ caregiving quality, SSP classification, and fathers’ childhood experience rating scales from the AAI. Father income and age was not significantly correlated with any of the caregiving quality measures, nor did they differ according to AAI classifications. However, an independent samples t-test indicated that infants who were securely attached to their fathers in the SSP were significantly more likely to have older fathers (mean age = 32.2, SD = 6.96) than those who were insecurely attached (mean age = 29.0, SD = 5.25). Fathers’ age was also correlated with AAI ratings of pressure to achieve from father, \( r(115) = -.22, p < .05 \) and neglect from mother, \( r(115) = .20, p < .05 \). Income was related only to AAI ratings of pressure to achieve from mother, \( r(117) = -.29, p < .01 \), and
pressure to achieve from father, $r(117) = -0.33, p < .001$. Therefore, we controlled for fathers’ age in analyses involving secure vs. insecure SSP classification, pressure to achieve from father, and neglect from mother; and we controlled for family income in analyses involving pressure to achieve from mother and from father.

**Fathers’ AAI Classification and Caregiving Quality**

Two multivariate analyses of variance were used to examine the relation of AAI to caregiving. In both, the four dependant variables were the four caregiving scales (sensitivity, hostility, disengagement, and role-reversal), the independent variable was fathers’ AAI classifications, and the $F$ statistics and $df$ error terms were determined using Wilks’ Lambda. In the first MANOVA, AAI classifications were broken down into all 5 groups, however, Preoccupied (N = 4) and CC fathers (N = 7) were excluded from this analysis because of the small N’s for these groups. The data for all subjects were analyzed in the second MANOVA. A significant multivariate effect for AAI classification was found, $F(8, 188) = 2.20, p < .05$. Table 2 shows the univariate effects, means, and standard deviation scores. Duncan post-hoc tests revealed that secure-autonomous fathers had significantly higher sensitivity scores than did unresolved fathers, although dismissing fathers did not differ significantly from either of the other two groups. Dismissing fathers and unresolved fathers had higher hostility scores than secure-autonomous fathers. Finally, unresolved fathers had higher scores for disengagement and role-reversal compared with secure-autonomous fathers.

In the second MANOVA, secure-autonomous fathers were compared with insecure fathers (all other AAI groups, including all unresolved and CC fathers) on all measures of paternal caregiving quality. According to Hesse (2008), since CC interviews show a mix of attachment strategies, they have very low coherence and “they are necessarily defined as
insecure” (Hesse, 2008, p. 572). The multivariate effect was not significant, $F(10, 105) = 1.65$, $ns$. However, univariate analyses indicated that secure-autonomous fathers (N= 59) and insecure (N= 52) fathers differed significantly in sensitive caregiving, means = 4.65 and 4.31, $SDs = .71$ and .84, respectively, $F(1,109) = 4.89$, $p < .05$, and in hostility, means = 2.65 and 3.04, $SDs = .86$ and .97, respectively, $F(1, 109) = 4.91$, $p < .05$. In addition, secure-autonomous fathers differed marginally from insecure fathers on role-reversal, means = 2.68 and 3.02, $SDs = .92$ and 1.11, respectively, $F(1, 109) = 3.01$, $ns$. Fathers’ disengaged behavior did not differ according to whether they had a secure-autonomous vs. insecure relationship with their infant.

**Fathers’ AAI Classification and Father-Infant Attachment**

The relation of the five major AAI categories (secure-autonomous, dismissing, preoccupied, unresolved, and cannot-classify, and the five major SSP categories (secure, avoidant, resistant, disorganized, and cannot-classify) are shown in Table 3. A series of logistic regressions were run to examine whether each AAI category predicted the correspondent SSP category, after controlling for fathers’ age. In the first logistic regression, we first entered father’s age as a control, then the secure-autonomous (vs. all others) AAI classification, to predict secure (vs. all others) SSP classification. In the second logistic regression, we entered fathers’ age, then dismissing AAI (vs. all others), to predict avoidant SSP classification. In the third logistic regression, we entered fathers’ age, then preoccupied AAI (vs. all others), to predict resistant SSP classification. Finally, we entered fathers’ age, then unresolved AAI (vs. all others), to predict disorganized SSP classification. Significant results were found only for the first logistic regression. Father’s age was a significant predictor of secure SSP attachment, $B = .09$, $SE = .04$, $p < .05$, but secure AAI classification also predicted secure SSP attachment even after controlling for father’s age, $B = -.76$, $SE = .44$, $p < .05$. 
Because relations were found only between secure versus insecure AAI and SSP attachment, we were only able to examine our first mediational hypothesis, i.e., that fathers’ caregiving quality would mediate the relation between fathers’ secure-autonomous attachment and secure father-infant attachment. To examine this hypothesis, we first needed to examine whether fathers’ caregiving quality predicted secure versus insecure SSP attachment. A series of logistic regressions was conducted in which differences between secure versus insecure SSP classifications were examined each of the four caregiving quality scales (sensitive, hostile, disengaged, and role-reversed), after controlling for fathers’ age. Again, all father-infant dyads classified as disorganized and cannot-classify were designated as insecure. Results indicted that only fathers’ sensitive caregiving significantly predicted secure SSP attachment ($B = .58$, $SE = .27$, $p < .05$) after controlling for fathers’ age.

To examine whether fathers’ sensitive caregiving mediates the relation between fathers’ secure-autonomous AAI classifications and father-infant SSP security, we followed the steps recommended by Baron and Kenny (1986). Having already determined that secure AAI classification predicts secure SSP classification even after controlling for father’s age, we next used an OLS regression to determine that fathers’ secure AAI classification also predicts the mediator variable, sensitive caregiving, $\beta = .33$, $SE = .15$, $p < .05$. Finally, we conducted a logistic regression with the predictor variable (secure-autonomous versus insecure AAI classification) and the mediator (sensitive caregiving) as independent variables and secure (versus insecure) SSP attachment as the dependent variable. If the relation between the predictor variable and dependent variable significantly declines when the mediator is included in the regression, then the mediational hypothesis is supported. The association between fathers’ secure-autonomous AAI classification and father-infant secure attachment did decline to
nonsignificance when sensitive caregiving was entered as a mediator, $\beta = -.69, SE = .43, p = .11$, supporting the hypothesis that the relation between fathers’ secure-autonomous AAI status and father-infant secure attachment is mediated by father’s sensitive caregiving.

**Fathers’ Childhood Experiences and Caregiving Quality**

We first examined the relation of fathers’ caregiving to their ratings for childhood experiences (mother and father loving, mother and father rejecting, mother and father involving, mother and father neglecting, and mother and father pressure to achieve) using first-order bivariate correlations. Few significant relations were found. Pressure to achieve from mothers was negatively related to fathers’ sensitivity, $r (111) = -.23, p < .05$, and positively related to their hostility, $r(111) = .37, p < .001$, and role-reversed caregiving, $r (111) = .28, p < .01$. Pressure to achieve from fathers was also negatively related to fathers’ sensitivity, $r (111) = -.23, p < .05$, and negatively related to their hostility, $r(111) = .20, p < .05$). Surprisingly, neglect from mothers was positively related with fathers’ sensitivity, $r (111) = .28, p < .01$, and negatively related to hostility, $r(111) = -.23, p < .05$, and role-reversed caregiving, $r (111) = -.26, p < .01$. That is, fathers who recalled their mothers as more neglecting were likely to be more sensitive and less hostile and role-reversing with their infants. No other childhood experience scales were related to caregiving, and none of the childhood experience scales were correlated with father’s emotional disengagement or FR caregiving behaviors.

**Unique predictors of fathers’ caregiving quality**

To examine whether fathers’ recollections of childhood experiences predicted their caregiving quality independent of their attachment representations, and to control for shared variance between all of the significant predictors of each type of caregiving, multiple regressions were performed in which all significant predictors of each caregiving quality measure were
entered simultaneously to predict that type of caregiving quality. Separate regressions were run for each of the three caregiving scales (sensitive, hostile, and role-reversed caregiving) that were significantly correlated with one or more child experience scales. In each of the three regressions, fathers’ age and family income were entered first to control for these covariates. As shown in Table 4, after simultaneously controlling for all other predictors of father’s sensitive caregiving, fathers’ secure attachment classification, as well as fathers’ recollections of high neglect from mother, were still significant predictors of sensitive caregiving. In addition, both fathers’ hostile caregiving and fathers’ role-reversed caregiving were still significantly predicted by unresolved attachment classification, mothers’ high pressure to achieve and mothers’ low neglect after controlling for all predictors simultaneously.

Discussion

The aim of this study was to examine how fathers’ attachment representations and their recollections of childhood experiences relate to specific aspects of their caregiving and to infant-father attachment. Fathers’ secure-autonomous adult attachment classification was related to higher sensitive and lower hostile caregiving, dismissing and unresolved adult attachment classifications were related to higher hostility, and unresolved adult attachment classification was related to higher disengaged and role-reversed caregiving. These results support other studies that found a relation between fathers’ adult attachment representations and caregiving quality (van IJzendoorn, Kranenburg, Zwart-Woudstra, Van Buschback, & Lambermon, 1991; Cohn, et al., 1992), and also provide some support for the idea that different insecure paternal states of mind are related to different styles of insensitive caregiving.

In general, our findings show similar relations between fathers’ adult attachment representations, caregiving, and SSP attachment to those that have been found for mothers. In
particular, secure-autonomous attachment was found to predict fathers’ sensitive caregiving as well as secure father-infant attachment in the SSP, supporting other research establishing a link between adult attachment security and infant attachment security for mothers (De Wolff & van IJzendoorn, 1997) and for fathers (Cox et al., 1992; Goossens & van IJzendoorn, 1990). In addition, we found that dismissing fathers were more likely than secure-autonomous fathers to show hostile, rejecting patterns of caregiving, similar to the caregiving patterns found for mothers who have avoidant attachments with their infants (who have found to be more likely to be dismissing) (Egeland & Farber, 1984; Belsky, Rovine & Taylor, 1984).

We also found that the relation between fathers’ internal working models of attachment and father-infant SSP classifications was mediated by fathers’ sensitive caregiving, as has been found in research with mothers (van IJzendoorn, 1995). However, we did not find that specific types of insecure attachment representations and insensitive caregiving were related to specific types of insecure infant attachment. Even though different types of insecure AAI classifications were related to specific types of insensitive caregiving to some extent, we found no evidence that dismissing fathers were more likely to have avoidantly attached infants or that unresolved fathers were more likely to have disorganized infants, as has been found for mothers. Rather, for fathers, insecure AAI classifications were related to insecure SSP classifications, collapsed over insecure types.

One reason for the lack of specificity in the relation of particular types of fathers’ insecure working models to particular types of insecure father-infant attachment may be due to the fact that in this sample, there were only four preoccupied fathers, so the relation of fathers’ preoccupied attachment representations to their caregiving and SSP attachment could not be adequately assessed. In addition, we found that both dismissing and unresolved attachment
predicted fathers’ hostile caregiving. Thus, it may be that for fathers, the caregiving patterns of dismissing and unresolved fathers are somewhat similar, except that unresolved fathers seem to have even more negative and problematic caregiving patterns than dismissing fathers, since they were also more likely than other fathers to be role-reversing and emotionally disengaged as well as more hostile. Also, when both unresolved and dismissing AAI classification were simultaneously entered into a regression to predict hostile caregiving, only unresolved caregiving remained a significant predictor. Thus, the finding that fathers’ insecure representations of attachment predict insensitive caregiving in general, which in turn predicts insecure father-infant SSP classification, may be driven largely by the unresolved fathers. Our findings also indicate that having an unresolved representation of attachment may be particularly detrimental for father’s caregiving quality, perhaps more detrimental than other types of insecure attachment.

One major difference in the relation of adult attachment, caregiving, and infant-parent attachment for fathers versus mothers is that for mothers, unresolved AAI classification predicted infants’ disorganized attachment, and the link was mediated by mothers’ frightening behaviors, in our sample (Author, ) as well as in other samples (Abrams et al., 2006; Schuengal et al., 1999). In contrast, in previous research with the present sample, we found that for fathers, unresolved AAI classification was not related to frightening behavior with infants or to infants’ disorganized attachment (Author, 2010). Interestingly, the unresolved mothers in our sample have similar levels of frightening behavior as the unresolved fathers (Author, 2010). However, unlike mothers, fathers who were not unresolved were just as likely to engage in frightening behavior as unresolved fathers, so that fathers as a group had significantly higher mean levels of frightening behavior than did mothers (Author, 2010). We found that many fathers, secure as well as insecure and unresolved, engaged in frightening behaviors with their infants such as
grabbing them from behind without warning and looming into their faces with bared teeth and roaring. However, we found also secure-autonomous fathers were more likely than insecure fathers to be sensitive and frightening at the same time (Author, 2010). That is, if the infant became upset by the frightening behavior, secure-autonomous fathers were more likely to stop and comfort the infant. In contrast, insecure and unresolved fathers were more likely to persist in the frightening behavior. It may be that fathers who engage in highly stimulating during play (even to the point of seeming frightening), but remain sensitive, may help their children learn to regulate their own emotions. In support of this idea, we found that the interaction between frightening behavior and sensitive caregiving predicted children’s emotion regulation at 24 months, such that children whose fathers were both frightening and insensitive with them during infancy showed the highest emotional under-regulation at 24 months, whereas those whose fathers were frightening and sensitive had the lowest mean levels of under-regulation (Author, 2010).

In the present study, we found that instead of showing more frightening behaviors, unresolved fathers showed significantly more early signs of role-reversed caregiving and emotional disengagement compared to fathers who were not unresolved, and they were less sensitive as well. It may be that fathers with unresolved trauma withdraw and abandon the parenting role when feeling overwhelmed by trauma, thus displaying emotional disengagement or role-reversed caregiving. Since mothers are usually the primary caregivers, they may be more likely to feel that they cannot disengage from the caregiving role. When feeling overwhelmed by trauma, they may thus be more likely to remain engaged and nonconsciously lapse into a dissociated state, showing frightened/frightening behavior as a result instead of simply withdrawing from the parenting role.
Although fathers’ adult attachment representations predicted their caregiving better than did their recollections of childhood experiences, recollections of maternal and paternal pressure to achieve and maternal neglect did relate to fathers’ caregiving independent of their AAI classifications. Specifically, recollection of higher maternal and paternal pressure to achieve predicted lower sensitivity and greater hostility, and higher maternal pressure to achieve predicted greater role-reversed caregiving. Perhaps fathers who were under pressure to perform and achieve as children were socialized to be more career-oriented in their adult life. Therefore, they may feel resentment when they do spend time with their child and may not be able to sensitively respond to their child’s needs because they are used to focusing on their own needs. Another possibility is that fathers may transfer the pressure that they felt to achieve to their expectations for their own child, expecting even their young infants to perform up to a certain standard (i.e., becoming upset when the baby makes a mess while eating or fails to put a shape into the correct place on a toy). Little empirical research has examined pressure to achieve. One study, however, did find that adolescents who feel unduly pressured to achieve and do well in school are more likely to report deviant activity, feel incapable of reaching goals, and have low self esteem compared to those who do not feel such pressure (Eskilson, Wiley, Muehlbauer, & Dodder, 1986). More research is needed examining pressure to achieve and how it relates to fathering and child outcomes.

Surprisingly, fathers’ recollections of neglect from their mothers in childhood predicted some aspects of positive caregiving, including higher sensitivity, lower hostility, and lower role-reversal. This finding seems contradictory as most research on early neglect suggests negative outcomes (Loos & Alexander, 1997; van der Kolk, Perry & Herman, 1991). Thus, the coding for mother neglect was checked carefully for errors. To better understand this finding, the interview
transcripts for fathers who reported high mother neglect were examined. Most of these fathers indicated that they had to be responsible for their own care and the care of younger siblings at a young age. Thus, perhaps these fathers learn appropriate caregiving skills that may carry over in to their interactions with their own children. Because boys typically have less caregiving experience compared to girls, these early caregiving experiences may be particularly valuable for future fathers, even if obtained within a context of perceived neglect. Still, sensitive caregiving would not be expected unless these men were able to transform their early negative working models and become secure as adults. However, we found no relationship between fathers’ ratings of high maternal neglect and their AAI categorization.

It is also unknown if the level of neglect reported by fathers in this sample was comparable to those in other studies finding strong links between early neglect and negative outcomes. In our sample, only two fathers were rated above the midpoint of 5 on a 9-point scales, and another 8 subjects scored a 5. The two fathers judged to have experienced high neglect both experienced maternal abandonment at times during childhood. One of them was below average in sensitivity and was classified as CC and unresolved on the AAI, as might be expected. However, the other father who experienced high neglect was more than one standard deviation above the mean on sensitivity and was secure on the AAI. This subject was judged to have had a very loving father who cared for him after his mother abandoned him, as well as a loving stepmother. The eight fathers who scored 5 on maternal neglect generally reported that their mothers were very busy out of necessity, i.e., one reported that his mother was a single mother who held two jobs. These were the fathers who reported often caring for younger siblings. Thus, in our sample, factors other than the actual neglect from mothers, such as early caregiving experiences or loving care from other attachment figures, may have been driving this
finding. Clearly, future research on the role of childhood experiences of neglect, levels of neglect, and experiences that may enable to overcome the effects of early neglect, is needed.

The findings of this study, indicating that different insecure groups show different patterns of negative caregiving, demonstrate the importance of examining attachment subgroups separately. Perhaps the most significant limitation of this study is the relatively small sample size, which prevented us from examining the caregiving and attachment patterns of preoccupied fathers. Future research should also examine the specific caregiving styles of underrepresented insecure subgroups, perhaps using meta-analytic methods. These finding also need to be extended to more diverse samples of fathers, including low-SES fathers, fathers of diverse cultural and ethnic backgrounds, and fathers who are primary caregivers or single fathers.

To summarize, this study contributes to the literature on the relation between fathers’ representations of attachment, recollections of childhood experiences, caregiving styles and infant-father attachment. These relations, in general, were found to be similar to those that have been found for mothers. However, unresolved mothers have been found to show frightening patterns of caregiving, whereas we found that unresolved fathers were more likely to show role-reversed and emotionally disengaged patterns of care. This study revealed that while a few types of childhood experiences were related to their caregiving, fathers’ attachment representations were more strongly related to their caregiving. Thus, it is possible for fathers to have had negative childhood experiences and still parent in sensitive and loving ways with their own children if they have open, flexible and secure attachment representations.

References


Table 1

*Childhood Experience Scales and Caregiving Scales: Descriptive Statistics*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Childhood Experiences Scales</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother Loving</td>
<td>4.10</td>
<td>1.56</td>
</tr>
<tr>
<td>Father Loving</td>
<td>3.41</td>
<td>1.60</td>
</tr>
<tr>
<td>Father Rejecting</td>
<td>5.11</td>
<td>1.48</td>
</tr>
<tr>
<td>Mother Involving</td>
<td>2.51</td>
<td>1.71</td>
</tr>
<tr>
<td>Mother Pressure to Achieve</td>
<td>1.55</td>
<td>1.15</td>
</tr>
<tr>
<td>Father Pressure to Achieve</td>
<td>1.86</td>
<td>1.37</td>
</tr>
<tr>
<td>Mother Neglect</td>
<td>1.70</td>
<td>1.46</td>
</tr>
<tr>
<td>Father Neglect</td>
<td>2.40</td>
<td>2.11</td>
</tr>
</tbody>
</table>

* *Caregiving Scales*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitive</td>
<td>4.44</td>
<td>.83</td>
</tr>
<tr>
<td>Hostile</td>
<td>2.89</td>
<td>.94</td>
</tr>
<tr>
<td>Role Reversed</td>
<td>2.92</td>
<td>1.05</td>
</tr>
<tr>
<td>Disengaged</td>
<td>3.60</td>
<td>.61</td>
</tr>
<tr>
<td>Frightening</td>
<td>4.05</td>
<td>2.30</td>
</tr>
</tbody>
</table>
* n = 118
** n = 119
Table 2.

*MANOVAs for Caregiving Scales by Adult Attachment Classification*

<table>
<thead>
<tr>
<th></th>
<th>Secure-Autonomous (F) (N = 51)</th>
<th>Dismissing (D) (N = 32)</th>
<th>Unresolved (U) (N = 17)</th>
<th>Preoccupied* (E) (N = 4)</th>
<th>Cannot-Classify* (CC) (N = 7)</th>
<th>Univariate F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td></td>
</tr>
<tr>
<td>Sensitive</td>
<td>4.70 (.69)</td>
<td>4.40 (.91)</td>
<td>3.99 (.63)</td>
<td>4.30 (.80)</td>
<td>4.6 (.98)</td>
<td>5.40*</td>
</tr>
<tr>
<td>Hostile</td>
<td>2.63 (.85)</td>
<td>3.03 (1.10)</td>
<td>3.22 (.66)</td>
<td>3.16 (.80)</td>
<td>2.64 (1.18)</td>
<td>3.67*</td>
</tr>
<tr>
<td>Disengaged</td>
<td>3.51 (.53)</td>
<td>3.54 (.72)</td>
<td>3.94 (.53)</td>
<td>3.61 (.42)</td>
<td>3.59 (.79)</td>
<td>3.40*</td>
</tr>
<tr>
<td>Role-Reversed</td>
<td>2.64 (.89)</td>
<td>2.91 (1.17)</td>
<td>3.41 (1.02)</td>
<td>3.26 (.72)</td>
<td>2.62 (.93)</td>
<td>3.73*</td>
</tr>
<tr>
<td>Frightening</td>
<td>4.06 (2.12)</td>
<td>3.53 (2.17)</td>
<td>4.18 (2.10)</td>
<td>6.5 (2.08)</td>
<td>3.86 (2.96)</td>
<td>.76</td>
</tr>
</tbody>
</table>

*P < .05

* Not included in this MANOVA due to small Ns

Note. Post-hoc tests indicated that the Secure-Autonomous and Unresolved groups differed significantly on sensitivity, hostility, disengagement, and role-reversal. Also, the Secure-Autonomous and Dismissing groups differed significantly in hostility.
Table 3.

Chi-square: Relation of father AAI classifications and father-infant SSP classifications collapsed into secure versus insecure.

<table>
<thead>
<tr>
<th>Father-Infant Strange Situation Classifications*</th>
<th>Secure</th>
<th>Insecure</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Father AAI Classifications</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insecure</td>
<td>23</td>
<td>29</td>
<td>52</td>
</tr>
<tr>
<td>Actual frequencies</td>
<td>27.9</td>
<td>24.1</td>
<td>32</td>
</tr>
<tr>
<td>Expected frequencies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual frequencies</td>
<td>29</td>
<td>16</td>
<td>45</td>
</tr>
<tr>
<td>Expected frequencies</td>
<td>24.1</td>
<td>20.9</td>
<td>64</td>
</tr>
<tr>
<td>Total</td>
<td>52</td>
<td>45</td>
<td>97</td>
</tr>
</tbody>
</table>

*Note. All unresolved, disorganized, and cannot-classify cases counted as insecure.
Table 4.

*Multiple Regressions Examining Unique Variance Accounted for by Predictors of Fathers’ Caregiving Ratings*

<table>
<thead>
<tr>
<th>Predictors of Fathers’ Sensitive Caregiving:</th>
<th>$B$</th>
<th>SE $B$</th>
<th>$β$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure vs. Insecure AAI Classification</td>
<td>.30</td>
<td>.14</td>
<td>.19*</td>
</tr>
<tr>
<td>Mother Pressure to Achieve</td>
<td>-.09</td>
<td>.08</td>
<td>-.13</td>
</tr>
<tr>
<td>Father Pressure to Achieve</td>
<td>-.08</td>
<td>.06</td>
<td>-.13</td>
</tr>
<tr>
<td>Mother Neglect</td>
<td>.15</td>
<td>.05</td>
<td>.28**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Predictors of Fathers’ Hostile Caregiving:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismissing vs. not-Dismissing AAI Classification</td>
<td>.19</td>
<td>.17</td>
<td>.10</td>
</tr>
<tr>
<td>Unresolved vs. not Unresolved AAI Classification</td>
<td>.44</td>
<td>.22</td>
<td>.17*</td>
</tr>
<tr>
<td>Father Pressure to Achieve</td>
<td>-.03</td>
<td>.07</td>
<td>-.05</td>
</tr>
<tr>
<td>Mother Pressure to Achieve</td>
<td>.31</td>
<td>.09</td>
<td>.38**</td>
</tr>
<tr>
<td>Mother Neglect</td>
<td>-.14</td>
<td>.06</td>
<td>-.22**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Predictors of Fathers’ Role-Reversed Caregiving:</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unresolved vs. not Unresolved AAI Classification</td>
<td>.66</td>
<td>.24</td>
<td>.24**</td>
</tr>
<tr>
<td>Mother Pressure to Achieve</td>
<td>.23</td>
<td>.08</td>
<td>.27**</td>
</tr>
<tr>
<td>Mother Neglect</td>
<td>-.19</td>
<td>.06</td>
<td>-.27**</td>
</tr>
</tbody>
</table>
*p < .05, **p < .01