Children's emotion understanding in relation to attachment to mother and father

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Abstract

Although attachment plays a key role in children's socioemotional development, little attention has been paid to the role of children's attachment to their father. This study examined whether insecure attachment to each parent was associated with reduced emotion understanding in children and whether children showed consistent attachments to their mother and father. We measured children's attachment to each parent using the Manchester Child Attachment Story Task and child emotion understanding using the Test of Emotion Comprehension (children's M_{age} = 5.64 years, SD = 0.84). The results indicated that insecure father-child attachment and insecure mother-child attachment were each associated with lower emotion understanding in children after controlling for parent's depressive symptoms and children's age. There was significant concordance of child attachment to mother and father. The findings provide support for convergence of children's attachment across parents and suggest that father-child attachment is an important factor to consider when examining children's emotion understanding.

Introduction

Attachment refers to an emotional bond between a child and his/her parent or caregiver (Ainsworth, 1989). Bowlby's monotropy theory proposed that children have an innate need to form an emotional bond to their primary caregiver, usually the mother but he later argued that children can form attachments with several figures that can be hierarchically organised (Bowlby, 1958, 1969/1982; Bretherton, 2010; Howes & Spieker, 2008). While it is now recognised that children build attachment relationships with their mother and father (Bretherton, 2010; van IJzendoorn, Sagi, & Lambermon, 1992), only a few studies have considered the role of father-child attachment in predicting children's outcomes (Brumarie & Kerns, 2010; Fearon, Bakermans-Kranenburg, van IJzendoorn, Lapsley, & Roisman, 2010; Grossmann, Grossmann, Fremmer-Bombik, Kindler, & Scheuerer-Englisch 2002; Grosssmann, Grossmann, Kindler, & Zimmermann, 2008). However, consideration of children's attachment to fathers is particularly important given accumulating evidence showing that fathers influence their children's development significantly and that the number of hours fathers spend with their children has increased in past decades (Lamb, 2004; Ramchandani, & Psychogiou, 2009; Wood, & Repetti, 2004; Yeung, Sandberg, Davis-Kean, & Hofferth, 2001). The limited number of existing studies considering children's attachment to mother and father show that father-child attachment is linked to a wide range of outcomes among infants (Main & Weston, 1981), preschool children (Pinto, Veríssimo, Gatinho, Santos, & Vaughn, 2015; Verschueren & Marcoen 1999), school-aged children (Boldt, Kochanska, Grekin, & Brock, 2016; Boldt, Kochanska, Yoon, & Koenig Nordling, 2014) and adolescents (Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Lieberman, Doyle, & Markiewicz, 1999).

The construct of emotion competence involves interrelated domains including the ability to experience and express emotions, to distinguish one's own and other's emotions, to manage emotions, and to understand the implications of emotions (Saarni, 1999; Sprung, Münch, Harris, Ebesutani, & Hofmann, 2015). Emotion competence has been found to correlate with decreased emotional symptoms over time, better social behaviour and higher academic performance in children (Denham *et al.,* 2003; Izard *et al.,* 2001; Rieffe & De Rooij, 2012). Accumulating evidence provides support for an association between child-mother attachment and domains of emotion competence. In a sample of 40 children aged from two to six years, children's security of attachment to their mother predicted better understanding of negative emotions

(Laible & Thompson, 1998). In another study, security of attachment to mother among three to six year old children was associated with emotion understanding and this link was evident in tasks of emotion understanding using both attachment-related and attachment-neutral content (De Rosnay & Harris, 2002). Moreover, the significant link between child-mother attachment and emotion competence has been found in adopted children of preschool age (Barone & Lionetti, 2012). It appears therefore that there is a significant link between attachment to mother and better understanding of emotions.

Studies examining children's emotion competence have overlooked the role of father-child attachment. As an exception, Steele, Steele, Croft, and Fonagy (1999) examined both mother-child and father-child attachment and found that children's security of attachment to their mother predicted children's better understanding of mixed emotions at six years, but children's security of attachment to their father did not contribute additionally to children's emotion understanding. However, this study used a low risk sample and the attachment literature indicates that insecurity of attachment might be linked to children's adverse outcomes when children experience other risk factors (Brumarie & Kerns, 2010). It is now well established that depression in mothers and fathers puts their children at risk for increased emotional problems (Goodman *et al.,* 2011; Ramchandani *et al.,* 2005). Raikes and Thompson (2006) found that increased depressive symptoms in mothers predicted reduced emotion understanding in children at age three. However, to date no study has examined associations between children's attachment to mother and father and their emotion understanding when controlling for parent's depressive symptoms. This study aimed to address this gap. Therefore, the first aim of this study was to examine whether children with insecure father-child and mother-child attachment have lower levels of emotion understanding after controlling for parent's depressive symptoms and children's age. We controlled for child age in light of children's increasing ability to understand emotions with age (Pons, Harris, & De Rosnay, 2004). In addition, we explored whether children with insecure attachment to both parents would score lower on emotion understanding than children with secure attachment to both or one parent only.

Research considering both mother-child and father-child attachment has often looked at similarities or differences in children's attachment across parents. It is argued that repeated early parent-child interactions lead to the formation of attachment relationships and subsequently to "internal working models" or

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attachment representations that are still developing during the preschool years (Bowlby, 1969/1982; Howes & Spieker, 2008). Studies investigating concordance of attachment across parents have yielded some inconclusive findings. Two meta-analytic studies found significant but modest associations between mother-infant and father-infant attachment (Fox, Kimmerly, & Schafer, 1991; van Ijzendoorn & de Wolff, 1997). Van Ijzendoorn and de Wolff (1997) used data from 950 families and found that 62% ($n = 588$) of infants had the same attachment to both parents. Using the Manchester Child Attachment Story Task which assesses attachment by asking children to play out stories with dolls (MCAST; Green, Stanley, Smith, & Goldwyn, 2000) Di Folco *et al.* (2017) found that 72.6% of six year old children had the same attachment representation to both parents. However, another study that measured attachment with a story completion task in five year old children found that only 59% of children had the same attachment with both parents (Verschueren & Marcoen, 1999). The authors concluded that, although there is a positive association between attachment to mother and father, a proportion of children have different attachment across parents. Therefore, the question of whether children have similar or different attachment across parents needs further investigation. A third aim of this study was to examine concordance of children's attachment to mother and father.

In summary, we made the following predictions:

1. Children with insecure attachment to either parent would score lower on an emotional understanding task after controlling for parent's depressive symptoms and child's age. Due to the relatively limited sample size, we modelled child's attachment to mother and father separately (instead of entering father-child and mother-child attachment as separate predictors in one model).

2. For the number of children with attachment data available relating to both mothers and fathers, we predicted that children with insecure attachment to both parents would score lower on emotion understanding than children with secure attachment to both or one parent only.

3. There would be concordance in children's attachment to mother and father. This prediction was based on previous studies which have found children's attachments across parents to be similar (Di Folco *et al.,* 2017).

Method

Participants and recruitment

The sample consisted of families who participated in a longitudinal study that examined associations between parental depression and their children's outcomes. Although the study's main interest concerned fathers, their partners were also invited to take part. Fathers were recruited via community centres, nurseries and general practices. We sent out 1277 information leaflets and the Patient Health Questionnaire (PHQ-9; Spitzer *et al.,* 1999) to screen for depressive symptoms. Out of the 544 fathers who completed the PHQ-9, 319 showed interest in taking part in the study. Of those 319 fathers, 39 were excluded because they did not meet the study's inclusion criteria, 68 refused to participate after receiving further information about the study, and 52 fathers were not contactable. Inclusion criteria were biological relationship between parents and child, children's age between 3-5 years, adequate English language, and parent's willingness to facilitate a home visit. Exclusion criteria were delayed cognitive and language development, and medical and neurological problems among children. Ethical approval for the study was granted by relevant National Health Service Ethics Committees (REC reference number: 11/H0102/6).

A trained researcher saw families at two separate time points. One hundred and sixty families participated at the first assessment (Time 1) and 106 families agreed to be followed up (66% response rate; Time 2). A trained researcher asked each parent independently questions about having a Major Depressive Episode (current depression and a history of depression) using the Structural Clinical Interview for DSM-IV (SCID; Gorman *et al.,* 2004) which has been found to have satisfactory reliability, sensitivity and specificity (Basco *et al.,* 2000; Lobbestael, Leurgans, & Arntz, 2010). At the first assessment, 40 (25%) fathers had a Major Depressive Episode according to the SCID. Out of the 40 depressed fathers, seven had current depression and 33 had a history of depression. Fifty mothers (34%) had a history of depression and none were currently depressed. To increase the sample size for the attachment data, nine fathers were added in the second assessment. All nine fathers met criteria for a Major Depressive Episode (six had a history of depression and three had current depression). Two partners of those nine fathers did not take part in the study. Three mothers had a history of depression and four were never depressed.

We measured children's attachment to each parent at the second time point (Time 2). Children's mean age was $M = 5.64$ years ($SD = 0.84$). Data on father-child attachment was available for 105 children (47 boys) while data on mother-child attachment was available for 81 children (38 boys). There were 74 children for whom we had data on both mother-child and father-child attachment. Fathers' and mothers' mean age at the second assessment was 40.80 ($SD = 5.24$) and 38.22 years ($SD = 4.84$) respectively. Sixty-two percent of fathers and 68% of mothers had a degree or postgraduate degree. The majority of parents (94%) were married or cohabiting. For the 74 families for whom we had data on both mother-child attachment and father-child attachment, 94% ($n = 68$) of parents were married or cohabitating and 6% ($n = 4$) were singles while data on marital status was missing for two families. Figure 1 presents the number of mothers and fathers at Times 1 and 2 and also the number of parents with complete attachment data.

Measures

Parent-child attachment. We used the Manchester Child Attachment Story Task (MCAST; Green *et al.,* 2000) to assess children's representations of their attachment relationship with their mother and father respectively. The MCAST has been used in both clinical and community populations of children from four to eight years of age (Futh, O'Connor, Matias, Green, & Scott, 2008; Green, Stanley, & Peters, 2007). A trained researcher presented the child with a doll house and doll figures, then explained to the child that they would do some story telling. The researcher started telling the story and the child was asked to play out the completion of the story with dolls. The MCAST began with a breakfast scenario that aimed to familiarise the child with the testing procedure, followed by four scenarios (having a nightmare, abdominal pain, knee injury, and getting lost in a shopping centre) that aimed to elicit attachment related arousal and mild distress. After the child completed the story, the researcher asked a number of questions including "Can you tell me how the child/parent doll is feeling now?", and "Can you tell me what the child/parent doll is thinking now?" (Green *et al.,* 2000; pp. 51-52). After the child completed all scenarios, she/he was asked to play freely about a pleasant family activity. The children's responses were rated on a 9-point scale (from 1 = *little evidence of relevant category* to 9 = *high evidence of relevant category*) for child and parent proximity seeking, child self-care, role reversal, parent-child conflict, parent's responsiveness, sensitivity, warmth,

intrusiveness, disengagement and resolution of the distressing situation. The coding of these responses established an interpersonal attachment strategy for each scenario and were then combined to establish an overall attachment classification: 1) secure (the child sought proximity and resolved distress), 2) insecure-avoidant (the child avoided contact with the parent and used self-care), 3) insecure-ambivalent (the child's distress was not resolved or escalated), and 4) disorganised (child used multiple, contradictory strategies or lacked a strategy). Green *et al.* (2000) reported satisfactory content validity, stability and interrater reliability for the secure versus insecure attachment classification ($\kappa = .88$). Another study found that disorganised attachment was associated with increased behavioural problems as rated by teachers in a community sample of school-age children (Goldwyn, Stanley, Smith, & Green, 2000).

In this study a trained researcher tested each child individually in a quiet room at Time 2. Due to the study's main focus on fathers, children's attachment to their father was assessed first, followed by assessment of the child's attachment to their mother, with approximately one month gap between the two assessments. Each MCAST session was video-recorded and coded later. All data was coded by the third author and 40 MCAST videos (20 mother-child attachment and 20 father-child attachment) were coded by the fourth author for reliability purposes. Both authors were trained in coding procedures and had achieved gold standard reliability. Inter-rater agreement was high for mother-child attachment, $\kappa = .90$, for secure vs insecure attachment classification, and $k = .84$, for secure, insecure-avoidant, insecure-ambivalent and disorganised attachment classification. The inter-agreement reliability was satisfactory for father-child attachment, $\kappa = .70$, for secure vs insecure attachment; and $k = .69$, for secure, insecure-avoidant, insecure-ambivalent and disorganised attachment. Both coders were both blind to family characteristics.

Children's emotion understanding. We used The Test of Emotion Comprehension (TEC; Pons & Harris, 2000) to assess children's emotion understanding. The TEC has been used in children between three to eleven years of age (Pons *et al.,* 2004). It involves an A4 book with versions for boys and girls. The upper part of each page portrays a cartoon scenario and the lower part portrays four facial expressions. A researcher reads the scenario to the child who then asked to select one of the four facial expressions that matches the emotion of the protagonist. The TEC has nine subtests, presented to the child in the same order

assessing the following components: The "*external level*" concerns children's understanding of the causes of emotions, the impact of reminders (defined as an event or occasion that can "reactivate" an emotion) and children's ability to recognise emotional expressions. The "*mental level*" concerns children's understanding of desires, beliefs and hidden emotions and the "*reflective level*" concerns children's understanding of emotion management, emotions with regard to moral issues and mixed emotions. The child receives one point for every correct answer. We created a total score of emotion understanding by summing scores across all 9 subtests. Scores ranged from 0 to 9 with higher scores indicating better emotion understanding. An intervention that aimed to increase children's emotion understanding found significant correlations in children's emotion understanding before and after the intervention in both the experimental ($r = .68$) and control group ($r = .84$; Pons, Harris, & Doudin, 2002). The TEC has also been found to detect changes in children's emotion understanding across different age groups (Pons *et al.,* 2004).

Parents' depressive symptoms. We measured parent's depressive symptoms using the Patient Health Questionnaire (PHQ-9; Spitzer *et al.,* 1999). The PHQ-9 consists of 9 items, each rated on a 4-point scale ranging from 0 = *Not at all* to 3 = *Nearly every day.* Higher scores indicate more severe depressive symptoms and correlate with worse outcomes including more impairment, health care use and disability days (PHQ-9; Spitzer *et al.,* 1999). Each parent completed independently the PHQ-9 at two separate time points. In this study we used parents' scores on the PHQ-9 at Time 2. Mothers' depressive symptoms correlated with fathers' depressive symptoms at Time 2 ($r = .24$, $p < .05$).

Covariates/confounders

Parent's depressive symptoms and child's age were identified as potential covariates/confounders from existing studies (Goodman *et al.,* 2011; Pons *et al.,* 2004; Raikes & Thompson, 2006; Ramchandani *et al.,* 2005).

Statistical analysis

We first created a binary variable for father-child attachment as a secure versus insecure (insecure-avoidant, insecure-ambivalent, and disorganised) attachment classification (coded as 0 = Insecure; 1 = Secure). Similarly, we created a binary variable for mother-child attachment (coded as 0 = Insecure; 1 = Secure). We used Pearson's correlations to test associations among study variables, followed by hierarchical linear regressions to test the relationship between child's attachment to either parent (predictor variable) and emotion understanding (outcome variable). Covariates included parent's depressive symptoms and child's age. These variables were entered at step 1. Child's attachment to either parent was entered at step 2. Separate regression analyses were conducted for mothers and fathers. Analysis of variance was used to examine if children with insecure attachment to both parents would score lower on emotion understanding compared to children with secure attachment to both or one parent only. We used a McNemar test to examine concordance for father-child and mother-child attachment.

Results

Table 1 presents the frequency distribution of father-child and mother-child attachment classifications for the whole sample, and separately for boys and girls.

[Insert Table 1 here]

Table 2 presents correlations among study variables. Children's emotion understanding was positively associated with secure father-child attachment, $r(99) = .30$, $p < .01$, and secure mother-child attachment, $r(75) = .32$, $p < .01$. Children's age was correlated with better emotion understanding, $r(107) = .53$, $p < .001$. Children's gender was associated with father-child attachment, $r(103) = -.20$, $p < .05$.

[Insert Table 2 here]

A chi-square test showed a significant difference in father-child attachment between boys and girls, $X^2(1) = 4.02$, $p < .05$. Boys were more likely to be insecurely attached to their fathers compared to girls (20 insecure boys versus 14 insecure girls). There was no significant difference in mother-child attachment classifications between boys and girls, $X^2(1) = 1.39$, $p = .24$.

Table 3 presents the means and standard deviations for children's emotion understanding among father-child and mother-child attachment classifications for the whole sample, and separately for boys and girls.

[Insert Table 3 here]

We then used hierarchical linear regression to examine the associations between parent-child attachment and children's emotion understanding after controlling for confounding variables. Parent's depressive symptoms and child's age were entered at step 1 and parent-child attachment was entered at step 2. Separate regression models were run for mothers and fathers. As shown in Table 4, there was a significant positive association between secure father-child attachment and children's emotion understanding after controlling for father's depressive symptoms and child's age. Father-child attachment explained an additional 5% of variance in emotion understanding at the second step. In this model, child's age was also significantly associated with emotion understanding, but father's depressive symptoms were not. Table 4 also shows a significant positive association between secure mother-child attachment and child's emotion understanding, explaining 6% of variance in emotion understanding after controlling for mother's depressive symptoms and child's age. In this model, child's age was the only other predictor associated with child's emotional understanding.

[Insert Table 4 here]

Table 5 presents the frequency distribution of attachment across parents where data were available for both mother-child and father-child attachment with means and standard deviations for children's emotion understanding among these attachment classifications. A McNemar test showed that the positive correlation between the child's attachment to their mother and father was significant ($X^2 = 14.97$, $p < .01$). In total, 71.6% ($n = 53$) children had the same attachment classification across parents; 47.3% ($n = 35$) of children were securely attached to both parents and 24.3% ($n = 18$) were insecurely attached to both parents.

Given the small number of children with secure attachment to mother and insecure attachment to father ($n = 4$) we created a category with insecure attachment to one parent only ($n = 21$). A planned contrast comparing scores on emotion understanding for the group with insecure attachment to both parents to the group with secure attachment to one or both parents showed no significant difference, $p = .27$.

Discussion

This study examined associations between children's attachment to their mother and father and their emotion understanding. Another aim was to examine the concordance of children's attachment to their mother and father. In summary, analyses revealed that father-child attachment and mother-child attachment were each concurrently associated with children's emotion understanding, after controlling for their parent's depressive symptoms and child's gender. There was no significant difference in emotion understanding between children with insecure attachment to both parents and children with secure attachments to at least one parent. It appears therefore that insecurity of attachment to even one parent might be associated with decreased emotion understanding in children. We also found a significant positive association between father-child and mother-child attachment.

Previous studies have established significant links between children's security of attachment to mother and their emotion understanding (Barone & Lionetti, 2012; De Rosnay & Harris, 2002; Laible & Thompson, 1998; Steele *et al.,* 1999). Our study adds to the current literature by finding significant associations between children's emotion understanding and security of attachment to both their mother and father. It appears therefore that children's attachment to mother and father are both important in relation to children's emotion understanding. This finding suggests that securely attached children might have more advanced emotional skills compared to insecurely attached children and that a secure parent-child attachment might provide a safe environment in which children learn and practise emotion competence skills (Ontai & Thompson, 2002; Steele *et al.,* 1999). An important question concerns the mediating mechanisms that may explain the link between attachment and emotion understanding. Laible and Thompson (1998) indicated several routes through which children's security of attachment might be linked to their emotional competence including spontaneous parent-child discussions about emotions (Laible & Thompson, 2000), parental validation of children's emotional expressions (Berlin & Cassidy, 2003), and positive peer relationships and occasions in which to share emotions (Bohlin, Hagekull, & Rydell, 2000). It is worth

noting though that while we assumed the quality of attachment to be related to children's emotion understanding it is also possible that more emotionally competent children might be more likely to have formed secure attachment to their caregivers: as our study was cross-sectional the direction of effect cannot be determined.

Analyses showed a significant positive association between children's attachment to their mother and father. Out of the 74 children for whom we had data on both mother-child and father-child attachment, 71.6% (n = 53) children had the same attachment classification to both parents. In particular, 47% ($n = 35$) children were securely attached to both parents and 24% ($n = 18$) children were insecurely attached to their mother and father. This finding is consistent with the 72.6% concordance rate found in the study by Di Folco and colleagues (2017) and provides some support for consistent attachment across parents among young children. Several theoretical explanations could account for this finding. Parents may have similar parenting behaviours that could potentially lead to cross-parent convergence of attachment (Di Folco *et al.,* 2017; Dykas, Woodhouse, Cassidy, & Waters, 2006). Another explanation is that children may build an attachment with their primary caregiver and generalise this attachment to the other parent (Dykas *et al.,* 2006). However, this finding could be due to methodological issues. Di Folco *et al.* (2017) argued that the MCAST coding manual considers children's narrative coherence during testing. Since the administration of mother and father MCAST was conducted over a short interval it is likely that levels of narrative coherence would be relatively similar in both assessments and could contribute to consistent attachment to mother and father. Future research therefore should examine this question with alternative ways of assessing attachment. Future studies should also assess parents' own attachment representation which might influence similarities or differences in children's attachment across parents. A study found that mothers' and fathers' attachment representations in the Adult Attachment Interview predicted mother-infant and father-infant attachment classification respectively (Steele, Steele, & Fonagy, 1996).

While it was not among the study's hypotheses, we found that child gender was related to father-child but not mother-child attachment. In particular, we found that boys were more likely to be insecurely attached to their father compared to girls. In general, studies focusing on representations of attachment have found that girls are more likely to have secure representations compared to boys (e.g., Gloger-Tippelt & Kappler, 2016; Toth, Lakatos, & Gervai, 2013). In our study there were more boys than girls with disorganised attachment to their

father (15 vs 1) and this finding is consistent with previous studies that have found higher prevalence of disorganised attachment in boys (Giudice, 2008; Tóth *et al.,* 2013). If these findings are replicated in future studies, an important future direction is to identify the mechanisms that may lead to gender differences on attachment classifications. In addition, children's age was associated with better emotion understanding providing further evidence for children's increasing ability to understand emotions as they grow older (Pons *et al.,* 2004). In line with a previous study that used the Test of Emotion Comprehension in three to six year old children (Belacchi & Farina, 2010) we found no significant associations between emotion understanding and children's gender.

Strengths of this study include assessment of both mother-child and father-child attachment and their relationship to their children's emotion understanding. Despite these strengths, the study had a number of limitations. The study examined cross-sectional data that did not allow us to test the predictive power of attachment over time. Longitudinal studies that measure attachment and outcomes at separate time points have the potential to provide further information about the possible causal relationship between attachment and future child outcomes. Another limitation is that shared method variance may have inflated the association between children's responses to emotionally distressing scenarios during the MCAST and their emotion understanding (Toth *et al.,* 2013). Future studies should replicate the study's findings using alternative methods of assessing attachment such as observations or interviews before any firm conclusions can be made. Grossmann and colleagues have argued that the father-child attachment might be best captured by sensitive and challenging play interactions which have been found to predict children's behavioural problems and attachment representations over time (Grossmann *et al.,* 2002; Grosssmann *et al.,* 2008).

In sum, the findings of this study provided support for associations between children's attachment to their parents and their emotion understanding. Pending further research that may better illuminate the causal nature of these associations, such findings have the potential to inform prevention and intervention strategies particularly for children with insecure attachments. Sprung *et al.* (2015) emphasised the potential role of emotion competence in the identification and treatment of emotional problems and provided some evidence that emotion competence is amenable to change. In a meta-analysis of 19 studies, training was effective in increasing children's emotion understanding. Another implication concerns interventions designed to improve parent-child attachment. An interesting direction for future research would be to examine whether

parenting interventions that aim to increase children's security of attachment have an effect on children's emotional outcomes and whether these effects are evident for both mother-child and father-child attachment. Our findings revealed no significant associations of parental depression with children's attachment and emotion understanding but an interesting direction for future research is to examine if insecurity of attachment mediates the links between parent depression and child developmental outcomes using in at risk populations. To conclude, our findings replicate previous studies showing concordance for attachment to mother and father, and add to the literature by demonstrating significant positive links between quality of attachment and emotion understanding and underscore the potential role of father-child attachment in their children's emotional outcomes.

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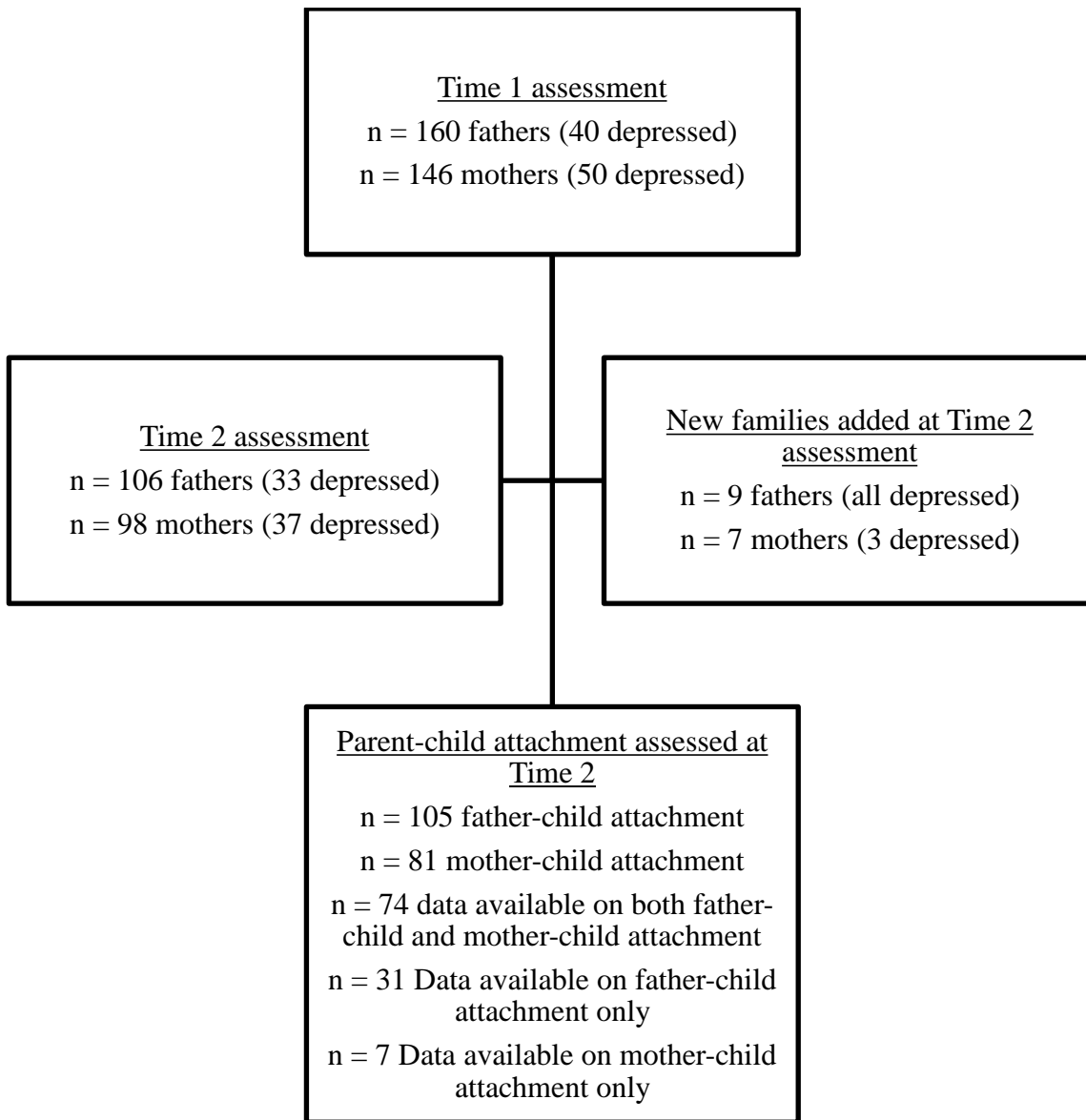
Figure 1: Flow chart showing number of participants at Times 1 and 2 and complete mother-child and father-child attachment data

Table 1: Frequency distribution of father-child and mother-child attachment classifications for the whole sample and separately for boys and girls

	Children's attachment to their fathers				
	Secure	Insecure Avoidant	Insecure Ambivalent	Disorganised	Insecure (Total)
	N (%)	*N* (%)	*N* (%)	*N* (%)	*N* (%)
All	71 (67.6%)	5 (4.8%)	13 (12.4%)	16 (15.2%)	34 (32.4%)
Boys	27 (57.4%)	1 (2.1%)	4 (8.5%)	15 (31.9%)	20 (42.6%)
Girls	44 (75.9%)	4 (6.9%)	9 (15.5%)	1 (1.7%)	14 (24.1%)
	Children's attachment to their mothers				
All	44 (54.3%)	8 (9.9%)	17 (21.0%)	12 (14.8%)	37 (45.7%)
Boys	18 (47.4%)	6 (15.8%)	5 (13.2%)	9 (23.7%)	20 (52.6%)
Girls	26 (60.5%)	2 (4.7%)	12 (27.9%)	3 (7.0%)	17 (39.5%)

Table 2: Pearson's correlations among study variables for fathers and mothers

Fathers	1	2	3	4
1. Child's age				
2. Child's gender (0 = Girls; 1 = Boys)	-.06			
3. Parent's depressive symptoms	.03	.09		
4. Attachment (0=insecure; 1=secure)	.14	-.20*	-.02	
5. Child's emotion understanding	.53***	-.10	-.00	.30**

Mothers				
1. Child's age				
2. Child's gender (0 = Girls; 1 = Boys)	-.06			
3. Parent's depressive symptoms	.07	-.19		
4. Attachment (0=insecure; 1=secure)	.22	-.13	.05	
5. Child's emotion understanding	.53***	-.10	.11	.32**

Note[1]: * <.05; ** p <.01; *** p <.001

Table 3: Means and standard deviations for emotion understanding across attachment classifications

	Secure	Insecure Avoidant	Insecure Ambivalent	Disorganised	Insecure (Total)
	Children's attachment to their fathers				
	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)
All	5.23 (1.82)	3.20 (1.92)	4.38 (1.85)	4.07 (1.27)	4.06 (1.63)
Boys	5.27 (1.71)	1.00 (n/a)	4.00 (1.41)	4.15 (1.28)	3.94 (1.43)
Girls	5.21 (1.90)	3.75 (1.71)	4.56 (2.07)	3.00 (n/a)	4.21 (1.89)
	Children's attachment to their mothers				
All	5.52 (1.70)	4.00 (1.15)	4.53 (2.35)	4.27 (1.19)	4.34 (1.81)
Boys	5.65 (1.69)	3.80 (1.30)	3.80 (1.10)	4.38 (.92)	4.06 (1.06)
Girls	5.44 (1.73)	4.50 (0.71)	4.83 (2.69)	4.00 (2.00)	4.65 (2.37)

Table 4: Hierarchical regression analyses showing the associations between children's attachment to each parent and their emotional understanding

	Fathers			Mothers		
	N	$\varDelta R^2$	β	N	$\varDelta R^2$	β
Step 1	96	.05*		71	.06*	
Child's age			.53***			.48***
Parent's depressive symptoms			-.01			.16
Step 2						
Child's age			.50***			.42***
Parent's depressive symptoms			-.005			.15
Attachment (0=Insecure, 1=Secure)			.22*			.26*

Note[1]: * *p* <.05;*** *p* <.001; Note[2]: We re-ran the hierarchical regressions replacing a continuous variable of parent's depressive symptoms assessed with the PHQ-9 with a binary variable of depression (0 = Non-depressed; 1 = Depressed) assessed with the SCID to test if the results remained significant when controlling for a research diagnosis of Major Depressive Episode. When a research diagnosis of depression was used, the associations between attachment and emotion understanding remained significant (for mothers β = .26, *p* = .016; for fathers β = .24, *p* = .007)

Table 5: Frequency distribution of attachment classifications to both parents with means and standard deviations for children's emotion understanding

	n (%)	*M* (*SD*)
Secure[Mother] and Secure[Father]	35 (47.3%)	5.55 (1.82)
Insecure[Mother] and Insecure[Father]	18 (24.3%)	4.44 (1.67)
Insecure[Mother] and Secure[Father]	17 (23.0%)	4.47 (1.97)
Secure[Mother] and Insecure[Father]	4 (5.4%)	4.50 (1.00)

Note[1]: Data on emotion understanding was missing for four children (two children with secure attachment to mother and father; two children with insecure attachment to mother and father)