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A brief review

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Parents’ Empathy and Child Attachment Security: A Brief Review

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Abstract

The present review examined the association between parents’ empathy and quality of child-parent attachment relationships. A systematic search yielded five published empirical studies, including nine effect sizes. A three-level meta-analysis yielded a significant, moderate and positive association of $r = .27$ between empathy of the parent and child attachment security. It was concluded that parental empathy is significantly related to child attachment security. The magnitude of the effect size is comparable to the effect sizes found in meta-analyses on the relation between parental sensitivity, parental mentalization, and child attachment security. Future studies should investigate the relation between parents’ (cognitive and affective) empathy, their internal working models of attachment, and their child’s attachment security.
Parents’ Empathy and Child Attachment Security: A Brief Review

Empathy is the ability to understand and share another’s emotional state (Cohen & Strayer, 1996), and consists of two dimensions: affective empathy is an automatic emotional response to another’s mental state and concerns the experience of similar emotions as others. Cognitive empathy is the understanding of another’s mental state through perspective taking (De Wied et al., 2007; Smith 2006). The capacity for empathy is fundamental to the development and maintenance of social relationships (Anderson & Keltner, 2002; Preston & De Waal, 2002; Twemlow, Fonagy, & Sacco, 2005).

Evolutionary theory assumes that empathy involves the child’s attachment system (Cassidy, Jones, & Shaver, 2013; Pietromonaco & Barrett, 2000), which regulates the child’s proximity to the parent or other caregivers (Ainsworth 1967, 1972; Bowlby, 1969). Empathy enables caregivers to recognize and respond to the biological needs of their child for safety and support, and to act altruistically in times of threat to ensure their offspring’s survival (Darwin, 1922; Eibl-Eibesfeldt, 1982; MacLean, 1985; Stern, Borelli, & Smiley, 2015). Attachment theory proposes that patterns of caregiving behavior shape a child’s ‘internal working model’ of the self and others, and finally shape the child’s socio-emotional functioning (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1980).

Bowlby (1969) assumed that there were four distinguishing characteristics of child-mother attachment relationships: proximity maintenance, which is the desire to be near the people we are attached to; safe haven behavior, which can be defined as returning to the attachment figure for comfort and safety in the face of fear or threat. Secure base behavior, wherein the attachment figure acts as a base of security from which the child can explore the environment, and separation distress, which is anxiety that occurs in the absence of the attachment figure.
Ainsworth (1978) further expanded Bowlby's work through the development of the "strange situation" observational study, which gave attachment theory an empirical basis. Ainsworth discovered three styles of attachment: *secure attachment, insecure-avoidant attachment, and insecure-resistant attachment* (Ainsworth et al., 1978). Later, a fourth style was discovered, namely, *insecure-disorganized attachment* (Main & Solomon, 1986; 1990).

Research has shown that securely attached children develop a positive balance between searching contact with their caregiver and exploration of the environment (Ainsworth et al., 1978). They become visibly upset when their caregivers leave and are happy when they return, seeking comfort and trust. Parents of securely attached children tend to play more with their children, react more quickly to children's attachment-related needs and are generally more responsive compared to parents of insecurely attached children.

Studies have shown that securely attached children are more empathic than insecurely attached children during later stages of childhood (Fraley, 2002; Joireman, Needham, & Cummings, 2002; Lucassen et al., 2011; Panfile & Laible, 2012). While forming a secure attachment with caregivers is normal and expected, as Hazan and Shaver (1987) have noted, it does not always happen. Research indicates that a large number of factors hamper the development of secure attachment, particularly unresponsiveness and inconsistent behavior towards infant's attachment-related needs during the first year of life. Insecure attached children cry more, show higher levels of anxious behavior and tend to avoid contact, whereas secure attachment results in high self-esteem, building intimate relationships, social support, and the ability to share feelings with other people (Groh, Fearon, Van IJzendoorn, Bakermans-Kranenburg, & Roisman, 2017).

A vast amount of research has been conducted on parental antecedents of child attachment security, such as parenting style (e.g., Nair & Murray, 2005) and maternal anxiety (e.g., Stevenson-Hinde, Chicot, Shouldice, & Hinde, 2013). For many years, research on
antecedents of secure attachment primarily focused on parental sensitivity, which is the ability to perceive the meaning behind an infant’s behavioral signals and to respond to them promptly and appropriately (Braungart-Reiker, Garwood, Powers, & Wang, 2001; Lamb, Easterbrooks, & Holden, 1980; De Wolff & Van IJzendoorn, 1997). However, sensitivity could only explain a small percentage (25% of the variation) of differences in children’s attachment security, leaving a gap in the transmission of attachment from the parent to the child (Van IJzendoorn, 1995; Verhage et al., 2016). In recent years, studies have moved beyond parental sensitivity, trying to unravel different precursors of the child’s attachment security (Meins, 2013; Oppenheim & Koren-Karie, 2002; Slade, Grienenberger, Bernbach, Levy, & Locker, 2005). Researchers posit that two related, but distinct, parental capacities underlie sensitive caregiving behavior: parental mentalization and empathy.

Parental mentalization is the degree to which parents show frequent, coherent, or appropriate appreciations of their infant’s internal states (Zeegers, Colonnesi, Stams, & Meins, 2017) and is often simplistically understood as synonymous with the capacity of empathy toward others (Fonagy & Luyten, 2018). It defines parents’ ability to represent the mind of their child, that is, whether a parent can appropriately interpret the child’s behavior in terms of mental states, such as thoughts, emotions, and intentions (Fonagy & Luyten, 2018; Zeegers et al., 2017). In their meta-analysis, Zeegers et al. (2017) found parental mentalization to be an independent predictor of the child’s attachment security, providing evidence for the assumption that parents’ ability to consider the child’s internal states seems important for secure child attachment, possibly supported by empathy (Fonagy, Gergely, Jurist, & Target, 2016; Meins, 2013; Slade et al., 2005), while the combination of parental sensitivity and mentalization explained more variance than each predictor separately. To conclude, parents’ capacity to represent their children’s mind and to reflect on their children’s
thoughts and emotions appears to be an independent factor in children’s development of attachment (Zeegers et al., 2017).

The present study is a brief narrative review and preliminary meta-analysis on the relation between parents’ empathy and child attachment security. It is hypothesized that parental affective and cognitive empathy are positively associated with child attachment security.

**Method**

**Selection of Studies**

A comprehensive search of literature published until 2018 was conducted to identify relevant articles on the relation between parental empathy and the child’s attachment. Computer-based and manual search methods were used to locate studies for the current meta-analysis. The computerized databases were PsycINFO, MEDLINE, and ERIC. A comprehensive search of each computerized database included the following terms and combination of terms: (“mother”) OR (“father”) OR (“maternal”) OR (“paternal”) AND (“empathy”) AND (“attachment”). In addition, meta-analyses and systematic reviews were manually searched. The search process yielded 320 potentially relevant published articles.

To be considered for inclusion, studies had to meet the following inclusion criteria: (1) studies had to examine the relation between parents’ empathy and child-parent attachment relationships; (2) studies had to report the Pearson’s $r$ correlation coefficient on the association between parental empathy and child attachment, or sufficient statistical information to calculate this correlation coefficient. One published article (i.e., Borelli et al., 2016) did not report a Pearson’s $r$ correlation coefficient nor information that was needed to calculate Pearson’s $r$. Therefore, the published study of Borelli et al. (2016) was not included. Last (3), studies had to be written in English and published in peer-reviewed journals. When
the search procedure ended, we found five studies eligible for inclusion in the present review. The included studies are marked with an asterisk in the Reference list.

**Study Coding Procedure**

Studies were coded for year of publication, the research design (cross-sectional or longitudinal), and the type of assessment procedure for empathy and attachment (questionnaire, observation, composite or interview). Several sample characteristics were also coded: size of sample, continent in which the participants lived (Europe, North-America, or Israel), gender and average age of parents, percentage of mothers, gender and average age of children, percentage of boys, and whether a study used a general or a clinical sample. Three articles reported more than one relevant association between parental empathy and child attachment, as different attachment styles were studied (i.e., secure attachment, dismissing/avoidant attachment, preoccupied attachment, and disorganized attachment) or different dimensions of empathy (i.e., basic empathy and parental empathy). All relevant associations were extracted from each included study.

**Statistical Analyses**

Pearson’s correlation coefficient was used as a measure of effect size. In order to estimate the overall mean association between parental empathy and child attachment (i.e., the overall mean effect size), all correlations were first Fisher’s $z$ transformed to approximate a normal sampling distribution (Lipsey & Wilson, 2001). Next, the overall mean effect was estimated in a three-level meta-analytic model. We used this three-level approach to meta-analysis, as multiple effect sizes were extracted from three of the included studies. In this approach, the dependency in effect sizes is modelled, which is important as independency in effect sizes is an important assumption in meta-analytic research (Assink & Wibbelink, 2016). The meta-analysis was performed in the statistical program R using the syntax as presented by Assink and Wibbelink (2016).
Results

Description of the Studies

A brief description of the five studies that fitted the inclusion criteria is provided below, and the characteristics of the included studies are summarized in Table 1.

Black and Leszcynsk (2013) examined the association between child attachment and both paternal and basic empathy of the parents in a North American sample ($N = 120$, $M_{\text{age children}}= 4.47$). They used a cross-sectional design and all constructs were measured with a questionnaire (the Kinship Center Attachment Questionnaire, the Basic Empathy Scale, and the Parenting Empathy Questionnaire, respectively). Paternal empathy as well as basic empathy were significantly related to child attachment: $r = .19$, and $r = .28$, respectively.

Oppenheim Koren-Karie, and Sagi (2001) examined the association between mothers’ empathic understanding of their 4.5 years old children’s internal experience (i.e., cognitive empathy) and infant attachment in an Israeli sample ($N = 98$ dyads, $M_{\text{age parents}}= 33.80$) in a cross-sectional design. Empathic understanding was assessed by showing 98 mothers video segments of their children and themselves and interviewing them regarding their children’s and their own thoughts and feelings. Interviews were rated and classified into one empathic (Balanced) and three Non-Empathic categories. Infant attachment was assessed at the age of 12 months using the Strange Situation Test. Results showed a significant correlation between empathy and ambivalent attachment ($r = .31$) and disorganized attachment ($r = .23$).

Quinn (1991) studied the association between mothers’ empathy and attachment of infants with Down syndrome in a North American sample ($N = 118$ dyads) in a cross-sectional design. Maternal empathy was assessed using a questionnaire (the Empathy Construct Rating Scale; Monica, 1981). Infant attachment was assessed by means of observations (Attachment-Separation-Individuation-Scale). Results showed a positive and significant correlation between empathy and attachment ($r = .20$).
Stern, Borelli and Smiley (2015) examined the association between empathy of parents and child attachment security in a North American sample ($N = 54$ dyads, $M_{age\ children} = 9.90, M_{age\ parents} = 36.80$) in a cross-sectional design. Both empathy and attachment were measured using a battery of questionnaires and interview measures, including the Child Attachment Interview (CAI) and the Parent Affective and Cognitive Empathy Scale (PACES; developed by Stern et al. (2015) themselves). Results showed correlations between higher levels of parental empathy and secure child attachment ($r = .14$), dismissing child attachment ($r = -.43$), and preoccupied child attachment ($r = -.55$), respectively.

Wieczorek-Deering, Greene, Nugent, and Graham (1991) examined the association between empathy (amongst others) of mothers and infant attachment in a Western European sample ($N = 98, M_{age\ parents} = 46.00$) with a cross-sectional design. The Strange Situation Procedure was used to assess infant-parent attachment, and cognitive empathy was assessed with an adaptation of the Maximally Discriminative Facial Movement Coding System (Izard, 1979) and the Facial Actions Coding System (Ekman & Friesen, 1978). The correlation between cognitive empathy and infant attachment was $r = .18$.

**Association between Parental Empathy and Child Attachment Security**

The overall mean effect size was based on 9 effect sizes derived from 5 studies, including 238 parent-child dyads. Effect sizes ranged between $r = .14$ and $r = .55$. A significant medium correlation between empathy of the parent and child attachment security was found, $r = .27$ ($t = 6.288, p < .001$). The small number of studies and effect sizes did not allow for further reliable heterogeneity, moderator, and publication bias analyses.
Discussion

Child-parent attachment is considered to be one of the most important bonds in human life, while a secure internal working model of attachment is the first major developmental task of the child. This chapter builds on previous meta-analyses examining the relation between parental sensitivity and mentalizing capacities on the one hand and child-parent attachment security on the other hand, explaining the role of parents in the development of child attachment from a life-course perspective (Verhage et al., 2016; Zeegers et al., 2017). The present brief review integrates the extant knowledge on the relation between parents’ empathy and child attachment by means of a narrative review and preliminary meta-analysis.

Our systematic search yielded five published empirical studies, including nine effect sizes, on the relation between parents’ empathy and child attachment. Results indicate a moderate significant positive association between parental empathy and child attachment security. Outcomes thus support the expectation that parental empathy is positively associated with child-parent attachment security. In evolutionary theory, forming and maintaining social bonds is crucial for the development of humans, and empathy is thought to be crucial in this respect (MacLean, 1985; Preston & De Waal, 2002). Infants who seek and accept support from their parents are assumed to be securely attached, and are more likely to have received sensitive and responsive caregiving, which results in a variety of socioemotional advantages (Cassidy & Shaver, 1999; Groh, et al., 2017; Johnson, Dweck, & Chen, 2007). In contrast, insecurely attached children are at increased risk for psychopathology (e.g., Colonnesi et al., 2011; Hoeve, Stams, Van der Put, Dubas, Van der Laan, & Gerris, 2012; Madigan, Brumariu, Villani, Atkinson, & Lyons-Ruth, 2016).

In the present review, the effect size for the association between parental empathy and child attachment (r = .27) was comparable to the effect sizes for the associations between parental sensitivity and attachment (r = .25) and parental mentalization and attachment (r =
that were found in the meta-analyses by Verhage et al. (2016) and Zeegers et al. (2017).

Whereas parental sensitivity and mentalization constitute behavioral and cognitive dimensions of parenting (Leerkes, Crockenberg, & Burrous 2004; Zeegers et al., 2017), parental empathy may be considered to be an affective dimension of parenting, which is the capacity to understand and share the child’s emotional state (Cohen & Strayer, 1996). This empathic capacity can facilitate sensitive caregiving and foster the development of supportive interpersonal relationships (Borelli, Vazquez, Rasmussen, Teachanarong, & Smiley, 2016). Research suggests that the child’s experience of its parents’ empathic behavior partly shapes the internal working model of attachment, which is a cognitive-affective scheme that provides information about the self and significant others (Bretherton & Munholland, 1999; Johnson, et al., 2007). Parents’ empathic caregiving may also socialize children’s own empathic tendencies, orienting them toward (rather than away from) emotional engagement with others (Stern, Borelli, & Smiley, 2015).

It is plausible to suggest that parental empathy will not only be associated with parental sensitivity and mentalization, but parental empathy might also explain unique variance in the quality of child-parent attachment relationships beyond parental sensitivity and mentalization, because it introduces the affective dimension of parenting as an antecedent of child-parent attachment relationships, where until now most research has focused on behavioral and cognitive dimensions of parenting explaining children’s attachment to their parents. As such, parental empathy can be the missing link in research on the intergenerational transmission of attachment between parent and child, which so far has focused on parents’ sensitivity (Verhage et al. 2016). Both parents’ metacognitive awareness of the child’s mind (Zeegers et al., 2017) and parental empathy for the child (Stern et al., 2015; the present review), may prove to be unique mediators of the relation between parents’
attachment representations and their children’s attachment. Future studies on the transmission of attachment from parent to child should examine this possibility.

Like the intergenerational transmission of attachment, the ability to empathize might also be intergenerational. Indeed, research has shown that child and parental empathy is positively associated (Soenens, Duriez, Vansteenkiste, & Goossens, 2007). Next to a number of precursors of affective empathy that are already shown in newborn babies (Sagi & Hoffman, 1976), empathy in children develops through the exposure to empathic and sensitive behavior of their caregivers (Robinson & Little, 1994). Therefore, especially the quality of the relationship between the child and its primary caregivers, in particular parents, is assumed to play a major role in the development of empathy in children (Laible, 2007). Results of our review and meta-analysis show that parents’ empathy might contribute to child-parent relationship quality in terms of attachment security.

Although the importance of studies that link to parent’s empathy and child attachment is apparent, we only found five studies on this subject. All five studies showed a relation between parental empathy and child attachment. Given the small number of studies on this subject and the encouraging results, it is clear that more studies on this subject are necessary in order to be able to draw firm conclusions. Given the evolutionary importance of both empathy and the attachment bond between parent and child, further research on this association is needed to unravel the unknown variation in the transmission of both empathy and attachment between parent and child (Van IJzendoorn, 1997, Verhage et al., 2016). We therefore suggest that future researchers should investigate the relation between parents’ cognitive and affective empathy, their internal working models of attachment (i.e., attachment representations), and their child’s attachment security, including both mothers and fathers. Furthermore, research should focus on the mental capacities of both parents and children in order to examine to what extent reflection on each other’s empathic tendencies may moderate...
the relation between parental empathy, mentalization, and sensitivity on the one hand and children’s internal working models of attachment and empathy on the other hand.

**Limitations**

The findings of the present study should be interpreted in the light of several limitations. This is the first brief review and preliminary meta-analysis that integrates studies on the relation between parental empathy and attachment, and the results provide leads for future research. Notably, it is not uncommon to conduct a meta-analysis on a small sample size if the scientific field is in need of knowledge integration in a particular subject area (see Rodenburg, Benjamin, De Roos, & Meijer, 2009). For instance, Letourneau et al. (2015), recently published a brief (narrative) review and meta-analysis of only 7 trials examining the effects of interventions targeting maternal sensitivity and reflective function on secure child-mother attachment relationships, showing a positive mean overall effect. Nevertheless, the limited number of studies and effect sizes implies that this meta-analysis was underpowered to test within and between study heterogeneity of effect sizes, and subsequently conduct continuous and categorical moderator analyses with sufficient statistical power (Cafri, Kromrey, & Brannick, 2010). We therefore could not compare mean effect sizes in different subgroups in a reliable way (Rubio-Aparicio, Sánchez-Meca, López-López, Botella, & Marín-Martínez, 2017), which sets limits to possibilities for generalization of our study findings. Moreover, the number of studies and effect sizes were insufficient to conduct reliable publication bias analyses.

In addition, all five studies were cross-sectional, which might inflate the association between parental empathy and child attachment to the extent that parental empathy is assessed as a state that might be affected by the child’s attachment. All samples of the included studies were Western (i.e., three North-American samples, one Western-European, and one Israeli sample), which implies that the results of this meta-analysis cannot be generalized to non-
Western populations. Further, the samples of the studies consisted of 90 to 100 percent mothers. This suggests that the results cannot be generalized to (Western) fathers. Notably, research by Bögels and Phares (2008) indicates that data concerning fathers’ involvement in child-rearing is often missing, and such missing data must be regarded as “systematic”.

**Conclusion**

This brief review showed a significant positive relation between parents’ empathy and the child’s attachment security. Being able to get a feeling of what your child feels might be a very strong driver to respond to his or her attachment needs. Given the limited number of studies on the relationship between parental empathy and child attachment, we stress the need for more research in this area.
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Table 1. *Overview of the Included Studies*

<table>
<thead>
<tr>
<th>Reference</th>
<th>Year</th>
<th>Gender parent</th>
<th>M parent</th>
<th>% mother</th>
<th>Gender child</th>
<th>M child</th>
<th>Country</th>
<th>Type Empathy</th>
<th>Empathy instrument</th>
<th>Type Attachment</th>
<th>Attachment instrument</th>
<th>N</th>
<th>#ES</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black &amp; Leszczynski</td>
<td>2013</td>
<td>Mixed</td>
<td>-</td>
<td>-</td>
<td>B/G</td>
<td>4.47</td>
<td>USA</td>
<td>E/PE</td>
<td>E que</td>
<td>SA</td>
<td>ATTque</td>
<td>120</td>
<td>2</td>
<td>.28/.19</td>
</tr>
<tr>
<td>Oppenheim et al.</td>
<td>2001</td>
<td>M</td>
<td>33.8</td>
<td>100</td>
<td>B/G</td>
<td>4.5</td>
<td>Israel</td>
<td>E</td>
<td>EI</td>
<td>PA/DiA</td>
<td>ATTobs</td>
<td>98</td>
<td>2</td>
<td>.31/.23</td>
</tr>
<tr>
<td>Quinn</td>
<td>1991</td>
<td>M</td>
<td>-</td>
<td>100</td>
<td>B/G</td>
<td>90</td>
<td>B/G</td>
<td>EC</td>
<td>E</td>
<td>E que</td>
<td>ATTobs</td>
<td>118</td>
<td>1</td>
<td>.20</td>
</tr>
<tr>
<td>Stern et al.</td>
<td>2015</td>
<td>Mixed</td>
<td>36.8</td>
<td>90</td>
<td>B/G</td>
<td>9.90</td>
<td>USA</td>
<td>E</td>
<td>E que/EI</td>
<td>SA/DA/PA</td>
<td>ATTI</td>
<td>54/48/21</td>
<td>3</td>
<td>.43/.55/.14</td>
</tr>
<tr>
<td>Wieczorek-Deering</td>
<td>2012</td>
<td>M</td>
<td>46.0</td>
<td>100</td>
<td>B/G</td>
<td>EC</td>
<td>W-Europe</td>
<td>CE</td>
<td>Eque</td>
<td>SA</td>
<td>Attobs</td>
<td>98</td>
<td>1</td>
<td>.18</td>
</tr>
</tbody>
</table>

Note. M = mothers; F= Fathers ; M parent = Mean age parents; B = Boys; G = Girls; M Child = Mean age child, EC = Early Childhood; Country = country in which participants lived; E = Empathy general, CE = cognitive empathy; AE = Affective Empathy, PA = Parental Empathy; Empathy instrument = type of empathy assessment; E que = empathy questionnaire; E obs = Empathy observational assessment, EI = empathy interview; EM = Empathy mixed method assessment; ATTque = attachment questionnaire; ATTobs = Attachment observational assessment, ATTI= Attachment interview; ATTM = Attachment mixed method assessment; SA = Secure Attachment, DA = Dismissing Attachment, PA = Preoccupied Attachment, DiA = Disorganized Attachment; N = number of participants in study; #ES = number of effect sizes coded from study; r = Pearson’s r correlation coefficient.