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3 Parents' empathy and child attachment security

A brief review

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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 1979; Ainsworth & Bell, 1970; Bowlby, 1969, 1973, 1980). Empathy enables caregivers to recognise 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 (Eibl-Eibesfeldt, 1982; MacLean, 1985; Stern, Borelli, & Smiley, 2015). Attachment theory proposes that patterns of caregiving behaviour 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 behaviour*, which can be defined as returning to the attachment figure for comfort and safety in the face of fear or threat; *secure base behaviour*, 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 (1979) further expanded Bowlby's work through the development of the "strange situation" observational study, which gave attachment theory an empirical basis (Bretherton, 1992). 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-disorganised 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 may hamper the development of secure attachment, particularly unresponsiveness and inconsistent behaviour towards infant's attachment-related needs during the first year of life. Insecurely attached children cry more, show higher levels of anxious behaviour and tend to avoid contact, whereas secure attachment results in high self-esteem, increased ability to build 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 the antecedents of secure attachment primarily focused on parental sensitivity, which is *the ability to perceive the meaning behind an infant's behavioural 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; van IJzendoorn & Wolff, 1997; Verhage et al., 2016). In recent years, studies have moved beyond parental sensitivity, trying to unravel different precursors of children'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 behaviour: parental mentalisation and empathy.

Parental mentalisation is *the degree to which parents show frequent, coherent, or appropriate appreciations of their infant's internal states* (Zeegers, Colonesi, Stams, & Meins, 2017) and is often simplistically understood as synonymous with the capacity of empathy towards 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 behaviour 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 mentalisation to be an independent predictor of the child's attachment security, providing evidence for the assumption that parents' ability to consider their children's internal states was important for secure child attachment, possibly supported by empathy (Fonagy, 2006; Fonagy, Gergely, Jurist, & Target, 2002; Meins, 2013; Slade et al., 2005), while the combination of parental sensitivity and mentalisation 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).

This study is a brief narrative review and preliminary meta-analysis on the relation between parents' empathy and their children's attachment security. It is hypothesised 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 computerised databases were PsycINFO, MEDLINE, and ERIC. A comprehensive search of each computerised 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, this study 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 (Black & Leszczynsk, 2013; Oppenheim, Koren-Karie, & Sagi, 2001; Quinn, 1991; Stern et al., 2015; Wieczorek-Deering, Greene, Nugent, & Graham, 1991).

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 disorganised 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 included is provided later, and the characteristics of these are summarised in Table 3.1. Two of the included studies used an adapted version of the Basic Empathy Scale (BES; Jolliffe & Farrington, 2006), assessing both cognitive and affective empathy. For their study, Black and Leszczynsk (2013) adapted the original questions to shift the emphasis from friends (e.g. 'My friends' emotions don't affect me much') to others (e.g. 'Other people's emotions don't affect me much'). Stern et al. (2015) developed the Parent Empathy Measure (PEM) based on existing measures of empathy, such as the BES (Jolliffe & Farrington, 2006), but also integrated attachment-related constructs to create an index of empathy, specific to the parent-child relationship. This measure includes subscales of cognitive and affective empathy. The remaining three studies were conducted before the development of the BES in 2006, and used observational measures, such as facial expressions, to investigate empathy (Oppenheim et al., 2001; Quinn, 1991; Wieczorek-Deering et al., 1991).

Black and Leszczynsk (2013) examined the association between children's attachment and both parental and general (or trait) empathy of the parents in a

Table 3.1 Overview of the included studies

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

Note. M = mothers; F = Fathers; M parents = 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 = Disorganised Attachment; N = number of participants in study; #ES = number of effect sizes coded from study; r = Pearson's r correlation coefficient

North American sample ($N = 120$, $M_{age\ children} = 4.47$). They used a cross-sectional design and all constructs were measured with a questionnaire (the Kinship Center Attachment Questionnaire, the BES, and the Parenting Empathy Questionnaire, respectively). Parental empathy as well as general empathy were significantly related to child attachment: $r = .19$, and $r = .28$, respectively. There were no significant results for cognitive or affective empathy separately.

Oppenheim et al. (2001) examined the association between mothers' empathic understanding of their 4.5-year-old children's internal experience (i.e. cognitive empathy) and infant attachment in an Israeli sample ($N = 98$ dyads, $M_{age\ parents} = 33.80$). Infant attachment was assessed between the ages of 6 and 12 months using the Strange Situation Test. At the age of 4.5 years, mothers and their child were assessed again and completed the story completion task, and mothers were administered the Empathic Understanding procedure. 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. Results showed a significant correlation between empathy and ambivalent attachment ($r = .31$) and disorganised attachment ($r = .23$).

Quinn (1991) studied the association between mothers' empathy and the attachment of their 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 mother's empathy and their children's attachment ($r = .20$).

Stern et al. (2015) examined the association between the empathy of parents and their child's attachment security in a North American sample ($N = 54$ dyads, $M_{age\ children} = 9.90$, $M_{age\ parents} = 36.80$) using 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 and based on the BES). 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. There were no significant results for the subscales of affective or cognitive empathy.

Wieczorek-Deering et al. (1991) examined the association between general empathy (i.e. for 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 found to be $r = .18$.

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, or 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 a major developmental milestone for children. This chapter builds on previous meta-analyses examining the relation between parental sensitivity and mentalising capacities on the one hand and child-parent attachment security on the other hand, exploring 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 indicated a moderate significant positive association between parental empathy and child attachment security. This finding supports the theoretical expectation that parental empathy is positively associated with child-parent attachment security. In evolutionary theory, for example, forming and maintaining social bonds is crucial for human development, 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 in turn results in a variety of socio-emotional 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; Hovee et al., 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 mentalisation and attachment ($r = .30$) that were found in the meta-analyses by Verhage et al. (2016) and Zeegers et al. (2017). Whereas parental sensitivity and mentalisation constitute behavioural 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 et al., 2016). Research suggests that the child's experience of its parents' empathic behaviour 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 socialise children's own empathic tendencies, orienting them towards (rather than away from) emotional engagement with others (Stern et al., 2015).

It is plausible to suggest that parental empathy will not only be associated with parental sensitivity and mentalisation, but it might also explain unique variance in the quality of child-parent attachment relationships beyond parental sensitivity and mentalisation. This is because it introduces the affective dimension of parenting as an antecedent of child-parent attachment relationships, where until now most research has focused on behavioural and cognitive dimensions of parenting as an explanation for children's attachment to their parents. As such, parental empathy could 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 empathise 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 behaviour 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 parent's empathy to child attachment is apparent, we only found five studies on this subject. All five studies showed a relation between parental empathy and child attachment. Two of the studies used a measurement instrument that was based on the BES (Jolliffe & Farrington, 2006). 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 (cognitive and affective) 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 from parent to 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, mentalisation, and sensitivity on the one hand and children's internal working models of attachment and empathy on the other hand.

Limitations

The findings of this 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 seven 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 generalisation 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 generalised to non-Western populations. Further, the samples of the studies consisted of 90–100% mothers. This suggests that the results cannot be generalised 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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