Mind matters
On mothers’ and fathers’ mentalizing about their child
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GENERAL DISCUSSION

Mentalizing, or theory of mind, is a widely studied human capacity in the literature on adult mental health and child development (Baron-Cohen, Leslie, & Frith, 1985; Fonagy & Luyten, 2015; Freeman, 2016; Marty, 1991; Premack & Woodruff, 1978; Wimmer & Perner, 1983). Since two decades, mentalizing became embedded in theories that explain infant-parent attachment security as well as socioemotional functioning, and parenting researchers developed ways to assess parents’ mentalizing capacity (e.g., Meins, 1997; Meins et al., 2001; Slade, 2005). This dissertation aimed to examine whether parents’ mentalizing capacity predicts attachment security by summarizing the mentalizing-attachment literature of the past two decades. Second, this dissertation aimed to extend existing research on parental mentalization by investigating whether both mothers’ and fathers’ mind-mindedness uniquely predicts socioemotional functioning of children, and whether parents’ mind-mindedness is adaptable through intervention. Section 1 (Chapters 2 and 3) included two meta-analytic studies on the associations between parents’ and children’s mentalizing and child-parent attachment security. Section 2 (Chapters 4 and 5) addressed fundamental questions on whether mind-mindedness of mothers and fathers predicts infants’ regulated emotional responding, as well as preschoolers’ behavior problems and social competence later in childhood. Section 3 (Chapters 6, 7, and 8) included an evaluation of two interventions that aim to change parents’ “online” moment-to-moment representations of their child’s mind. Below, I discuss the present dissertation’s contribution to the research on parental mentalization for each individual section along with implications for future fundamental and intervention research.

Section 1 Summarizing research on parent and child mentalization

Section 1 includes two meta-analyses in which we investigated (a) the pooled association between parental mentalizing and infant-parent attachment security and (b) the pooled associations between child-parent attachment security and children's mentalizing abilities. First of all, Chapter 2 includes a meta-analytic study that aimed to examine to what extent parental mentalization predicts infant-parent attachment security, accounting for an already established predictor of attachment, namely parental sensitivity. We therefore tested whether parents’ mentalizing capacity (i.e., mind-mindedness, parental reflective functioning, and insightfulness) uniquely predicts variation in attachment, over and above parental sensitivity. The pooled correlations presented moderate but robust associations between parental mentalization and attachment security as well as parental sensitivity. Although the overall effect of mentalization on attachment security decreased after controlling for the effect of
sensitivity, and vice versa, direct effects of both predictors remained substantial. We also observed a small indirect effect of mentalization on attachment security via sensitive parenting.

The outcomes of Chapter 2 are important for at least two reasons. First, the outcomes provide stronger evidence for the implementation of mentalization-based treatment approaches in attachment interventions, of which the Basic Trust intervention (evaluated in Chapter 8) is an example. Still attachment interventions are carried out worldwide that, supposedly based in traditional attachment theory (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969/1982), entail coercive strategies that operate with limited support and potentially do harm to children (e.g., holding therapy, rebirthing; Lilienfeld, 2007; Mercer, 2019). It is therefore important that we not only examine possible adverse effects from such interventions (Mercer, 2017; 2019), but also perform research that can inform parents and mental health organizations on established predictors of attachment security. Furthermore, a previous meta-analysis indicated that those interventions that focus on evidence-based predictors of attachment security were most successful in promoting positive parent and child outcomes (Bakermans-Kranenburg, van IJzendoorn, & Juffer, 2003).

Second, the results of Chapter 2 are relevant because they highlight that there are at least two parental features that, besides being related to each other, are of unique importance to the development of secure attachment relationships. Multiple other parenting or parent-child relationship features have been theorized and/or examined as a predictor of attachment security, such as parental embodied mentalization (Shai & Belsky, 2011a; Shai & Meins, 2018), autonomy granting behavior (Bernier et al., 2014), reciprocal parenting (Feldman, 2015), limit setting (Juffer, Bakermans-Kranenburg, & van IJzendoorn, 2019), entropy (Davis et al., 2017), protective parenting (Bakermans-Kranenburg, & van IJzendoorn, 2017), and repair of mismatches (Beebe & Steele, 2013). However, it is yet unclear how all these parenting aspects relate to each other and whether they predict unique variance in attachment security, over and above parental sensitivity and mentalizing. Particularly since Chapter 2 also showed that most variance in attachment security (i.e., 88%) remains unexplained, it might be important to move to studies that investigate large and more complex models, including multiple direct predictors and/or mediators of attachment.

In the future, we could extend the research in Chapter 2 by adding other parenting or parent-child relationship features to models that map infant-parent attachment (e.g., limit setting, repair of mismatches, autonomy support, protective parenting; see Bernier et al., 2014 for a good example). Such complex model testing is only possible with relatively large samples, and appropriate statistical techniques (Kline, 2011). This criterion has been met by few attachment studies (Bernier et al., 2014; see appendix
B of the supplementary materials). Although performing observational assessments of attachment and parenting behavior is very time-consuming, the attachment field would benefit greatly from studies with a sample size that exceeds 200 parent-child dyads, which use structural equation modeling allowing the investigation of the extent to which each of the predictors uniquely accounts for variance in attachment, above and beyond the role of other predictors (Preacher & Hayes, 2008). Ultimately, this type of research enables scientists to develop an evidence-based overview of the precise parenting abilities and behaviors that are important to children’s attachment security, aiding a sound translation of fundamental research to clinical practice.

Chapter 3 followed up on the previous chapter by considering whether there are direct pooled associations between child-parent attachment and two hallmarks of children’s mentalizing abilities: false-belief understanding and emotion understanding. Although a body of literature exists in which attachment is examined as a predictor of early mentalizing abilities of preschoolers, doubts have been raised about whether the attachment-mentalization relation is significant and direct. The results of the second meta-analysis suggest that children’s attachment security related more strongly to emotion understanding (moderate association) than to false-belief understanding (small association).

Perhaps the most important outcomes of Chapter 3 are that (a) controlling for language ability, the association between false-belief understanding and attachment was substantially reduced and (b) representational measures of attachment (story telling tasks) show larger associations with children’s understanding of emotions and beliefs than behavioral measures of attachment in childhood. Since representational measures of attachment explicitly require perspective-taking abilities, the observed association may be due to representational attachment measures and false belief tasks drawing on the same ability to understand others’ mental states, rather than indicating a genuine association between attachment security and false-belief understanding. Chapter 3’s results therefore only provide marginal support for the hypothesis that early secure attachment predicts children’s understanding of others’ belief states.

Indeed, the outcomes provide reason to study whether the opposite direction of effect holds—are children who are good at reading their own and other people’s minds better able to form secure attachments in the preschool years? In order to disentangle possible bi-directionality of the attachment-mentalizing association, we need studies that observe child-parent attachment at several time-points and during longer stretches of time. Also, in hindsight, it would have been very informative if we had also included studies on parental mentalization as a predictor of children’s false-belief and emotion understanding in Chapter 3. Since two previous meta-analyses already showed that the parent’s mentalizing capacity associates with children’s false belief understanding
(Devine & Hughes, 2016; Tompkins, 2018), and since we learned from the Chapter 2 that parents’ mentalizing predicts attachment security, it could be possible that the attachment-false belief association would have further decreased with parental mentalizing included in the model.

In summary, Figure 1 shows an overview of the hypothesized associations between parent and child mentalization derived from the meta-analytic results in Section 1 and from three previous meta-analyses (Devine & Hughes, 2016; Tompkins, 2018; Verhage et al., 2016). The meta-analytic data indicates that children seem to acquire mentalizing in the context of the child-parent attachment relationship, fostered by their parents’ mentalizing capacity. In turn, children’s mentalizing abilities might enable them to form secure attachment representations during preschool, suggesting that the two systems are closely related and mutually influence each other over time (Gergely & Unoka, 2008). To conclude, Figure 1 shows a remaining gap in our knowledge, that is, could mentalizing of parents be one of the mechanisms underlying the intergenerational transmission of attachment? (van IJzendoorn & Bakermans-Kranenburg, 2019). The association between adult attachment and parents’ tendency to mentalize about their child has been addressed in few studies (e.g., Arnott & Meins, 2007; Demers, Bernier, Tarabulsy, & Provost, 2010b; Milligan, Khoury, Benoit, & Atkinson, 2015; Slade et al., 2005). More empirical studies are needed to understand whether parental mentalization relates to adult attachment, since this could shed further light on the mechanisms underlying transmission of attachment from parent to child.

**Section 2 mothers’ and fathers’ mind-mindedness**

In Section 2 (Chapters 4 and 5) we investigated whether the effects of mentalizing of two attachment figures extends to socioemotional functioning of infants and preschoolers. More specifically, we investigated the (bidirectional) relations between mothers’ and fathers’ mind-mindedness and physiological emotion regulation in infancy as well as behavior problems and social competence in childhood. In Chapter 4, we tested multiple hypotheses on the associations between both parents’ early mind-mindedness and infants’ physiological emotion regulation across the first year of life, as indicated by levels of heart rate variability (HRV) during rest and a stressful situation (Appelhans & Luecken, 2006). When mothers displayed high levels of appropriate and low levels of nonattuned mind-related comments about their 4-month-olds’ minds, infants had higher HRV levels during rest at 12 months, over and above infants’ resting HRV levels at 4 months. Hence, the analyses showed convincing support for the hypothesis that that parents’ mind-mindedness predicts more flexibility of infants’ autonomic nervous system to deal with arousal in general. The same effects were found for paternal mind-mindedness, but only at 12 months.
Figure 1. Hypothesized pathways from parent to child mentalization, supported by meta-analytic data
Red lines: Chapter 2; blue lines: Chapter 3; black lines: Devine & Hughes, 2016; Tompkins, 2018; Verhage et al., 2016
The results on the prediction of infants’ HRV decline (i.e., active emotion regulation; Shahrestani et al., 2014) during the stressful stranger situation were less straightforward. We observed a larger HRV decline in infants during the stranger task at 12 months when mothers made more frequent appropriate mind-related comments at 4 months, and fathers made more nonattuned comments at 12 months. This means there was some support for the hypothesis that mind-mindedness links to active emotion regulation during a stressful stranger situation. A recent meta-analysis of Groh and Narayan (2019) showed that attachment security in children is unrelated to infant heart rate during the separation phase of the strange situation procedure, suggesting that the strange situation causes a physiological stress reaction in all infants (securely and insecurely attached). Considering this meta-analytic evidence, infants’ HRV reactivity (decline) during Chapter 4’s stranger approach task might not have been a strong indicator of infant emotion regulation capacity and the parent-infant relationship quality. Another interesting outcome of Chapter 4 was that infants’ HRV levels at 4 months did not predict parents’ mind-mindedness at 12 months, over and above earlier levels of mind-mindedness at 4 months. In line with this finding, previous research has shown that mind-mindedness is not associated with children’s temperament (Meins et al., 2011) and general cognitive ability (e.g., Meins et al. 2001), which, altogether, suggests that individual characteristics of infants do not determine parents’ later frequent and appropriate mentalizing during infancy.

Chapter 5 presents research on the stability, continuity, and concordance in mothers’ and fathers’ mind-mindedness from 4 to 30 months, as well as the joint effects of both parents’ early mind-mindedness on children’s later social competence and behavior problems (4.5 years). The study indicated that both parents’ mind-mindedness is rather stable from 4 to 30 months, although the amount of mind-related speech decreases as the child grows older. During infancy mothers’ and fathers’ mind-mindedness becomes more alike, but concordance disappears during toddlerhood. Only when both parents were low in mind-mindedness, children showed more externalizing problems at 4.5 years, suggesting that parents show joint effects on their children’s externalizing problems. In addition, mothers’ and fathers’ use of nonattuned mind-related comments predicted children’s low social competence and more externalizing, but not internalizing behavior at 4.5 years.

In summary, Chapters 4 and 5 indicate that parents’ mind-mindedness is stable across infancy and predicts better capacity to deal with physiological arousal in infants as well as less maladaptive behaviors directed toward the environment in preschoolers. The outcomes of Chapters 4 and 5 align with the propositions made in earlier studies that mind-mindedness is a trait-like quality of parents (e.g., Meins et al., 2003) and a predictor of adaptive socioemotional functioning in children (e.g., Meins et al., 2011).
Nevertheless, the notion that parents’ mentalizing is a stable trait that determines child development paints a too simplistic picture. We considered the role of two parents in this dissertation since, from an evolutionary view, fathers are thought to be more prone to challenge their children, encourage risk taking than mothers, and they more often participate in or initiate playful interactions with their children, whereas mothers are inclined to have a more caring and nurturing parenting role (Möller, Majdandžić, de Vente, & Bögels, 2013). Multiple results from the studies in Chapters 4 and 5 confirm the unique role of maternal and paternal caregiving.

First, we found that despite couples’ concordance in appropriate mind-related speech at 12 months, mothers’ and fathers’ mind-mindedness independently predicted infant emotion regulation, although the first appearance of these effects showed a different timing (Chapter 4). Second, fathers’, not mothers’, mind-mindedness at 12 months predicted better emotion regulation at 12 months via caregiving behavior (Chapter 4). Third, we found continuity in parents’ mind-mindedness from 4 months to 2.5 years, and concordance in couples’ mind-mindedness at 12 months (Chapter 5). Fourth, it was the combination of two parents being low in mind-mindedness that predicted children’s externalizing problems at 4.5 years. Altogether, these outcomes highlight that a) mothers and fathers have a unique influence on their child’s socioemotional functioning, b) parents may affect their children’s development through different mechanisms and at different age points. (also see Miller et al., 2019), and, c) parents could compensate each other’s lack of mind-mindedness in buffering against externalizing behavior problems.

There may be multiple reasons for the unique paternal and maternal effects that we found in Chapters 4 and 5. For instance, 4-month-old infants have fewer motor and communication abilities that allow them to deliberately use parents to regulate their emotional states (Sroufe, 1997). The development of young infants may therefore be particularly influenced by the extent to which caregivers adequately read subtle cues of their infant and provide a caring response to these cues. On the other hand, the positive effect of parents who are challenging, though in an attuned and appropriate manner, may become more apparent at a later age, when infants begin to experience more efficacy in adapting their own and others’ behaviors (Majdandžić et al., 2016).

Another reason for the different onset and trajectory of maternal and paternal effects might be that Dutch female employees are entitled to at least 3 to 4 months maternity leave, whereas male employees are entitled to up to 2 days of paid paternity leave after their partners have given birth (in 2018). Almost all mothers in Chapter 5’s study reported to have spent full-time with their newborns during the first 3 months, whereas most fathers reported to have worked full-time (or 4 days) from birth. Getting an appropriate understanding of the newborn’s signals may require time to develop, which fathers in the present sample have had less than mothers. Moreover, nursing
mothers participate in parent-child interactions that are critical in soothing arousal during the first months. Differences in the nature and quantity of infant–mother and infant–father interactions during the newborn’s first months may thus also explain the different first appearance of the maternal effects.

Interestingly, Chapter 5’s results showed joint effects of mothers’ and fathers’ mind-mindedness on preschoolers’ behavioral functioning: Only when two parents were low in appropriate mind-mindedness, children showed an increased rate of behavioral difficulties. These results suggest that parents may compensate each other’s lack of frequent mind-reading. It is important to note that we found this result only for appropriate mind-mindedness, and not for the nonattuned index. That is, a lack of verbalizing the child’s mental states could possibly be repaired by another parent’s frequent commenting on the child’s mind, while nonattuned comments provide a strong indication that the parent has problems with accurately representing the infant’s mind and treating him or her as a sentient individual (Meins, 2013). When one parent is high in nonattuned mind-mindedness, this could therefore not be compensated by another parent being low in nonattuned mind-mindedness. The joint effects of parents’ lack of appropriate mind-mindedness thus demonstrate a crucial difference between the use of parents’ appropriate and nonattuned mind-mindedness, which might have implications for the socioemotional development of the child.

The outcome that the combination of two parents being low in mind-mindedness predicted externalizing behavior is relevant for another reason. In a previous study maternal mind-mindedness at 8 months predicted less behaviorally difficulties in low, but not high socioeconomic status (SES) families (N = 177; Meins et al., 2003). In line with the study of Meins et al., Chapter 5 showed that in a population of middle-to-high SES families, children are at risk for developing behavioral difficulties only when both their mother and father are low in mind-mindedness. In other words, in families with more socioeconomic stressors, a mother’s frequent mentalizing about her child is a protective factor against the development of behavioral difficulties, whereas in families with more optimal socioeconomic circumstances, low mentalizing of both parents poses a risk factor for the development of externalizing problems.

Altogether, Section 2’s results on both the stability and concordance in mind-mindedness as well as the independent and joint effects of mothers’ and fathers’ mind-mindedness suggest that there is much to say for including the entire family system and its dynamics when predicting children’s socioemotional trajectories (Bögels & Phares, 2008; Lucassen et al., 2011; Monteiro, Verissimio, Vaughn, Santos, & Bost, 2008), as well as including broader family factors (e.g., socioeconomic stressors, life events). An important avenue for future fundamental research on parents’ mentalizing is to further investigate the bidirectional effects between parents’ mentalizing and children’s
behavior. Although Chapter 4 did not show infant-to-parent effects on parents’ mind-mindedness, we found concordance in couples’ mind-mindedness at 12 months (but not 4 months), suggesting that mind-mindedness is affected by family dynamics (Chapter 5). Mind-mindedness in later childhood has shown to associate with parental stress, which is both an antecedent and consequence of child behavioral difficulties (McMahon & Meins, 2012; Neece et al., 2012). Furthermore, there is evidence from neuroscience studies in adults that stress or arousal immediately impedes people’s ability to reflect consciously on the minds of others (reflective or controlled mentalizing; Luyten & Fonagy, 2015). This means that moment-to-moment stressors that occur during daily parenting situations (e.g., a child that starts to cry because he does not get his way) may cause sudden, short-term decreases in parents’ mentalizing.

In order to understand the immediate (causal) effects of difficult infant or child behavior on parents’ mentalizing stance, future studies should focus on conducting experimental research. For instance, using an infant simulator at home, it would be possible to test whether excessive crying of an infant (simulator) causes immediate effects on parents’ mind-mindedness and caregiving behavior (Voorhuis, Out, van der Veen, Bhandari, van Ijzendoorn, & Bakermans-Kranenburg, 2013). On a similar note, in later childhood, it is possible to manipulate children’s behaviors, for instance, by instructing children to obstruct a parent-child puzzle task without informing the parent. Such experiments could not only clarify possible child-to-parent effects, but also provide an opportunity to learn about the specific characteristics of parents who are able to maintain a mentalizing stance during stressful parenting situations (particularly when such experiments are conducted in a heterogeneous group of parents; Luyten & Fonagy, 2015). Moreover, recently, interview measures and questionnaires on parental mentalizing became available that could be administered online (Fishburn et al., 2017; Luyten, Mayes, Nijssens, & Fonagy, 2017). These less time-consuming measures of mentalizing make it feasible to start using microgenetic designs (Siegler & Crowley, 1991) to get a better understanding of the mechanisms underlying the relation between parental mentalizing and children’s behavioral/socioemotional functioning.

Section 3 Adapting parents’ mentalizing

In Section 3 (Chapters 6, 7, and 8), we investigated whether parental mind-mindedness increased after two interventions that explicitly aim to enhance and change parents’ representations of their child’s mind: Mindful with your baby/toddler and Basic Trust. First, the Mindful with your baby/toddler training is a group-based mindful parenting training for mothers of infants and toddlers who experience parental stress and/or problems in the parent-child relationship. Chapter 6 presents initial results on the self-reported effects of the “Mindful with your toddler” intervention,
since the effectiveness of the toddler version had not been explored previously. Overall, mothers (N = 22) reported no significant differences between waitlist and pretest. From pre- to posttest, mothers reported improvements in child psychopathology, maternal mindfulness and self-compassion (medium effect sizes). These effects were stable or further improved at a 2- and 8-month follow-up (medium/large effect sizes). Improvement in child dysregulation, maternal internalizing psychopathology, parenting stress, sense of parental incompetence, non-judgmental acceptance of parental functioning, and nonjudging of inner experience was only seen at 2- and 8-month follow-up (medium/large effect sizes). No changes in maternal externalizing psychopathology, overreactivity, compassion for the child, and partner relationship were reported. These results provided initial support that the mindful parenting group training is also successful in improving mental health in mother-toddler dyads, next to mother-infant dyads (Potharst et al., 2017).

In Chapter 7 we examined whether the mindful with your baby/toddler training not only reduces maternal self-reported parenting stress, but also changes objectively-measured maternal behavior during parent-child interactions and mother-child interaction quality, as compared to wait list (N = 53 mother-child dyads). The results showed no significant changes in maternal behavior or stress between waitlist and pretest. Mothers reported less parenting stress after the training (small effect size), were more accepting (medium effect size), and made fewer nonattuned references to the child’s mental states (large effect size). The children showed higher levels of responsiveness after the training (small to medium effect size). No significant changes occurred in appropriate mind-related comments, maternal responsiveness (vocal turn-taking), and dyadic coordination of gaze and facial expressions. The outcomes suggest that the Mindful with your baby/toddler training affects not only maternal stress, but also maternal behavior, particularly (over)reactive parenting behaviors, which resulted in more acceptance, better attunement to child’s mental world, and more “space” for children to respond to their mothers during interactions.

Second, The Basic Trust method, presented in Chapter 8, is an example of an attachment-based intervention method that is focused on explicitly improving children’s mentalizing abilities through teaching parents to frequently and consistently make the child aware of their own and others’ mental states (i.e., by frequently using mental state language when interacting with their child; Polderman, 1998; 2017). We studied post-intervention changes in child attachment insecurity, behavior problems, parental mind-mindedness, sensitivity and parenting stress in 53 families with internationally adopted children who were insecurely attached to their adoptive parents. Children’s insecure attachment, internalizing and externalizing behaviors, as well as mothers’ and fathers’ stress decreased from pre-test to posttest and these effects were sustained at
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the six-month follow-up. Both parents’ sensitivity showed an improvement at follow-up, but not at posttest, whereas both parents’ mind-mindedness showed an improvement at posttest, but a slight fade-out effect at follow-up.

The results of Chapters 7 and 8 suggest that mentalizing of parents is adaptable and interventions aimed at enhancing parents’ mentalizing result in positive effects on children’s behavior. Chapter 7 showed that after the Mindful with your baby/toddler training mothers were not more inclined to refer to their child’s mind during interactions, but they did show fewer misinterpretations of the child’s moment-to-moment mental states. Chapter 8 shows that after the Basic Trust intervention, mothers and fathers used more mind-related references to describe their child, suggesting that parents’ mentalizing tendency had increased, or at least, the tendency to comment on their child’s mind. The two interventions therefore seem to bring about changes in distinct aspects of parents’ mentalizing stance. Although we evaluated the interventions within two very different populations (e.g., different age, different reasons for referral), it might be interesting to consider the two different approaches to get a better understanding of the results.

It is the main focus of the Basic Trust intervention to stimulate parents’ thinking about their child’s behavior in relation to their mental states, as well as commenting on the child’s mental states (with the help of video feedback; Polderman, 2017). This intervention approach might result in direct effects on the frequency of parents’ mind-related speech. In the Mindful with your baby/toddler training, different than in the Basic Trust intervention, parents are not invited to immediately verbalize reflections on their child’s mind or respond to them (Potharst et al., 2017), which may explain why mind-related speech did not increase at posttest, nor did sensitive responsiveness (which associates with appropriate mind-related comments; Meins, 2013). On the other hand, the focus on being aware of and accepting one’s own and others’ moment-to-moment state of mind may have led mothers to become better attuned to the infant’s thoughts and feelings, demonstrating fewer nonattuned comments (misinterpretations of the child’s mind) as well as less rejecting behavior. So it seems that the two interventions bring about changes in different aspects of mentalizing (reading the mind more accurately versus reading more frequently), highlighting the multidimensional character of parental mind-mindedness and mentalization in general (Meins, 2013; Luyten & Fonagy, 2012). Changing parents’ mentalizing stance could, therefore, be reached through several routes.

Although Chapter 8 suggests that the Basic Trust intervention is successful in adapting parents’ mind-mindedness, the intervention did not prove to be successful in establishing long-term effects in parents’ mind-mindedness. This raises the question whether short parenting interventions are able to bring about a long-term adaptation
in parents' mentalizing. Especially since an individual's mentalizing capacity is thought to develop from the experiences of close personal relationships (Fonagy et al., 2002), behaviorally focused methods (i.e. the stepwise method of interacting that parents are taught to use) might not be sufficient to establish long-term changes in parents' mentalizing. There is convincing evidence from neuroscience studies that good (balanced) mentalizing of adults is not only dependent on stress and arousal, but also the use of attachment strategies in response to arousal (Luyten & Fonagy, 2015). Thus, it might be important to incorporate intervention modules that a) track and intervene in internal and external stressors with an individual and/or family, and b) discuss parents' own history of attachment and how this affects their response to stress. In order to reach this goal it seems important to pay attention to therapeutic alliance. Forming a therapeutic alliance in which the therapist encourages self-focused mentalizing may help parents in regulating their own challenging emotional states, which could possibly lead to more long-term improvements in parents' mentalization within the parent-child relationship (e.g., Suchman DeCoste, Castiglioni, Legow, & Mayes, 2008).

In sum, Section 3 presents preliminary evidence that Mindful with your baby/toddler and Basic Trust, both interventions that target parents' online representations of their child's mind, are successful in increasing parents' mind-mindedness and to some extent, their sensitive behavior. The positive changes in parent and child outcomes provide reasons to further study the effectiveness as well as the working mechanisms of both interventions. Specifically, in order to refine our understanding of mentalization-based parenting programs, we should gain more insight into the type of interventions that bring about changes in the different aspects of mentalizing (Luyten & Fonagy, 2015).

Strengths and Limitations

The present dissertation united meta-analytic and prospective study designs including low- and high-risk participants to answer questions about the relations between parents' mentalizing and children's socioemotional development. In most studies, both mothers and fathers were included, and we tested their unique and/or joint effects on child outcomes. We also considered multiple methods to assess children's functioning, that is, we employed physiological measures, parent-child observations at home and in a laboratory setting, interviews, and parent reports on questionnaires. Finally, we examined multiple domains of children's socioemotional functioning (attachment security, mentalizing, emotion regulation, internalizing/externalizing behaviors, social competence).

Nevertheless, the research presented in this dissertation has limitations. First, understanding adaptive and maladaptive pathways in child development is a tremendous puzzle. How parents represent their children's mind seems an important indicator of the
quality of proximal processes within the child’s family system (Bronfenbrenner, 1994), but is far from an exclusive predictor of children’s socioemotional development. As mentioned earlier, it is likely that family environment and children’s behavioral problems connect via the effect of environmental factors on the parent. For example, low SES is correlated with higher rates of psychopathology and heightened levels of stress and in adults (Fryers, Melzer, & Jenkins, 2003; Lorant et al., 2003), and parental depression and stress are known to associate with children’s behavioral problems (e.g., Crnic, Gaze, & Hoffman, 2005; Yates, Obradovic, & Egeland, 2010). We did not include measures of all ecological systems that may influence children’s development (i.e., meso-, exo-macrosystem; Bronfenbrenner, 1994). On a similar note, we did not include measures that index biological and/or genetic vulnerability, precluding us from making hypotheses on the differential susceptibility of children to parents’ (lack of) mentalizing (Belsky, 2005).

Second, the non-experimental and correlational design of the fundamental studies precludes causal inference on the effects of parental mind-mindedness on infant and child development. Furthermore, we only studied the bidirectionality of effects in Chapter 4. The outcomes of Chapter 3 remind us that the outcomes of this dissertation could equally be explained as child-to-parent effects as parent-to-child effects. Third, with regard to the intervention studies, conclusions about causality and placebo effects are limited by the lack of a randomized control design. Furthermore, much has yet to be studied when it comes to supporting the claim that the interventions in Chapters 6 to 8 work the way they are theorized to work. We were not able to adequately study whether a post-intervention change in mind-mindedness was underlying a change in child attachment insecurity or behavior problems. Next to studying mechanisms of change, future studies should also consider whether mentalization is a moderator of treatment success. Do mentalizing parents respond better to treatment? If this is the case, it would also be interesting to investigate whether the mind-mindedness interview could provide a useful tool in screening for extreme cases of problems with mentalizing (i.e., when parents only describe the child’s behavior and physical appearance or when they only comment on negative aspects of the child’s mind and behavior), enabling clinicians to adapt their treatment approach accordingly.

Fourth, the samples in the empirical studies included mostly families with middle to high socioeconomic backgrounds, and also the majority of the samples in the meta-analytic studies involved middle-to-high class families from Western societies. Particularly since research has shown that the extent to which a lack of mind-mindedness is a family risk factor for child behavioral difficulties depends on socioeconomic status (Meins et al., 2013, 2018), we should be careful with generalizing the results to families with lower SES. Fifth, in Chapters 5, 6, 7 and 8, we used, next to observational measures
of parenting, parent report on child outcomes, most importantly reports on social competence, attachment insecurity, and behavior problems. Especially because this dissertation examines how parents represent their child’s mind, the reports of child outcome could have been biased by the parent’s mentalizing capacity. For instance, parents who tend to primarily see problematic behavior of their children, without trying to understand the meaning of this behavior (i.e., showing a lack of mentalizing), may also be the parents who report more behavioral problems. This means that the associations found could expose the parents’ representation of their child’s development, rather than the child’s actual development. Using multiple informants, other than the parents, and using objective observations of child psychopathology and socio-emotional functioning, may be important particularly in research on parental mentalization.

Last, although this dissertation aimed to shed further light on how parental mentalizing relates to attachment and children’s social-emotional development, both child outcomes were investigated in separate studies. So, the pathway from parents’ mentalizing to infant attachment security and later children’s healthy social-emotional functioning remains to be studied further.

**Conclusion**

The combination of meta-analytic and empirical (fundamental) studies as well as intervention studies performed under clinically representative conditions provides evidence for the notion that the parent’s capacity to mentalize is an essential characteristic of parents that sets in motion a positive developmental pathway of children, starting with (a) fostering regulated emotional responding and a secure attachment relationship during infancy, (b) providing interactions in which children are able to learn about their own and others’ minds, which in turn (c) aids the development of more (socially) adaptive behaviors and less maladaptive behaviors. The results of this dissertation also point to the complexity of predicting child development—if we want to paint the right picture, it seems important to take into account the entire family system when examining children’s socioemotional functioning and consider the stressors that each family faces. The results indicate that the parent’s capacity to mentalize seems adaptable, but the results also raise the question on whether short parenting interventions are able to bring about changes in the parent’s mentalizing stance that last on the longer term. We should therefore learn more about the antecedents of parental mentalizing and the long-term effects of mentalization based parenting interventions.