

## INTERVENTION IN TRANSMISSION OF INSECURE ATTACHMENT: A CASE STUDY<sup>1</sup>

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*Summary*—Several attachment based intervention studies have been performed, with varying success. An important question is whether short term interventions can be successful in promoting parental sensitivity and security of infant-parent attachment as well as in changing parental representations of attachment. We investigated this issue in an exploratory way in a case study. A short term home based intervention with written material and video feedback which was effective regarding parental sensitivity and infant security in a former study, was provided a parent who revealed an insecure attachment representation in the Adult Attachment Interview. The intervention sessions were expanded with discussions about past and present experiences of attachment. After four intervention sessions the mother's behavior towards her child was rated as more sensitive than before the intervention. Also the infant-mother attachment, as observed in the Strange Situation, appeared to be more secure. Nevertheless, in a second Adult Attachment Interview administered after the intervention, the mother showed again an insecure representation of attachment. Possible implications of these results are discussed.

In attachment theory (Bowlby, 1982), past attachment experiences are supposed to become crystallized into an internal working model or mental representation of attachment, which Main, Kaplan, and Cassidy (1985) defined as 'a set of rules for the organization of information relevant to attachment and for obtaining or limiting access to that information.'

Studies on intergenerational transmission of attachment indicate that about 75% of the parents with a secure or insecure mental representation of attachment develop a similar secure or insecure attachment relationship with their baby. Other studies show that the quality of the infant's attachment at one year of age could be predicted from the representation of attachment of that infant's parent as measured during pregnancy (for a review, see Van IJzendoorn, 1995). Less clear, however, is the transmission mechanism between parental attachment and infant attachment. It is hypothesized that the interactions of parents with their children and the way the infant-parent at-

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tachment develops is influenced by the parent's representation of attachment. According to Ainsworth, Blehar, Waters, and Wall (1978), sensitive responsiveness, that is, the parent's ability to respond adequately and promptly to the signals of the child, is an important determinant of infant attachment. However, the association between sensitive responsiveness and infant's attachment appears to be modest (De Wolff, 1996), and the same is true for the association between parental attachment and sensitive responsiveness (Van IJzendoorn, 1995). Therefore, a crucial issue in attachment theory deserving close scrutiny is how parental representations of attachment are transmitted to children. An empirical search for determinants of attachment other than sensitive responsiveness could result in knowledge bridging the "transmission gap" (Van IJzendoorn, 1995).

Intervention studies address this issue experimentally by supporting parents with advice, assistance, or intervention programs and assessing the effects of these efforts on infant's attachment. An intervention program that affects infant's security provides at the same time evidence for the causal relationship between the experimentally manipulated determinant and a measure of attachment. In the past decades several intervention studies examined the possibility of affecting infant-parent attachment with varying success (for a review, see Van IJzendoorn, Juffer, & Duyvesteyn, 1995). A meta-analysis involving 12 intervention studies showed that it is possible to enhance sensitive responsiveness in parents and promote infants' security. However, whereas the over-all effect of the interventions on parental sensitivity was moderate ( $d = .58$ ), the over-all effect on infant's attachment appeared modest ( $d = .17$ ) (Van IJzendoorn, *et al.*, 1995), indicating that it is easier to change parents' behavior towards their child than to change the relationship that develops between children and their parents. The intensity of the support in the intervention studies in the meta-analysis varied from the mere provision of a soft baby carrier or three home sessions with personal feedback on the mother's behavior to weekly contacts during almost a year or longer in which support or therapy was given to the mother to enhance her empathy for her baby. An unexpected finding from this meta-analysis is that longer, more intensive, and therapeutic interventions appeared to be less effective ( $d = .00$ ) in affecting attachment of infant and parent than short-term or nonintensive preventive interventions ( $d = .48$ ) (Van IJzendoorn, *et al.*, 1995).

These studies do not, however, allow conclusions about the mental representation with respect to the attachment of the parent involved, since they do not report representational attachment measures such as the Adult Attachment Interview (George, Kaplan, & Main, 1985). Only one long-term, intensive intervention study of parental sensitivity, infant's attachment and the parent's representation of attachment used the Adult Attachment Inter-

view as a measurement of representational change (Erickson, Korfmacher, & Egeland, 1992). Although a positive effect of intervention for sensitivity was reported, no positive change was reported on infant's security or on the parent's representation of attachment as assessed with the Adult Attachment Interview (Egeland, Adam, Ogawa, & Korfmacher, 1995). The question whether a short-term intervention that is fruitful in changing parental insensitivity and infant's insecurity could be successful in affecting the parent's mental representation as well remained unanswered. This question is the more important since the parent's mental representation is considered to be crucial in the intergenerational transmission of attachment.

A second, related, question not sufficiently addressed in intervention studies hitherto, is whether it is possible to influence the mental representation of attachment through a specific intervention, e.g., by means of providing a supportive relationship to the parent or through exploration of negative childhood experiences.

In our case study a mother with an insecure mental representation of attachment and little sensitive responsiveness was provided video feedback (used in a previous study and described by Juffer, Rosenboom, Hoksbergen, Riksen-Walraven, & Kohnstamm, in press) and intervention strategies explicitly directed at the mother's mental representation. By presenting the Adult Attachment Interview as a pre- and posttest to this mother, we were able to explore whether an expected increase in her sensitivity and the development of a secure attachment with her child were accompanied by a change in her mental representation of attachment. Further, the case study may clarify the mechanism of the transmission of attachment from one generation to the next by describing the process of the intervention in some detail.

## METHOD

### *Procedure*

To prepare a large-scale intervention study (with a randomized pretest-posttest control group) a case study was performed with video feedback and written information about sensitive parenting adapted from a previous intervention study (Juffer, 1993) and with discussions about parents' past attachment experiences.

The mother of a firstborn child was recruited from the Registry Office and requested to participate in a study regarding the influence of parents' own childhood on the development of their children. She was invited to the institute for an Adult Attachment Interview in which she revealed an insecure representation of attachment. In a home visit, pre-intervention videotapes of mother-child interaction were made, and the intervenor explained the further procedure of the study to the mother. The mother's informed consent was received.

After four sessions of interventions in the home, the mother was invited to the institute twice to participate in another Adult Attachment Interview and, with her child, in the Strange Situation to assess the quality of the infant-mother attachment.

### *Intervention*

The intervention was implemented between the 11th and 14th months of the child's age. In four intervention sessions three types of interventions were provided: (1) general written information about sensitive responsiveness in daily life situations, (2) personal feedback on the videotaped interaction of the mother-child dyad, and (3) semistructured discussions about past and present.<sup>2</sup> The video feedback method (Juffer, *et al.*, in press) provides the opportunity to focus on the baby's signals and emotions, thereby improving the parent's empathy for the baby and stimulating the parent's affective attunement. It also enables the positive reinforcement of the parent's—sometimes scarce—moments of sensitive responsiveness. The discussions were inspired by attachment theory (Bowlby, 1982, 1988) and by the biographies of "earned secure" persons (Main & Goldwyn, 1985/1994; Pearson, Cohn, Cowan, & Cowan, 1994). A person with an earned secure representation of attachment is someone who reports to have had a harsh or unloving childhood but who restructured those experiences, a situation we want to induce with our intervention. Discussions about past and present attachment may enable parents to reconsider their childhood experiences and explore the link between those experiences and the developing relationship with their baby (Fraiberg, Adelson, & Shapiro, 1975).

The intervention thus included elements based on attachment theory and research: sensitive responsiveness (Ainsworth, *et al.*, 1978; Van den Boom, 1988), physical contact and intimacy (Anisfeld, Casper, Nozyce, & Cunningham, 1990; Bowlby, 1982; Main, 1990), affective attunement (Haft & Slade, 1989; Stern, 1977, 1985), and reflection on experiences of past attachment (Bowlby, 1988; Erickson, *et al.*, 1992; Fraiberg, *et al.*, 1975; Lieberman, Weston, & Pawl, 1991). Besides these elements, the mother's relationship with the intervenor was considered to be a supportive and encouraging condition of change (Bowlby, 1988). A strategy we considered worth testing was whether a discussion about childhood would be more fruitful in the presence of the grandparent involved.

### *Pre- and Postintervention Assessments*

Before the intervention the Adult Attachment Interview (George, *et al.*, 1985) was administered to assess the parent's mental representation of attachment. After the intervention the interview was administered again, by a

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<sup>2</sup>Material is available from the authors upon request.

different interviewer, to trace possible changes in the mother's mental representation. The test-retest reliability of the Adult Attachment Interview is sufficient to warrant such a use of the interview (Bakermans-Kranenburg & Van IJzendoorn, 1993; Benoit & Parker, 1994). Further, in several studies the classifications turned out to be uninfluenced by potential interviewer effects, memory, intelligence, and social desirability (for an overview, see Van IJzendoorn, 1995). The intervenor was not involved in the interviewing, neither did she know the classification of the mother's attachment. Both interviews were coded in counterbalanced order by two independent coders<sup>3</sup> who did not know whether the interview was a pre- or posttest. The coders did not visit the mother in her home. The coders agreed on the classifications of both interviews.

To rate the mother's sensitive responsiveness Ainsworth's Sensitivity rating scale (Ainsworth, Bell, & Stayton, 1974) was used. For this purpose interaction of mother and infant was videotaped in their home before and after intervention. The videotape was rated afterwards by three independent coders who had not visited the mother and who did not know an intervention had occurred. All three coders rated both assessments in random order. The scores of the three coders were averaged.

The Strange Situation procedure (Ainsworth, *et al.*, 1978), meant to observe the quality of the attachment of infant and parent, was performed after the intervention, when the child was 14 months old. The same classification was given independently by two experienced raters.

#### THE CASE STUDY

##### *Background*

Emma (29 yr.) was the fourth child in a family with five children. In Emma's childhood her father was often abroad for months because of his job. When Emma was nine years old, her parents divorced. Emma participated in elementary vocational training and left home at the age of 19. At the start of the study, Emma was married with a daughter, Debby (11 months).

##### *Pre-intervention Assessments*

In the first Adult Attachment Interview, Emma emphasized that she did not remember her childhood well. She noted that the relationship with her mother was never very strong. Her mother was off to work most of the time. Emma recalled that when she or one of the other children got hurt, her mother used to react quite laconically and tell them that it would pass away automatically. She ended with: "My mother was quite tough, on herself too. . . . And we all took that up a bit. So." She remembers quite well

<sup>3</sup>The two coders were trained by and reliable with M. Main and E. Hesse. Their intercoder reliability was 81% ( $\kappa = .72$ ).

the fights her parents had before the divorce and the times she was scared of her father. Emma thinks she nevertheless managed quite well: "My little brother is a mental wreck now . . . but yes, I did manage quite well." When asked about the effects of her childhood experiences, Emma says: "I would do things different with my child. So I know what I shouldn't do. But for the rest, no." The interview disclosed an insecure dismissing (Ds3) representation of attachment. Although she did not deny that negative events occurred in her childhood, she emphasized that she was not really affected negatively. In her opinion, she even came out stronger.

The sensitivity rating of a videotaped home observation was 3.3 on the Ainsworth nine-point scale (1=highly insensitive; 9=highly sensitive). Although Emma showed some empathy for Debby's perspective, e.g., while playing together on the ground with toys, she behaved according to her own views and wishes most of the time. Also, Emma seemed aversive of physical contact. When asked to play with her child without toys, Emma put Debby in a highchair with a table-flap in between them. She invited Debby to clap her hands by showing Debby how to do it. When Debby wanted to grasp her mother's clapping hands, Emma pulled back her hands immediately and ordered Debby that she should do it on her own. There were some rejecting moments as well, e.g., when Debby finally clapped her hands, but Emma snarled at her, as she did not clap earlier. During this episode, Debby reacted to her mother's negative overtures by silently, restlessly turning away from her mother several times. Before and after the filming Emma put Debby in the playpen quickly to get her out of the way. Emma either ignored her daughter's fussing protests or commanded her to play on her own.

In Ainsworth, *et al.*'s study (1978) the mothers of the insecurely attached children had a mean score of 2.4, whereas the mothers of the securely attached infants had a mean score of 6.5. From meta-analytic findings involving 11 studies (752 parents) the conclusion can be drawn that over-all parents of insecure children are rated consistently lower on sensitivity as compared to parents of secure children (mean of the secure group: 5.9; mean of the insecure group: 5.1) (De Wolff, *in press*).

In sum, the Adult Attachment Interview shows Emma's distorted, idealized view of her childhood experiences. Instead of acknowledging the negative effects of unavailable and harsh parenting, she normalized her upbringing. Observations of her interaction with Debby show that she does not acknowledge the emotional needs of her own child. In fact, by avoiding physical contact and by reacting impatiently and insensitively to Debby, Emma indicated her unavailability and inability to serve as a secure base. Main and Stadtman (1981) mention aversion to physical contact as typical of mothers of avoidant babies. An insecure attachment could be expected, completing the intergenerational cycle of insecure attachment.

*First Intervention Session*

Before this session the intervenor studied the videofilm taken earlier and prepared her feedback. When the intervenor began showing the videotapes, Emma perceived them as some nice filmshots. Later on Emma watched the videotape in a more serious and concentrated manner. The intervenor commented on the baby's behavior, without discussing the role of the mother explicitly. She showed the difference between Debby's (physical) contact-seeking and exploration behavior and explained the relevance of these behaviors for the child's social development and competence. When the intervenor suggested that Debby seemed to like playing together at a particular moment because she looked happy and content, Emma acknowledged this.

In the discussion part of the session, Emma opened up about her youth experiences, after the introduction of some projective material. She mentioned that her mother more or less neglected her, while her father was sadistic and frightened her. Emma herself developed some phobic reactions. She nevertheless emphasized that she did not have a bad childhood.

*Second Intervention Session*

Emma's mother, Debby's grandmother, accepted the intervenor's invitation to come over to her daughter's home. The grandmother took part in the discussion on attachment. During the filming the intervenor noticed that Emma was responding sensitively to some of Debby's positive signals such as smiling. However, she still reacted impatiently and was rejecting to Debby's negative signals such as crying or fussing.

The video feedback part of this session focused on the child's perspective. The intervenor tried to express what the baby on the video felt and why she behaved the way she did ("speaking-for-the-baby" technique; see also Carter, Osofsky, & Hann, 1991). By asking questions about Debby's behavior, Emma was encouraged to cooperate actively. The intervenor stressed that Emma knew Debby best because she interacted with her baby every day. By verbalizing their baby's behavior, mothers learn to practice observation and empathy, which are conditions for sensitive responsiveness.

During the discussion part of the session, after introducing a questionnaire, the intervenor brought the conversation round to Emma's childhood. At first Emma and her mother mostly agreed with each other, e.g., they both stressed that Emma always had been a very independent child. Emma's mother thought Emma was an easy going child. In the course of the discussion, some disagreement occurred. Emma's mother thought that she always was available, but Emma referred to her mother's long working hours and her being unavailable most of the time. Emma had to go to her sisters whenever something was wrong. Emma's mother said she never realized this. At the end of the discussion, Emma's mother emphasized her own difficult position as a single parent, and she seemed to ask for some understanding.

### *Third Intervention Session*

Emma mentioned that she and her mother never discussed her childhood experiences before. In this sense the discussion in the previous session was unique. Emma doubted, however, whether she would ever talk about the past with her mother again.

The video feedback part of the session focused on the principles of sensitive responsiveness: the relevance of adequate and prompt reactions to the signals of the child (Ainsworth, *et al.*, 1978). Positive moments of the video were used as an illustration to show how well it worked out for Debby if and when Emma responded adequately to her. The intervenor also showed that Emma could be very sensitive when Debby was physically close to her, e.g., when Debby sat on her lap. Emma's harshness seemed to melt when she was in close physical contact with her daughter; there was tenderness in her tone, expression, and movements. Emma understood the main issues quickly and was able to evaluate her own behavior, including some insensitive aspects. Before this session Emma received and read a pamphlet about the day's theme: sensitive responsiveness in daily interactions.

During the discussion part the intervenor discussed Emma's life story by means of three fictional "attachment biographies." While Emma was very involved in the subject, commenting rather emotionally on her adolescence, Debby started crying and sought Emma's proximity. As usual, Emma rejected her in an irritated way, and Debby cried louder and walked away. Suddenly, Emma silently looked in Debby's direction, and after a few seconds she went after Debby and comforted her. The incident seemed to be a turning point; from this moment Emma seemed more often to try to see Debby's perspective.

### *Fourth Intervention Session*

Emma received a pamphlet about playing together, in which the principles of sensitive responsiveness were applied to playful interactions. The video feedback focused on affective attunement between mother and child (Stern, 1977, 1985). Emma was actively involved: She explained several times how Debby's behavior should be interpreted. Besides, she listened attentively to what the intervenor brought forward about the relevance of sharing the baby's feelings. We told her that, if parents communicate to their children that they want to share their pleasure as well as their distress, children will feel free to express their emotions. The baby will trust the parents, knowing that they can be relied on. Commenting on the videotaped interactions, the intervenor showed that Emma noticed Debby's signals more often: looking in the direction Debby looks, verbalizing Debby's behavior, and finishing a game if Debby is not interested in it anymore.

Talking about the past, Emma described how her mother always de-

picted her father as the ogre, but that she now feels he had some nice characteristics, too. For example, her father seemed interested and involved in her life now. Emma acknowledged that her mother treated her harshly in the past, but that she now understands better why her mother did so. She would have preferred that her mother had explained more to her when she was a child so that she could have better understood her parents' fights and their divorce.

#### *Postintervention Assessments*

The second Adult Attachment Interview did not show the insights Emma seemed to express during the intervention sessions. Again, Emma said she did not remember her childhood very well. Her mother and she had little connection with each other when she was young. When asked about being hurt as a child, Emma replied: "When I hurt myself. Well, not that much happened then, because it passed off automatically. You know, my mother was that way. My mother is very hard, also on herself. . . . And yes, that was quite normal." She described the fights and anxieties before her parents' divorce but at the same time denied that she was ever emotionally upset during her childhood: "Oh, I was never upset. . . . No, I cannot remember. . . . No, I would say, I did manage very well, in fact." Again, the transcript had to be classified as insecure dismissing (Ds3).

In contrast to the stable insecure representation of attachment, Emma's sensitivity was rated higher after the intervention. The average score of the three independent coders was 5.2 now, an increase of almost two scale points. Compared to the pre-intervention observation, Emma paid more attention to Debby's signals during their playing together. Although there were some impatient moments, her way of treating Debby was never harsh or hostile. She verbalized Debby's behavior and mood from time to time. Playing peekaboo with Debby on her lap (a position chosen by Emma herself), Emma shared a lot of physical intimacy and eye contact with her. Debby reacted responsively and with clear-cut positive affect towards her mother. During the peekaboo episode she rubbed her face against her mother's face and vocalized in a soft-toned "singing" voice which was taken over by Emma. The findings on the interactions of mother and child in the home were confirmed by the Strange Situation assessment. Two coders (blind to all other data) classified Debby at 14 months as securely attached to her mother (B3 with a hint of B2).

During a final informal home visit Emma evaluated the video feedback as positive. She remarked: "Anyway, it's my first child. I am eager to learn something if it is important for Debby. . . . I am more conscious about things, especially with respect to Debby." During this visit the positive interaction between Emma and Debby impressed the intervenor. When Debby

got a present (a children's book), Emma took her on her lap, helped her to unwrap it, shared Debby's surprise and pleasure and, upon Debby's request, showed her the pictures in the book. Emma told the intervenor that Debby's behavior towards herself changed. Debby now protested against being left alone in the car when Emma went into a shop, whereas in the past she did not object to it. Emma now took Debby with her while shopping. Emma was less positive about the discussions of attachment. The discussion stirred up issues and topics from the past, but she doubted the usefulness of it. In her opinion, neither the past nor her parents could be changed. She emphasized, though, that instead of her mother's support she experienced support from her mother in law and that she was happy with that support.

#### DISCUSSION

We discuss two results from the presented case study. First, contrary to the expected insecurity of the infant, a secure attachment of infant and parent developed. The anecdotally described changes in both the infant's behavior and the mother's reactions in our case study point to changes in their relationship. Our findings appear to illustrate how a short term intervention may be effective in enhancing the parent's sensitivity and promoting a secure infant parent attachment. If so, they concur with the conclusion from a meta-analysis that emphasized the effectiveness of short-term preventive interventions above long-term therapeutic interventions (Van IJzendoorn, *et al*, 1995).

The case study does not allow for a true test of change in infant security, as we did not have a pre-intervention assessment. However, as discussed above, the mother's insecure representation of attachment, her low sensitivity, and her aversion to physical contact with the baby pointed to an expected insecure infant mother attachment, so that the measured security of the relationship could well be a result of the intervention. Another question is how to interpret the mother's increase in sensitivity by almost two points. In Juffer, *et al*'s (in press) study the average increase of the experimental group was about one half scale point, whereas the control group showed on the average either no increase or a decrease on Ainsworth's rating scales. In our view, the mother's increase in sensitivity might very well be related to the following infant security, although it would be more convincing to have additional measures of changes in mother and infant behavior. For instance, the changes in the mother's tone and facial expression, or the growing mutual enjoyment of the interaction could be meaningful for the development of a secure attachment. Our future large-scale intervention study, which includes a control group without intervention, may provide us with more information necessary to bridge the "transmission gap."

Presuming that in the current case study the intervention was effective,

one might wonder what the working ingredients of this intervention may have been. In our view, three aspects of the intervention seem important. First, the ecological validity of the intervention: a home-based intervention can be attuned to the daily parent-child interaction optimally. Second, the acknowledgement of the parents as experts on their own child: in the intervention parents are explicitly invited to interpret their child's behavior, thereby stimulating an active involvement. Third, the usefulness of video feedback: while showing the videotapes the intervenor can point to the signals of the child, thereby enlarging the observational skills and empathy of the parent.

The second result concerns the discrepancy between parental attachment, parental sensitivity, and infant attachment security in our case. Although parental sensitivity and infant attachment security improved, the parental representation of attachment remained insecure. The mother may have felt less at ease during the second administration of the AAI. However, an interviewer effect was absent in other studies where the AAI was administered twice (Bakermans-Kranenburg & Van IJzendoorn, 1993; Sagi, Van IJzendoorn, Scharf, Koren-Karie, Joels, & Mayseless, 1994) and we introduced the second interview carefully to the mother. A central hypothesis in attachment theory is that parental representations of attachment determine parents' sensitive responsiveness and that responsiveness in its turn affects the infant-parent attachment. Our case study suggests, though, that parental sensitivity and infant security can be divergent from the parent's attachment, and, moreover, that interventions may create this discrepancy. The consequences of such a discrepancy remain as yet unexplored. In our view, it could lead to two different developmental pathways for the child (see also Van IJzendoorn, *et al.*, 1995). The increase in parental sensitivity may be only temporary because the underlying mental representation of attachment did not change. If and when parents confront new developmental issues and demands from their growing child, they may not be able to generalize the acquired behavioral strategies to an older age. In this case the (secure) child would experience a breakdown in his parent's sensitivity. The second, more positive, pathway is that the intimacy and (physical) contact with the baby would restore the parent's capacity for attachment and compassion in the long run (Fraiberg, *et al.*, 1975). Besides, a securely attached child behaves in a more positive way than an insecure child, thereby shaping the parent's behavior and reinforcing the stability of the parent's sensitivity (Bowlby, 1982). In a family systems approach it is acknowledged that a substantial change anywhere in the family affects all members (e.g., Stern-Bruschweiler & Stern, 1989). Only longitudinal research will yield information about the plausibility of the two pathways.

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