From the father's point of view: How father's representations of the infant impact on father–infant interaction and infant development

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ABSTRACT

Despite the knowledge that fathers uniquely contribute to the development of their infants, relatively few studies have focused on the father–infant relationship during early infancy. In the present longitudinal study we included 189 fathers and examined whether their early attachment representations of the infant predicted future quality of father–infant interaction. We also investigated whether these representations were related to the infant's development. Paternal attachment representations were assessed by the Working Model of Child Interview (WMCI) at 6 months post-partum and classified fathers' representations as 'balanced' or 'unbalanced' (disengaged or distorted). At 24 months, father–infant interaction was videotaped and analyzed by the NICHD coding scales. Further, the Peabody Picture Vocabulary Test (PPVT-III) was administered to evaluate the infant's verbal development. Results revealed that fathers' early attachment representations of the infant predict the quality of future father–infant interaction, with balanced representations more strongly associated with more favorable behaviors in fathers and infants. In addition, paternal interactive behavior appears an important mechanism through which paternal representations influence the development of the infant. These results underline the importance of early identification of fathers with unbalanced attachment representations, and we therefore recommend that more attention should be directed to the quality of the early father–infant relationship in clinical settings.

1. Introduction

In the seventies, fathers were described as 'forgotten contributors to child development' [1]. Until then, research on parent–child relationships had focused almost exclusively on the relation between a mother and her child and its impact on a child's social, emotional, behavioral and cognitive development [1]. In the years that followed more research included fathers in family research or focused primarily on the father's role. Studies have demonstrated that infants develop attachments to their mother and to their father, and the nature of these attachments might differ. Grossman et al. [2] noted that while infants usually turn to their mother for comfort in times of distress, fathers might contribute mainly by providing sensitive support during infant's exploration. Father's sensitive behavior during infant's exploration is characterized by sensitivity to the child's emotions, but also by support, cooperation and scaffolding. These paternal behaviors during the child's exploration will give the child a sense of security during challenging tasks, and this fosters the child to concentrate and master new skills [2]. Recent studies emphasized that fathers' unique contribution to the child's development starts already during early infancy. For instance, regular paternal involvement and active engagement with the infant have been associated with better cognitive and psychological infant outcomes [3]. Paternal disengaged and avoidant interactions in the infant's first months of life have been associated with the onset of externalizing behavior problems in childhood [4]. These studies emphasize the influence that paternal behavior exerts on the development of a child early in life. But what makes that some fathers are sensitive and stimulating and others are disengaged or intrusive? Because most research has been conducted with mothers, we will first summarize what is known about underlying processes that affect interactive behavior among mothers.

Research among mothers has demonstrated that the quality of maternal interactive behavior is influenced by mothers' internal attachment representations of her infant and the relationship with her infant (e.g., [5,6]). Internal representations are generalized ideas and schemes about social interactions [7]. These internal representations

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form a set of tendencies to interact in particular attachment relationships. When a mother prepares for motherhood, she develops specific ideas and expectations of her infant and her relationship with him/her [8]. These representations develop most rapidly during the first months post-partum. The quality of these representations differs between individuals and can be evaluated by studying parental narratives. One instrument that examines parental narratives is the Working Model of the Child Interview (WMCI) [9,10]. The WMCI is a semi-structured interview that focuses on the meaning a child has to the parent by asking the parent about the subjective experiences and perceptions of the child, parenting, and the relationship with the child [10]. In the WMCI coding system, representations can be either classified as 'balanced' or 'unbalanced'. Balanced representations are characterized by positive, rich and coherent ideas of the infant and of the relationship with the infant. Unbalanced representations are either characterized by an emotional distance with the infant (disengaged) or by confusion, insensitivity or preoccupation ('distorted') [11]. Research demonstrated that the quality of representations guides the way mothers interact with their infant. Mothers who have balanced representations of their infant display higher levels of sensitivity toward their infant than mothers with disengaged or distorted representations. Mothers with disengaged representations showed more withdrawal from their infant, while mothers with distorted representations showed more intrusiveness toward their infant [12–14]. Korja et al. [13] not only investigated the effects of maternal representations on maternal interactive behavior, but also examined the effects of maternal representations on infant interactive behavior. Results showed that infants of mothers with unbalanced representations showed higher levels of withdrawn mood and lower levels of infant's quality of play and attention skills.

Despite these findings among mothers, very few studies have examined father's early representations of the infant and its predictive value for later quality of the father–infant relationship. One recent study of Vreeswijk et al. [15] focused on the stability of paternal representations during the transition to parenthood. The authors concluded that there is a strong concordance between fathers' prenatal and postnatal representations of the infant, assessed at 26 weeks of gestation and 6 months post-partum, respectively. This study did, however, not address the predictive value of representations on father's interactive behavior. To our knowledge, no research has yet focused on the association between early paternal attachment representations of the infant for later quality of father–infant interaction and infant development. Although it seems reasonable to expect that paternal representations guide paternal behavior in a similar way as was found in mothers, we do not know whether paternal representations assessed as early as the first months post-partum are already 'stable' predictors of future quality of father–infant interaction and its impact on the infant's development. Despite changes in role patterns and the fact that fathers in general have become more actively involved in the care for their infants, mothers are often still the primary care giver, especially in the first months post-partum [16]. If father's early representations are indeed predictive for the quality of the father–infant relationship, and if they are associated with the infant's development, early screening among fathers may be considered to prevent problems in the father–infant relationship.

1.1. The present study

The present study is part of a longitudinal project in which mothers and fathers of term and preterm infants are followed during the first two years post-partum [17]. In our recent study with the same cohort [18], no significant differences were found between parents of term and preterm infants in the distribution of representations. For this reason we do not focus on the effects of infant's prematurity in this study.

The aim of the present study is to examine whether the quality of early paternal representations is associated with later quality of paternal and infant interactive behavior. Furthermore, we examine whether paternal interactive behavior mediates the relation between paternal

representations and infant's development. We expect that fathers with balanced representations display the highest quality of paternal interactive behavior, whereas fathers with unbalanced (disengaged or distorted) representations will demonstrate lower quality of interactive behaviors. In line with this, we anticipate that infants of fathers with balanced representations will demonstrate a higher quality of behavior in interaction with their fathers compared to infants with fathers that have unbalanced representations. We also expect that infants of fathers with balanced representations demonstrate higher developmental levels than infants of fathers with unbalanced representation. We anticipate that the effects of paternal representations on infant's development are mediated by the quality of paternal interactive behavior.

2. Method

2.1. Participants

As part of the larger longitudinal study, 220 fathers (and their partners) with a full-term infant (>37 weeks of gestational age (GA)) or a preterm infant (24–37 weeks of GA) were recruited between September 2009 and November 2011 in eight hospitals in the south of the Netherlands. Pre-selection criteria were a hospital birth and participants having sufficient understanding of the Dutch language. There were no pre-selection criteria for infant's medical health status. Parents received an information brochure and a letter stating the aims and implications of the study (e.g., time investment and the home visits). In case of participation, both parents signed an informed consent. At 6 months post-partum—the first measurement occasion of the present study (T1)—14% of fathers had dropped out. This resulted in 189 participating fathers (full-term $n = 71$, preterm $n = 118$). At 24 months post-partum—the second measurement occasion of this study (T2)—150 fathers still participated (full-term $n = 62$, preterm $n = 88$). There were no differences between fathers that were followed up and fathers that dropped out on background characteristics (gestational age of the infant and sex of the infant, firstborn infant, paternal educational level, paternal age) neither on the WMCI classifications (respectively 18 (17.3%), 17 (27.9%) and 4 (16.6%) fathers with balanced, disengaged and distorted (see measures) were not followed-up). Participating fathers were between 22 and 51 years old at time of their infant's birth (M = 34.65 SD = 5.23). For 64% of the fathers, the newborn infant was their first infant ('firstborn infant'), and 49% of the infants were boys. Seventy-seven percent of fathers had completed a minimum of higher general secondary education (at least 'intermediated vocational level').

3. Procedure

At 6 months post-partum (mean = 6, range = 5–8) (T1), and 24 months post-partum (mean = 24, range = 23–27) (T2) the families were home visited by one of the researchers (R.H., A.T., H.H). We chose the time-point of 6 months post-partum because all infants had been discharged from the hospital at that time and fathers have had some time to adjust to the situation of being responsible for caring for the infant. We further opted for 24 months as a measurement occasion, as it has described as the general consensus (although not unanimous) to use correction for gestational age at birth up to 2 years of age [19]. We assessed the infants at 24 months chronological age, and in the analyses, we corrected for gestational age at birth (by including it as a covariate).

At T1 fathers were interviewed in their homes. These interviews were recorded and were later coded by means of the Working Model of Child Interview (WMCI) coding scheme (see measures). At T2, the Peabody Picture Vocabulary Test (PPVT) was administered to the infant (see measures). Furthermore, fathers were asked to play with their infant for approximately 15 minutes and were given several toys to play with (bubble blow, jumping frogs and a bouncing ball). This free play interaction was videotaped and later analyzed by using the National