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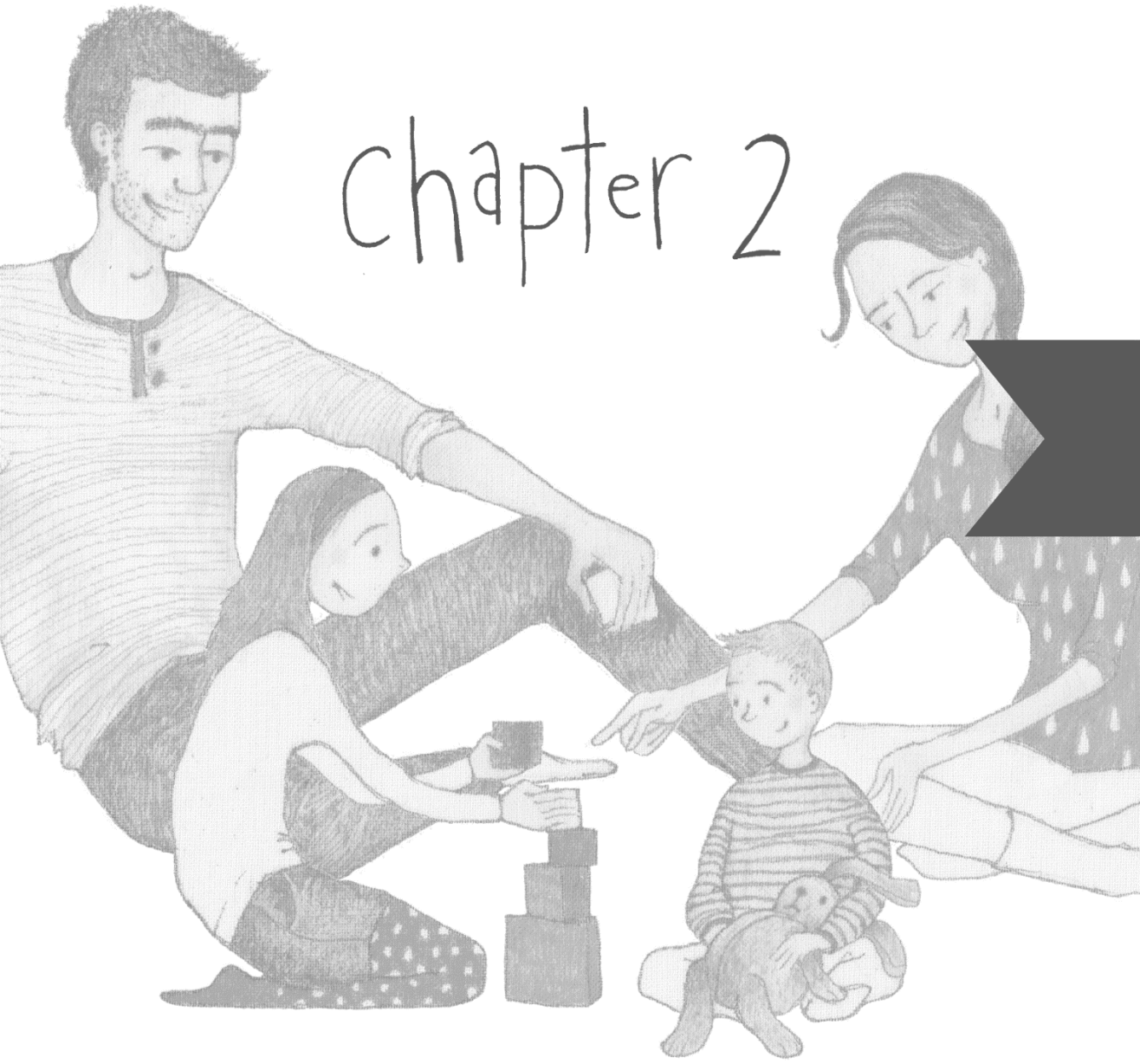

Mothers, fathers, sons, and daughters: Parental sensitivity in families with two children

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Abstract

Most studies on early childhood parenting include only mothers. Fathers are rarely observed in interaction with their young children, although they play an important role in the socialization of their children. In this study, we observed parenting of mothers and fathers toward their sons and daughters in families with two children, using a within-family approach in a sample with systematically varying family constellations. Participants included 389 families with two children (1 and 3 years of age). Parenting practices were coded during free play using the Emotional Availability Scales (Biringen, 2008). Findings revealed that mothers showed higher levels of sensitivity and lower levels of intrusiveness toward their children than fathers. Furthermore, mothers and fathers were more sensitive and less intrusive toward their oldest child than toward their youngest child. Fathers' higher intrusiveness toward the youngest child was only found in the case of a youngest boy. Child gender was not related to parenting in any of the other analyses. Our results suggest that parent gender is more salient than child gender in the prediction of parenting practices in early childhood.

Keywords: birth order, fathers, gender, mothers, sensitivity

INTRODUCTION

It is now widely acknowledged that both mothers and fathers contribute to their children's development in important ways (Lewis & Lamb, 2003). However, most studies on early childhood parenting include only mothers. Fathers are rarely observed in interaction with their young children, although they play an important role in the socialization of their children (Lamb, 2010). Most observational studies comparing mothers and fathers regarding the quality of their interactions with young children have found that fathers show less sensitivity and more intrusiveness than mothers (e.g., Barnett, Deng, Mills-Koonce, Willoughby, & Cox, 2008; Schoppe-Sullivan et al., 2006; Volling, McElwain, Notaro, & Herrera, 2002). In addition to parent gender, child gender appears to play a role in the quality of parent–child interactions, with evidence suggesting higher sensitivity toward girls than toward boys (e.g., Lovas, 2005). The level of parental sensitivity may also depend on specific parent–child gender combinations, but results to date have been inconsistent (e.g., Lovas, 2005; Schoppe-Sullivan et al., 2006). A particularly useful approach to studying parent–child gender combinations is a within-family design including families with both boys and girls, accounting for birth order. To date, such studies are lacking. In the current study, using a within-family design, we explore the assumption that both parent and child gender and their specific combinations are related to parental sensitivity and nonintrusiveness.

Mothers and fathers

In early childhood, parental sensitivity and nonintrusiveness are important aspects of parenting. Sensitivity refers to the adult's ability to perceive child signals, to interpret these signals correctly, and to respond to them promptly and appropriately (Ainsworth, Bell, & Stayton, 1974). Many studies have shown that maternal sensitivity is related to positive child outcomes across developmental domains (e.g., Bakermans-Kranenburg, Van IJzendoorn, & Juffer, 2003; Eisenberg et al., 2001; Kochanska, 2002; Tamis-LeMonda, Bornstein, & Baumwell, 2001). Intrusiveness refers to a constellation of interfering parenting behaviors that are rooted in the adult's lack of respect for the infant's autonomy. Intrusive parents have their own agenda in mind when interacting with their children and, as a result, may overwhelm them with excessive stimulation or interrupt activities initiated by the child (Ispa et al., 2004). Maternal intrusiveness has been linked to various patterns of maladaptation during childhood (Egeland, Pianta, & O'Brien, 1993; Ispa et al., 2004; Rubin, Burgess, Dwyer, & Hastings, 2003). Although fathers are underrepresented in observational studies of parent–child interactions in early childhood, there is some evidence that paternal sensitivity and intrusiveness predict child developmental outcomes in a similar way as found for mothers (Lewis &

Lamb, 2003; Lucassen et al., 2011; Tamis-LeMonda, Shannon, Cabrera, & Lamb, 2004). Thus, both maternal and paternal sensitivity and nonintrusiveness appear to be important for the promotion of optimal child development. This does not imply that mothers and fathers show equal levels of sensitive and nonintrusive parenting. There are several reasons to believe that they do not.

According to Role Theory, fathers are traditionally viewed as the breadwinners of the family and mothers as the primary caregivers of the children and the ones responsible for household maintenance (Lamb & Lewis, 2010). Role Theory suggests that social roles are shared norms and expectations about how an individual should behave in certain situations (Biddle, 1986). Following this theory, the different roles and responsibilities mothers and fathers have in the family may lead to differences in their interactions with their children. In the last decades a shift in gender role patterns has occurred in Western societies: Mothers' participation in the labor market has increased substantially and fathers take more active roles in their children's socialization (Cabrera, Tamis-LeMonda, Bradley, Hoffert, & Lamb, 2000; Lamb, 2010). However, although paternal involvement in the family has increased, maternal involvement remains substantially higher and mothers spend on average two to three times as much time than fathers in direct one-on-one interaction with their children, especially in early childhood (Sociaal Cultureel Planbureau [SCP], 2011). Thus, consistent with Role Theory, mothers are still generally the primary caregivers of young children. Given that sensitive parenting relies heavily on the correct interpretation of child signals, more time spent with a child is likely to lead to a more accurate understanding of his or her needs, resulting in higher levels of sensitivity for mothers than fathers. In addition, Sex Role Theory proposes that the different characteristics of mothers and fathers may result in differences in parenting between mothers and fathers (Bem, 1974). For example, females are more competent in decoding social and emotional nonverbal information than males (Hall & Matsumoto, 2004), especially in decoding subtle emotional expressions (Hoffmann, Kessler, Eppel, Rukavina, & Traue, 2010). This skill may give mothers an advantage over fathers when it comes to behaving sensitively and nonintrusively toward their children. Fathers, on the other hand, may feel like it is their responsibility to choose the direction for play, which could lead to more intrusive behavior when interacting with their children (Power, 1985). Meta-analytically, fathers were found to use more directive speech, informing speech, and questions and requests for information than mothers, suggesting that fathers are more goal-oriented than mothers (Leaper, Anderson, & Sanders, 1998; Tenenbaum & Leaper, 2003). It may be that fathers' use of instrumental speech interferes with their child's activities in a somewhat intrusive way.

To date, research comparing mothers' and fathers' sensitivity and nonintrusiveness toward young children is scarce, but most studies indeed indicate that fathers show lower levels of sensitivity and higher levels of intrusiveness than

mothers do. In an early study, Power (1985) showed that mothers were more responsive toward their young infants' cues of interest and attention than fathers. Later studies replicated these findings, confirming that mothers were more sensitive and less intrusive toward their young infants (3 to 24 months old) during free play than fathers (Barnett et al., 2008; Lovas, 2005; Roopnarine, Fouts, Lamb, & Lewis-Elligan, 2005; Schoppe-Sullivan et al., 2006; Volling et al., 2002). These differences between mothers and fathers occurred across various contexts, suggesting that differences between mothers and fathers in parenting do not depend on the situation in which the parent interacts with the child (Volling et al., 2002).

In contrast to the above-mentioned studies, other studies concluded that fathers are just as sensitive as mothers and do not display more intrusive behavior toward their young infants (4 to 36 months old) (Braungart-Rieker, Garwood, Notaro, & Powers, 1998; Braungart-Rieker, Garwood, Powers, & Wang, 2001; Goossens & Van IJzendoorn, 1990; John, Halliburton, & Humphrey, 2012; Tamis-LeMonda et al., 2004). Interestingly, there are no evident differences between the studies that do and do not find mother-father differences with respect to sample characteristics, procedures or instruments. For example, the Emotional Availability Scales were used in two studies that reported contrasting findings (John et al., 2012; Lovas, 2005). This means that further research is needed to test the hypothesis that fathers show lower levels of sensitivity and nonintrusiveness toward their young children than mothers.

Parenting sons and daughters

Child gender may affect parenting behavior of mothers and fathers as well. There is ample evidence that parents treat their sons and daughters differently. Differential treatment of sons and daughters can take various forms, but important differences may be observed in the opportunities parents provide or encourage for their children (Leaper, 2002). For example, parents are more likely to prohibit their daughters' aggression than their sons' aggression and are less accepting of deviations from social behavior in daughters than in sons (Martin & Ross, 2005; Mills & Rubin, 1990). In addition, there is evidence that these different parenting behaviors are not caused by the gender-specific behavior of the child (Mills & Rubin, 1990). Instead, parents themselves appear to be an important source of gender-specific interaction patterns, as also shown by the classic study by Culp, Cook, and Housley (1983) in which infants were dressed up as boys or girls (regardless of their actual gender) and then presented to adults to play with. Adults treated the same child differently based on the perceived sex of the child. The way parents behave toward their children may therefore be guided by their gender schemas, as also proposed by Gender Schema Theory (Bem, 1981, 1983). Gender-differentiated parenting can be quite subtle and adults may be unaware of their own

predispositions toward sex stereotyping, or not willing to admit them, indicating that it is important to rely on observational studies rather than parental self-reports (Culp et al., 1983).

The findings that both parent gender and child gender may influence parent–child interactions, suggests that mother-son, mother-daughter, father-son, and father-daughter relationships are distinct (Russell & Saebel, 1997). Results of some recent studies on these relationships are, however, inconclusive. One study examining these four types of dyads found that mothers in mother-daughter dyads displayed the highest levels of parental sensitivity, followed by mother-son, father-daughter, and finally father-son dyads (Lovas, 2005). For nonintrusiveness a slightly different pattern was found, with the father-daughter and father-son dyads scoring similarly and lowest, suggesting that only mothers show different levels of intrusiveness toward sons and daughters, with more intrusiveness toward their sons than toward their daughters (Lovas, 2005). Another study found that mothers and fathers were equally sensitive to sons, but that fathers were less sensitive to daughters than were mothers, and mothers were more sensitive to daughters than to sons (Schoppe-Sullivan et al., 2006). This finding is consistent with the suggestion that the degree of interactive synchrony between parent and child is higher in same-gender parent-infant dyads, perhaps because they share the same inborn modes of emotion regulation (Feldman, 2003). However, according to two other studies, fathers are less sensitive toward sons and display more negative intrusiveness with sons than with daughters (Barnett et al., 2008; Tamis-LeMonda et al., 2004). In line with Lovas (2005), these findings suggest that father-son dyads may be characterized by less optimal parenting than other parent–child dyads. Overall, there seems to be some evidence for parenting differences among the four parent-by-child gender dyads, but the direction of these differences is inconclusive.

A within-family approach

To date, most studies about gender-differentiated parenting have used a between-family design comparing families with boys to families with girls. This approach has some important limitations. Differences between boys and girls in parenting practices do not necessarily reflect only a gender difference, but can also be caused by other underlying group differences in family characteristics or other dyadic interaction patterns. To account for such factors that can influence the differences between parenting boys and girls, it is important to examine differences within families. A crucial question is whether boys and girls are also treated differently when they grow up in the same family. By adopting a within-family approach, variations between boys and girls in how they are parented are unlikely to be caused by other family variables.

When investigating parenting siblings within families, child birth order is a relevant factor. Firstborn children tend to receive more sensitive and higher-quality

care during early childhood than later borns do (Furman & Lanthier, 2002; Van IJzendoorn et al., 2000). These differences in parental treatment are especially pronounced when the second born is a girl or of the same gender as the firstborn, and fathers are more likely to show differential treatment than mothers (Furman & Lanthier, 2002). Research examining gender-differentiated parenting of mothers and fathers should thus also take birth order into account. In addition, child age may be an important factor to consider, as it is confounded with birth order. The developmental gap between siblings may lead to differences in parenting behavior. Older children are better able to (verbally) communicate their needs and interests than young infants (Berk, 2003). It may therefore be easier for parents to react sensitively and nonintrusively toward their older children than toward their younger children. Although there are developmental differences between oldest and youngest children, studies have shown that parental sensitivity and nonintrusiveness are related to child outcomes both in infancy and early childhood (e.g., Eisenberg et al., 2001; Ispa et al., 2004; Lucassen et al., 2011; Rubin et al., 2003; Tamis-LeMonda et al., 2001; Tamis-LeMonda et al., 2004), indicating that sensitive and nonintrusive parenting is equally important for both age groups. To our knowledge, no studies have yet examined differences between mothers and fathers regarding parenting practices toward their sons and daughters *within* families, taking birth order into account. To fully understand the specificity of differential treatment of siblings and boys and girls without interference of between-family variations, a within-family research design is required.

The current study

In the current study differences in sensitivity and nonintrusiveness are investigated in mother-oldest, mother-youngest, father-oldest, and father-youngest dyads, using a within-family approach in a sample with systematically varying family constellations (boy-boy, girl-girl, boy-girl, and girl-boy). The following hypotheses are examined: (1) Mothers show higher levels of sensitive and nonintrusive behavior toward their children than fathers (Barnett et al., 2008; Lovas, 2005; Roopnarine et al., 2005; Schoppe-Sullivan et al., 2006; Volling et al., 2002); (2) Parents show higher levels of sensitive and nonintrusive behavior toward their oldest children than toward their youngest children (Furman & Lanthier, 2002; Van IJzendoorn et al., 2000); (3) Parents show higher levels of sensitive and nonintrusive behavior toward their daughters than toward their sons (Barnett et al., 2008; Bornstein et al., 2008; Hughes, Deater-Deckard, & Cutting, 1999; Lovas, 2005; Tamis-LeMonda et al., 2004); (4) The differences between sensitive and nonintrusive behavior toward oldest and youngest children are larger for families with same-gender siblings than for families with mixed-gender siblings (Furman & Lanthier, 2002). In addition, we examined the assumption that the levels of parental sensitivity and nonintrusiveness vary by specific parent–child gender combinations

(Lovas, 2005). Because results of previous studies are mixed, no specific hypothesis was formulated. Differences between the parent–child gender combinations will be examined in an explorative manner.

METHOD

Sample

This study is part of the longitudinal study '*Boys will be Boys?*' examining the influence of mothers' and fathers' gender-differentiated socialization on the socioemotional development in boys and girls in the first four years of life. Families with two children were selected from municipality records in the Western region of the Netherlands. Families were included if the youngest child was around 12 months of age and the oldest child was between 2.5 and 3.5 years old. Exclusion criteria were single parenthood, severe physical or intellectual handicaps of parent or child, and being born outside the Netherlands and/or not speaking the Dutch language. The current paper reports on data from the first wave of the study.

Between April 2010 and May 2011, eligible families were invited by mail to participate in a study on the unique role of mothers and fathers on socioemotional development with two home visits each year over a period of 3 years. All families received a letter, a brochure with the details of the study, and an answering card to respond to the invitation. Of the 1,249 eligible families 31% were willing to participate. The participating families did not differ from the nonparticipating families in age of mothers (p = .83) or fathers (p = .13), educational level of mothers (p = .27) or fathers (p = .10), or the degree of urbanization of residence (p = .77). For the current study, one family with missing data for the mother was excluded, resulting in a final sample of 389 families. The sample consisted of families with the following sibling gender constellations: 107 boy-boy (28%), 91 girl-girl (23%), 98 boy-girl (25%), and 93 girl-boy (24%).

At the time of the first home visit the youngest siblings were 12 months old (SD = 0.2) and the age of the oldest siblings ranged from 2.5 to 3.6 years (M = 3.0, SD = 0.3). The mothers were aged between 22.6 and 45.6 years (M = 33.9, SD = 4.0) and the fathers were between 23.9 and 62.9 years of age (M = 36.7, SD = 5.1). Most parents were married (79%), 14% of the couples had a cohabitation agreement or registered partnership, and 7% lived together without any kind of registered agreement. With regard to educational level, most mothers finished academic or higher vocational schooling (79%), some obtained a vocational degree (19%), and a few completed only secondary or primary school (2%). Like the mothers, most of the fathers obtained an academic or higher vocational degree (76%) or finished vocational schooling (19%), and a few completed only secondary or primary school (5%). The educational levels of both mothers and fathers were aggregated into two categories, because the groups with low educational levels were very small. A high educational

level was assigned to mothers or fathers who had completed at least higher vocational schooling (mothers: 79%, fathers: 76%). A low educational level was assigned when primary, secondary, or vocational school was finished (mothers: 21%, fathers: 24%). Mothers worked on average 25.6 hours per week (*SD* = 9.3, range 0–60) and fathers worked 37.5 hours per week (*SD* = 7.4, range 0–80), which is comparable to the average working hours of mothers and fathers in the general Dutch population (Sociaal Cultureel Planbureau and Centraal Bureau voor de Statistiek, 2012). Most families lived in urban residences (86%).

Procedure

Each family was visited twice: once with the mother and the two children and once with the father and the two children, separated by a period of about 2 weeks. The order in which mothers and fathers were visited and interacted with the oldest and youngest child was counterbalanced between families. Before the first home visit, both parents were asked to individually complete a set of questionnaires. During the home visits, parent–child interactions and sibling interactions were filmed, and the oldest children and both parents completed computer tests. All home visits were conducted by pairs of trained (under)graduate students. Families received a payment of 30 Euros and small presents for the children. Informed consent was obtained from all participating families. Ethical approval for this study was provided by the Commission Research Ethics Code of the Leiden Institute of Education and Child Studies.

Measures

The fourth edition of the Emotional Availability Scales (EAS; Biringen, 2008) was used to measure parental sensitivity and nonintrusiveness toward their children during free play. Each dyad received a bag with toys and was invited to play for 8 minutes. Sensitivity refers to the parent's ability to be warm and appropriately responsive to the child. Important aspects are the expression and appropriateness of positive affect, and clarity in perception of child signals and the ability and willingness to respond appropriately to such signals. Nonintrusiveness refers to the parent's ability to give the child space to explore and to refrain from intrusions on the child's activities. Important aspects are whether the parent follows the child's lead and finds noninterruptive ports of entry into the interaction. Each dimension is divided into seven subscales; the first two subscales are coded on a 7-point Likert scale and the other subscales are coded using a 3-point Likert scale (potential score range 7–29). For every subscale a global rating was given for the entire free play session. Subscale 7 of the Nonintrusiveness dimension (the adult is made to "feel" or "seem" intrusive) was excluded because it refers to child behavior rather than parental behavior (leading to a potential score range of 7–26).

The second author, who is an experienced coder of parent–child interactions, completed the online training provided by Zeneyp Biringen and then trained a team of coders. During the team training, some subscales led to persistent interpretation problems and some alterations were made to improve intercoder agreement. Three types of alterations were made. First, subjective criteria were removed, for example 'a healthy and secure connection' was removed from the subscale Affect of the Sensitivity dimension. Second, the scoring of some subscales was changed to make them more linear. For example, on the subscale Affect of the Sensitivity dimension the difference in behavioral descriptions between scores 6 (bland, neutral affect most of the time) and 7 (balanced, genuine, congruent, relaxed, low-keyed, gentle, soft spoken OR animated in appropriate ways, clear enjoyment of child) was much bigger than the differences between other scores on this subscale. We changed the descriptions so that score 6 refers to behavior that is similar as for score 7, but somewhat more neutral or less positive. Third, overlap between the dimensions was removed to improve their independence. For example, we dropped the criterion that a high score on Nonintrusiveness could only be given when the adult let the child lead and followed the child, because this suggests both nonintrusiveness *and* sensitivity, whereas a very passive parent can be highly nonintrusive while not very sensitive.

Seven coders rated the videotapes on the EAS dimensions. All dyads within the same family were coded by different coders to guarantee independency among ratings. Coder reliabilities were computed on 15% of the participating families (n = 60). Intercoder reliability was adequate, the mean intraclass correlation coefficient (absolute agreement) for Sensitivity was .81 (range .73 to .92) and for Nonintrusiveness .84 (range .76 to .93). During the coding process, the first 100 videotapes were coded twice by separate coders and regular meetings were organized to prevent coder drift.

Data Analysis

The EA dimensions were inspected for possible outliers, defined as values more than 3.29 *SD* above or below the mean (Tabachnick & Fidell, 1996). Outliers (n = 6) were found on all dimensions, except for sensitivity of father toward the youngest child and nonintrusiveness of father toward both children. The outlying scores were winsorized (Tabachnick & Fidell, 1996). Analyses performed with the nonwinsorized and winsorized data did not show different results. Therefore the results of the winsorized data are presented. All variables were normally distributed.

Before the analysis of within-family differences, correlations were inspected between mothers' and fathers' parenting practices and their educational level and working hours. Paternal educational level was positively associated with his sensitivity toward the youngest child, $r = .10$, $p < .05$. Maternal educational level was

positively related to her sensitivity toward the oldest child, $r = .21$, $p < .01$, and nonintrusiveness toward the oldest child, $r = .19$, $p < .01$, and toward the youngest child, $r = .15$, $p < .01$. Working hours of both parents were marginally related to their sensitivity and nonintrusiveness, but after controlling for educational level these associations were no longer significant ($ps > .06$). Because of this pattern of associations, educational level of father and mother were controlled for in further analyses, whereas working hours was not.

Analyses of parents' sensitivity and nonintrusiveness toward their oldest and youngest children were conducted using GLM Repeated Measures analysis. Two-way interactions between the within-subjects factor (dyad: mother-oldest child, mother-youngest child, father-oldest child, father-youngest child) and the between-subjects variables (sibling gender constellation, educational level mother, education level father) were examined. The analyses were repeated using the between-subjects variable mixed-gender versus same-gender siblings (two groups instead of four groups of sibling gender constellation).

RESULTS

Preliminary analysis

The correlations between mothers' and fathers' sensitivity and nonintrusiveness are presented in Table 1. Mothers and fathers who were more sensitive toward their oldest child were also more sensitive toward their youngest child. Furthermore, maternal and paternal sensitivity were positively associated for both children (correlations ranged from .20 to .25). The same pattern was found for nonintrusiveness. Within all possible dyads (mother-oldest child, mother-youngest child, father-oldest child, father-youngest child) positive correlations between sensitivity and nonintrusiveness were found. These correlations were however significantly higher for interactions with the oldest children than interactions with the youngest children, for both fathers, $z = 3.12$, $p < .01$, and mothers, $z = 4.03$, $p < .01$.

Multivariate regression analyses were conducted to test moderation by child gender. In the first set of analyses, maternal behavior, child gender, and their interaction were added to predict paternal behavior (separately for sensitivity and nonintrusiveness, and separately for oldest and youngest children). In the second set of analyses, maternal behavior toward the oldest, oldest child gender, and their interaction were entered as predictors of maternal behavior toward the youngest (separately for sensitivity and nonintrusiveness and repeated for paternal behavior). None of the associations between mothers and fathers and oldest and youngest children were moderated by the genders of the children or the sibling gender combinations (same vs. mixed gender) ($ps > .20$).

Table 1.
Correlations for sensitivity and nonintrusiveness of mothers and fathers toward their oldest and youngest child (N = 389)

	1	2	3	4	5	6	7
1. Sensitivity mother-oldest							
2. Sensitivity mother-youngest	.31**						
3. Sensitivity father-oldest	.20**	.06					
4. Sensitivity father-youngest	.17**	.25**	.38**				
5. Nonintrusiveness mother-oldest	.56** [a]	.15**	.13*	.11*			
6. Nonintrusiveness mother-youngest	.10*	.33** [a]	.09	.17**	.31**		
7. Nonintrusiveness father-oldest	.12*	.05	.53** [a]	.07	.13*	.10	
8. Nonintrusiveness father-youngest	.10	.17	.15**	.35** [a]	.12*	.21**	.34**

[a] Correlations between Sensitivity and Nonintrusiveness within the same dyad.
* $p < .05$ ** $p < .01$

Differences between mothers' and fathers' sensitivity and nonintrusiveness

Mothers' and fathers' scores on sensitivity and nonintrusiveness are presented in Table 2 separately for the oldest and youngest child and for the various sibling gender constellations. Both parents scored relatively high on both dimensions. Significant main effects were found for both sensitivity, *Pillai's* $F(3, 385) = 26.60$, $p < .01$, $\eta_p^2 = .17$, and nonintrusiveness, *Pillai's* $F(3, 385) = 6.44$, $p < .01$, $\eta_p^2 = .05$. Consistent with our first hypotheses, contrasts revealed that mothers were significantly more sensitive toward their oldest child than fathers toward both children. Mothers were also more sensitive toward their youngest child than fathers were toward their youngest child. Almost the same pattern was found for nonintrusiveness. However, mothers and fathers did not differ in their levels of nonintrusiveness toward the oldest child. In line with our second hypothesis, both mothers and fathers were more sensitive and nonintrusive toward their oldest child than toward their youngest child.

In contrast to our third hypotheses, gender of the children was not related to parental sensitivity. None of the two-way interactions between the within-subjects factor (dyad) and the between-subjects variables (sibling gender constellation, educational level father, educational level mother) were significant (p values ranged from .07 to .34). However, consistent with our third hypotheses, for parental nonintrusiveness a significant interaction was found with sibling gender constellation, *Pillai's* $F(3, 385) = 2.00$, $p = .04$, $\eta_p^2 = .02$. Within-subjects contrasts revealed significant interactions when comparing fathers' nonintrusiveness toward the oldest and youngest child. Follow-up paired t tests revealed higher intrusiveness toward the youngest than toward the oldest child, but only in the case of a youngest boy (ps < .01). No significant interactions were found between the

Table 2.

Means and Standard Deviations on sensitivity and nonintrusiveness for mothers and fathers toward their oldest and youngest children for different sibling gender constellations (N =389)

	Sibling gender constellation							
	Boy-Boy (n = 107)	Girl-Girl (n = 91)	Boy-Girl (n = 98)	Girl-Boy (n = 93)	Total (n = 389)		*Pillai's F*	
Dyad	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	Range	*and contrasts*	η_p^2
Sensitivity							26.60 **	.17
Mother-oldest (MO)	24.64 (2.66)	25.01 (3.05)	25.36 (2.27)	24.71 (3.03)	24.92 (2.76)	15.90-29.00	> MY**; FO*; FY**	
Mother-youngest (MY)	23.52 (3.44)	24.36 (2.66)	24.44 (2.85)	23.62 (3.17)	23.97 (3.08)	14.00-29.00	> FY**	
Father-oldest (FO)	23.83 (2.82)	23.97 (2.76)	24.08 (3.05)	24.46 (3.03)	24.08 (2.91)	15.80-29.00	> FY**	
Father-youngest (FY)	22.03 (3.48)	23.46 (3.31)	22.85 (3.70)	22.05 (3.66)	22.58 (3.58)	11.00-29.00		
Nonintrusiveness							6.44 **	.05
Mother-oldest (MO)	20.36 (3.23)	20.52 (3.56)	20.36 (3.22)	20.24 (3.51)	20.37 (3.36)	11.00-26.00	> MY*; FY**	
Mother-youngest (MY)	19.12 (3.45)	19.56 (3.24)	20.14 (3.30)	19.71 (3.31)	19.62 (3.34)	9.00-26.00	> FY*	
Father-oldest (FO)	19.30 (3.68)[a]	19.49 (3.47)	19.79 (3.43)	20.26 (3.10)[a]	19.70 (3.44)	9.00-26.00	> FY**	
Father-youngest (FY)	18.03 (3.61)[b]	19.79 (3.48)	19.04 (3.31)	18.77 (3.18)[b]	18.87 (3.45)	10.00-26.00		

Note. MO (Mother-Oldest child), MY (Mother-Youngest), FO (Father-Oldest), FY (Father-Youngest). Different superscripts indicate significant differences within columns.

* $p < .05$ ** $p < .01$

within-subjects factor (dyad) and educational level of the father or mother (p values ranged from .18 to .73). When using the between-subjects variable mixed-gender versus same-gender siblings (instead of sibling gender constellation) in the repeated measures analyses, again no significant interactions with the within-subjects factor sensitivity or nonintrusiveness were found. As a result, no support was found for the hypothesis that differences between oldest and youngest children are larger for families with same-gender siblings than for families with mixed-gender siblings (hypothesis four).

To make optimal use of our within-family design, we compared parenting toward the two siblings in boy-girl families (n = 98) and girl-boy families (n = 93) to see whether within-family child gender effects were present above and beyond the birth order and parent gender effects reported above. Findings were consistent with those of the main set of analyses, revealing only one child gender effect, showing that fathers were more intrusive toward the youngest than oldest when the youngest was a boy.

Discussion

In the current study we found that mothers were more sensitive and more nonintrusive toward their children than fathers. Furthermore, mothers and fathers were more sensitive and more nonintrusive toward their oldest child than toward their youngest child. Gender of the children was not related to parental sensitivity, but fathers were more intrusive toward their youngest child than toward their oldest child in the case of a youngest boy.

In line with previous studies (e.g., Barnett et al., 2008; Schoppe-Sullivan et al., 2006; Volling et al., 2002), we found that mothers showed more sensitive and nonintrusive behavior toward both children than fathers. These differences may be explained by the fact that mothers are almost always the primary caregivers of the children and therefore have more experience with their children's behavior (Barnett et al., 2008). As a result, mothers may be more familiar with their children's signals and needs and may therefore react more sensitively to their children than fathers. Although parental working hours were not related to their parenting practices in our study, this may not be an accurate indicator of the time a parent spent with their children because the way in which mothers and fathers spend their off-work time can be very different (Sociaal Cultureel Planbureau and Centraal Bureau voor de Statistiek, 2012). For example, mothers spend more time on child care and household maintenance than fathers (Bittman & Wajcman, 2000). In addition, because mothers work fewer hours than fathers, they tend to spend more time alone (i.e., without father) with the children than fathers do. The differences in sensitivity and nonintrusiveness between mothers and fathers may not only reflect differences

resulting from mothers' greater experience in a play context, but may also reflect differences in parenting ideas (Power, 1985). Fathers may more often choose the direction and content of the play situation, which could lead to more intrusive behavior when interacting with their children. In addition, fathers tend to make more requests for information than mothers when interacting with their children (Leaper et al., 1998; Tenenbaum & Leaper, 2003). This interaction style may interfere with their children's play, and lead to intrusiveness.

Although there are differences between mothers and fathers, it should be noted that both mothers and fathers in our sample score relatively high on sensitivity and nonintrusiveness. Furthermore, the contribution of mothers and fathers to a child's development might be different and complementary depending on the role each parent plays in the socialization of their children. Longitudinal research suggests that fathers might contribute in particular by providing sensitive support during explorative play with their toddlers, whereas providing comfort when the child is in distress seems more of a maternal "responsibility" (Grossmann et al., 2002). This may point to unique contributions of mothers and fathers, although the specific behaviors described for both parents do refer to dimensions of sensitive parenting. Because both maternal and paternal sensitivity and nonintrusiveness have been found to be related to secure attachment relations and positive developmental outcomes in early childhood (e.g., Bakermans-Kranenburg et al., 2003; Ispa et al., 2004; Lucassen et al., 2011; Tamis-LeMonda et al., 2004), it seems that paternal sensitivity is important for fostering positive child development and should be encouraged.

In addition to mean-level differences between mothers and fathers regarding sensitivity and nonintrusiveness, we also found significant correlations within parent dyads, which is in line with previous studies (Braungart-Rieker et al., 1998; Tamis-Lemonda et al., 2004; Volling et al., 2002). This resemblance of the two parents might reflect a more general familial parenting style, which may be the result of assortative mating (Luo & Klohnen, 2005; Watson et al., 2004). In addition, parents may observe each other or discuss the interaction with their infants and may learn from each other and adopt similar styles (Braungart-Rieker et al., 1998).

As expected, both mothers and fathers showed more sensitive and nonintrusive behavior toward the oldest child than toward the youngest child. In addition, the differences between sensitivity and nonintrusiveness toward oldest and youngest children were not different for families with same-gender siblings and mixed-gender siblings. This finding is in line with previous studies that also found that firstborn children tend to receive higher-quality care during early childhood than later borns do (Furman & Lanthier, 2002; Van IJzendoorn et al., 2000). This may be explained by the developmental differences between the children. There is an important developmental gap between 1-year-old and 3-year-old children with respect to social, cognitive and language development (Berk,

2003). For example, 1-year-old children have not yet mastered the ability to express themselves clearly by using language. When they grow older, they become more skilled in verbally communicating their needs and interests to others. This may make it somewhat easier for parents to adjust their behaviors to the specific needs of an older child than those of an infant. In addition, parents have spent more time with their firstborn child in which to learn that child's unique characteristics and needs, which may also contribute to higher levels of sensitive behavior toward the oldest child.

An alternative or complementary explanation for differences in quality of parental interactions with their two children may be that parents have difficulties responding sensitively to two children at the same time (Van IJzendoorn et al., 2000). When the second child is born, family dynamics change. Parents no longer have one child to care for, but have to divide their attention and affection between two children (Furman & Lanthier, 2002). Oldest children, who experienced a period as only children receiving full attention from their parents, may fight back for their parents' attention and care by demanding the same quality of care as before the birth of their younger sibling (Furman & Lanthier, 2002). By definition, youngest children have no other experience than having to share their parents' attention with an older sibling, and might therefore place fewer demands on the quality of parental behavior. In our study, the two children were observed separately, but still a difference in parenting behavior toward the oldest and youngest child was found. Thus, more sensitive interaction patterns with an oldest child are persistent even when the youngest is not present.

Although we found mean-level differences in parenting behavior toward the oldest and youngest child, we also found significant associations between parenting practices toward the two children. Although behaving sensitively is dependent on the unique characteristics of the child, the ability to perceive and recognize a child's signals appears to be a more general ability that is not child-dependent. Parents who are able to adjust their behavior to the specific needs of one child are also better able to do this with their other child, leading to similarities in parental care across siblings. However, the correlations between parenting behavior toward the oldest and youngest child were not very high, indicating that the unique characteristics and needs of the child do affect sensitive parenting.

Contrary to our expectations, we found little evidence for gender-differentiated parenting by mothers and fathers. Although the literature shows that parents treat their sons and daughters differently (Barnett et al., 2008; Lovas, 2005; Schoppe-Sullivan et al., 2006; Tamis-LeMonda et al., 2004), such differences were not found in our study. However, differences in treatment of sons and daughters do not necessarily imply differences in sensitivity. Boys and girls may have different needs, and adjusting parenting behavior to these specific needs is in line with the premise that what is considered sensitive is dependent on the unique characteristics

and needs of the child. It is therefore possible that parents show gender-differentiated treatment, but that these different behaviors toward sons and daughters are equally sensitive. In addition, it could be that the subtle ways in which parents treat their sons and daughters differently are difficult to detect (Raley & Bianchi, 2006). This is also illustrated by the meta-analysis of Lytton and Romney (1991), in which strikingly little evidence for gender-differentiated parenting was found. It must however be noted that this meta-analysis has been criticized for its theoretical and methodological approach (Keenan & Shaw, 1997). The meta-analysis by Leaper and colleagues (1998) showed that the setting also plays a role in detecting gender-differentiated parenting. Gender-differentiated parenting was more likely to occur in a structured setting (e.g., problem-solving task) than in a relatively unstructured setting (e.g., free play) as was used in the current study. In addition, the high educational levels of the parents in our sample may also provide an explanation for the absence of significant child gender differences. Several studies found that mothers with a high educational level hold more egalitarian attitudes about gender roles (Ex & Janssens, 1998; Harris & Firestone, 1998), possibly resulting in less gender-differentiated parenting.

Finally, the gender differences reported in previous studies (e.g., Lovas, 2005; Schoppe-Sullivan et al., 2006) may be limited because they were based on between-family comparisons. In such studies, differences in parenting practices with boys and girls do not necessarily reflect gender differences, but can also be caused by underlying group differences. These limitations may have influenced previous findings regarding gender-differentiated parenting. Our findings extend previous work by adopting a within-family approach, and suggest that whereas parent gender does influence parental sensitivity and nonintrusiveness toward young children, child gender is less salient in early childhood.

In addition, we did find an interaction effect of child gender with birth order for paternal nonintrusiveness. Fathers were more intrusive toward their youngest child than toward their oldest child, but only in the case of a youngest boy. This finding adds to the mixed literature on the effects of child gender on parenting and provides some support for more gendered early parenting of fathers (Barnett et al., 2008; Tamis-LeMonda et al., 2004). Previous research already showed that the father-son dyad may be characterized by less optimal parenting than the other parent–child dyads (Barnett et al., 2008; Lovas, 2005; Tamis-LeMonda et al., 2004). Parents, in particular fathers, generally have higher expectations of sons than of daughters with respect to cognitive, social and physical competence (Blakemore, Berenbaum, & Liben, 2009). High expectations may lead to more parental demanding behavior during father-son interactions, interfering with the activities and interests of the child. There may be a larger gap between the (too high) expectations of fathers with their 1-year-old sons and their actual characteristics and abilities than is the case with older sons. Perhaps fathers find it difficult to adjust

their expectations and interactive behavior in a way that would fit the developmental level of very young children. However, the effect size of this result was small and should therefore be interpreted with caution.

This study has some limitations. The sample consisted of mostly Caucasian families with predominantly high educational levels. This reduces the generalizability of the results to the general population. Because parent–child interactions may vary by ethnicity or social class, it is important to examine gender differences in parenting in more diverse samples. In addition, child characteristics other than child gender and birth order, such as temperament or problem behavior, may influence parenting. Further research should include such child characteristics to examine whether they are differentially related to mothers' and fathers' parenting. Moreover, there are aspects of the parent–child relationship that were not captured by our measure of sensitivity and nonintrusiveness in a free play setting, such as teaching and discipline behaviors. It is important to note that the differences found in this study do not necessarily reflect differences with respect to other aspects of parent–child relationships.

Further, this study relied on observations of parent–child interactions during a free-play session with preselected toys. Although this design allowed us to compare our results with other studies, this setting may have limited the types of interactions parents generally use with their children, especially because they were instructed to play with their child with the toys. The literature shows that there are notable differences between mothers and fathers in the type of interactions with children (Blakemore et al., 2009; Lamb & Lewis, 2010; Paquette, 2004; Volling et al., 2002). For example, fathers use more physical play when interacting with their children. This type of play is probably less likely to occur in a situation in which toys are provided that are best used while sitting down (e.g., a drawing board, a tea set, Lego). Although studies have examined gender differences in parenting in different settings (e.g., competing demand task, teaching task), to our knowledge there are no studies that examined parenting differences between mothers and fathers in a situation that is likely to elicit fathers' preferred style of play. Observing parenting behavior during a physical play situation would therefore be an important direction for further research. It is also recommended to investigate the association between time spent with children and parenting qualities. Given that sensitive parenting relies heavily on the correct interpretation of child signals, more time spent with that child is likely to lead to a more accurate understanding of his or her needs, resulting in higher levels of sensitivity.

In conclusion, parent gender rather than child gender plays an important role in the quality of parent–child interactions in early childhood. Although some studies found that the mother-son, mother-daughter, father-son, and father-daughter interaction patterns are different (Russell & Saebel, 1997), our results question whether gender of the child is a strong factor affecting relationships in

early childhood. Birth order, on the other hand, appears to be more important in identifying distinct interaction patterns. To fully understand developmental patterns in early childhood, future research should include both mothers and fathers and examine their interaction patterns with their young children in various situations. Birth order may be a significant modulator of parental sensitivity, with important practical implications. Because later-born children receive lower-quality care than firstborn children, it may be particularly beneficial for prevention programs to focus on families in which a second child is born. In sum, our findings highlight the importance of parent gender and birth order for the quality of parent–child interactions in early childhood, but failed to find support for the claim that boys and girls are parented differently.