Growing up together

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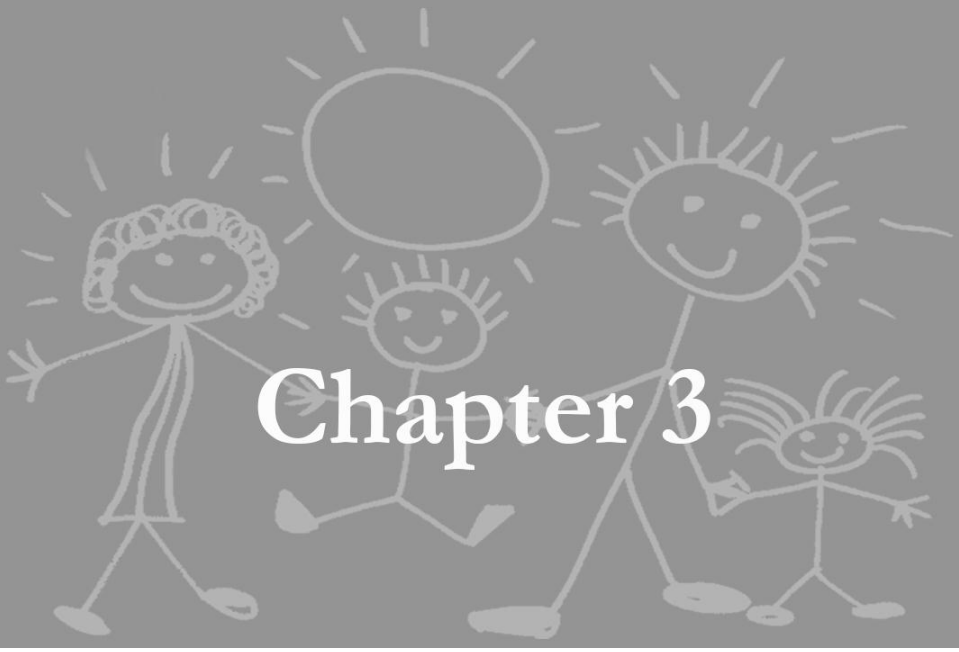

Chapter 3

Parental Sensitivity Towards Toddlers and Infant Siblings Predicting Toddler Sharing and Compliance

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ABSTRACT

Children with younger brothers or sisters are exposed to parenting directed towards themselves as well as parenting directed towards their siblings. We examined the hypothesis that mothers' and fathers' sensitive parenting towards their second-borns predicts compliance and sharing behavior in their firstborns, over and above their parenting towards their firstborns. In a sample of 388 families with a toddler and infant, parental sensitivity, child sharing behavior, and child compliance were observed during two different home visits, one with father and one with mother present. The results showed that toddlers shared more with their younger siblings and showed more compliance when their fathers were more sensitive towards them, but only if fathers showed low sensitivity towards the younger siblings. We suggest two explanations: toddlers may show more positive behavior to ensure continuation of their favored position, or they may compensate for the lack of fathers' sensitivity towards the younger siblings. Our study highlights the importance of the broader family context of parenting for child socio-emotional development.

Keywords: siblings, fathers, sensitivity, prosocial development, compliance

INTRODUCTION

Differences in the socio-emotional development of two siblings within a family have been explained by non-shared family environmental factors such as birth order, peer relations, and differential parenting (Knafo, Israel, & Ebstein, 2011; Ragan, Loken, Stifter, & Cavigelli, 2012). When children have younger brothers or sisters, they are not only exposed to parenting directed towards themselves, but also to parenting directed towards their siblings. Parenting directed towards a sibling can influence child behavior through several processes, for example by influencing the general atmosphere at home (Feinberg & Hetherington, 2001), or trough rivalry over the love and attention of a parent (Volling, Kennedy, & Jackey, 2010). To understand toddler behavior in relation to mothers' and fathers' parenting it may be helpful to take into account mothers' and fathers' parenting towards the infant sibling.

Sharing and compliant behaviors emerge around 24 months of age and are two empirically related important indicators of social-behavioral development that have been found to be related to each other (Knafo & Plomin, 2006; Kochanska & Aksan, 2006; Vreeke & Van der Mark, 2003). In infancy and toddlerhood, children need prompts from their parents to be able to follow social rules (situational compliance), but when approaching preschool age, children start to internalize parental rules and begin to show committed compliance (Kochanska, Coy, & Murray, 2001). The development of self-regulation represents an important developmental task relevant to both committed compliance and prosocial behavior (Kochanska & Aksan, 2006). Self-regulation allows for the internalization of rules and social norms, which in turn enables compliance and willingness to share. Thus, both prosocial behavior and compliance during toddlerhood are considered expressions of the development of self-regulation. Positive parenting in the form of sensitive discipline, warmth, and support predicts more prosocial behavior, including sharing, and more compliance in children (e.g., Feldman & Klein, 2003; Kiang, Moreno, & Robinson, 2004; Kochanska & Aksan, 2006) through processes of modeling other-oriented behavior (Hastings, Utendale, & Sullivan, 2007; Van IJzendoorn, 1997; Van IJzendoorn, Bakermans-Kranenburg, Pannebakker, & Out, 2010), and increasing children's willingness to cooperate with the parent (Ainsworth, Blehar, Waters, & Wall, 1978; Kochanska & Aksan, 2006).

Although most studies on the effects of parenting on the development of sharing or compliance include only mothers, there are studies indicating a similar influence of fathers' parenting on children's prosocial behavior (e.g. Sturgess, Dunn, & Davies 2001) and compliance (e.g., Kochanska & Kim, 2012). There is even some evidence that the influence of fathers may be stronger than that of mothers (Blandon & Volling, 2008; Volling & Belsky, 1992). In one study, facilitative parenting of fathers, but not mothers, was related to prosocial interactions between siblings (Volling & Belsky, 1992). In a second study, toddlers' compliance was related to gentle guidance by fathers, while no direct effect of maternal gentle guidance was found (Blandon & Volling, 2008). The influence of fathers on child behavior may be especially important for the older sibling. It has been argued that when second-born children are infants and need more care than their older siblings, fathers' parenting becomes especially important for the firstborn children (Volling, 2012). Since previous findings are inconsistent and fathers may be especially important for the firstborn child in the period after the birth of a second child, when mothers tend to spend more time with the infant (Volling, 2012), further research is needed on the relation between fathers' sensitivity and toddler behaviors in families with younger siblings.

In addition to the direct effects of each parent on child behavior, interactions between fathers' and mothers' sensitivity may influence child behavior (Volling, Blandon, & Gorvine, 2006). Previous studies have shown contradictory results concerning the interaction between fathers' and mothers' parenting behavior. In a study with toddlers and their older siblings, the relation between fathers' gentle guidance and child compliance was moderated by gentle guidance of the mothers (Volling et al., 2006). More gentle guidance by fathers was related to more compliance of their children, but only if mothers were low in their use of gentle guidance. In a replication study, however, the opposite effect was found, with more gentle guidance of fathers being only related to more child compliance when mothers were *high* in their use of gentle guidance (Blandon & Volling, 2008). These findings emphasize the importance of examining within-family processes and parenting behaviors of both fathers and mothers when investigating the development of child behavior.

According to family-system theories, family members do not only influence each other in direct interactions, but interactions between dyads within the family also influence the behaviors of all individual family members (Minuchin, 1985; Volling, Kolak, & Blandon, 2009). Following the premise of family-system theories, child behavior could be influenced not only by sensitivity of both parents towards the child itself or by interactions between mother's and father's sensitivity, but also by parental sensitivity towards a sibling, or any difference between parental sensitivity towards the sibling and towards the child itself (Reiss et al., 1995). Previous studies on parenting and siblings' development have focused primarily on differential parenting, examining how a parent responds to one sibling compared to the other (e.g., Blandon & Volling, 2008). Several studies have shown that differential parenting is related to less prosocial behavior and compliance, and more externalizing behavior in the less favored sibling (Asbury, Dunn, Pike, & Plomin, 2003; Blandon & Volling, 2008; Caspi et al., 2004; Mullineaux, Deater-Deckard, Petrill, & Thompson, 2009).

Only few studies have investigated the effect of parenting towards a child on the behavior of this child's sibling (Feinberg, Neiderhiser, Howe, & Hetherington, 2001; Reiss et al., 1995). One study found that negative parenting towards a sibling was associated with positive behavioral outcomes in adolescents (Reiss et al., 1995). In another study, adolescents had the least externalizing problems when they received high levels of positive parenting themselves, while their siblings received low levels of positive parenting. This is described as the "sibling barricade", a process through which parenting towards a child has an opposite effect on the behavioral outcomes of the sibling, while controlling for the parenting towards the sibling (Feinberg, Neiderhiser, Simmens, Reiss, & Hetherington, 2000; Reiss et al., 1995). An explanation for this effect is that children perceive to be better off than their siblings irrespective of the parenting they receive themselves. This sibling barricade may also play a role with younger children. Especially when older siblings experience a change in parenting behavior following the birth of a younger sibling, they may be inclined to compare parenting towards themselves to parenting towards their younger sibling (Volling, 2012), and may therefore be especially affected by how their younger sibling is parented. However, other studies indicate that rivalry between siblings over positive parenting can also result in positive child outcomes (Fearon et al., 2006;

Fearon, Bakermans-Kranenburg, & Van IJzendoorn, 2010; Knafo, 2009). It appears that both negative and positive behaviors can occur in response to evaluations of how a sibling is being parented, and both can be strategies to gain more parental attention (Belsky, 1997), which is consistent with an evolutionary view on the competition over caregiving resources (Fearon et al., 2010).

In the current study we investigated mothers' and fathers' sensitivity towards toddlers and their younger siblings in relation to the toddlers' sharing behavior and compliance. Our study examines issues raised by family-system theories, which state that interactions between all dyads within the family influence child behavior as well as (the effects of) interactions between other dyads (Minuchin, 1985; Volling, Kolak, & Blandon, 2009). For example, preschoolers' situational compliance has been related to more maternal gentle guidance only when fathers displayed high levels of gentle guidance, whereas no relation was found between maternal guidance and child compliance when fathers displayed low levels of gentle guidance (Blandon & Volling, 2008). In addition, effects of differential parenting on child behavior have been found to differ depending on the quality of the parenting a child actually receives. Fathers' differential gentle guidance was related to low levels of compliance of the less favored child only when fathers' gentle guidance directed towards this child was low, while if the less favored child received still rather high levels of paternal gentle guidance this child displayed high levels of compliance (Blandon & Volling, 2008). This suggests that differential parenting may only lead to negative child behavior in the less favored child in case of low quality parenting. Therefore, we examined two interaction effects: the interaction between paternal and maternal sensitivity, and the interaction between parental sensitivity towards the oldest child and parental sensitivity towards the youngest child, in combination with the main effect of parenting.

Differential parenting is relevant for children's social development given that it has been found to predict compliance, externalizing behaviors, and prosocial behaviors (e.g., Blandon & Volling, 2008; Caspi et al., 2004; Mullineaux et al., 2009). Most studies found that differential parenting leads to less compliance and prosocial behavior, and more externalizing behavior in the less favored sibling, although there is also some evidence that it may lead to more prosocial behavior in the less favored sibling (Knafo, 2009). Differential parenting has also been related to more social problems in both

siblings, the favored as well as less favored (Meunier, Boyle, O'Conner, & Jenkins, 2013). In early childhood, sharing with siblings and compliance are central aspects of social development within the family context (Knafo & Plomin, 2006; Kochanska & Aksan, 2006), so differential sensitivity during toddlerhood may be especially relevant for the development of these behaviors. Previous studies have indeed found that sharing and compliance are affected by differential parenting in preschoolers and during middle childhood (i.e. Knafo, 2009; Volling et al., 2006).

We expected that more parental sensitivity towards their toddlers is positively related to toddlers' sharing behavior and compliance. In addition, we expected, based on previous research concerning differential parenting, that the positive relation between parental sensitivity towards their toddlers and toddlers' sharing behavior and compliance is stronger if parents are less sensitive towards their youngest children, because these toddlers would be less jealous of their younger sibling.

METHOD

Participants

This study is part of the longitudinal study *Boys will be Boys?* examining the influence of gender-differentiated socialization on the socio-emotional development of boys and girls in the first years of life. This paper reports on data from the first wave. Families with two children in the Western region of the Netherlands were selected from municipality records. Families were eligible for participation if the second-born child was around 12 months of age and the firstborn child was between 2.5 and 3.5 years old at the time of recruitment. Exclusion criteria were single parenthood, severe physical or intellectual handicaps of parent or child, and parents being born outside the Netherlands or not speaking the Dutch language. Between April 2010 and May 2011 eligible families were invited by mail to participate; 31% (n = 390) of the 1,249 families agreed to participate. The participating families did not differ from the non-participating families on age, educational level of both parents, and degree of urbanization of the place of residence (all ps > .10). For the current paper, one family with missing data for sensitivity of the mother and one family with missing data of both visits for sharing behavior of the firstborn child were excluded, resulting in a final sample of 388 families. Two families consisted of the biological mother of the children and a

stepfather, while the other 386 families (99.5%) consisted of two biological parents. The distribution of family constellations was as follows: 107 boy-boy (28%), 91 girl-girl (23%), 97 boy-girl (25%), and 93 girl-boy (24%).

At the time of the first visit toddlers were, on average 36.2 months old (*SD* = 3.6) and their younger siblings were, on average, 12.0 months old (*SD* = 0.2). The mean age difference between siblings was 23.7 months (*SD* = 3.6). Mothers were aged between 23 and 46 years (*M* = 33.9, *SD* = 4.0) and fathers were between 26 and 63 years of age (*M* = 36.8, *SD* = 5.1). Most participating parents were married or had a cohabitation agreement or registered partnership (93%), and the remaining 7% lived together without any kind of registered agreement. With regard to educational level, most of the mothers (76%) and fathers (79%) had a high educational level (academic or higher vocational schooling).

Procedure

Each family was visited twice within about two weeks, once for observation of the mother and the two children and once for observation of the father and the two children. The order of father and mother visits was counterbalanced. After the two visits families received a gift of 30 Euros and small presents for the children. Before each 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 children and parents completed computer tasks. All visits were conducted by pairs of trained graduate or undergraduate students. Informed consent was obtained from all participating families. Ethical approval for this research was provided by the Research Ethics Committee of the Institute of Education and Child Studies of Leiden University.

Measures

Sharing Behavior. Toddlers received a small box of raisins (a common children's treat in the Netherlands) and were instructed by the experimenter to share these with their younger siblings. The sharing task was administered during both the father and mother visits. Parents were present during the task and were free to interfere if they considered this necessary. The task was filmed and the number of treats shared with the younger sibling was counted. Treats shared with or by the parent were not counted; when a

toddler took treats back from the younger sibling these were subtracted from the total number of shared treats. Parents within the same family were coded by different coders to guarantee independency among ratings. Interobserver reliability between all pairs of seven independent coders was good with a mean intraclass correlation (single rater, absolute agreement) of .95 (range .86 to 1.00). Sharing behavior was significantly correlated between visits (r = .30, p < .01) and showed no mean-level differences between visits (p =.71). We therefore computed a combined mean score for toddlers' sharing behavior. The number of treats shared ranged from not sharing any treats to giving all the treats to the younger sibling (n = 0-30).

Compliance. Toddlers' compliance was measured in a 4-minute disciplinary *don't* context (Kochanska et al., 2001). The parent was asked to put a set of attractive toys on the floor in front of both children, but to make sure the children did not play with or touch the toys. After 2 minutes, both siblings were allowed to play only with an unattractive stuffed animal for another 2 minutes. Noncompliance was coded with an event-based coding system. An event was coded when the child reached towards or touched the prohibited toys after the parent explained that the child was not allowed to touch them. If a child reached or touched the toys more than once within 10 seconds this was coded as one event of noncompliance. Within the 4 minutes of the task, noncompliance could range from 0 to a maximum of 24 events. The two observations of compliance for each child within the same family (once with the mother present, once with the father present) were coded by different coders to guarantee independence of the ratings. Interobserver reliability was good, with a mean intraclass correlation (single rater, absolute agreement) for all pairs of the nine coders of .97 (range .92 to 1.00). To prevent coder drift regular meetings with coders were organized. In order to generate a measure for compliance the inverse sum scores of noncompliance were computed, with a score of 0 representing complete compliance (i.e., no events of non-compliance) during the don't touch task, and scores below 0 representing progressively lower levels of compliance. Because, toddlers' compliance during the two visits were significantly correlated (r = .36, p < .01) and there were no mean-level differences between visits (p = .31) combined mean scores for compliance were computed. For two families observations of one visit were missing, for these families the data of the other visit was used as the best estimate of child compliance.

Parental Sensitivity. Each dyad (one parent, one child) received a bag with toys and was invited to play with the toys for eight minutes. The Sensitivity scale from the fourth edition of the Emotional Availability Scales (EAS; Biringen, 2008) was used to measure parental sensitivity during free play. The scale is divided into seven subscales; (1) affect, (2) clarity of perceptions and appropriate responsiveness, (3) awareness of timing, (4) flexibility, variety, and creativity in modes of play or interaction with parent, (5) acceptance in speech, (6) amount of interaction, and (7) conflict situations. The first two subscales are coded on a 7-point Likert scale and the other subscales are coded on a 3-point Likert scale with a potential score range of 7-29. The sixth 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 alterations were made to improve intercoder agreement, for more information about these alterations see Hallers-Haalboom et al. (2014). Dyads within the same family were coded by different coders (i.e., four coders per family) to guarantee independency among ratings. Intercoder reliability for the total sensitivity score for all pairs of the seven coders was adequate, with a mean intraclass correlation coefficient (absolute agreement) of .81 (range .73 to .92). During the coding process, the first 100 videotapes were coded twice independently by separate coders and regular meetings were organized to prevent coder drift. Sensitivity, compliance, and sharing behavior were coded by different coders.

Data Analysis

All measures were inspected for possible outliers that were defined as values more than 3.29 *SD* below or above the mean (Tabachnick & Fidell, 2012). Outliers were winsorized to make them no more extreme than the most extreme value that fell within the accepted range conform a normal distribution (Tabachnick & Fidell, 2012). Sharing behavior was positively skewed, and a square root transformation was used for analyses (Tabachnick & Fidell, 2012). All other measures were normally distributed. We chose not to use difference scores (subtracting sensitivity towards the toddler from sensitivity towards the sibling), because of systematic differences in parental sensitivity towards their toddlers and their 1-year-olds (see below).

Most parents were more sensitive towards their toddlers than towards their 1-year-olds (mothers 68%; fathers 70%), which is likely to be due to age-related differences in the children's developmental stages (Hallers-Haalboom et al., 2014). To assess main and interaction effects of parental sensitivity towards both siblings on toddlers' sharing behavior and compliance, hierarchical regression analyses were conducted. In the first step age of the toddler, gender of both children, and parental sensitivity towards both children were entered. In the second step two-way interactions between parental sensitivity towards the toddler and towards the sibling and between paternal and maternal sensitivity were entered. Finally non-significant interactions were deleted from the model. Sibling gender composition was also examined as a potential moderator, but it did not affect the relations reported in this paper, and was deleted from the model. Variables were centered before the computation of interaction terms.

RESULTS

The means, standard deviations and bivariate correlations of the predictors and the outcome measures are presented in Table 1. No significant correlation between toddler compliance and sharing behavior was found. There was a positive correlation between paternal sensitivity and toddlers' sharing behavior indicating that more sensitive fathers had toddlers who shared more. For both sharing behavior and compliance no associations were found with maternal sensitivity towards either child, or with parental sensitivity towards the younger sibling. Sensitivity was positively correlated between parents and between siblings, and mothers were more sensitive towards the younger siblings when their older siblings were older. Mothers' sensitivity towards the younger siblings ranged from 14 to 29 (M = 24.0, SD = 3.1) and fathers' sensitivity ranged from 11 to 29 (M = 22.6, SD = 3.6). Sensitivity towards the toddlers ranged from 16 to 29 for both parents (mothers: M = 24.9, SD = 2.8; fathers: M = 24.1, SD = 2.9). Sensitivity was higher towards the toddlers than towards the youngest siblings for both fathers, $t(387) = 8.00$, $p < .01$, $d = 0.81$, and mothers, $t(387) = 5.35$, $p < .01$, $d = 0.54$. Compared to mothers, fathers were less sensitive towards their toddlers, $t(387) = 4.58$, $p < .01$, $d = 0.41$, and the younger siblings: $t(387) = 6.73$, $p < .01$, $d = 0.61$.

Table 1.
Summary of Means, Standard Deviations and Correlations for Toddlers' Sharing Behavior, Compliance, and Age, and Parental Sensitivity towards Both Siblings

		1	2	3	4	5	6	*M*	*SD*
1.	Toddler's sharing behavior							9.4	3.9
2.	Toddler's compliance	.09						- 6.4	4.2
3.	Toddler's age	.07	.13*					3.0	0.3
4.	Fathers' sensitivity to toddler	.12*	.03	.01				24.1	2.9
5.	Mothers' sensitivity to toddler	-.01	-.03	.03	.19**			24.9	2.8
6.	Fathers' sensitivity to sibling	.07	-.06	-.06	.37**	.16**		22.6	3.6
7.	Mothers' sensitivity to sibling	.06	-.01	.11*	.06	.31**	.25**	24.0	3.1

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

Note: the negative mean of compliance indicates that on average children showed 6.5 events of non-compliance during the don't touch task.

For sharing behavior, the hierarchical regression analysis showed a main effect for paternal sensitivity to the toddler (Table 2). Toddlers shared more with their siblings when their fathers were more sensitive towards them. Moreover, the interaction between paternal sensitivity towards the toddler and paternal sensitivity towards the younger sibling was significant. Simple slopes analyses (Aiken & West, 1991) revealed a significant relation between paternal sensitivity and sharing only for toddlers whose fathers showed relatively low sensitivity towards the younger siblings, while no significant relation was found for toddlers whose fathers showed high sensitivity towards the younger siblings (Figure 1). Other predictors were not significant, including child characteristics, maternal sensitivity towards the toddler, the main effect of sensitivity of both parents towards the younger sibling, and both the interactions between maternal and paternal sensitivity towards the toddler, and maternal sensitivity towards the toddler and maternal sensitivity towards the younger sibling.

For compliance, the multiple regression analysis revealed significant main effects for age and gender (Table 2), with older toddlers and girls showing more compliance. Neither the main effects of parental sensitivity nor the interaction between paternal and maternal sensitivity were significant. Again, the interaction between paternal sensitivity towards the toddler and paternal sensitivity towards the younger sibling contributed significantly to the prediction of compliance. To further examine the significant interaction effect, simple slopes analyses were conducted (Aiken & West, 1991). Similar to the results for sharing, we found a significant relation between paternal sensitivity and compliance only for the toddlers whose fathers showed relatively low sensitivity towards the younger siblings, whereas no significant relation was found for toddlers whose fathers showed high sensitivity towards the younger siblings (Figure 2). This implies that toddlers showed more compliance when their fathers were more sensitive towards them, but only if fathers showed lower levels of sensitivity towards their younger siblings.

Table 2.

Parental Sensitivity towards both Siblings in Relation to Toddler's Sharing and Compliance

	Sharing				Compliance			
	B	*SEB*	*β*	R^2	*B*	*SEB*	*β*	R^2
Step 1				.04				.06
Toddler's age	.14	.11	.07		.17	.06	.14**	
Toddler's gender	.12	.06	.10		1.57	.42	.19**	
Sibling's gender	.08	.06	.07		-.03	.43	-.00	
Fathers' sensitivity to toddler	.03	.01	.12*		.07	.08	.05	
Mothers' sensitivity to toddler	-.01	.01	-.05		-.03	.08	-.03	
Fathers' sensitivity to sibling	.00	.01	.01		-.13	.07	-.11	
Mothers' sensitivity to sibling	.01	.01	.05		-.01	.07	-.01	
Step 2				.04				.07
Fathers' sensitivity T * Fathers' sensitivity S	-.01	.00	-.10*		-.05	.02	-.14**	

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

Note: Beta's derived from the final model. T refers to toddler and S refers to the younger sibling.

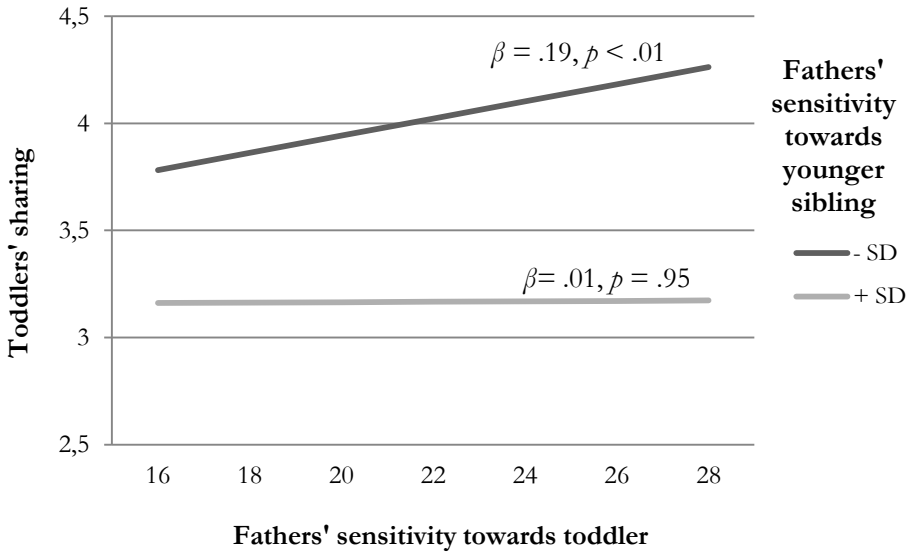

Figure 1.
The association between fathers' sensitivity towards the toddler and toddler sharing behavior by fathers' sensitivity towards the younger sibling.

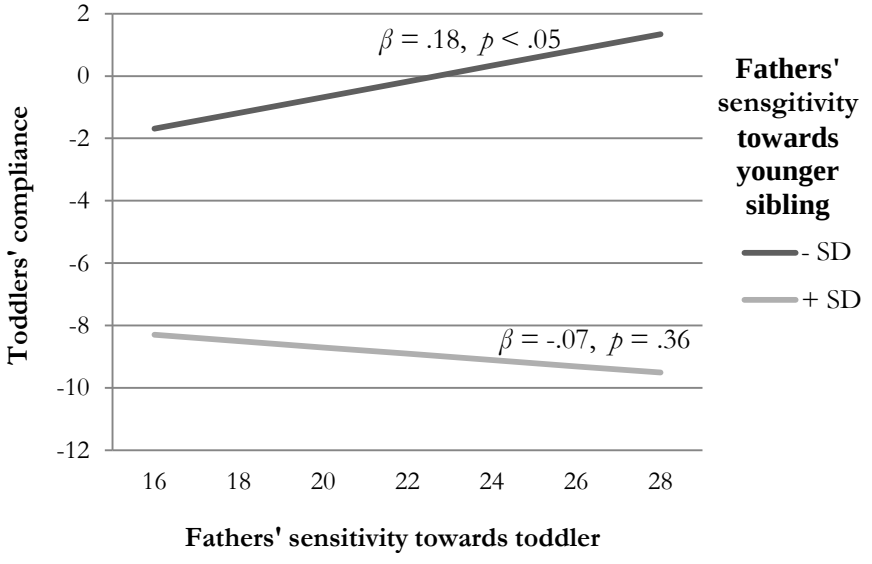

Figure 2.
The association between fathers' sensitivity towards the toddler and toddler compliance by fathers' sensitivity towards the younger sibling.

DISCUSSION

Our results showed that toddlers share more with their younger siblings and exhibit more compliance when their fathers were more sensitive towards them, but only if fathers showed low sensitivity towards the younger sibling. The moderation effect, indicating that toddlers who exhibited most sharing behavior and compliance had fathers who showed high levels of sensitivity towards the toddlers themselves and low levels of sensitivity toward the younger siblings, confirms the assumption of family-systems theories that interactions between dyads within the family influence other dyadic interactions within the family which in turn influence child outcomes (Minuchin, 1985; Volling et al., 2009). In addition, it supports the idea of social comparison between siblings (Feinberg et al., 2000; Volling et al., 2010). Three-month-old infants already differentiate between prosocial and antisocial actions of others and are able to evaluate and compare behaviors of others (Hamlin & Wynn, 2011). By the age of 6 months infants feel jealous when their parents direct their attention towards another child (Hart, 2010). By (unconsciously) noting the level of sensitivity the younger sibling receives in comparison with the level of sensitivity the toddler receives, the toddler might feel favored by the parent. Previous studies have indicated that toddlers' behavior is sensitive to parenting towards younger siblings and that differentiated parenting is related to more positive behavior in the favored sibling (Blandon & Volling, 2008; Fearon et al., 2010; Knafo, 2009).

Social comparison influences social development through sibling rivalry and fear over losing parental attention (Boyle et al., 2004). As a consequence the favored toddler may exhibit more preferred behavior, i.e. more prosocial behavior and more compliance, to ensure continuation of its favored position (Fearon et al., 2006). Another explanation could be that in the case of sharing behavior, toddlers may compensate for the lack of fathers' sensitivity towards the younger sibling by exhibiting more prosocial behavior towards their younger siblings. Eight-month-old infants are sensitive to the level of fairness of actions towards others, and from the age of 19 months toddlers are able to share altruistically and adapt their prosocial acts to how the other behaved or was treated before (Hamlin, Wynn, Bloom, & Mahajan, 2011; Schmidt & Sommerville, 2011). Toddlers shared more with a person who was victimized before than with a person who was helped before the sharing task (Hamlin et al., 2011). The experience of being favored over a

younger sibling could be experienced as unfair by the toddler, which may lead to more prosocial behavior towards the younger sibling. However, since our data is correlational, it could be that toddlers' sharing behavior and compliance increased their fathers' sensitivity towards them (Carlo, Mestre, Samper, Tur, & Armenta, 2010; Combs-Ronto, Olson, Lunkenheimer, & Sameroff. 2009).

The finding that mothers were more sensitive than fathers is in line with findings of previous studies (Lovas, 2005; Volling, McElwain, Notaro, & Herrera, 2002). Mothers are often the primary caregiver and therefore they are more familiar with the signals of the child which may make them more sensitive than fathers, see Hallers-Haalboom et al. (2014). In contrast to paternal sensitivity, maternal sensitivity was not related to toddlers' behavior. This difference between fathers and mothers is consistent with findings from previous studies (Volling & Belsky, 1992; Volling et al., 2006). A study with preschoolers showed a relation between paternal sensitivity and prosocial sibling interactions, whereas no relation for maternal sensitivity was found (Volling & Belsky, 1992). The differences between the effects of paternal and maternal sensitivity on child behavior may be related to the differences in how fathers and mother interact with their children, especially during free play. Fathers initiate more physical and rough-and-tumble play than mothers do (Volling et al., 2002). In rats, such rough-and-tumble play has been related to the development of social and emotional competences (Pellis & Pellis, 2007). It has been proposed that a similar relation between rough-and-tumble play and more social skills and emotional understanding could exists in humans, because during this more physical play it is necessary to monitor emotional expressions of a playmate in order to assure that the game is still enjoyed by the other (Pellegrini & Smith, 1998).

Compliance was not related to sharing, which may be due to the different interaction partners in the two settings. Compliance was observed during parent-child interaction, while sharing was observed during a child-sibling interaction. In addition, this result shows that sharing in the presence of a parent is not necessarily influenced by compliance to parental rules.

This study has some limitations. The sample consisted predominantly of highly educated parents, which may influence the generalizability of the results. Although, the high educational level of our sample is comparable to educational levels of samples of other studies including both parents, often

from convenience samples (Blandon & Volling, 2008; Verhoeven, Junger, Van Aken, Deković, & Van Aken, 2010), it is important for future research to include lower-educated parents. Another limitation lies in the observational measure of sensitivity. Sensitivity was observed during a free-play situation with pre-selected toys. Although free-play is frequently used for observation of parental sensitivity (e.g. Kiang et al., 2004), it could be that this is not a naturalistic situation for all parents. This could also explain why fathers were found to be less sensitive than mothers, since this kind of play may be closer to daily-life experiences for mother-child interactions than for father-child interactions (Volling et al., 2002). Furthermore, the use of a play situation limits the number of observations of parental sensitivity to a child's distress, while parental responses to a child's distress are seen as a central concept of sensitive parenting (Bowlby, 1982; Mesman, Oster, & Camras, 2012; Out, Pieper, Bakermans-Kranenburg, Zeskind, & Van IJzendoorn, 2010). Indeed, some studies only found a relation between parental sensitivity towards child distress and child outcomes, while no relation was found between parental sensitivity to child nondistress and behavioral outcomes (Leerkes, Blankson, & O'Brien, 2009). This could explain why no direct effect of sensitivity on sharing or compliance was found. Therefore, future studies could focus more on the relation between parental sensitivity to distress and child behavior. Finally, we only used the number of shared treats as a measure for sharing, and we did not observe any other aspect of the child's sharing behavior or the behavior of the younger sibling or the parent during the sharing task. Although the number of shared treats measure seems to be useful in revealing relations between parenting and sharing behavior, observing the actual behavior of each family member present during a sharing episode could provide more information on processes between siblings and parental interference.

In conclusion, compliance and sharing behavior in toddlers are related to the parenting they receive in combination with the parenting directed towards their younger siblings, which they observe. Fathers' sensitivity was positively related to toddlers' sharing behavior and compliance when fathers were not so sensitive towards the younger siblings. This could be explained by toddlers showing positive behavior to ensure continuation of their favored position or, in the case of sharing, they may compensate for the lack of fathers' sensitivity towards the younger siblings. Our study contributes to the

growing body of research indicating that not only one-to-one parenting shapes child socio-emotional development, but also observed parenting towards siblings. This is one of the first studies that examined interactions between parenting towards two children, instead of using the difference in parenting towards two children, as a predictor of child behavior. This enabled us to document the interplay between dyadic interactions within the family, revealing that parenting towards a child and its sibling are related to child behavior. In addition, while most studies have focused on preschoolers or school-aged children, we focused on toddlers to investigate the influence of parenting towards two children during a developmental period in which compliance and prosocial behavior first emerge. Our results are in line with family-systems theories (Minuchin, 1985; Volling et al., 2009) and confirm that the interplay between different dyadic interactions within a family are related to child outcomes. Doing so, our findings highlight the significance of the broader family context for child development.