

# Chapter 6

## Children's Living Arrangements After Divorce and the Quality of the Father-Child Relationship; Father Involvement as an Important Underlying Mechanism



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**Abstract** Using data from the multi-actor Divorce in Flanders survey, this study aimed to provide a more comprehensive understanding of linkages between children's living arrangements after divorce and father-child relationship quality. First, we tested whether father involvement and co-parental relationship quality explained linkages between living arrangements and father-child relationship quality. Second, we examined whether child's loyalty conflicts and child's sex moderated associations between living arrangements and father-child relationship quality. Finally, we explored whether results differed when fathers or children reported on their relationship. Results show that father-child relationship quality (irrespective of the reporter) was significantly higher for children living in JPC but only compared to children who live solely with their mother. Furthermore, father involvement explained the association between living arrangements and father-child relationship quality (again irrespective of the reporter). The co-parental relationship also explained part of this association, but only when children reported on father-child relationship quality. The association between children's living arrangement and father-child relationship quality was stronger for sons than daughters. This association did not differ by loyalty conflicts. These findings highlight the importance of enabling fathers to remain involved after divorce and having a positive co-parental relationship for maintaining high quality relationships between fathers and children.

**Keywords** Living arrangements · Father-child relationship quality · Joint physical custody · Father involvement · Co-parental relationship

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## 6.1 Introduction

Recent trends show an increasing number of children in Europe who have experienced a parental divorce (Eurostat Statistics Explained 2016). While research suggests that a good relationship with *both* parents has short and long-term beneficial consequences for children's mental well-being (Stafford et al. 2016), in divorced families there is on average less father-child contact and a weaker father-child relationship compared to intact families (Dunlop et al. 2001; Peters and Ehrenberg 2008; Shapiro and Lambert 1999). Even though part of this effect is likely due to selection (i.e. fathers who are less involved in childrearing and who have weaker father-child relationship quality are more likely to experience divorce), longitudinal studies reveal that the divorce itself weakens the father-child relationship (Amato and Booth 1996; Shapiro and Lambert 1999). Given the importance of strong father-child relationship quality for child's well-being, it is important to obtain a comprehensive understanding of the conditions under which the father-child relationship is weaker after divorce and what factors may help maintain high quality father-child relationships.

Living arrangement of the child seems to play a crucial role in the association between divorce and father-child relationship quality. Although the majority of children live with their mother after divorce, there is a growing number of children that lives in joint physical custody (JPC), meaning that children live at least one-third of the time with each parent. Many researchers stress that this type of arrangement enables fathers and children to maintain positive father-child relationships after divorce (Baude et al. 2016; Bauserman 2012; Spruijt and Duindam 2009; Vanassche et al. 2017). In the current chapter, we investigate linkages between children's living arrangements after divorce and the quality of the father-child relationship. We contribute to the literature in four ways. First, we differentiate between three different types of living arrangements reflecting children's actual living situation: JPC arrangements, arrangements in which the child lives mainly with the mother (with visitation arrangements for fathers) and arrangements in which the child lives solely with the mother. All recent review studies collapse the latter two categories into one (Baude et al. 2016; Nielsen 2018), although this distinction has important consequences for what opportunities there are for the continuation of the father-child relationship. Second, we move beyond the question *whether* living arrangements have an effect on father-child relationship quality after divorce. We elaborate on and test different mechanisms that might explain this association, namely the level of father involvement and the quality of the co-parental relationship. Third, we aim to investigate under what conditions JPC is more or less beneficial for father-child relationship quality than living solely or mainly with mother. We examine to what extent the association between living arrangements after divorce and the quality of the father-child relationship is influenced by (a) experienced loyalty conflicts by the child (i.e. feeling caught in the middle between parents), and (b) child's sex. Fourth, the multi-actor nature of our dataset allows us to explore if linkages between living arrangements and the father-child relationship are different depending on whether

the father or the child reports on the quality of the father-child relationship. Previous studies that have investigated father-child relationship quality within different living arrangement have only made use of child reports (e.g., Bjarnason and Arnarsson 2011; Carlsund et al. 2013; Låftman et al. 2014), while per definition, relationships consist of (at least) two persons whom both have their own perceptions on and views of the relationship (Harach and Kuczynski 2005). We made use of family systems theory to develop our hypotheses. According to family systems theory, it is important to study individuals within the context of their larger family, which consists of individuals and subsystems (e.g., parental subsystem, parent-child subsystem) that are constantly influencing each other (Cox and Paley 2003; Minuchin 1985).

### ***6.1.1 Linkages Between Living Arrangements After Divorce and Father-Child Relationship Quality: The Issue of Self-Selection***

As previously mentioned, the father-child relationship appears to be stronger in JPC compared to other living arrangements, in particular in comparison to sole maternal custody (e.g., Carlsund et al. 2013; Låftman et al. 2014; Nielsen 2018; Spruijt and Duindam 2009; Vanassche et al. 2017). Although there are strong reasons to believe that living arrangements after divorce shape the quality of the relationship children have with their father, we need to take the possibility of self-selection into account, that is, the possibility that characteristics of the different family members and their relationships influence the family's choice for a certain living arrangement. For instance, highly involved fathers who have stronger bonds with their children are more likely to obtain a JPC arrangement. Also, parents who have better co-parental relationships may be more likely to choose for JPC. While self-selection might play a role in research on living arrangements, recent evidence indicates that it does not largely accounts for the benefits of JPC for children (Braver and Votruba 2018).

We made two choices in the current chapter in our attempt to rule out part of the self-selection. First, we decided to control for two important self-selection factors (Braver and Votruba 2018). We controlled for interparental conflicts before the divorce, since low-conflict families are overrepresented in JPC (Sodermans et al. 2013), and interparental conflicts can have a negative effect on the father-child relationship (Kalmijn 2015). We also controlled for parents' socioeconomic status (SES), because highly educated parents have on average a better relationship with their children (Conger et al. 2010) and are more likely to have JPC (Sodermans et al. 2013) compared to lower educated parents.

Second, we decided to use Flemish data to answer our research questions. In Belgium, the percentage of children living in JPC after divorce rose from 7% (couples who divorced before 1995) to 27% (couples who divorced after 2006) (Sodermans et al. 2011). This increase is associated with the tendency towards equal parental rights after divorce and the accompanying changes in laws and policy in

Belgium. Since 2006, JPC is introduced as the default residential model after divorce in the Belgian law. So, when parents do not agree on the child arrangements after divorce, the judge must investigate and seriously consider the possibility of an equally divided alternating residence (Vanassche et al. 2017). Due to this change in law, JPC living arrangements are also presented as the default starting option for families in which there are conflicts between the ex-partners or in which the father was relatively weaker involved in childcare during the marriage (Sodermans et al. 2013). As a consequence, since 2006, self-selection into different types of living arrangements after divorce might play a smaller role within the Belgian context. Therefore, and because of the high divorce rate (Eurostat Statistics Explained 2016), Belgium makes an interesting setting to study the effects of different living arrangements after divorce.

### ***6.1.2 Linkages Between Living Arrangements After Divorce and Father-Child Relationship Quality: Causal Relationships***

Because parenting time predicts a better father-child relationship (Fabricius et al. 2010), researchers suggest that the more equal children spend their time between mother and father, the higher the quality of the father-child relationship. Research shows that even weak father-child relationships improve when father and child spent more time together (Fabricius et al. 2010). Below we elaborate on two factors that may explain these linkages between children's living arrangements and father-child relationship quality: the level of father involvement and the quality of the co-parental relationship.

### ***6.1.3 Linkages Between Living Arrangements After Divorce and Father-Child Relationship Quality: The Mediating Role of Father Involvement***

From a family systems perspective, living under the same roof as your child helps fathers to maintain their role as an involved parent which contributes to a strong father-child relationship (Fabricius et al. 2010; Melli and Brown 2008; Vanassche et al. 2013). Overnight stays enable the father to move beyond the recreational role which he might have had with only daytime contact, and fulfil a more caregiving role (Cashmore et al. 2008; Stewart 1999). It permits the father to be involved in children's everyday lives and routines, like transitions to and from school, or helping with homework. This higher level of father involvement is associated with higher quality father-child relationships (Cashmore et al. 2008).

#### ***6.1.4 Linkages Between Living Arrangements After Divorce and Father-Child Relationship Quality: The Mediating Role of the Co-parental Relationship***

After divorce, parents end their relationship with each other as spouses, but maintain their relationship as co-parents. Family system theory states that the whole family has to adjust to these new roles, expectations, and boundaries (Ahrons 1980; Carroll et al. 2007). Parents need to jointly make decisions regarding their child(ren), need to share information about their child(ren)'s life, and need to decide on what level they will align their parenting activities which means they have to manage their conflicts (when present). In sum, ex-spouses need to find a way of cooperating in their new roles within their co-parental relationship. Studies show that JPC predicts stronger co-parental relationships characterized by more emotional support and positive feelings compared to sole custody (Bauserman 2012; Spruijt and Duindam 2009). In turn, this co-parental relationship is shown to benefit the quality of the father-child relationship. Research shows that when mothers and non-residential fathers have positive co-parental relationships, the father-child relationship is stronger (Sobolewski and King 2005).

#### ***6.1.5 Linkages Between Living Arrangements After Divorce and Father-Child Relationship Quality: The Moderating Influence of Loyalty Conflicts***

Although the quality of the father-child relationship is generally highest in families with JPC, this might not be the case in all circumstances, in particular when there is high interparental conflict (see the review of Smyth et al. 2016). One of the main concerns about JPC is that this type of living arrangement might not be beneficial when children are being exposed to interparental conflicts (Pruett et al. 2014; Smyth et al. 2016; but please note that other scholars argue that JPC is always the best living arrangement, e.g. Kruk 2012; Warshak 2014). Children who experience many conflicts between their parents often experience loyalty conflicts and feel they have to 'choose' between their parents. Children who feel caught in the middle are less able to freely express their love for one parent without the feeling of hurting the other parent or themselves (Afifi and Schrodt 2003). In line with this reasoning, scholars have shown that feeling caught in the middle is associated with low quality parent-child relationships (Afifi and Schrodt 2003; Amato and Afifi 2006). The behavior in the parental subsystem (i.e. interparental conflicts) seems to spill over to the parent-child subsystem (i.e. weaker father-child relations). As such, linkages between children's living arrangements after divorce and the quality of the father-child relationship might differ by the extent to which the child reports to feel caught in the middle.

### ***6.1.6 Linkages Between Living Arrangements After Divorce and Father-Child Relationship Quality: The Moderating Influence of Child's Sex***

The second possible moderating influence for the relationship between living arrangements and father-child relationship quality is the child's sex. An advantage of JPC (compared to arrangements where children live solely or mainly with their mother) is that fathers can more easily maintain close bonds with their children. Studies showed that fathers are more likely to stay in contact and maintain a strong relationship with sons than with daughters after divorce (Marsiglio 1991; Peters and Ehrenberg 2008; Sobolewski and King 2005). This is probably because fathers are typically more involved with their sons than daughters. In addition, studies show that the father-daughter relationship is at greater risk after divorce compared to the father-son relationship (for a review see Nielsen 2011). These results suggest that the father-son bond might be strong irrespective of living arrangement, while for daughters, it is especially important to live with their father to ensure a high-quality father-child relationship.

### ***6.1.7 The Present Study***

The aim of the current study is to provide a comprehensive understanding of linkages between children's living arrangements and the quality of the father-child relationship by differentiating between three living arrangements. Further we empirically test two underlying mechanisms and examine under what conditions linkages between children's living arrangements and the quality of the father-child relationship differ. We aim to test the following hypotheses:

1. The quality of the father-child relationship is highest in JPC, somewhat lower in families in which children live mainly with mother, and lowest in families in which children live solely with mother.
2. Fathers whose children live solely with their mother, and to a lesser extent fathers of children who live mainly with mother, show less involvement with their children compared to fathers in JPC, which explains the relation between living arrangements and the quality of the father-child relationship.
3. Parents whose children live solely with their mother, and to a lesser extent parents of children that live mainly with mother, have worse co-parental relationships compared to parents with JPC, which explains the relation between living arrangements and the quality of the father-child relationship.
4. The effect of living arrangements on the quality of the father-child relationship is weaker for children who experience loyalty conflicts.
5. The effect of living arrangements on the quality of the father-child relationship is stronger for daughters compared to sons.

Further, we explore whether the results of our study differ depending on the person who reports on father-child relationship quality. We make use of structural equation modelling (SEM) to answer our research questions.

## 6.2 Methods

### 6.2.1 Data

We made use of the cross-sectional 'Divorce in Flanders' study, which was conducted in 2009–2010 (Mortelmans et al. 2011). This multi-actor study includes information on 4550 first marriages (reference marriages) contracted between 1971 and 2008 that were drawn from the Belgian National Register. Respondents were one or both (ex)-spouses of each reference marriage. Furthermore, one child, the target child, was randomly selected to participate. We only focused on divorced families with a participating minor target child between 10 and 17 years old, living with at least one of the parents at the time of the interview ( $n = 414$ ). Next, we excluded families who had other arrangements (i.e. living solely with father, living mainly with father, or a flexible arrangement) than our three arrangements of interest ( $n = 57$ ). Sample sizes within these living arrangements were too small to draw meaningful conclusions from comparisons. Finally, we excluded families whereby the child did not have any face-to-face contact with father, because these children were not asked about the relationship with their father ( $n = 35$ ). Our final sample contains information on 322 divorced families. Participants were interviewed by face-to-face Computer Assisted Personal Interviews (CAPI).

In total, 780 family members were part of our research sample, consisting of 173 fathers ( $M_{age} = 43.62$ ,  $SD = 4.52$ ), 285 mothers ( $M_{age} = 41.42$ ,  $SD = 4.06$ ), and 322 children. The mean age of the participating children (51.2% boys) was 13.71 ( $SD = 2.16$ ). The majority of the parents was highly educated (fathers = 37.0%, mothers = 43.5%) or moderately educated (fathers = 41.6%, mothers = 44.2%). Almost all fathers (87.9%) and half of the mothers (50.9%) had a full-time job. Approximately one third of the mothers was working a part-time job (35.1%). At the time of the interview half of the parents was living with a new partner (fathers = 54.9%, mothers = 44.9%).

### 6.2.2 Measures

**Living Arrangements** To categorize the families into living arrangements we used information on children's actual residency. This information was collected using the month-calendar (Sodermans et al. 2014). A residential calendar was presented to the parent, corresponding with a regular month. The parent indicated for every day and night whether the child resided with him/her or with the

**Table 6.1** Percentages of children, mothers, and fathers per living arrangement

	Total	Solely	Mainly	JPC
Respondents	780 (100%)	24.7%	36.9%	38.3%
Children	322 (100%)	26.4%	36.6%	37.0%
Mothers	285 (100%)	29.8%	38.2%	31.9%
Fathers	173 (100%)	13.3%	35.3%	51.4%

ex-partner. When answers of parents were not identical, a mean score was calculated. Next, we distinguished three different living arrangements based on regularly used cut-off criteria (e.g., Fabricius et al. 2012; Smyth et al. 2008): (1) living solely with mother (100% at mother's residence), (2) living merely with mother (child lives 66–99% of the time with mother and less than 33% of the time with father), and (3) living in JPC (child lives at least 33% of the time with each parent). This resulted in 85 children (26.4%) who were living solely with mother, 118 children (36.6%) who were living merely with mother, and 119 children (37.0%) who were living in JPC. Table 6.1 shows how all family members were divided among the living arrangements.

**Father-Child Relationship Quality** Father-child relationship quality was reported by fathers and children separately. Relationships are defined as dyads that accumulate a history of interactions over time (Hinde 1976). In the most recent review on living arrangements and children's outcomes (Nielsen 2018), the quality of parent-child relationship was described as how well parents and children communicate and how close they feel to each other. To tap into the specific concept of father-child relationship, most researchers use different items. For example, scholars assess both affection as well as conflicts between parents and children (e.g., Fauchier and Margolin 2004), or both care as well as control (e.g., Dunlop et al. 2001). In the current study, in a similar line, we aimed to tap into both an affective and an evaluative component of the father-child relationship. First, children and fathers were asked to rate the quality of their father-child relationship ('How good or how bad is the relationship with your father/child?') on a 5-point scale from (1) *very bad* to (5) *very good*. Second, we assessed parent-adolescent communication by the Parent-Adolescent Communication Scale (PACS) (Barnes and Olson 1985). Children and fathers answered 9 items on a 7-point scale from (1) *strongly disagree* to (7) *strongly agree*. An example item is 'I openly show affection to my father/My child openly shows his or her affection for me'. The communication scale showed a good reliability for children ( $\alpha = .83$ ) and fathers ( $\alpha = .78$ ). Finally, because the relationship-item and communication scale was significantly correlated for both fathers,  $r(169) = .48$ ,  $p < .001$ , and children,  $r(315) = .68$ ,  $p < .001$ , we decided to compute their mean to indicate the quality of father-child relationship quality. Father-child relationship quality from father's perspective and from child's perspective were analyzed separately. Father and child report on father-child relationship were significantly related,  $r(169) = .45$ ,  $p < .001$ .



**Father Involvement** Father involvement is a quantitative measure reported by fathers. This scale consists of 6 questions concerning how often the father undertakes certain activities with his child (i.e. helping with homework, talking about his/her problems, having fun together, taking part in leisure activities, taking to/from school, going to parent evenings). Fathers could answer on a 7-point scale, ranging from (1) *never* to (7) *daily*. The scale showed an acceptable reliability,  $\alpha = .70$ .

**Co-parental Relationship** Co-parenting refers to interactions of parents regarding their children, or the ways that parents work together in their roles as parents (Feinberg 2003). This is somewhat different from the interparental or marital relationship. Van Egeren and Hawkins (2004) state there are 4 co-parenting dimensions; co-parenting solidarity, co-parenting support, undermining co-parenting, and shared parenting. By incorporating different items that tap into these different dimensions, we aimed to obtain a multidimensional concept of co-parenting. To measure the co-parental relationship, both parents reported on three items. First, both parents were asked to rate the quality of their relationship at time of the interview ('How would you describe the relationship with [ex-spouse] at the moment?') on a 5 point scale from (1) *very bad* to (5) *very good*. Second, parents filled in two questions that were related to the co-parenting practices, (1) 'My ex-spouse and I agree on how to share the responsibilities of parenting', and (2) 'My ex-spouse and I have difficulty discussing financial matters involving the children' (reversed). Items are answered on a 5-point scale ranging from (1) *never* to (5) *almost always*. These three questions together with the relationship question had an acceptable reliability for fathers ( $\alpha = .71$ ) and mothers ( $\alpha = .72$ ). The mean of the three items was computed to indicate the co-parental relationship according to fathers and mothers separately. Higher scores are corresponding to a better co-parental relationship. Reports of fathers and mothers were strongly correlated,  $r(134) = .55, p < .001$ . This was true within all living arrangements (ranging from  $r = .47$ , to  $r = .62$ ). When both parents ( $n = 136$ ) reported on the co-parental relationship, we decided to compute the mean.

**Loyalty Conflicts** Children were asked whether they experienced conflicts between the parents (i.e. blamed each other, yelled at each other, used violence, broke things deliberately, did not want to talk to each other) during the last 12 months. Children who indicated that they never experienced interparental conflicts, were not asked about their loyalty conflicts ( $n = 129$ ). Children who did indicate that they experienced interparental conflicts could answer on a 5-point scale ranging from (1) *Completely false* to (5) *Completely true* whether they feel caught in the middle when their parents argue. Because data was not normally distributed, we decided to create three categories; (1) children who never experienced interparental conflicts ( $n = 129$ ), (2) children who did experience interparental conflicts, but indicated the statement about loyalty conflicts was completely false, false, or neither true nor false ( $n = 113$ ), and (3) children who did experience interparental conflicts and who indicated the statement about loyalty conflicts was true or completely true ( $n = 61$ ).

**Conflicts Before Separation** Conflicts during the year before separation were reported both by fathers and mothers. Parents were asked how frequently they blamed each other, yelled at each other, used physical violence, threw or broke things deliberately or not wanted to talk to each other for a while. They could answer on a 7-point scale, ranging from (1) *never* to (7) *daily*. These five items had a good reliability for fathers ( $\alpha = .72$ ) and mothers ( $\alpha = .78$ ).

**Child's Sex** The sex of the child was indicated by the interviewer whereby male was coded as 0 and female as 1.

### 6.2.3 Data Analysis

To answer our research questions, structural equation modeling in *Mplus* version 8 (Muthén and Muthén 2017) was used. We tested our hypotheses by using three models: (1) a saturated model for the direct effect of living arrangements on father-child relationship quality, (2) a model for testing the mediation effects, and (3) a saturated model for testing the moderation effects. All models were computed two times; once for child-reported father-child relationship quality, and once for father-reported father-child relationship quality.

First, we tested whether there was a main effect of living arrangements on the quality of the father-child relationship, in which we treated JPC as the reference category. To examine this direct effect, we used a saturated model that included all control variables. We controlled for the previously mentioned self-selection factors: father's SES, mother's SES, father-reported and mother-reported interparental conflicts before separation. Further we controlled for children's age at the time of the interview, as father's involvement is shown to vary by child's age (Lamb 2000; Marsiglio 1991). Next, we controlled for the child's age at separation since previous research suggests that the older the child was at time of separation, the more opportunities the father and child had to develop a strong father-child relationship (Cheadle et al. 2010). We also controlled for the effect of re-partnering (0 = no partner, 1 = new partner), because re-partnering of both mothers and fathers might have an influence on father-child relationship quality (e.g., Kalmijn 2012; Noël-Miller 2013; Tach et al. 2010). Finally, we included the effects of loyalty conflicts and child's sex since these variables may be related to father-child relationship quality.

Second, when there was a significant main effect, we tested the indirect effects. We included both father involvement and the co-parental relationship to the model. We added the effect of living arrangements on both variables. We also added the effect of both variables on father-child relationship quality. Then, to improve model fit, we included more parameters and compared each model by a chi-square difference test. When model fit did not significantly improve, we tested for the indirect effects.

Finally, the moderation effects of loyalty conflicts and child's sex were examined by adding six latent variables to the first saturated model, without father involvement and the co-parental relationship in the model. Two latent variables represented the interaction between child's sex and dummy coded living arrangements (0 = JPC). The other four latent variables represented the interaction between dummy coded loyalty conflicts (0 = no interparental conflicts) and dummy coded living arrangements. Father-child relationship quality was regressed on these latent variables.

Within the 322 families, 149 fathers and 37 mothers did not participate. Some important differences were found between parents who were missing and parents who were not missing from the data. Fathers who did not participate ( $M = 4.23$ ,  $SD = 0.94$ ) had children who reported a lower father-child relationship quality compared to fathers who were not missing ( $M = 4.53$ ,  $SD = 0.90$ ),  $t(315) = 2.88$ ,  $p = .004$ ,  $d = 0.32$ . When the mother had missing data ( $M = 4.71$ ,  $SD = 0.64$ ), children reported higher father-child relationship quality compared to families where the mother was not missing ( $M = 4.35$ ,  $SD = 0.96$ ),  $t(60) = 3.07$ ,  $p = .003$ ,  $d = 0.45$ . Mothers who did not participate had more often an equally divided living arrangement ( $V(1, 322) = .30$ ,  $p < .001$ ), while fathers who did not participate had more often children who lived solely with mother ( $V(1, 322) = .38$ ,  $p < .001$ ). Parents with missing data did not differ on child-reported loyalty conflicts, partner-reported conflicts before divorce, partner-reported co-parental relationship or father-reported father-child relationship quality. Little's (1988) Missing Completely at Random test produced a norm  $\chi^2$  ( $\chi^2/df$ ) of 1.51. This indicates that it is likely that data was missing at random and it is safe to impute missing items (Bollen 1989). Missing data was imputed using the missRanger package in R (Mayer, 2019). Maximum likelihood estimation with robust standard errors (MLR) was used as the estimator, since it takes into account non-normality (Satorra and Bentler 1994). Because MLR is used, the chi-square difference test is not reliable due to the scaling correction. Therefore, the scaling correction factor is accounted for by using the Satorra-Bentler Scaled Chi-Square. RMSEA's smaller than .05, and CFI's larger than .95 indicated an adequate model fit (Hu and Bentler 1999).

## 6.3 Results

### 6.3.1 Descriptives

The frequencies, percentages, means and standard deviations of all variables are represented in Table 6.2 and 6.3 for each living arrangement separately. Also results of one-way between analyses of variances (ANOVA's) and Cramer's  $V$ 's are represented, to compare the different living arrangements on all variables. Regarding the key variables, the groups differed significantly on child-reported father-child relationship quality, father involvement and the co-parental relationship. Post-hoc tests revealed that children who lived solely with their mother reported lower father-child relationship quality compared to children who lived mainly with mother

**Table 6.2** Frequencies, means, standard deviations of measures, and ANOVA statistics

Living arrangement												
Solely			Mainly			JPC			ANOVA			
<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	$\eta^2$
80	4.03 <sup>b,c</sup>	0.99	118	4.46 <sup>a</sup>	0.90	119	4.56 <sup>a</sup>	0.86	89	4.89	0.61	8.65**
23	4.58	0.73	59	4.93	0.67	89	4.89	0.61	89	4.89	0.61	2.64
23	2.43 <sup>b,c</sup>	0.79	60	3.00 <sup>a,c</sup>	0.88	89	3.60 <sup>a,b</sup>	0.91	89	3.60 <sup>a,b</sup>	0.91	19.18**
81	3.23 <sup>c</sup>	1.17	118	3.46	1.00	118	3.61 <sup>a</sup>	0.99	118	3.61 <sup>a</sup>	0.99	3.18*
85	14.33 <sup>c</sup>	2.26	118	13.83 <sup>c</sup>	2.03	119	13.14 <sup>a,b</sup>	2.08	119	13.14 <sup>a,b</sup>	2.08	8.14**
76	6.12	3.94	108	6.23	3.46	107	7.25	3.55	107	7.25	3.55	2.96
23	2.72	1.26	61	2.74	1.03	89	2.45	0.89	89	2.45	0.89	1.72
85	3.44 <sup>b,c</sup>	1.43	109	2.77 <sup>a</sup>	1.25	91	2.88 <sup>a</sup>	1.27	91	2.88 <sup>a</sup>	1.27	6.89*

<sup>a</sup>Different from solely, <sup>b</sup>Different from mainly, <sup>c</sup>Different from JPC, \* =  $p < .05$ , \*\* =  $p < .001$

**Table 6.3** Frequencies, percentages, and Cramer’s V statistics

		Living arrangement								Cramer’s V
		Solely		Mainly		JPC		Total		
		N	%	N	%	N	%	N	%	
Loyalty conflicts	No parental conflicts	37	50.7	50	43.5	42	36.5	129	42.6	.09
	No loyalty conflicts	22	30.1	46	40.0	45	39.1	113	37.3	
	Loyalty conflicts	14	19.2	19	16.5	28	24.3	61	20.1	
Child’s sex	Boys	40	47.1	62	52.5	63	52.9	165	51.2	.05
	Girls	45	52.9	56	47.5	56	47.1	157	48.8	
Father’s SES	Low	6	26.1	23	37.7	8	9.0	37	21.4	.24**
	Middle	12	52.2	20	32.8	40	44.9	72	41.6	
	High	5	21.7	18	29.5	41	46.1	64	37.0	
Mother’s SES	Low	20	23.5	7	6.4	8	8.8	35	12.3	.17*
	Middle	33	38.8	55	50.5	38	41.8	126	44.2	
	High	32	37.6	47	43.1	45	49.5	124	43.5	

\* =  $p < .05$ , \*\* =  $p < .001$

( $d = 0.37, p = .003$ ) and children in JPC ( $d = 0.45, p < .001$ ). Further, in JPC families, fathers reported more father involvement compared to families whereby the child lived mainly with mother ( $d = 0.62, p < .001$ ) or solely with mother ( $d = 0.87, p < .001$ ). There was also significantly more father involvement in families whereby the child lived mainly with mother compared to families whereby the child lived solely with mother ( $d = 0.41, p = .025$ ). Finally, within JPC parents had a better co-parental relationship compared to living arrangements in which the child lived solely with mother ( $d = 0.28, p = .037$ ). We did not find any significant differences between the three types of living arrangements on father-reported father-child relationship quality, child’s sex, and loyalty conflicts. Correlations between all concepts are shown in Table 6.4.

### 6.3.2 Child-Reported Father-Child Relationship Quality

First, we tested the main effect of living arrangements on the child-reported father-child relationship quality in a saturated model including all control variables. There was only a difference between children who live in JPC and children who live solely with mother ( $\beta = -0.38, p = .008$ ). Children in JPC reported higher father-child relationship quality compared to children who lived solely with mother. There was no difference between children in JPC and children who live mainly with mother on their father-child relationship quality ( $\beta = 0.03, p = .790$ ).

In order to answer the mediation questions, we included father involvement and the co-parental relationship to the saturated model. We added parameters until model fit did not significantly improve (see Table 6.5). After the eighth model, model fit did not significantly improve so we decided to use that model for the mediation analyses

**Table 6.4** Correlations between measures

Variable	1	2	3	4	5	6	7
1. Father child relationship (child-reported)							
2. Father-child relationship (father-reported)	.45**						
3. Father involvement (father-reported)	.26*	.32**					
4. Co-parental relationship (parent-reported)	.32**	.06	.01				
5. Age child	-.22**	-.28**	-.39**	-.05			
6. Age at separation	-.12*	-.16*	-.00	-.11	.34**		
7. Conflicts (father-reported)	-.15	-.16*	-.05	-.25**	.22**	.07	
8. Conflicts (mother-reported)	-.21**	.05	.11	-.27**	-.00	.05	.21*

\* =  $p < .05$ , \*\* =  $p < .001$

( $\chi^2(13) = 16.07$ ,  $p = .246$ , RMSEA = 0.03, CFI = 0.99). Table 6.6 represents the parameters of this final model.

For the first mediation analysis (father involvement), we found that fathers whose child lived solely or mainly with mother reported less father involvement compared to fathers with JPC. Further, more father involvement predicted higher father-child relationship quality. We tested whether father involvement explained the difference we found in father-child relationship quality between children in JPC and children who lived solely with mother. Results showed that father involvement indeed explained this difference. Children living solely with mother reported lower levels of father-child relationship compared to children in JPC, because their fathers were less involved.

For the second mediation analysis (co-parental relationship) results indicate that parents with JPC had a better co-parental relationship compared to parents whose children lived solely with mother, and (approaching borderline significance) parents whose children lived mainly with mother. Further, a better co-parental relationship predicted a stronger father-child relationship quality. The indirect effect of the co-parental relationship was also significant. Results show that children in JPC have a stronger father-child relationship quality compared to children living only with mother, because their parents have a better co-parental relationship.

Next we analyzed whether the effect of living arrangements was the same for boys and girls and across different levels of loyalty conflicts. We added the four latent variables that represent the interaction of the dummy coded loyalty conflicts and the dummy coded living arrangements to the saturated model. We also added the interaction effects between child's sex and dummy coded living arrangements to the model. Parameters of this saturated model are shown in Table 6.7.

First, the model shows a main effect of loyalty conflicts on father-child relationship quality. Children who experience loyalty conflicts reported lower father-child relationship quality compared to children that experienced no interparental conflicts. Also, children who indicated they experienced interparental conflicts but no loyalty

conflicts, reported lower father-child relationship quality compared to children that experienced no interparental conflicts. The interaction terms concerning the moderation effects of loyalty conflicts were not significant. So, the relationship between living arrangements and father-child relationship quality did not differ by level of loyalty conflicts.

Second, the model shows that girls reported a lower father-child relationship quality compared to boys. One interaction effect of child's sex was significant, indicating that the difference between JPC and living solely with mother in father-child relationship quality was less strong for girls compared to boys. The other interaction effects showed that boys and girls did not differ on the difference between JPC and living mainly with mother in father-child relationship quality.

### 6.3.3 *Father-Reported Father-Child Relationship Quality*

Also, for father-reported father-child relationship quality we first examined the direct effect of children's living arrangements after divorce on the quality of the father-child relationship in a saturated model, while including all control variables. Similar to the results found when we used child reports, results indicated there was only a difference between fathers in JPC and father whose child lived solely with mother in father-child relationship quality ( $\beta = -0.28, p = .048$ ). So, when all control variables included in the model, fathers in JPC reported higher father-child relationship quality compared to fathers whose child lived solely with mother. There was no difference between fathers in JPC and fathers whose children lived mainly with mother ( $\beta = 0.14, p = .334$ ).

In order to check whether father involvement and the co-parental relationship mediated the effect of living arrangements on father-child relationship quality we computed a new model containing father involvement and the co-parental relationship. Again, we added parameters until model fit did not significantly improve (see Table 6.8). This resulted in the same final model as the model we used for child-reported father-child relationship with the same model fit, ( $\chi^2(13) = 16.07, p = .246, RMSEA = 0.03, CFI = 0.99$ ). All parameters for this model can be found in Table 6.9.

Similar to the results we found when we relied on child-reports, children's living arrangements after divorce were a significant predictor for the level of father involvement. In line with our expectations, our results showed that fathers whose child lived solely or mainly with mother reported less father involvement compared to fathers with JPC. More father involvement in turn, predicted better father-child relationship quality reported by fathers. The difference between JPC and living solely with mother in father-reported father-child relationship quality was also significantly explained by father involvement. So, more father involvement explained why fathers in JPC reported higher father-child relationship quality compared to fathers whose children lived solely with mother.

Next, regarding the co-parental relationship, there was a significant effect from living arrangements on the co-parental relationship. Parents in JPC had a better co-parental relationship compared to parents whose children lived only with mother. However, in contrast to the child reports, the co-parental relationship did not predict father-child relationship quality. The indirect effect of the co-parental relationship was also not significant, meaning that the co-parental relationship did not explain the difference between JPC and living only with mother in father-reported father-child relationship quality.

Next we analyzed whether the effect of living arrangements on father-reported father-child relationship quality differed by level of loyalty conflicts and by child's sex. We added the interaction effects between dummy coded loyalty conflicts and dummy coded living arrangements and the interaction effects between child's sex and dummy coded living arrangements to the saturated model.

Within this model (see Table 6.10), we found no effect of child's loyalty conflicts on father-reported father-child relationship quality. Further, the relationship between living arrangements and father-reported father-child relationship quality did not significantly differ for different levels of loyalty conflicts experienced by children.

Second, there was no main effect of child's sex on father-reported father-child relationship. Finally, the relationship between living arrangements and father-reported father-child relationship did not significantly differ for sons and daughters.

### **6.3.4 Control Variables**

Finally, regarding control variables, models show that mother-reported interparental conflicts before separation have a negative effect on child-reported father-child relationship quality while it was positively related to father involvement. Next, higher levels of interparental conflicts before separation reported by fathers predict a lower father-child relationship quality reported by fathers. When their father had a new partner, this was related to a weaker child-reported father-child relationship. However, when their mother had a new partner, this was related to a higher quality of child-reported father-child relationship. Mother's re-partnering was also related to a better co-parental relationship. Further, parents' SES was predicting father-child relationship quality reported by children. When their father had a higher SES, this was related to higher child-reported father-child relationship quality, while higher levels of mother's SES were related to lower child-reported father-child relationship quality. When fathers were more highly educated, they were also more likely to be more involved. Finally, older children had less involved fathers compared to younger children.



## 6.4 Discussion

In this study, we examined the effect of children's living arrangements after divorce on father-child relationship quality. We made a distinction between three living arrangements: JPC, living mainly with mother, and living solely with mother. We examined two mechanisms that may underlie linkages between children's living arrangements after divorce and father-child relationship quality, namely the level of father involvement and the quality of the co-parental relationship. Furthermore, we tested to what extent these linkages were conditioned by the level of loyalty conflicts experienced by the child or the child's sex. Finally, we examined to what extent our results differed by the person reporting on the quality of the father-child relationship (father or child).

Our first hypothesis about the effect of living arrangements on father-child relationship quality is partly confirmed. Father-child relationship quality was higher in JPC compared to families in which children lived solely with mother, while controlling for self-selection factors (i.e. parents' SES and interparental conflicts before separation), child's age, child's age at separation, child's sex and loyalty conflicts. Nevertheless, even though previous research suggest that time spend more equally between parents will lead to better father-child relationships (Fabricius et al. 2010), there was no difference between JPC and families in which children lived mainly with mother. This result suggests that living in two parental households matters more for father-child relationship quality than the actual time spent together for maintaining a high father-child relationship quality (Vanassche et al. 2013).

Next, we hypothesized that father involvement would explain the effect of living arrangements on father-child relationship quality. This hypothesis was confirmed for the difference we found between families in JPC and families with children living only with mother. Fathers with JPC were more involved compared to fathers with other living arrangements, which predicted a higher father-child relationship quality. So, overnight stays may enable fathers to fulfil a more caregiving role and to be more involved with children's everyday lives and routines (Cashmore et al. 2008). This higher level of father involvement also predicts closer father-child bonds. Thus, it is especially important for fathers to stay involved after divorce to ensure a strong father-child relationship. This was true for both father-reported and child-reported father-child relationship quality.

Our third hypothesis about the mediation effect of the co-parental relationship was partly confirmed. Only within the child-reported model, and not within the father-reported model, we found that the co-parental relationship explained the difference we found in father-child relationship quality between children in JPC and children who were living solely with mother. JPC predicted a better co-parental relationship compared to living solely with mother, which subsequently predicted a

higher father-child relationship quality perceived by children. This finding is in accordance with previous literature and suggests that parents within a more equally divided living arrangement need to cooperate and make joint decisions which results in a better co-parental relationship (Bauserman 2012; Spruijt and Duindam 2009). While quality of the co-parental relationship was positively related to the quality of the father-child relationship as reported by children, it was not significantly related to the quality of the father-child relationship as reported by fathers. Our result suggests that children, but not fathers, perceive the quality of the father-child relationship to be lower when the quality of the co-parental relationship is low. A possible explanation could be that the co-parental relationship influences parenting practices (Feinberg 2003) which could have a larger effect on how the child rather than the father perceived the quality of the father-child relationship. Future studies are needed to test the plausibility of this explanation.

Next, our hypothesis concerning the moderating effects of loyalty conflicts was not confirmed. Contrary to our expectations, derived from concerns about JPC in the presence of interparental conflicts (Pruett et al. 2014; Smyth et al. 2016), we did not find different effects of living arrangements on the quality of the father-child relationship by the level of loyalty conflicts. This may suggest that a more equally divided living arrangement is beneficial for the father-child relationship irrespectively of the presence of perceived loyalty conflicts (Kruk 2012; Warshak 2014). The level of loyalty conflicts only had a direct negative impact on father-child relationship quality as reported by children. So, as children experience interparental conflicts and feel caught in the middle between their parents, they subsequently perceive the relationship quality with their father weaker. Again, our results suggest that only children, and not fathers, perceive their quality of father-child relationship to be lower in case of many loyalty conflicts. Thus, children's views on the father-child relationship seem to be more strongly affected by the interactions within the interparental subsystem than fathers' views on the father-child relationship. An alternative explanation could be due to sample homogeneity. A large part of the families did not include father reports. Compared to those children of fathers who were not willing to participate, the children in our sample reported a higher father-child relationship quality. As such, and since parents are more likely to provide a more positive picture of parent-child relationships (Aquilino 1999), the variability in the father-reported father-child relationship quality is smaller in our sample than in the general population, which may have inhibited our ability to pick up effects.

Finally, we found a significant interaction effect between children's living arrangements after divorce and child sex on the quality of the father-child relationship as perceived by children, albeit in the opposite direction. The difference found in father-child relationship quality between children in JPC and children who lived solely with mother was stronger for boys than girls. This finding suggests that the quality of the father-son relationship is more easily affected by changes in father-

child contact compared to the quality of the father-daughter relationship. According to social learning theory, children learn how to behave through modeling and imitation and parents are their main role models. Bussey and Bandura (1984) have shown that children are more likely to learn from their relationship with the same-sex parent. This may explain why more contact between father and child, has a larger effect on the father-son relationship compared to the father-daughter relationship. Nevertheless, readers should take into account that these findings only pertained to child-reports.

In this chapter, we explored whether results differed depending on who reports on the quality of the father-child relationship. Although we found that the overall picture is very similar, namely that the level of father involvement is an underlying mechanism for the relationship between children's living arrangements after divorce and the quality of the father-child relationship, we found an interesting difference that deserves some attention. The quality of the co-parental relationship explained the difference between living in JPC and living solely with mother in the quality of the father-child relationship as perceived by children, while it was not an underlying mechanism for the quality of the father-child relationship as perceived by fathers. Furthermore, children, and not fathers, experienced weaker father-child relationship quality when children felt caught in the middle. Finally, only in the child-reported model we found a moderating effect of child's sex. These findings highlight the importance of having different perspectives on the impact of divorce on parent-child relationships, as each perspective adds to our understanding of the complex interplay between the different family members involved in a divorce. In addition, these findings also suggest that more research is needed to understand where these differences come from and how they can be explained.

This study has two important limitations. First, the cross-sectional design is limited in its ability to demonstrate causality. Even though we controlled for parents' SES and conflicts before separation, self-selection may still underlie some of the differences in the quality of the father-child relationship found between the three different types of living arrangements. However, in our sample we found strong evidence that the father-child relationship undergoes changes after divorce. Participants in our study were asked whether the father-child relationship at the time of the interview was better or worse compared to the time before the parents started to live separately. Children living solely with their mother reported a more negative change in father-child relationship quality compared to children living mainly with mother and children in JPC. Although we cannot state that self-selection did not play a role, these findings provide suggestive evidence for causal mechanisms. Second, our sample consists of formerly married parents only, which might limit generalizability to families with different family constellations. Also, parents who agreed to participate in the current study were relatively highly educated. This may give a more positive view on father-child relationship quality, since previous research showed

that more educated (non-resident) fathers are more likely to maintain frequent contact with their children (Cooksey and Craig 1998; Conger et al. 2010).

Despite these limitations, our study contributed to the existing literature by providing a more comprehensive understanding of linkages between children's living arrangements after divorce and the quality of the father-child relationships, and the mechanisms that underlie this relationship. We made use of a sophisticated SEM model that allowed us to examine multiple complex relationships within the same model. Not only did we take into account the co-parental relationship reported by parents, but we also assessed the loyalty conflicts experienced by children. We also controlled for self-selection effects of parents' SES and interparental conflicts during the year before separation since these characteristics may have been causing families to choose for JPC and also may have an effect on father-child relationship quality. Finally, this was the first study to examine both child reports and father reports on father-child relationship quality within different living arrangements.

Our analyses revealed that the level of father involvement is an important underlying mechanism for the impact of children's living arrangements after divorce on the quality of the father-child relationship. JPC and visitation arrangements for fathers appear to be beneficial to the quality of the father-child relationship, as they allow fathers to remain highly involved in their children's lives. Since having high quality relationships with both parents has short and long-term beneficial consequences for children's mental well-being, it may be suggested that policy makers, lawyers and parents should strive for living arrangements after divorce that allow both parents to remain involved in their children's lives. From the perspective of children, it is also very important to have a positive co-parental relationship. Children who felt caught in the middle between their parents reported weaker father-child relationship quality. Moreover, a strong co-parental relationship (partly) explained the difference between children in JPC and children that lived only with their mother in their self-reported father-child relationship quality. In conclusion, in order to have a strong father-child relationship the current study indicates that it is important to keep fathers involved in children's day-to-day lives and maintain a positive co-parental relationship.

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Appendix

Table 6.5 Model fit and test results of model fit comparisons for child-reported father-child relationship quality

Model	$\chi^2$	$\Delta\chi^2$ (TRd)	$df/\Delta df$	<i>p</i>	<i>scf</i>	CFI/ $\Delta$ CFI	RMSEA/ $\Delta$ RMSEA	Added parameter
Model 0	153.43		23	<.001	1.12	0.61	0.13	
Model 1	119.18		22	<.001	1.11	0.71	0.12	
Model 2	94.69		21	<.001	1.13	0.78	0.10	
Model 3	79.28		20	<.001	1.11	0.82	0.10	
Model 4	67.67		19	<.001	1.10	0.85	0.09	
Model 5	36.06		17	.005	1.09	0.94	0.06	
Model 6	29.04		16	.024	1.09	0.96	0.05	
Model 7	22.27		15	.101	1.10	0.98	0.04	
Model 8	16.07		13	.246	1.11	0.99	0.03	
Model 9	11.64		12	.475	1.09	1.00	0.00	
Model 0 vs. 1	31.21		1	<.001	1.25	0.10	0.02	Father involvement regressed on child's age
Model 1 vs. 2	30.03		1	<.001	0.87	0.07	0.01	Co-parental relationship regressed on father-reported conflicts
Model 2 vs. 3	12.63		1	<.001	1.49	0.04	0.01	Father involvement regressed on father's SES
Model 3 vs. 4	10.73		1	.001	1.24	0.03	0.01	Co-parental relationship regressed on mother-reported conflicts
Model 4 vs. 5	29.55		2	<.001	1.19	0.09	0.03	Co-parental relationship regressed on loyalty conflicts
Model 5 vs. 6	7.42		1	.006	1.01	0.02	0.01	Co-parental relationship regressed on re-partnering mother
Model 6 vs. 7	7.00		1	.008	1.05	0.02	0.01	Father involvement regressed on mother-reported conflicts
Model 7 vs. 8	6.53		2	.038	1.01	0.01	0.01	Father involvement regressed on loyalty conflicts
Model 8 vs. 9	3.72		1	.156	1.40	0.01	0.03	Father involvement regressed on re-partnering father

$\chi^2$  chi-square, TRd Sattora-Bentler scaled chi-square difference, *df* degrees of freedom, *p* *p*-value, *scf* scaling correction factor, CFI Comparative Fit Index, RMSEA Root Mean Square Error of Approximation

**Table 6.6** Mediation model for child-reported father-child relationship quality

Structural model	Beta (SE)	B (SE)	p
<i>Father-child relationship regressed on</i>			
Solely living with mother (0 = JPC)	-0.05 (0.16)	-0.05 (0.15)	.751
Mainly living with mother (0 = JPC)	0.20 (0.12)	0.18 (0.11)	.099
Father involvement	0.27 (0.06)	0.32 (0.07)	<.001
Co-parental relationship	0.18 (0.06)	0.15 (0.05)	.003
No loyalty conflicts (0 = no interparental conflicts)	-0.22 (0.11)	-0.21 (0.11)	.052
Loyalty conflicts (0 = no interparental conflicts)	-0.63 (0.15)	-0.58 (0.14)	<.001
Child's sex (0 = boys)	-0.18 (0.10)	-0.17 (0.09)	.060
Father: Interparental conflict	0.01 (0.05)	0.01 (0.05)	.773
Mother: Interparental conflict	-0.12 (0.05)	-0.09 (0.04)	.018
Father: Re-partnering (0 = no partner)	-0.32 (0.11)	-0.30 (0.10)	.003
Mother: Re-partnering (0 = no partner)	0.27 (0.10)	0.25 (0.09)	.007
Father SES	0.14 (0.06)	0.18 (0.07)	.011
Mother SES	-0.11 (0.05)	-0.15 (0.07)	.038
Age child	-0.03 (0.05)	-0.01 (0.02)	.531
Age at separation	-0.03 (0.05)	-0.01 (0.01)	.573
<i>Father involvement regressed on</i>			
Solely living with mother (0 = JPC)	-1.07 (0.09)	-0.85 (0.09)	<.001
Mainly living with mother (0 = JPC)	-0.54 (0.12)	-0.43 (0.09)	<.001
No loyalty conflicts (0 = no interparental conflicts)	-0.18 (0.10)	-0.15 (0.08)	.054
Loyalty conflicts (0 = no interparental conflicts)	0.11 (0.12)	0.08 (0.09)	.370
Age child	-0.27 (0.05)	-0.10 (0.02)	<.001
Father SES	0.21 (0.05)	0.23 (0.05)	<.001
Mother: Interparental conflicts	0.12 (0.05)	0.07 (0.03)	.010
<i>Co-parental relationship regressed on</i>			
Solely living with mother (0 = JPC)	-0.41 (0.13)	-0.43 (0.14)	.002
Mainly living with mother (0 = JPC)	-0.19 (0.11)	-0.20 (0.12)	.085
No loyalty conflicts (0 = no interparental conflicts)	-0.57 (0.12)	-0.60 (0.12)	<.001
Loyalty conflicts (0 = no interparental conflicts)	-0.70 (0.15)	-0.74 (0.16)	<.001
Father: Interparental conflict	-0.13 (0.05)	-0.14 (0.06)	.012
Mother: Interparental conflict	-0.16 (0.06)	-0.13 (0.05)	.006
Mother: Re-partnering (0 = no partner)	0.27 (0.10)	0.29 (0.10)	.006
<i>Indirect effect father involvement</i>			
Solely living with mother (0 = JPC)	-0.29 (0.07)	-0.27 (0.06)	<.001
<i>Indirect effect co-parental relationship</i>			
Solely living with mother (0 = JPC)	-0.07 (0.03)	-0.07 (0.03)	.032

**Table 6.7** Moderation model for child-reported father-child relationship quality

Structural model	Beta (SE)	<i>B</i> (SE)	<i>p</i>
<i>Child-reported father-child relationship regressed on</i>			
Living solely with mother (0 = JPC)	-0.69 (0.21)	-0.64 (0.20)	.001
Living mainly with mother (0 = JPC)	-0.18 (0.20)	-0.16 (0.19)	.384
No loyalty conflicts (0 = no interparental conflicts)	-0.45 (0.17)	-0.41 (0.16)	.010
Loyalty conflicts (0 = no interparental conflicts)	-0.75 (0.21)	-0.70 (0.19)	<.001
Child's sex (0 = boys)	-0.50 (0.15)	-0.47 (0.14)	.001
Father: Interparental conflict	-0.00 (0.05)	-0.00 (0.05)	.956
Mother: Interparental conflict	-0.14 (0.06)	-0.10 (0.04)	.016
Father: Re-partnering (0 = no partner)	-0.47 (0.11)	-0.43 (0.11)	<.001
Mother: Re-partnering (0 = no partner)	0.33 (0.10)	0.31 (0.10)	.001
Father SES	0.20 (0.06)	0.25 (0.07)	.001
Mother SES	-0.12 (0.06)	-0.17 (0.08)	.037
Age child	-0.12 (0.05)	-0.05 (0.02)	.018
Age at separation	-0.01 (0.05)	-0.00 (0.01)	.844
Living solely with mother * No loyalty conflicts	0.22 (0.29)	0.21 (0.27)	.439
Living solely with mother * Loyalty conflicts	-0.11 (0.38)	-0.10 (0.36)	.779
Living mainly with mother * No loyalty conflicts	0.07 (0.24)	0.07 (0.22)	.761
Living mainly with mother * Loyalty conflicts	0.14 (0.29)	0.13 (0.27)	.646
Living solely with mother * Child's sex	0.54 (0.25)	0.50 (0.23)	.030
Living mainly with mother * Child's sex	0.35 (0.21)	0.32 (0.20)	.106

**Table 6.8** Model fit and test results of model fit comparisons for father-reported father-child relationship quality

Model	$\chi^2 / \Delta\chi^2$ (TRd)	df/ $\Delta df$	p	scf	CFI/ $\Delta CFI$		RMSEA/ $\Delta RMSEA$		Added parameter
					scf	$\Delta CFI$	$\Delta RMSEA$	RMSEA/	
Model 0	153.43	23	<.001	1.12	0.56		0.13		
Model 1	119.18	22	<.001	1.11	0.67		0.12		
Model 2	94.69	21	<.001	1.13	0.75		0.10		
Model 3	79.28	20	<.001	1.11	0.80		0.10		
Model 4	67.67	19	<.001	1.10	0.84		0.09		
Model 5	36.06	17	.005	1.09	0.94		0.06		
Model 6	29.04	16	.024	1.09	0.96		0.05		
Model 7	22.27	15	.101	1.10	0.98		0.04		
Model 8	16.07	13	.246	1.11	0.99		0.03		
Model 9	11.64	12	.475	1.09	1.00		0.00		
Model 0 vs. 1	31.21	1	<.001	1.25	0.11		0.02		Father involvement regressed on age
Model 1 vs. 2	30.03	1	<.001	0.87	0.08		0.01		Co-parental relationship regressed on father-reported conflicts
Model 2 vs. 3	12.63	1	<.001	1.49	0.05		0.01		Father involvement regressed on father's SES
Model 3 vs. 4	10.73	1	.001	1.24	0.04		0.01		Co-parental relationship regressed on mother-reported conflicts
Model 4 vs. 5	29.55	2	<.001	1.19	0.10		0.03		Co-parental relationship regressed on loyalty conflicts
Model 5 vs. 6	7.42	1	.006	1.01	0.02		0.01		Co-parental relationship regressed on re-partnering mother
Model 6 vs. 7	7.00	1	.008	1.05	0.02		0.01		Father involvement regressed on mother-reported conflicts
Model 7 vs. 8	6.53	2	.038	1.01	0.01		0.01		Father involvement regressed on loyalty conflicts
Model 8 vs. 9	3.72	1	.156	1.40	0.01		0.03		Father involvement regressed on re-partnering father

$\chi^2$  chi-square, TRd Satorra-Bentler scaled chi-square difference, df degrees of freedom, p p-value, scf scaling correction factor, CFI Comparative Fit Index, RMSEA Root Mean Square Error of Approximation



**Table 6.9** Mediation model for father-reported father-child relationship quality

Structural model	Beta (SE)	B (SE)	p
<i>Father-child relationship regressed on</i>			
Solely living with mother (0 = JPC)	0.03 (0.17)	0.01 (0.09)	.882
Mainly living with mother (0 = JPC)	0.29 (0.15)	0.15 (0.08)	.058
Father involvement	0.31 (0.08)	0.21 (0.05)	<.001
Co-parental relationship	0.03 (0.06)	0.01 (0.03)	.610
No loyalty conflicts (0 = no interparental conflicts)	0.01 (0.12)	0.01 (0.06)	.912
Loyalty conflicts (0 = no interparental conflicts)	-0.52 (0.16)	-0.28 (0.09)	.002
Child’s sex (0 = boys)	-0.00 (0.10)	-0.00 (0.05)	.987
Father: Interparental conflict	-0.12 (0.06)	-0.07 (0.03)	.029
Mother: Interparental conflict	0.07 (0.05)	0.03 (0.02)	.196
Father: Re-partnering (0 = no partner)	-0.23 (0.13)	-0.12 (0.07)	.088
Mother: Re-partnering (0 = no partner)	-0.00 (0.11)	-0.00 (0.06)	.975
Father SES	0.08 (0.07)	0.06 (0.05)	.209
Mother SES	0.02 (0.06)	0.02 (0.05)	.700
Age child	-0.07 (0.05)	-0.02 (0.01)	.152
Age at separation	-0.15 (0.05)	-0.02 (0.01)	.008
<i>Father involvement regressed on</i>			
Solely living with mother (0 = JPC)	-1.07 (0.09)	-0.85 (0.09)	<.001
Mainly living with mother (0 = JPC)	-0.54 (0.12)	-0.43 (0.10)	<.001
No loyalty conflicts (0 = no interparental conflicts)	-0.18 (0.10)	-0.15 (0.09)	.054
Loyalty conflicts (0 = no interparental conflicts)	0.11 (0.11)	0.08 (0.09)	.370
Age child	-0.27 (0.05)	-0.10 (0.02)	<.001
Father SES	0.21 (0.05)	0.23 (0.05)	<.001
Mother: Interparental conflicts	0.12 (0.05)	0.07 (0.03)	.010
<i>Co-parental relationship regressed on</i>			
Solely living with mother (0 = JPC)	-0.41 (0.13)	-0.43 (0.14)	.002
Mainly living with mother (0 = JPC)	-0.19 (0.11)	-0.20 (0.12)	.085
No loyalty conflicts (0 = no interparental conflicts)	-0.57 (0.12)	-0.60 (0.12)	<.001
Loyalty conflicts (0 = no interparental conflicts)	-0.70 (0.15)	-0.74 (0.16)	<.001
Father: Interparental conflict	-0.13 (0.05)	-0.14 (0.06)	.012
Mother: Interparental conflict	-0.16 (0.06)	-0.13 (0.05)	.006
Mother: Re-partnering (0 = no partner)	0.27 (0.10)	0.29 (0.10)	.006
<i>Indirect effect father involvement</i>			
Solely living with mother (0 = JPC)	-0.33 (0.09)	-0.18 (0.05)	<.001
<i>Indirect effect co-parental relationship</i>			
Solely living with mother (0 = JPC)	-0.01 (0.02)	-0.01 (0.01)	.617

**Table 6.10** Moderation model for father-reported father-child relationship quality

Structural model	Beta (SE)	B (SE)	<i>p</i>
<i>Father-reported father-child relationship regressed on</i>			
Living solely with mother (0 = JPC)	−0.35 (0.25)	−0.19 (0.13)	.158
Living mainly with mother (0 = JPC)	0.21 (0.26)	0.11 (0.14)	.412
No loyalty conflicts (0 = no interparental conflicts)	0.07 (0.22)	0.04 (0.12)	.756
Loyalty conflicts (0 = no interparental conflicts)	−0.31 (0.26)	−0.17 (0.14)	.221
Child's sex (0 = boys)	−0.22 (0.19)	−0.12 (0.10)	.242
Father: Interparental conflict	−0.12 (0.06)	−0.07 (0.03)	.034
Mother: Interparental conflict	0.09 (0.06)	0.04 (0.02)	.126
Father: Re-partnering (0 = no partner)	−0.30 (0.14)	−0.16 (0.07)	.031
Mother: Re-partnering (0 = no partner)	0.03 (0.11)	0.02 (0.06)	.788
Father SES	0.15 (0.07)	0.11 (0.05)	.033
Mother SES	0.01 (0.06)	0.01 (0.05)	.906
Age child	−0.17 (0.05)	−0.04 (0.01)	.001
Age at separation	−0.12 (0.06)	−0.02 (0.01)	.034
Living solely with mother * No loyalty conflicts	−0.06 (0.28)	−0.03 (0.15)	.817
Living solely with mother * Loyalty conflicts	−0.20 (0.37)	−0.11 (0.20)	.581
Living mainly with mother * No loyalty conflicts	−0.28 (0.28)	−0.15 (0.15)	.319
Living mainly with mother * Loyalty conflicts	−0.46 (0.37)	−0.24 (0.20)	.214
Living solely with mother * Child's sex	0.31 (0.25)	0.17 (0.13)	.208
Living mainly with mother * Child's sex	0.26 (0.26)	0.14 (0.14)	.306

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