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Longitudinal Associations between Coparenting Quality, Sibling Relationship Quality, and
Children's Divorce-Specific Coping

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Abstract

Background: A large amount of research showed that children who experienced their parents' divorce have an increased risk for various longer term adjustment problems. However, the functioning of children after divorce in the shorter term, such as divorce-specific coping, has received much less attention. Divorce-specific coping – such as self-blame and acceptance – is important to examine as it relates to children's everyday difficulties after divorce, is predictive of their long-term adjustment, and is often targeted in intervention programs aimed at divorced families. **Aim:** Based on a family systems perspective, we investigated the associations between different family subsystems, namely the quality of coparenting and sibling relationship quality after divorce, and children's divorce-specific coping. **Method:** Dutch children ($N = 135$; $M_{age} = 11.76$) completed questionnaires to examine the associations of coparenting quality (CBQ) and sibling relationship quality (NRI) with self-blame and acceptance (PFAD). Multilevel structural equation modelling in *Mplus* was performed to investigate the proposed associations, and to examine the sibling relationship quality as a potential mediator in the association between coparenting and divorce-specific coping (i.e., acceptance and self-blame). **Results:** The association of neither coparenting nor sibling relationship quality with self-blame or acceptance was significant. Moreover, there was no mediation effect of sibling relationship quality. **Conclusion:** Previous research has shown the importance of divorce-specific coping on children's longer term adjustment, but studies on its predictors is lacking. In the current study, coparenting quality and sibling relationship quality did not seem to be associated with acceptance or self-blame after divorce. Further research is needed, specifically on short-term processes in families after divorce and on child characteristics to identify factors that influence divorce-specific coping.

Keywords: divorce and separation, family systems theory, post-divorce adjustment, divorce-specific coping, coparenting quality, sibling relationship quality

Longitudinal Associations between Coparenting Quality, Sibling Relationship Quality, and Children's Divorce-Specific Coping

Annually, a consistently high number of children worldwide face their parents' divorce (Sheykhi, 2020). These children have an increased risk for emotional, psychological, and behavioral difficulties in their adjustment compared to children from intact families. The adjustment domains generally most affected by a parental divorce include internalizing, externalizing, academic, and social-emotional functioning (Amato, 2001; 2010). These domains have been the subject of numerous studies on youth and divorce, showing that these children on average have a higher level of depression and anxiety, and more conduct problems (e.g., Størksen et al., 2006). However, by focusing on these standardized measures of adjustment, more subtle forms of post-divorce functioning are being overlooked. The way children react to and cope with parental divorce (i.e., divorce-specific coping) is related to both short- and long-term developmental outcomes (Sameroff et al., 2003). Yet, divorce-specific outcomes have received much less attention than general adjustment domains (Amato, 2001; 2010), whereas intervention programs targeting children after divorce often focus on strategies to improve precisely this aspect of child adjustment. To measure such divorce-specific adjustment, Laumann-Billings and Emery (2000) developed an instrument, of which two aspects specifically relate to coping after divorce: 'self-blame' and 'acceptance'. Research reported that intervention programs indeed can have a positive effect on divorce-specific coping, and this is also related to positive adjustment on the longer term (Christopher et al., 2017). Given its important role in children's adjustment, more studies are needed on divorce-specific coping, and on the factors that affect it.

Research has clearly shown that not the divorce itself, but rather family factors that precede and follow it are relevant for children's post-divorce adjustment (Amato, 2010; Sun, 2001), which is in line with family systems theory (Bowen, 1978; Cox & Paley, 1997; 2003).

Consistent with this, divorce-specific coping is likely affected by the interaction between other family systems (Cox & Paley, 1997; Minuchin, 1985). Because a growing number of children have substantial contact with both parents after divorce (Poortman & Van Gaalen, 2017; Steinbach et al., 2020), the way parents shape their joint parenting, also referred to as coparenting, is of increasing importance (Feinberg, 2003). Coparenting can be difficult, as the parental subsystem is often under pressure after divorce. Moreover, in a meta-analysis the quality of coparenting has been linked to psychological adjustment in children (Teubert & Pinquart, 2010). Research on the association between coparenting and children's coping after divorce is thus relevant both theoretically and practically, but such studies are scarce.

Moreover, coparenting processes such as parental conflicts and communication can spill over into other family systems (Brown, 1999; Cox & Paley, 1997). One example is the sibling subsystem, which has been shown to play an important role in children's adjustment as well (e.g., Noller et al., 2008). A more positive and less conflictual sibling relationship is related to more positive child adjustment (Buist et al., 2013). Therefore, the current study will investigate both the longitudinal associations between coparenting quality, sibling relationship quality, and divorce-specific coping, and the possible mediating role of sibling relationship quality between coparenting quality and children's divorce-specific coping.

Divorce-Specific Coping

In coping with their parents' divorce, research has shown that almost one-third of the children place (some of) the blame on themselves (Amato, 2000; Laumann-Billings & Emery, 2000). This self-blame is associated with mental health problems such as depression and externalizing problems (Amato, 2000; Healy et al., 1993; Sorek, 2019). Another aspect of divorce-specific coping is acceptance, often described in theories regarding mourning or dying (Kübler-Ross, 1969). It is then defined as the final stage, individuals 'accept their fate and grieve for what they will lose but achieve a sense of peace' (Leman et al., 2012, p. 500). Acceptance of

the divorce is linked to positive mental health outcomes like fewer internalizing problems (Christopher et al., 2017). Divorce can be a rather formative event in childhood, making children view the world through ‘the filter of divorce’ (Wallerstein, 1991). On the short-term, this can result in different ways of divorce-specific coping (Laumann-Billings & Emery, 2000) which is in turn related to long-term adjustment outcomes such as internalizing and externalizing problems (Amato, 2000; Christopher et al., 2017; Sorek, 2019). Both self-blame and acceptance are often used in child-focused interventions to improve children’s adjustment after divorce and to prevent longer term problems (Christopher et al., 2017; Deniz et al., 2014; Sameroff et al., 2003). Remarkably, few studies have been concerned with factors associated with either children’s self-blame or acceptance.

According to family systems theory, members from each subsystem within the family try to achieve an emotional balance. They can either take emotional responsibility, helping each other to restore the balance in the subsystem, or cut themselves off emotionally, which means emotions are dealt with by not involving oneself with the other’s problems (Brown, 1999). On the one hand, a divorce can manifest an emotional imbalance in subsystems (e.g., the parental subsystem; Cox & Paley, 1997; 2003) and result in children blaming themselves for the divorce (Sameroff et al., 2003). On the other hand, an emotional cut-off response – choosing to accept the emotions without trying to change or avoid them (i.e., acceptance) – is a more efficient strategy for dealing with negative emotions (Alberts et al., 2012). Based on this theoretical notion, children’s divorce-specific coping seems to be affected by functioning in other subsystems. Especially low quality of coparenting (e.g., high amounts of interparental conflict) may trigger emotional reactions in children (Crockenberg & Langrock, 2001).

Coparenting Quality

Coparenting, the way in which parents shape their joint parenting (Feinberg, 2003), is crucial in term of family functioning after divorce (Teubert & Pinquart, 2010) and can be

conceptualized into four key domains: (1) Coparental communication, (2) respect and cooperation, (3) conflict, and (4) triangulation (Rejaän et al., 2021). Communication refers to parental exchange of information and interaction patterns about child-rearing issues and each other's parenting (Schrodt & Shimkowski, 2013). Cooperation and respect can be achieved when parents put their own differences aside and promote a positive relationship between the child and the other parent (Feinberg, 2003). Conflict entails negativity between parents and can spill over to the entire family system (Erel & Burman, 1995). Finally, triangulation occurs when children are involved in parental conflict (Buehler & Welsch, 2009; Peris & Emery, 2005).

Previous research on coparenting has shown that positive coparenting (i.e., respect, communication, cooperation, and support) is associated with children's post-divorce adjustment such as higher adolescent self-esteem and less behavioral problems (Rejaän et al., 2021; Beckmeyer et al., 2014; Gasper et al., 2008). Likewise, higher levels of interparental conflict are associated with more problem behavior and are negatively associated with adolescent well-being (Elam et al., 2019; Rejaän et al., 2021; Van Dijk et al., 2020). In addition, triangulation has been linked to more negative affect in children (Shimkowski & Schrodt, 2012).

Although the association between coparenting and general adjustment domains has been well studied, much less is known about its relation to children's divorce-specific coping (Amato, 2000). An exception to this is a study reporting a significant link between interparental conflict and children's self-blame and acceptance post-divorce (Fabricius & Luecken, 2007). Moreover, especially triangulation seems to be associated with children blaming themselves for the conflicts between parents (Buehler & Welsh, 2009; Afifi & Schrodt, 2003). This is in line with family systems theory, arguing that coparenting factors such as interparental conflict are related to self-blame and acceptance after divorce (Minuchin, 1985). Most research examined coparenting aspects, but the current study will examine coparenting as one construct. This provides a more holistic picture of post-divorce coparenting, since it is the interplay of different

aspects rather than a single aspect of coparenting that determines family functioning (Rejaän et al., 2021).

Sibling Relationship Quality

Although coparenting may directly affect children's divorce-specific coping, interactions within the parental subsystem could influence interactions within other subsystems as well. This is called the *spillover effect* (Brown, 1999; Cox & Paley, 1997; 2003). The copying of behavior (e.g., communication styles) is also supported by social cognitive theories, also called *modelling* (Social Learning Theory; Bandura & Walters, 1997). Previous research has even shown that the sibling subsystem is affected by divorce-related factors such as the amount of interparental conflict (Amato, 2000; Frank, 2007). Hence, the sibling relationship should be taken into account when examining the influence of post-divorce family functioning.

Moreover, the sibling subsystem is interesting to examine with regard to divorce, since research has shown that in these situations siblings often experience both increased conflict and greater closeness (e.g., Bush & Ehrenberg, 2003; Noller et al., 2008). Studies have shown that warmth and support from siblings is associated with less internalizing and externalizing problems and higher self-esteem in youth, whereas higher levels of sibling conflict are related to more problem behaviors (Buist et al., 2013; Milevsky & Levitt, 2005). Additionally, it was found that the relationship that siblings create together, more specifically the amount of mutual support, is related to divorce-specific coping (Jacobs & Sillars, 2012). In sum, coparenting quality could influence the sibling relationship, which in turn may be associated with divorce-specific coping. Hence, coparenting quality might be associated directly and indirectly to children's specific coping.

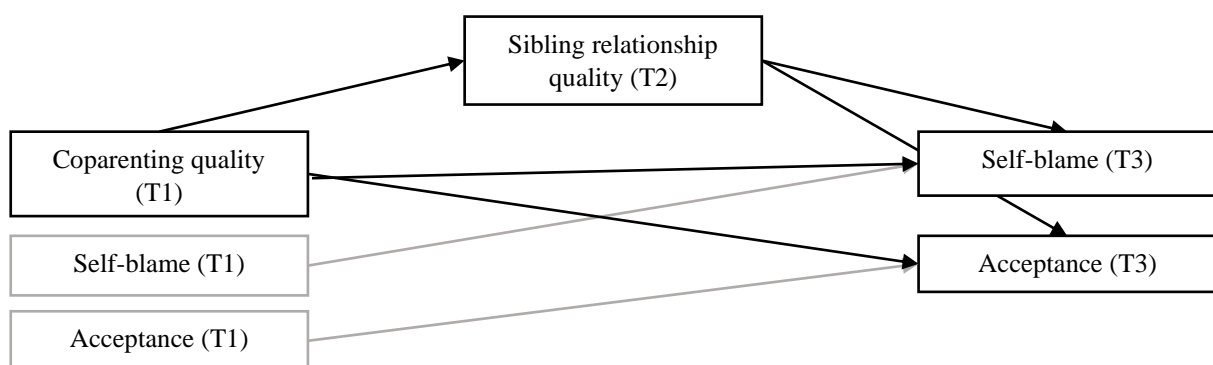
Current Study

The current study focused on the associations between post-divorce coparenting quality, sibling relationship quality, and divorce-specific coping over time (see Figure 1). Making use of

longitudinal data, we thus included three different subsystems in relation to each other (i.e., the parental subsystem, the sibling subsystem, and the child). First, we examined if coparenting quality after divorce was associated with children's self-blame and acceptance. We expected higher coparenting quality to be associated with less self-blame and more acceptance post-divorce (e.g., Fabricius & Luecken, 2007). Second, we investigated whether sibling relationship quality was related to post-divorce acceptance and self-blame. We expected higher sibling relationship quality to be related to less self-blame and more acceptance post-divorce (e.g., Jacob & Sillars, 2012). Third, we conducted an explorative mediation test to examine whether the relation between coparenting quality and post-divorce self-blame and acceptance could be partly explained by the sibling relationship quality. Based on a family systems perspective, we expected high coparenting quality to be beneficial for a supportive and less conflictual sibling relationship. In turn, we expected that the better the sibling relationship, the more positive the adjustment outcomes. That is, less self-blame and more acceptance post-divorce (e.g., Bandura & Walters, 1977; Brown, 1999).

Figure 1

Conceptual Model of Current Study



Methods

The data used in this study are part of the longitudinal research project 'Family Dynamics after Divorce' (FDD; Van Dijk et al., 2021). The FDD study was approved by the Faculty Ethics Review Board of Utrecht University (FETC16-056) and consists of three annual measurements,

which were all used in the current study (referred to as T1, T2, and T3).

Sample

The sample consisted of $N = 77$ families, with information from $n = 69$ mothers, $n = 56$ fathers, and $n = 135$ children of which 119 reported having a sibling. From the families participating, 40 families had 2 children and 9 families had 3 children participating. At T1, children were between 7 years and 10 months and 16 years and 11 months old ($M = 11.76$, $SD = 2.30$), 51.9% were boys, and 55.6% of the children went to primary school versus 43.7% that went to secondary school. Most sibling dyads were mixed sex (40.7%) compared to sister dyads (24.4%), and brother dyads (25.9%). The age difference of the sibling dyads ranged from 11 months to 14 years and 10 months ($M = 10.86$, $SD = 89.11$). All but 7 children were born in the Netherlands. Most children (67.9%) lived with both parents an equal amount of the time (i.e., 3-4 days/nights each), 31% reported living entirely or mostly (i.e., minimum of 5 days/nights) with their mother, and 2.3% lived mostly with their father. All participating families were included.

At T1, parents had on average been separated for 11.33 months ($SD = 6.75$), ranging from 1 month to years. Mothers were between 30 and 54 years old ($M = 43.58$ years, $SD = 5.69$) and fathers were between 33 and 59 years old ($M = 45.53$, $SD = 6.33$). Most mothers (90.9%) and fathers (71.4%) were born in the Netherlands. Parents were generally highly educated, 58.5% of mothers and 50.7% of fathers finished (applied) university. Regarding income, 15.6% mothers and 1.3% fathers had a taxable income lower than €1.250, 53.3% mothers and 22.1% fathers had an income between €1.250 and €3.750, and 27.3% mothers and 49.4% fathers earned more than €3.750 per month. The educational level and monthly income of parents were higher than the national average (CBS, 2020; 2021).

Procedure

Participants were recruited through online advertisements aimed at divorced parents, in school newsletters, and in waiting rooms of mediators, general practitioners, and counsellors.

Upon indicating interest, participants received further information about the study. Both parents had to give active informed consent for the participation of their child(ren), even if only one of the parents was further involved in the study. Children were asked for their written consent as well. Data were collected through annual home visits¹. If both parents participated, there was one home visit with mother and one with father. The current study used online questionnaire data that were gathered during the home visits. Children filled out the questionnaires independently except for children between 8 and 10 years old, or those with dyslexia or a reading disability. For those children, the questions were read out loud by the researcher. Children received €10,- for their participation at the annual measurement waves.

Coparenting Quality

To measure coparenting quality at T1, we used the subscales ‘conflict’, ‘communication’ and ‘respect/cooperation’ of the Coparenting Behavior Questionnaire (CBQ; Schum & Stolberg, 2007). For triangulation we used 4 items of the ‘triangulation’ scale of Walper and colleagues (2008), and 2 items of the ‘conflict intensity’ scale (Pinedo & Vollinga, 2013). We used the child-reported measures since children seem to experience a divorce differently than their parents (Wallerstein, 1991). Example items of the scales were ‘my parents fight with each other when I am there’ (conflict; 10 items), ‘my parents talk to each other about my problems’ (communication, 7 items), ‘when my dad needs help, he asks my mother’ (respect/cooperation, 8 items), and ‘my mom wants me to love her more than I love my dad’ (triangulation, 6 items). Some items needed to be reversed. Items were scored on a 5-point Likert scale, ranging from *strongly agree* (1) to *strongly disagree* (5), where higher scores indicate higher levels of coparenting quality. All scales had sufficient internal consistency; Cronbach’s alpha at the different measurement waves ranged from $\alpha = .83$ to $\alpha = .90$.

¹Due to COVID-19, 11% of the home visits at time wave 3 were replaced with an online conference call with parents and their child(ren).

Sibling Relationship Quality

The perceived quality of the sibling relationship was measured at T2 with the subscales ‘negative’ and ‘support’ of the short version of the Network of Relationship Inventory (NRI; Furman & Buhrmester, 1985). Example items were ‘how often do you disagree or fight with your sibling’ (negative, 6 items) and ‘do you care about your sibling’ (support, 8 items). Both scales had good internal consistency, respectively $\alpha = .92$ and $\alpha = .86$. All items were scored on a 5-point Likert scale ranging from *little or none* (1) to *the most* (5).

Although children were able to report on the relationship quality with multiple siblings, we only used the data on the first reported sibling. Only 42.9% of the children reported on a second, 6.7% on a third, and 1.7% on a fourth sibling, and including multiple sibling dyads in our model was beyond the scope of the current sample size. To investigate the reliability of only reporting on one sibling dyad, we performed an intraclass correlation between the first and second reported sibling dyad, $ICC = .66$. This indicates a high correspondence between the different sibling dyads (Julian, 2001). Which sibling was reported on first was random, as children were able to choose the order themselves. The research assistants reported that children had different reasons for their ordering (e.g., ‘I am starting with the oldest/youngest’ and ‘I am starting with the nicest/most annoying’). This resulted in 56.3% dyadic relations (i.e., the same sibling relationship was reported by both siblings), and 43.7% unilateral sibling reports.

Divorce-Specific Coping

Feelings of post-divorce self-blame and acceptance were measured at T1 and T3 with the subscales ‘self-blame’ and ‘acceptance of divorce’ from the Painful Feelings About Divorce (PFAD; Shanholtz et al., 2019). Example items were ‘a lot of my parents’ problems were because of me’ (self-blame, 4 items) and ‘my parents’ divorce relieved a lot of tensions in my family’ (acceptance, 4 items). Self-blame had sufficient internal consistency, $\alpha = .60$ at T1 and $\alpha = .64$ at T3, while acceptance had poor to sufficient internal consistency, $\alpha = .54$ at T1 and $\alpha =$

.48 at T3. Each item of the PFAD was scored on a 5-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5).

Analyses

To investigate our research questions, we used multilevel Structural Equation Modelling (SEM) in *Mplus*. SEM is suitable for analyzing (incomplete) longitudinal data (McArdle & Hamagami, 2001; Preacher et al., 2010), and has been argued to be a better method than the standard multilevel modelling (MLM) paradigm for testing mediation (Preacher et al., 2010). As some of the children were from the same family, a multilevel method was required to account for within-family variance. Thus, on the between-level, our participants were clustered in families. Intraclass correlations showed how much variance we could explain on the individual level (within-level). Because our sample size was relatively small, we had to reduce our estimated parameters in the SEM analyses. Therefore, we strived to perform a two-step procedure, in which we first conducted confirmatory factor analyses (CFAs) for all study variables using SEM, as latent constructs are preferred over scaling scores (i.e., mean- or sum scores) we saved the factor scores, and then conducted the structural analyses (McNeish & Wolf, 2020).

First, the measurement models were constructed using confirmatory factor analyses in *Mplus*. For our dependent variables, acceptance and self-blame, we tested a one-factor model. For the independent variables, we tested multiple models to choose the best fit. Coparenting behavior was tested as a one-factor model, a four-factor model (based on the four subscales, e.g., Rejaän et al., 2021), and a two-factor model (based on positive/negative components). Sibling relationship quality was tested as a one-factor and two-factor model (based on the subscales; Furman & Buhrmester, 1985). Goodness-of-fit statistics were used to evaluate the model fit for the CFAs, for which the following cutoffs were used: The comparative fit index (CFI > .90 acceptable fit), the standardized root-mean-squared error or approximation (RMSEA < .08 acceptable fit), and the standardized root-mean-square residual (SRMR < .08 acceptable fit);

Hooper et al., 2008; Kline, 2005). However, our data did not show good model fit without using a lot of modification indices (see Appendix A). Especially the predictor variables showed poor model fit, a possible explanation for this could be our relatively small sample size compared to the number of items (e.g., 31 items for coparenting). It was decided to use mean scores instead, despite its disadvantages compared to factor scores. The factor scores did not serve their function due to the poor model fit.

Next, we ran the (multilevel) structural analyses (see Figure 1) in which we tested the following three associations: (1) the relation between coparenting quality and post-divorce self-blame and acceptance, (2) the relation between sibling relationship quality and post-divorce self-blame and acceptance, and (3) the direct and indirect effects of coparenting quality and sibling relationship quality on post-divorce self-blame and acceptance, where sibling relationship quality was examined to (partially) mediate the relation between coparenting quality and post-divorce self-blame and acceptance. We tested the models separately for self-blame and acceptance starting with an intercept only model. Next, we added the covariates age and self-blame/acceptance at T1. Then, coparenting quality was added on the individual level (i.e., within-level). The next model also included sibling relationship quality on the individual level. In the final model, we added the indirect effect of coparenting on self-blame/acceptance via the sibling relationship. Due to power issues because of our relatively small sample size, and the strive for a parsimonious model, we did not control for our mediator at T1. A full information likelihood estimator was used to account for missing data. ML-estimation will yield unbiased estimates of model parameters when assuming missing at random (Enders, 2001).

Results

Descriptive Statistics

The correlations, means, and standard deviations of all study variables are presented in Table 1. Acceptance at T1 is positively correlated with coparenting quality at T1 and sibling

relationship quality at T2. Both self-blame and acceptance showed stability over time, with small and moderate correlations respectively. On average, self-blame significantly decreased over time, $t(121) = 3.88, p < .001$, whereas acceptance did not show a significant increase, $t(121) = -1.83, p = .069$. Children scored relatively low on self-blame, and relatively high on acceptance at both timepoints.

Table 1

Correlations, Means, and Standard Deviations for all Study Variables

	1	2	3	4	5	6
1 Coparenting T1	-					
2 Sibling RQ T2	0.15	-				
3 Self-blame T1	-0.05	-0.06	-			
4 Self-blame T3	-0.02	0.16	0.28*	-		
5 Acceptance T1	0.29*	0.25*	-0.04	0.03	-	
6 Acceptance T3	0.15	0.14	-0.18	-0.07	0.42	-
<i>M</i>	2.43	3.07	1.54	1.28	3.40	3.58
<i>SD</i>	0.38	0.41	0.69	0.49	0.87	0.87

Note. RQ = Relationship Quality.

*Correlation is significant at the .01 level (2-tailed).

Structural Analyses

Since self-blame and acceptance were not correlated (see Table 1), we decided to run the analyses for the different outcomes separately. The estimates of our multilevel models are depicted in Table 2 for acceptance and in Table 3 for self-blame. The multilevel model showed a moderate to high level of correspondence among children within the same family for all but one model (intercept-only model, $ICC = .03$) regarding acceptance, as $.10 < ICC < .40$ (Julian, 2001). This indicates that variance in children's acceptance after divorce originated from both the individual (i.e., within-level) and the family level (i.e., between-level). The ICCs for all models regarding self-blame showed a low correspondence among members within the same family,

with all ICCs < .06 (Julian, 2001). This implies that seemingly no variance originated from the family level, and that almost all variance of post-divorce self-blame originated on the individual level.

Acceptance

To investigate the associations between coparenting quality at T1, sibling relationship quality at T2, and post-divorce acceptance at T3, as well as possible mediation effects, we conducted multilevel analyses with several steps. All model results are summarized in Table 2. We started with the intercept only model (step 1), this showed a very low variance on the family level. Adding the covariates (step 2), revealed that acceptance at T1 was significantly associated with acceptance at T3, but age was not. Therefore, age was excluded in further models. After adding coparenting quality (step 3) and sibling relationship quality (step 4), the estimates indicated that both family factors were not significantly associated with acceptance at T3. Lastly, the indirect effect of coparenting on acceptance via the sibling relationship was added (step 5), but there were no significant indirect effects of coparenting quality.

Table 2

SEM Results for Acceptance

Model	N	B	SE	Beta	p
Intercept only model ^a	134	4.549	0.82	5.537	.000
Covariates ^b					
Acceptance T1	133	3.465	0.82	4.254	.000
Age	133	-0.393	0.34	-1.158	.247
Coparenting ^c	122	0.098	0.19	0.522	.602
Sibling RQ ^d	113	0.023	0.18	0.130	.896
Indirect effect ^e	126	-0.001	0.03	-0.031	.975

Note. A ML-estimator was used for all analyses. RQ = Relationship Quality.

^a77 families included, ICC = .03. ^b77 families included, ICC = .10. ^c71 families included, ICC = .40. ^d64 families included, ICC = .34. ^e73 families included, ICC = .40.

Self-Blame

To investigate the associations between coparenting quality at T1, sibling relationship quality at T2, and post-divorce self-blame at T3, as well as possible mediation effects, we conducted multilevel analyses with several steps. All model results are summarized in Table 3. We started with the intercept only model (step 1), this showed a very low variance on the family level. Adding the covariates (step 2), revealed that self-blame at T1 was significantly associated with self-blame at T3, but age was not. Therefore, age was excluded in further models. After adding coparenting quality (step 3) and sibling relationship quality (step 4), the estimates indicated that both family factors were not significantly associated with self-blame at T3. Lastly, the indirect effect of coparenting on self-blame via the sibling relationship was added (step 5), but there were no significant indirect effects of coparenting quality.

Table 3*SEM Results for Self-Blame*

Model	N	b	SE	Beta	p
Intercept only model ^a	124	1.279	0.05	27.710	.000
Covariates ^b					
Self-blame T1	123	-0.099	0.05	-2.100	.036
Age	123	-0.287	0.55	0.517	.605
Coparenting ^c	122	-0.046	0.12	-0.402	.688
Sibling RQ ^d	113	0.174	0.11	1.634	.102
Indirect effect ^e	126	0.023	0.02	1.017	.309

Note. A ML-estimator was used for all analyses. RQ = Relationship Quality.

^a71 families included, ICC = .06. ^b71 families included, ICC = .01. ^c71 families included, ICC = .02. ^d64 families included, ICC = .02. ^e73 families included, ICC = .01.

Discussion

The aim of the current study was to gain more insight into children's divorce-specific coping in relation to coparenting quality, and to examine the possible mediating role of sibling

relationship quality. Children's divorce-specific coping is important to examine, because it gives an indication of their daily difficulties surrounding the parental divorce, but also because it is predictive of their long-term adjustment (e.g., Amato, 2010; Sandler et al., 2000; Sorek, 2019). However, it has hardly been the subject of studies on children's divorce adjustment, and this especially regards factors predicting it. Therefore, in the current longitudinal study, two potentially relevant subsystem factors were examined as predictors of divorce-specific coping: coparenting and sibling relationship quality after divorce. In addition, the interplay of the subsystems is examined in association with self-blame and acceptance after divorce over time.

First, we examined if coparenting quality was associated with self-blame and acceptance post-divorce. We expected higher coparenting quality to be associated with lower levels of self-blame and higher levels of acceptance. Previous research suggested that coparenting quality was associated with more general child adjustment (Rejaän et al., 2021). Specifically interparental conflict was related to self-blame and acceptance post-divorce (Fabricius & Luecken, 2007). In the current study, however, coparenting quality was not significantly associated with self-blame over time, nor with acceptance post-divorce. Following more recent studies on coparenting (e.g., Rejaän et al., 2021), the current study examined coparenting as one construct instead of investigating only an aspect of coparenting. This provided a more holistic picture of post-divorce coparenting, since it is the interplay of different aspects rather than a single aspect of coparenting that determines post-divorce family functioning. Second, we examined whether sibling relationship quality is related to self-blame and acceptance post-divorce. The sibling relationship is impacted by divorce-related factors such as interparental conflict, as siblings can experience increased conflict and greater closeness (Noller et al., 2008). We expected higher sibling relationship quality to be related to lower levels of self-blame and higher levels of acceptance. Studies on more general child adjustment have shown that warmth and support from siblings is associated with positive child outcomes whereas higher levels of sibling conflict are related to

more negative child outcomes (Buist et al., 2013; Milevsky & Levitt, 2005). Our findings did not obtain any support for this association regarding divorce-specific coping. That is, based on our data, sibling relationship quality was not related to self-blame, nor to acceptance post-divorce. Lastly, we examined whether sibling relationship quality mediated the relation between coparenting quality and self-blame and acceptance post-divorce. Based on spillover effects and modeling (Brown, 1999; Bandura & Walters, 1977), we expected a partial mediation where the sibling relationship is affected by the interparental interactions (i.e., coparenting quality) and in turn impacts child adjustment. Our findings did not show any support for this hypothesis, as there were no direct, nor indirect effects in the estimated mediation models. This was to be expected, given the nonsignificant results of the first two research questions.

Based on our results, none of our hypotheses could be confirmed. Noticeably, self-blame did not correlate with coparenting nor with sibling relationship quality both concurrently and over time. So, the degree to which children blame themselves for divorce-related problems does not seem to be caused by or related to the quality of coparenting or the sibling relationship. Remarkably, acceptance at T1 did correlate with both coparenting and sibling relationship quality, but acceptance at T3 did not. Thus, the association seemed to decrease over time to the point that there were no significant association at T3.

There are several possible explanations why we did not find results in line with family systems theory and previous research that mostly examined general child adjustment, on which our expectations were based. First, our sample was rather small and contained relatively high functioning families. That is, on average ten months post-divorce at T1, parents were generally well-educated and employed. In addition, children reported relatively low levels of self-blame and high levels of acceptance, as well as rather low amounts of interparental conflict. We examined – among other things – the spillover effect between the parental subsystem and sibling subsystem as this mechanism would be in accordance with the idea of hierarchical ordering of

subsystems in terms of the family dynamic (Brown, 1999). However, it should be noted that the parent-child subsystem is also a quite influential subsystem that could be of additional value in future studies on divorce-specific coping. According to family systems theory, the parental subsystem is the most dominant in determining family functioning (Brown, 1999). Moreover, children's divorce-specific coping may be more determined by conflicts between parents, instead of coparenting factors such as communication and respect. Previous studies have specifically shown associations between interparental conflict and divorce-specific coping (e.g., Crockenberg & Langrock, 2001). Children's divorce-specific coping may not have been challenged for the children in our sample, since coparenting occurred rather harmoniously and therefore the sibling relationship might have been quite unaffected as well.

Second, the aim of the study was to examine children's divorce-specific coping following the divorce rather short-term. This was manifested through recruiting families who went through a divorce no more than two years ago which is relatively short-term compared to previous studies (e.g., Frank, 2007; Gasper et al., 2008). However, there is a two-year difference between the first and third measurement, meaning that our dependent variables were measured two to four years post-divorce. This might not have been short-term enough for the association we wanted to examine, since most of the changes and difficulties regarding divorce happen two years post-divorce (Hetherington, 1989). More specifically, the two-year difference between coparenting quality at T1 and divorce-specific coping at T3 might have been too large since the real-time influence is presumably more short-term than two years. The correlation between acceptance at T1 and coparenting quality at T1 could indicate that this is indeed the case. In accordance with the Divorce-Stress-Adjustment perspective (Amato, 2000), the process and events occurring around the divorce are more important than the divorce itself. This could suggest that the events leading to the divorce (e.g., parental conflict) and the process of the divorce may have a greater influence (Amato, 2000; Fabricius & Luecken, 2007) and should therefore also be taken into

account in future research on children's divorce-specific coping. Third, our results showed a low to moderate intraclass correlation. This suggests that there was few variance at the family level. Even though variance on the individual level is not particularly unwanted, this could indicate that self-blame and acceptance post-divorce may be affected by personal characteristics such as resilience (Emery & Forehand, 1996) rather than family functioning. It should be noted that this was especially true for self-blame, indicating this may be a more personal characteristic of children. A moderate amount of variance was still to be explained on the family-level for acceptance, where almost none was present for self-blame.

Strengths and Limitations

The results of the current study should be interpreted with caution as our sample was relatively small and well-functioning. Our sample might not reflect all families post-divorce since the above average family functioning post-divorce threatens the generalizability of the study (Neuman, 2011). Future research should focus on a larger sample but preferably also a more representative one with a larger variety of post-divorce problems. As stated before, it could be of additional value to include families still going through the divorce, or those participating in treatment or prevention programs, to enhance the knowledge on the process of divorce and examine real short-term effects. Furthermore, the reliability of our self-blame and acceptance scale was suboptimal. Self-blame and acceptance were both measured with four items, which may have accounted for the low reliability. It was considered to use composite reliability based on factor loading, which is a solid method to use in SEM models (Bacon et al., 1995). However, not all CFAs showed an adequate model fit, and the factor loadings were therefore not interpretable. Future research could benefit from more adequate measures for divorce-specific coping.

Despite its limitations, the current study did make a first step in trying to explain differences in children's divorce-specific coping, based on family systems factors. Further, we

used a longitudinal design. This is preferred in psychological research: ‘Longitudinal research is the main road to fundamental and valid knowledge of living organisms’ development’ (Magnusson et al., 1994, p. 17). In addition, longitudinal data is needed to investigate a mediation model, in which temporal sequence is assumed (Selig & Preacher, 2009). Also, we used recently divorced families allowing us to study relatively short-term effects. Moreover, this allowed us to use none-retrospective measures, this is preferred since retrospective data is more susceptible to biases (Neuman, 2010). In addition, we used child-reported data even for the coparenting behavior. We expected child-reported parenting data to be more closely related to divorce-specific coping. One could argue that it matters more how a child experiences the divorce and – possibly changing – family dynamics, rather than how parents perceive this when relating these factors to child adjustment (Gerard et al., 2005). Lastly, we examined three different subsystems in our model (i.e., the parental subsystem, the sibling subsystem, and the child). Including different subsystems is relatively new in studies regarding divorce (e.g., Erel & Burman, 1995; Krishnakumar & Buehler, 2000), and especially the sibling subsystem has received little attention (Shumaker et al., 2011).

Conclusions

In contrast to our expectation, our findings showed no longitudinal associations between child-reported coparenting, sibling relationship quality, and divorce-specific coping. As divorce-specific coping is thought to drive more general child adjustment on the long-term, future research should further examine important factors associated with children’s divorce-specific coping (Amato, 2000; 2010; Laumann-Billings & Emery, 2000). Moreover, future studies could focus on a more average-functioning sample, and divorce-specific coping could be considered as a child characteristic rather than one that is determined by family dynamics. In addition, there seemed to be higher correlations between coparenting and sibling relationship quality and divorce-specific coping at T1 than at T3. Thus, future research could focus on a smaller

timeframe after divorce. Interventions already implement divorce-specific coping mechanisms in their programs (Christopher et al., 2017). Nonetheless, empirical evidence on predictors of divorce-specific coping is still lacking. If we gain a better understanding of divorce-specific coping, we could potentially improve intervention effectiveness, which may contribute to the prevention of negative long-term outcomes.

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Appendix A

	X ² (df)	p	CFI	RMSEA	SRMR	Factor loadings ^a
Coparenting Q (1-factor)	1719.320 (434)	.000	0.37	.15	.14	[-.56; .66]
Coparenting Q (2-factor)	1685.760 (433)	.000	0.39	.15	.17	[-.89; .52]
Coparenting Q (4-factor)	1494.038 (428)	.000	0.53	.14	.15	[-.76; .94] ^b
Coparenting Q (adjusted) ^c	1303.177 (419)	.000	0.61	.13	.14	[-.69; .92]
Sibling RQ (1-factor)	456.104 (77)	.000	0.55	.19	.13	[-.80; .59]
Sibling RQ (adjusted) ^d	235.974 (73)	.000	0.82	.13	.09	[.05; .86]
Self-blame T1 ^e	7.213 (2)	.027	0.92	.14	.04	[-.75; .26]
Self-blame T3	9.054 (2)	.011	0.91	.17	.05	[.37; .94]
Acceptance T1 ^f	2.996 (2)	.224	0.99	.06	.02	[.55; .68]
Acceptance T3 ^f	9.575 (2)	.008	0.95	.18	.03	[.71; .74]

Note. A ML-estimator was used for all CFAs. Q = Quality. RQ = Relationship Quality.

^aFactor loadings could not be interpreted due to poor model fit. ^bNegative factor loadings were only present in the conflict factor. All subscales had at least one item with a factor loading below .3. ^cSubscales were investigated separately, this is the model including all modifications that resulted from these separate CFAs. ^dAdjusted model based on four modification indices. The two-factor model yielded warnings due to the correlation between the subscales warmth and conflict. ^eThree items had a negative factor loading which is odd, the model was also explored with three items, did this not improve the model. ^fDecent models except the RMSEA, this is expected due to the small number of items (Fan & Sivo, 2007).