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Family Relations
Interdisciplinary Journal of Applied Family Science

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The Role of Constructiveness in Interparental Conflict for Mothers' Perception of Children's Health

Objective: *To examine how constructiveness in interparental conflict affects mothers' perception of children's psychological and physical health and whether coparenting and positive parenting mediate these effects.*
Background: *Children exposed to high levels of interparental conflict are at elevated risk of developing health problems. However, previous research suggests that constructive and destructive interparental conflict may affect children's health differently.*
Method: *Mothers (*n = *289) with at least one child aged 3.5 to 8 years completed an online survey about parenting, coparenting, interparental conflict, and different aspects of child health.*
Results: *Results suggest that higher constructiveness in interparental conflict is related to fewer emotional problems, less pain, and fewer infectious diseases in children, independent of gender. The effects were fully mediated by coparenting.*
Conclusion: *Constructive interparental conflict promotes children's physical and psychological health and coparenting emerged as an important mechanism for this link.*
Implications: *Enhancement of constructive interparental conflict and coparenting are promising avenues to foster children's healthy development.*

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Key Words: couple relationship, emotional problems, emotional security, infectious diseases, marital conflict, pain.

In recent decades, a large body of evidence has been accumulated supporting the strong influence of interparental conflict on children's emotional, physiological, and social outcomes (Cummings & Davies, 2010). Surprisingly, children's physical health has received considerably less scientific attention in this field (Carr & Springer, 2010). Furthermore, previous studies mainly focused on the negative impact of destructive interparental conflict on children's developmental problems (Davies et al., 2016). In this study, we examine the relation between *constructive* interparental conflict and children's psychological and physical health, as well as the role of coparenting and positive parenting as potential mediators.

The Impact of Interparental Conflict on Children's Health

In this study, we defined health in the narrow sense of a child having more health when fewer physical or psychological symptoms are reported and vice versa. The three aspects of physical and psychological health assessed in

DOI:10.1111/fare.12449

this study (emotional problems, pain, infectious diseases) were chosen because (a) they represent the most prevalent areas of health problems of children in Germany (Kamtsiuris et al., 2007; Plück et al., 2000; Roth-Isigkeit et al., 2003) and (b) they allow a comparison of the better known relationship between interparental conflict and children's psychological health aspects with the little researched relationship between interparental conflict and physical health. The majority of previous research on interparental conflict as a risk factor for child health mainly focused on psychological outcomes, such as children's internalizing and externalizing symptoms (Grych & Fincham, 1990). In contrast, research on physical health implications is scarce (El-Sheikh et al., 2001).

Troxel and Matthews (2004) suggested a biopsychosocial model explaining how interparental conflict affects children's health. They proposed that destructive interparental conflict affects children's emotion regulation and emotional security through impaired parenting (e.g., decreased monitoring, negative communication). In turn, decreased emotional security and emotional dysregulation induces affective, behavioral, and cognitive reactivity in children. Ultimately, children's physical health is negatively affected via health risk behaviors, a heightened physiological stress response system, and impaired neurotransmitter functioning. In addition, the contributions of gender and developmental status are considered potentially important moderating variables. The authors concluded that only a few studies have systematically examined the impact of child gender and age on the link between interparental conflict and children's health (Troxel & Matthews, 2004). In this study, we address this gap by investigating gender effects and including child age as a covariate in all analyses.

In the present study, we assessed a broad range of child health outcomes, including indicators of psychological health (i.e., emotional problems), as well as indicators of physical health (i.e., pain and infectious diseases) reported by mothers. Emotional problems are an important indicator of children's psychological health; and prior research has already established the important role of interparental conflict, both destructive and constructive forms, in this respect (Zemp, Johnson, & Bodenmann, 2019). In contrast, highly prevalent somatization problems, such as pain (e.g., overall prevalence of pain was 80%; prevalence of pain lasting more than 6 months was 31% in a German sample of children and adolescents; Roth-Isigkeit et al., 2003), have hardly been investigated in the interparental conflict literature. Furthermore, infectious diseases belong to the most common reasons for illness in childhood and to the most common causes of death among children (Kamtsiuris et al., 2007). Therefore, we also examined infectious diseases as an outcome, which to our knowledge has not been previously investigated in the context of interparental conflict.

Disagreements and conflicts are normal and common in intimate relationships. A consistent finding is that it is not whether parents argue but rather how they argue that is most pertinent to the well-being of their children (McCoy et al., 2009). The emotional security theory (EST; Davies & Cummings, 1994) suggests that maintaining security and safety is children's primary goal in the family setting. Thus, children's responses to interparental conflict are flanked by its implications for their emotional security (Cummings et al., 2012). Although frequent exposure to destructive interparental conflict threatens children's emotional security (Davies et al., 2016), constructive conflict may even increase children's emotional security by observing how their parents effectively manage challenging situations in everyday family life (McCoy et al., 2009).

Thus, the degree of constructiveness versus destructiveness in interparental conflict seems to be essential. A high degree of destructiveness can be expressed by verbal hostility, physical aggression, or low solution orientation (Goeke-Morey et al., 2003). Destructive parental interactions are often perceived as threatening by children and have emerged as a strong family risk factor for children's adjustment problems (Buehler & Gerard, 2002). Conversely, constructive interparental conflict behavior is characterized by high willingness for cooperation and solution orientation, calm discussion, support, and affection between partners (Cummings et al., 2003). It was found that constructive conflicts induce less distress in children (Goeke-Morey et al., 2013) and are even beneficial for children's social development and school adjustment (McCoy et al., 2009; McCoy et al., 2013).

According to EST, a direct and an indirect path explain the impact of interparental

conflict on child adjustment (for a graphical overview, see Davies & Woitach, 2008): The direct path implies that destructive parental interactions induce immediate reactions of distress, whereas constructive disagreements are associated with more positive reactions and less emotion regulation effort in children (Cummings et al., 2002). Indirectly, interparental conflict might affect children's health by interfering with parents' parenting behavior (Sturge-Apple et al., 2006) or their coparenting (Zemp et al., 2018).

Coparenting and Parenting Behavior as Key Mechanisms

The quality of parenting behavior is central in the context of interparental conflict and its impact on children's health (Troxel & Matthews, 2004). Interparental conflict does not occur isolated in the couple relationship but likely spills over to the couple's parenting behavior (Erel & Burman, 1995). For that reason, we included positive parenting and coparenting as potential mediators in our study. *Positive parenting* reflects a friendly, warm, and child-related approach of each individual parent to rear and interact with his or her child (Reichle & Franiek, 2009). In contrast to negative parenting behaviors (e.g., harsh, inconsistent or inconsequent parenting), positive parenting has shown to be an important protective factor to prevent or reduce child maladjustment (Baumrind, 1991). *Coparenting* describes how the parental couple cooperates in terms of child-rearing, mutually supports each other in parenting, and divides responsibilities concerning child care (Feinberg, 2003). Coparenting differs conceptually from the couple relationship because it is motivated by the concern about the child and not about the partner. Both successful coparenting and positive parenting independently emerged as strong predictors for a wide range of positive child outcomes, for instance, better social and school adjustment, and fewer behavior and emotional problems (Teubert & Pinquart, 2010).

Whereas distressed couples tend to be ineffective in working as a team in child-rearing (Stroud et al., 2011), constructive interparental conflict contributes to a healthy family climate through parents' successful coparenting (Christopher et al., 2015) and positive parenting practices (McCoy et al., 2013). That is, parents with high levels of constructive communication provide mutual support and show less coparenting conflict, which, in turn, likely boosts positive parenting (Margolin et al., 2001). The complexity of family interactions calls for further research on the protective influence of constructive interparental conflict in a larger parenting context. This study aimed to examine coparenting and positive parenting as possible key mechanisms in explaining the impact of constructive interparental conflict on children's psychological and physical health.

Hypotheses

We hypothesize that constructive interparental conflict is associated with better health outcomes in children (i.e., fewer emotional problems, less pain, and fewer infectious diseases) from the mothers' perspective (Nicolotti et al., 2003; Troxel & Matthews, 2004). We further expect that successful coparenting and positive parenting mediate this link in a double mediation. More specifically, it is assumed that constructive interparental conflict enhances coparenting behavior (Christopher et al., 2015), which in turn contributes to higher levels of positive parenting (Margolin et al., 2001) and, ultimately, to better children's health. We control for child age in all analyses. Additionally, we test whether mediational paths differ between parents of girls and boys. However, we do not propose any firm hypotheses concerning gender or age effects in the light of inconsistent findings in this regard (Grych & Fincham, 1990; Snyder, 1998).

Method

Procedure

Parents (mothers or fathers) with at least one child aged 3.5 to 8 years were invited to take part in an online survey. Participants were recruited through advertisements and flyers distributed in local community centers and via posting the survey link on German Internet platforms addressed to parents and families. At the start of the survey, participants were informed about the study and gave informed consent. Duration of the online survey was approximately 20 to 30 minutes. At the end of the survey, participants indicated whether they had answered the questions seriously; participants who stated they had not were excluded from the final analysis ($n = 30$). All participants had the possibility to win one of ten 10 € vouchers and to receive an information

letter per e-mail describing the main results of the study.

Participants

A total of 510 parents completed the online survey (see Figure S1 for a flow chart in the supplemental materials: http://doi.org/10.7801/285). Inclusion criteria for study participation were having at least one biological child aged 3.5 to 8 years, being in a committed relationship of at least 1 year, cohabiting with current spouse or partner and the child (for at least 15 days per month), and good knowledge of German. If parents had more than one child in the relevant age group, they were asked to refer to the child with the most recent birthday. Because only 14 fathers completed the questionnaire, we excluded their data from the analysis. In a second step, families of children in current psychotherapeutic, psychiatric or medication treatment, and children with mental retardation, physical disabilities or chronic illnesses were excluded to prevent confounding with our primary outcome variables. Additionally, given our focus on *constructive* interparental conflict, we excluded mothers reporting high distress in the interparental relationship according to the Communication Patterns Questionnaire (Kröger et al., 2016). Sociodemographic information about the final sample ($N = 289$ mothers) is listed in Table 1.

Measures

Constructive interparental conflict. Constructive interparental conflict was assessed by mother report using the Constructive Communication subscale of the German version of the Communication Patterns Questionnaire (Christensen, 1987; German version by Kröger et al., 2016). This seven-item scale measures a couple's communication in conflict situations (e.g., "When a problem arises in the relationship, both partners try to discuss the problem"; answers on a 9-point Likert scale from 1 = *very unlikely* to 9 = *very likely)*. The total score was calculated by subtracting the negative communication items from the positive communication items (Heavey, Larson, Zumtobel, & Christensen, 1996), resulting in a possible range from –33 to +23. Higher scores indicate greater constructiveness in conflict communication. Scores >0 are classified as a constructive communication style and scores ≤0 indicate distressed couples characterized by destructive communication. In the current sample, $n = 80$ mothers scored ≤0 in this measure and were excluded from the analysis given our focus on constructive interparental conflict. Cronbach's α was .71 in the current sample.

Coparenting. Coparenting was assessed by mother report using the Coparenting scale from the German Family Panel (pairfam; Brüderl et al., 2015), an adapted and shortened version of the Parent Problem Checklist (Dadds & Powell, 1991; German version by Gabriel & Bodenmann, 2006). Three items on a 5-point Likert scale (1 = *never* to 5 = *very often*) assessed mothers' perception of the couple's cooperation in parenting issues (e.g., "How often have there been arguments concerning parenting between you and your current partner during the last 6 months?"), resulting in a possible range from 3 to 15. The mean score was used in the analyses; higher scores reflect greater coparenting. Cronbach's α was .78 in the current sample.

Positive parenting. Positive parenting was measured by mother report using the Positive Parenting subscale of the Alabama Parenting Questionnaire (APQ; Frick, 1991; German translation by Reichle & Franiek, 2009). The subscale consists of six items (e.g., *You praise your child when she or he has done something well*), rated by mothers on a 5-point Likert *scale* (1 = *hardly ever* to 5 = *nearly always*), resulting in a possible range from 6 to 30. The mean score was used in the analyses; higher scores represent greater positive parenting. Cronbach's α was .81 in the current sample.

Child emotional problems. Mothers completed the Emotional Problems subscale of the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997; German adaptation by Woerner et al., 2002). Five items (e.g., *often unhappy, many fears*) were rated on a 3-point Likert scale (1 = *not true*, 2 = *somewhat true*, 3 = *certainly true*), resulting in a possible range from 5 to 15. The mean score was used in the analyses; higher scores represent greater emotional problems. Cronbach's alpha was .66 in the current sample; this moderate internal consistency is comparable to previous findings in the same age range (Klein et al., 2013: 3–5 years; Woerner et al., 2002: 6–16 years).

Table 1. *Sociodemographic Statistics of Participants (N = 289 Mothers)*

	Numeric variables		
	M	*SD*	Observed range
Mothers' age	34.64	4.96	22–50
Child age	5.8	1.26	3.5–8.9
Couples relationship duration	11.97	4.67	2–26.75
Working time of employed mothers (hours/week)	25.04	10.15	2–40
Categorical variables			
Child gender, *n* (%)			
Girls		127 (43.9)	
Boys		162 (56.1)	
Mothers' working status, *n* (%)			
Employed		202 (69.9)	
Nonemployed		87 (30.1)	
Mothers or partners in psychotherapeutic/ psychiatric treatment, *n* (%)			
Yes		17 (5.9)	
No		272 (94.1)	
Household net income, *n* (%)[a]			
>3,000 EUR (~3,362 USD)		146 (50.5)	
2,000–3,000 EUR (~2,243–3,362 USD)		79 (27.3)	
<2,000 EUR (~2,243 USD)		64 (22.2)	
Relationship between child and mothers' partners, *n* (%)			
Biological parent		272 (94.8)	
Stepparent		16 (5.5)	
Adoptive/foster parent		1 (0.3)	
Citizenship, *n* (%)			
German		246 (85.1)	
Austrian		36 (12.5)	
Other[b]		7 (2.4)	
Mothers' education level, *n* (%)			
University		116 (40.1)	
High school		67 (23.2)	
Secondary school		19 (6.6)	
Other		12 (4.2)	

Note. Observed range = minimum to maximum scores. [a]Euro/U.S. dollar = 1.121, as of August 8, 2019. [b]French (*n* = 1), Greek (*n* = 1), Hungarian (*n* = 1), Italian (*n* = 1), Croatian (*n* = 1), Rumanian (*n* = 1), Serbian (*n* = 1).

Child pain symptoms. The scale to assess child pain symptoms was adapted from the parent questionnaire of the German Health Interview and Examination Survey for Children and Adolescents (KIGGS-Study; Kurth et al., 2008). From 2003 to 2006 the Robert Koch Institute in Germany conducted the first wave of a multimethod assessment of children's physical, psychological and social health aspects ($N = 17{,}641$; 0–17 years), commissioned by the German Federal Ministry of Health (Kurth et al., 2009). Mothers reported how often their child suffered over the previous 6 months from a list of pain symptoms (headache, stomachache, backache, arm or leg ache, other pain) using a 5-point Likert scale (1 = *never* to 5 = *very often*), resulting in possible range from 5 to 25. The mean score was used in the analyses; higher scores reflect greater pain symptoms. Calculating internal consistency would not be meaningful because all items measure distinct pains and do not represent a latent construct.

Child infectious diseases. The scale to assess child infectious diseases was adapted from the parent questionnaire of the German KIGGS-Study as well (Kurth et al., 2008, 2009). Infectious diseases were measured by asking

mothers how often their child suffered from one of seven illnesses over the previous 6 months (common cold or flulike infection, tonsillitis, herpes infection, bronchitis, diarrhoea, gastrointestinal infection, bladder and/or urinary tract inflammation, other infectious diseases), using a 5-point Likert scale (1 = *never* to 5 = *very often*). The mean score was used in the analyses; higher scores reflect a higher frequency of infectious diseases with a possible range from 7 to 35. Again, internal consistency was not calculated because items measure distinct diseases and do not represent a latent construct.

Data Analysis

Model analysis was conducted with IBM SPSS Amos 22.0.0 (Arbuckle, 2013). The maximum likelihood method generated model estimates. We first computed a predictor-outcome model (constructive interparental conflict → child health outcomes) excluding the mediators to examine the direct effects independent of coparenting and positive parenting. Next, we tested the hypothesized double mediation model using structural equation modeling. This type of model analysis estimates the influence of the independent variable (constructive interparental conflict) via two mediators (coparenting and/or positive parenting) on our dependent variables (child emotional problems, pain, and infectious diseases). Hence, whereas the direct effect represents the unique effect of constructive interparental conflict on child health outcomes, the indirect effect provides information about the mediating effect of coparenting and positive parenting in this association (MacKinnon, 2008). Indirect effects were examined using the bootstrap resampling procedure (MacKinnon et al., 2004) and were calculated with a bias-corrected confidence estimation (95% confidence intervals). Error terms of dependent variables were allowed to correlate due to assumed shared variance. Child age was included as a control variable by including direct paths from child age on all outcome variables.

We used a multigroup approach to account for potential gender differences. For each group (mothers of boys vs. girls) separate models were calculated simultaneously. To investigate gender effects, gender-specific model constraints were applied. That is, corresponding model paths were set equal between boys and girls step by step and chi-square difference tests were computed after each restriction. If the constraint did not significantly worsen model fit (the chi-square difference test was not statistically significant from the previous model), it was retained in the model.

Model fit was evaluated with the chi-square statistics (χ^2), the comparative fit index (CFI) and the root mean square error of approximation (RMSEA). A nonsignificant chi-square, values greater than .95 for CFI, and values smaller than .06 and .08 for RMSEA, indicate good representation of the data (Bentler, 1990).

Results

Descriptive Analyses

Table 2 shows correlations, means, standard deviations, ranges, and gender difference tests for all study variables reported by mothers. Constructive interparental conflict was positively associated with coparenting. Coparenting and positive parenting were not correlated. Coparenting, but not positive parenting, was negatively related to all child health outcomes. Children's emotional problems, pain, and infectious diseases were positively intercorrelated with each other. Child age was positively associated with positive parenting and child pain symptoms. The study variables did not differ significantly between boys and girls.

Model Comparison

First, we computed a predictor-outcome model (constructive interparental conflict → child health outcomes) without mediators to examine the direct effects independent of coparenting and positive parenting. Next, we specified the double mediation model (Figure 1).

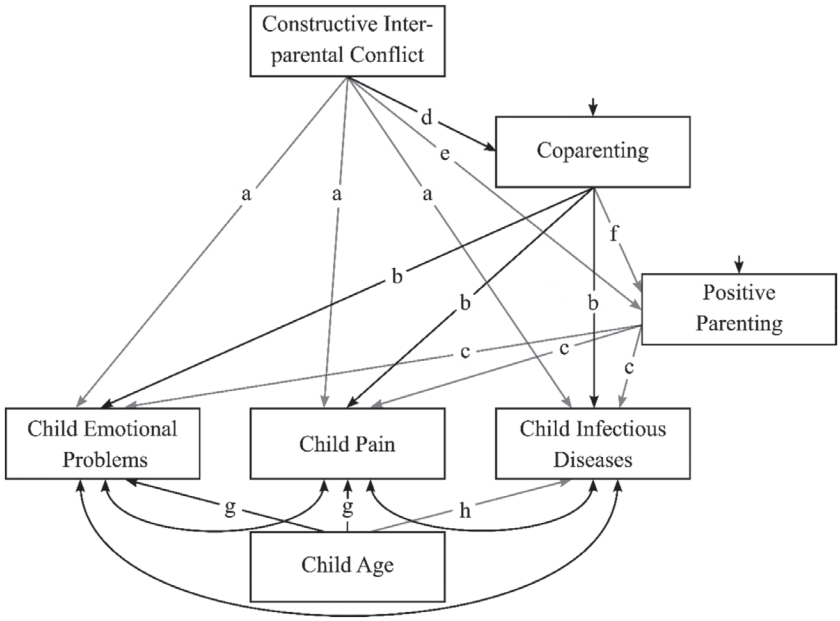
During the process of model specification, we successively applied gender-specific model constraints to investigate gender effects using chi-square difference tests (see Table 3 for a detailed description of steps in model comparison and relevant fit indices). We started with a fully constrained model, which was free of parameter fixation. To test whether constructive interparental conflict had an equal effect on child outcomes (emotional problems, pain, and infectious diseases) for girls and boys, estimates for the corresponding paths (see Figure 1) were held equal between genders (paths a in Figure 1). The constrained model provided an acceptable model

Table 2. *Correlations, Means, and Standard Deviations Among Study Variables*

Variable	1	2	3	4	5	6	7
1. Constructive interparental conflict							
2. Coparenting	.41**						
3. Positive parenting	.09	.01					
4. Child emotional problems	–.12	–.13*	–.03				
5. Child pain symptoms	–.08	–.12*	−08	.33**			
6. Child infectious diseases	–.03	–.17**	.06	.21**	.32**		
7. Child age	.04	.02	.12*	.07	.20**	−.04	
M	11.66	4.13	4.64	.33	1.60	1.56	5.10
SD	6.53	.72	.46	.36	.41	.33	1.26
Observed range (min. to max. scores)	0–23	1.70–5	1.80–5	0–1.80	1–3	1–3	3.50–8.90
t-test (gender differences: mother reports of boys vs. girls)	–1.34	.67	.02	–.23	1.48	–1.12	.23

Note. *$p < .05$. **$p < .01$.***$p < .001$ (two-tailed).

Figure 1. Double Mediation Model of Constructive Interparental Conflict on Child Health Outcomes.



Note. Double mediation model with path fixations. Model fit of the double mediation model was as follows: $\chi^2(28, N = 289) = 31.130$, $p = .311$, comparative fit index = .979; root mean square error of approximation = .020, 90% confidence interval [.000, .051]. Letters indicate equalized paths for gender. Error terms of dependent variables were allowed to have shared variance. Black paths indicate significant direct effects, gray paths indicate nonsignificant paths. All path estimates are reported in Table 4, separated for boys and girls.

fit and the constraint did not significantly worsen fit; thus, it was retained in the model.

Next, we equalized paths b from coparenting to the three outcome variables, which showed a good fit to the data and did not significantly worsen the model fit. Equality constraints were then applied to the paths of positive parenting on the three outcome variables (paths c) resulting in a good model fit. There was no significant drop in model fit compared with the previous model. In step four, the path from constructive interparental conflict on coparenting was held equal (path d). In Steps 5 and 6, we successfully constrained paths e and f. In Step 7, equality

Table 3. *Fit Indices and Model Comparisons*

	χ^2	*df*	CFI	RMSEA	RMSEA CI	$\Delta\chi^2$	Δdf
1. Fully constrained model	5.10	6	1.00	.000	.000–.070	—	—
2. CC → EP[a], CC → PN[a], CC → ID[a]	11.02	11	1.00	.003	.000–.062	5.92	5
3. CO → EP[b], CO → PN[b], CO → ID[b]	16.31	16	.998	.008	.000–.055	5.29	5
4. PP → EP[c], PP → PN[c], PP → ID[c]	23.65	21	.982	.021	.000–.056	7.34	5
5. CC → CO[d]	24.10	22	.986	.018	.000–.054	.45	1
6. CC → PP[e]	24.13	23	.992	.013	.000–.051	.03	1
7. CO → PP[f]	24.14	24	.999	.005	.000–.048	.01	1
8. Age → EP[g], Age → PN[g], Age → ID[g]	**40.81**	**29**	**.919**	**.038**	**.000–.063**	**16.67***	**5**
9. Age → EP[g], Age → PN[g], Age → ID[h]	31.13	28	.979	.020	.000–.051	6.99	4
Double mediation model	31.13	28	.979	.020	.000–.051	—	—
Single mediation model (CO only)	33.73	30	.975	.021	.000–.051	2.6	2
Single mediation model (PP only)	**93.42**	**30**	**.567**	**.086**	**.066–.108**	**62.29*****	**2**
Predictor–outcome model (without mediators)	11.292	11	.996	.010	.000–.063		

Note. Paths constrained to equality are denoted here in superscript lowercase letters and are in accordance to paths shown in Figure 1. Age = child age; CC = constructive interparental conflict; CFI = comparative fit index; CO = coparenting; EP = child emotional problems; ID = child infectious diseases; PP = positive parenting; PN = child pain; RMSEA = root mean square error of approximation. Reported *p* values are all two-tailed. Significant values are bold and represent steps that were not adopted in the final model. *$p < .05$. **$p < .01$. ***$p < .001$ (all *p*s are two-tailed).

constraints were applied to the paths of child age on child emotional problems and child pain (paths g), as well as on child infectious diseases (path h). Note that equality constraints of child age on all three outcome variables worsened the model fit; therefore, we restricted path h separately. Our final double mediation model provided a good fit to the data (see Table 3). In sum, there were no gender differences for any paths in the model. Paths constrained to equality in the final model are denoted in Figure 1.

Constructive Interparental Conflict and Children's Health

To understand the influence of constructive interparental conflict on mothers' perspective of child health, we first looked at the direct effects of constructive interparental conflict on children's health variables in the predictor–outcome model, which was run without mediators. None of the direct effects of constructive interparental conflict on children's emotional problems (girls: $\beta = -.066$, $p = .117$ / boys: $\beta = -.063$, $p = .126$), pain (girls: $\beta = -.057$, $p = .113$ / boys: $\beta = -.060$, $p = .121$), or infectious diseases (girls: $\beta = -.081$, $p = .119$ / boys: $\beta = -.064$, $p = .117$) were significant. However, the nonsignificant direct effects do not preclude subsequent mediational analysis (MacKinnon, 2008). According to recent recommendations (Hayes, 2009; Rucker et al., 2011), a mediated effect does not necessarily require a significant direct path between a predictor and an outcome. Specifically, despite the absence of a direct effect, coparenting and positive parenting may still serve as intervening variables in the link between constructive interparental conflict and mothers' perception of children's health. Intervening variables provide a link between independent and outcome variables, such that a predictor is related to an outcome variable through its relationship with an intervening variable.

Coparenting and Positive Parenting as Mediators

Table 4 lists path estimates for the final double mediation model, and main results are reported here. Results showed a significant direct effect of constructive interparental conflict on coparenting, but not on positive parenting. Coparenting had no direct effect on positive parenting, but did have an effect on all child health outcomes. The effects of positive parenting on child outcomes were not significant. Child age was related to children's emotional problems and pain, but not to infectious diseases. The indirect effects of constructive interparental conflict on children's emotional problems, pain, and infectious diseases were significant. Overall, the double mediation model explained a significant

Table 4. *Path Estimates for the Double Mediation Model*

	Girls			Boys		
Model paths	*β*	*SE*	*p*	*β*	*SE*	*p*
Direct effects						
Predictor effects						
CC → EP[a]	–.010	.047	.790	–.010	.045	.806
CC → PN[a]	–.009	.041	.802	–.009	.043	.810
CC → ID[a]	–.012	.058	.790	–.010	.047	.810
CC → CO[d]	**.428**	**.054**	**.002**	**.401**	**.048**	**.002**
CC → PP[e]	.102	.063	.124	.106	.069	.110
Mediator effects						
CO → EP[b]	**–.131**	**.047**	**.005**	**–.136**	**.053**	**.006**
CO → PN[b]	**–.115**	**.041**	**.005**	**–.129**	**.051**	**.007**
CO → ID[b]	**–.162**	**.058**	**.005**	**–.140**	**.054**	**.007**
PP → EP[c]	.026	.043	.526	.024	.039	.485
PP → PN[c]	.022	.038	.497	.023	.038	.494
PP → ID[c]	.032	.054	.501	.025	.041	.500
CO → PP[f]	–.036	.055	.514	–.040	.061	.504
Control variable effects						
Age → EP[g]	**.129**	**.054**	**.016**	**.134**	**.053**	**.014**
Age → PN[g]	**.113**	**.048**	**.015**	**.127**	**.051**	**.014**
Age → ID[h]	–.063	.059	.305	–.054	.050	.322
Indirect effects						
CC → EP	**–.054**	**.023**	**.006**	**–.052**	**.022**	**.007**
CC → PN	**–.047**	**.020**	**.006**	**–.050**	**.021**	**.008**
CC → ID	**–.067**	**.028**	**.007**	**–.054**	**.022**	**.008**
CC → PP	–.015	.024	.501	–.016	.025	.479
CO → EP	–.001	.003	.388	–.001	.003	.382
CO → PN	–.001	.003	.388	–.001	.003	.388
CO → ID	–.001	.004	.388	–.001	.003	.385
Model fit indices	$\chi^2(28) = 31.130$, $p = .311$; CFI = .979; RMSEA = .020, 90% CI [.000; .051]					
Squared multiple correlation	R^2	*SE*	*p*	R^2	*SE*	*p*
EP	**.036**	**.020**	**.036**	**.038**	**.020**	**.038**
PN	**.027**	**.016**	**.027**	**.034**	**.020**	**.034**
ID	**.033**	**.022**	**.033**	**.024**	**.018**	**.024**

Note. Paths constrained to equality are denoted here in superscript lowercase letters and are in accordance to paths shown in Figure 1. Age = child age; CC = constructive interparental conflict; CFI = comparative fit index; CO = coparenting; EP = child emotional problems; ID = child infectious diseases; PN = child pain; PP = positive parenting; RMSEA = root mean square error of approximation. Reported *p* values are all two-tailed. Significant values are bold.

amount of variance in all three health outcomes (see Table 4).

Additional Analyses

The statistical program (SPSS Amos; Arbuckle, 2013) used to estimate model paths calculates only one overall indirect effect per model. Therefore, no conclusion can be drawn about the unique contribution of each mediator from the double mediation model. However, given that only coparenting predicted child health in contrast to positive parenting, it is likely that the significant indirect effects were primarily driven by coparenting. Therefore, we compared the double mediation model with two single mediation models. The first single mediation model only tested coparenting as a mediator and included positive parenting as a covariate to coparenting (see Figure S2 in the supplemental materials, http://doi.org/10.7801/285). An equality constraint was successfully applied to the covariate between coparenting and postive parenting (path i). This single

mediation model provided good representation of the data and did not result in a worse model fit compared with the double mediation model (see Table 3). Effects were comparable to the double mediation model: None of the direct effects of constructive interparental conflict on children's emotional problems, pain, and infectious diseases were significant. Constructive interparental conflict had a significant direct effect on coparenting, and coparenting significantly predicted the child health outcomes. The indirect effects of constructive interparental conflict on the three outcomes were significant. Overall, the single mediation model with coparenting as mediator explained a significant amount of variance in children's emotional problems, pain, and infectious diseases (see Table S5 in the supplemental materials, http://doi.org/10.7801/285).

Last, we computed a second single mediation model to test positive parenting as a mediator and included coparenting as a covariate to positive parenting. This second single mediation model provided no acceptable fit to the data, $\chi^2(30) = 93.416$, $p = .000$, CFI = .567; RMSEA = .086, 90% CI [.06, .106], and was therefore not interpretable.

Discussion

This study investigated the role of constructive interparental conflict for children's psychological and physical health and assessed coparenting and positive parenting as potential mechanisms. The present results indicate that constructive interparental interactions reported by mothers exert protective indirect effects on their children's health via successful coparenting. The effects of the mediational model were significant but small, explaining 2% to 4% in children's emotional problems, pain, and infectious diseases. Although these symptoms represent only one small facet of understanding health, they do provide relevant insights into children's health status. Importantly, our findings suggest that constructive interparental conflict is an unspecific factor influencing children's health given that results did not differ between the three outcomes.

In line with our hypothesis, constructive interparental conflict positively predicted coparenting. A large proportion of the variance (40%–43%) in mothers' coparenting behavior was explained by the degree of constructiveness in the interparental conflict. Contrary to our hypothesis, positive parenting was not affected by constructive interparental conflict and did not mediate its impact on child health. Remarkably, most previous studies have not systematically examined the independent effects of coparenting and positive parenting in the same study. By doing so, our findings reveal an interesting difference between coparenting and positive parenting: The variance of coparenting was greater than that of positive parenting, in which all participants scored relatively high. This pattern is in line with the conceptual framework of coparenting. Coparenting is not simply a subdimension of the interparental relationship but rather is assumed to be more closely related to child-related outcomes than the couple relationship (Morrill et al., 2010). Our findings suggest that mothers' perception of successful coparenting, which is an important base for the organization and cohesiveness of the family, may be more important for the healthy development of young children than positive parenting. These results are consistent with Teubert and Pinquart's (2010) meta-analysis, demonstrating robust effects of coparenting on children's psychological problems. Our study additionally underlines the importance of coparenting for children's physical health. Alternatively, the interpretation of our findings also could be of methodological nature: Because we had to deal with a limited variance in positive parenting after the exclusion of mothers reporting high relationship distress, the low variance and the ceiling effects in the positive parenting variable may partially explain why we could not find a mediating path in this regard.

The question arises why, in contrast to previous studies (e.g., McCoy et al., 2009), we did not find direct effects of constructive interparental conflict on children's health. One possible explanation is that unlike the majority of previous research, we focused on constructive interparental conflict and excluded distressed couples displaying destructive communication patterns. Studies examining the impact of constructive interparental conflict on children typically report weaker effect sizes than studies about destructive conflict (Davies et al., 2012). Thus, we might have lacked adequate power to detect effects. On the basis of the current results, we can argue that constructive forms of conflict between parents have limited direct influence on children's health, and rather affect children

indirectly through their coparenting. This may be especially apparent in the relatively young children examined in our study, who are both strongly dependent on parental care and have greater immersion in the family unit than older children or adolescents (Davies et al., 2012; Richmond & Stocker, 2007). Thus, they may be particularly sensitive to indirect effects by coparenting. Given the cross-sectional design of our study, we cannot draw conclusions about effects varying by age of the child, as previous research has suggested (Richmond & Stocker, 2007). Further research with longitudinal data is needed to clarify this issue.

Interestingly, there was no evidence for gender differences. Effects and mechanisms of constructive interparental conflict on child health did not differ for boys and girls, at least as perceived by their mothers. This contrasts with previous findings that, even though children are generally sensitive to the effects of interparental conflict, gender is an important moderator in this link (Snyder, 1998). Specifically, girls' greater tendency to take responsibility for their parents' relationship problems and to self-blame was associated with greater proneness for internalizing symptoms (e.g., emotional problems, somatization; Crawford et al., 2001). In contrast, boys' perceptions of threat in the face of destructive interparental conflict were related to greater externalizing symptoms (e.g., conduct problems, aggression; Grych & Fincham, 1990). Importantly, our focus on constructive interparental conflict, which excluded mothers reporting high relationship distress, makes our study less comparable to previous research. Our findings suggest that gender differences are negligible in a relatively homogenous group of mothers once the focus is on constructiveness in interparental conflict.

Practical Implications

A large body of research has demonstrated the harmful impact of destructive interparental conflicts and the transmission of negative emotions of one relationship to another (e.g., from the couple to the parent–child relationship; Davies et al., 2016). This research is important to identify risk factors for child development. However, to fully understand the meaning of interparental conflict for children's health, it is essential also to examine constructive forms of conflicts. The present study suggests that children benefit from a constructive interparental conflict style, as they experience more cooperation in their parents' parenting behavior. These findings are relevant for informing practice indicating that it may be wise to target coparenting efforts in preventive couple relationship education. Strengthening coparenting emerged as a powerful means for enhancing couple, family, and child adjustment (e.g., Feinberg et al., 2016). Conflict is a normal part of raising a child together as a couple; therefore, the goal of prevention or treatment is not necessarily to avoid conflict but to support parents to handle their arguments constructively. Helping parents work on their joint parenting may be associated with less resistance and reluctance than improving general couple relationship dynamics (Zemp, Milek, Cummings, & Bodenmann, 2017). Further research is needed to better understand when to focus on relationship- versus coparenting-related skills in clinical practice.

Limitations

This study has several limitations: The most important is the exclusive reliance on mothers' self-report. Fathers were excluded due to their small number. Naturally, such a one-parent approach can only provide a limited proxy for assessing parenting and children's health. Effects could be inflated because of shared method variance. Moreover, given the lack of detailed information on mothers' health status, we cannot rule out that mothers' own health affected their perception of the children's well-being. Additional factors could potentially influence mothers' reports of children's symptoms. These include mothers' awareness of their child's pain, the reliability and accuracy with which children tell their mothers about their pain, and the child's age. Thus, our study provides the basis for further, more controlled research using data from both parents, children's perceptions, or rating of experts. At the same time, mothers' reports of their child's health seems a sensible measure considering the age ranges of children investigated in this study, and particularly given that symptoms were assessed over the previous 6 months. Further, the agreement between child and parent reports of child pain is substantial ($r = .64$) according to the meta-analysis by Zhou et al. (2008). They argued that parents' report can be considered as an accurate estimate of children's pain.

Second, although the three aspects of physical and psychological health assessed in this study represent the most prevalent areas of health problems in children, they are too heterogeneous to be (statistically) summarized into one indicator representing children's health more generally. Third, the current study has a cross-sectional design. Although cross-sectional studies are an important starting point to test innovative hypotheses, they do not provide information about (a) direction (causality) of the associations between study variables or (b) long-term influences. Particularly in the family context, cause and effect are often difficult to disentangle. Future studies should systematically examine longitudinal and bidirectional effects. Fourth, the current sample reports a slightly higher education but lower net income compared with representative samples of the German population (Federal Statistical Office of Germany, 2017), which may affect family functioning. Importantly, however, the prevalence of destructive and constructive interparental conflicts in our sample was comparable to that reported in previous studies (e.g., Buehler et al., 1997; Davies & Cummings, 1994).

Conclusion

The current study suggests that mothers' perception on how parents solve conflicts, support each other, and seek constructive solutions is related to children's psychological and physical health. We found evidence that constructive interparental conflict was a protective factor for children's pain, infectious diseases, and emotional problems, and successful coparenting emerged as a key mechanism underlying these beneficial effects. Our findings indicate that enhancement of constructive interparental conflict and coparenting are promising avenues to promote the healthy development of children.

Author Note

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The data that support the findings of this study are openly available in MADATA at http://doi.org/10.7801/285.

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