

Dutch Mothers' and Fathers' Differential Attributions and Parenting Reactions to the Misbehavior of Sons and Daughters

Joyce J. Endendijk, Christel M. Portengen, Marjolein Verhoeven, and Jorg Huijding
Child and Adolescent Studies, Utrecht University

There is ample evidence that fathers and mothers react differently to misbehavior of sons and daughters. Relatively little is known about the mechanisms underlying this differential treatment. This set of quasi-experimental studies examined whether parental attributions about child misbehavior mediate the association between child gender and negative parenting practices, and whether this is different for fathers and mothers. Dutch parents (Study 1: $N = 190$, 65% mothers, 53% girls; Study 2: $N = 287$, 56% mothers, 50% girls) of 2- to 4-year-old children were presented with scenarios illustrating child misbehaviors and were asked to imagine their own child in the scenarios. Subsequently, parents were asked about their attributions of the child behavior (Study 1: intentionality, developmental level; Study 2; typicality) and their hypothetical reactions (Studies 1 and 2; negative parenting; Study 2; frustration) in each situation. Study 1 revealed that fathers attributed boys' misbehavior more to being intentional than girls' misbehavior. Fathers' intentional attributions also mediated the association between child gender and negative parenting reactions to child misbehavior. Study 2 revealed that mothers attributed boys' misbehavior more to being typical for the child than girls' misbehavior. For mothers, the association between child gender and negative parenting reactions to child misbehavior was mediated by mothers' typicality attributions and frustration. Thus, gender-differentiated attributions seem to underlie how Dutch fathers and mothers respond to boys' and girls' misbehavior. Yet, both the type of internal attributions and the underlying mechanism for this gender-differentiated attributional process differ for mothers and fathers.

Public Significance Statement

This experimental research examined if and why fathers and mothers generally react more negatively to boys' misbehavior compared to girls' misbehavior. It was discovered that the different causes Dutch fathers and mothers attribute to boys' and girls' misbehavior play an important role in this. Fathers attributed boys' misbehavior more to being intentional and mothers attributed boys' misbehavior more to being typical for the child, which in turn predicted more negative parenting reactions to boys' misbehavior. These findings show that it is important to raise awareness in parents of the different causes they attribute to the misbehavior of boys and girls in order to foster more egalitarian parental treatment of boys and girls.

Keywords: parental attributions, gender differences, negative parenting, emotions

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Parental gender socialization comprises all ways in which parents teach their children about the social norms and expectations associated with gender (Endendijk et al., 2018; Henslin, 2001). Parental gender socialization is an accumulating process starting before birth with parents' making gendered choices about names (Pilcher, 2017), toys, clothes, books, and design of the newborn's room (Pomerleau et al., 1990), and continuing after birth with differential treatment of boys and girls (Leaper et al., 1998;

Lytton & Romney, 1991). In older research, there are some indications that fathers engage more in gender-differentiated parenting and traditional gender socialization than mothers (Lytton & Romney, 1991; Maccoby & Jacklin, 1978). Yet, more recent studies show that mothers' and fathers' gender socialization practices are more similar than different (Endendijk et al., 2017). In addition, both maternal and paternal gender socialization are important for children's development. For instance, gender-role behavior and attitudes of mothers and fathers have been associated with the development of gender stereotypes in children (Turner & Gervai, 1995) and better academic achievements in math and science in boys compared to girls (Updegraff et al., 1996). In addition, fathers' (but not mothers') gender-differentiated use of physical discipline explained the higher levels of aggression in boys compared to girls (Endendijk et al., 2017). Yet, mothers' differential use of spatial language with sons and daughters was associated with better spatial language skills in boys compared to girls (Pruden & Levine, 2017). Parental gender socialization has also been argued

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Joyce J. Endendijk  <https://orcid.org/0000-0001-8149-912X>

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Correspondence concerning this article should be addressed to Joyce J. Endendijk, Child and Adolescent Studies, Utrecht University, Heidelberglaan 1, P.O. Box 80140, 3508 TC Utrecht, The Netherlands. Email: J.J.Endendijk@uu.nl

to underlie gender inequality in the labor market and domestic domain (Croft et al., 2015; Khoreva, 2011). To reduce or prevent these outcomes, it is important to have more insight in the mechanisms that underlie fathers' and mothers' gender socialization of young children.

An important cognitive mechanism that might underly parents' gender socialization practices are parents' gendered attributions. These are differential inferences parents make about the causes of their son's and daughter's behaviors, achievements, and preferences (Bugental & Corpuz, 2019; Morrongiello & Rennie, 1998). For example, parents can make internal attributions, thereby viewing a child's behavior as intentional, not situationally determined, stable, or typical for one's child (Hastings & Coplan, 1999). In contrast, parents can also make external attributions, thereby viewing a child's behavior as accidental, provoked by the situation, transitory and age-related, or untypical for one's child (Hastings & Coplan, 1999). In general, attributing a child's behavior to internal factors has been associated with more negative reactions to the child's behavior by mothers and fathers (for reviews, see Bugental & Corpuz, 2019; Miller, 1995). Although fathers are understudied in the attribution literature, most available research that did compare mothers and fathers found similarities in their attributions and subsequent reactions to negative child behavior (Bugental & Corpuz, 2019; Miller, 1995; Park et al., 2018). Yet, one study showed that fathers attribute negative behavior more to internal causes in the child than mothers, which was associated with more negative reactions to such child behavior (Chen et al., 2008).

Parental attributions appear to vary across context (e.g., play setting, discipline setting, dangerous situation) and domain (e.g., disruptive behavior, prosocial behavior, emotions) (Bugental & Corpuz, 2019). The present study focused specifically on parental gendered attributions for child misbehavior for several reasons. First, during early childhood, misbehavior such as noncompliance, temper loss, and aggression are common (Wakschlag et al., 2007), with approximately 75% of children exhibiting aggression and tantrums by age 2 (Potegal et al., 2003; Tremblay et al., 1999). Second, clear gender differences are demonstrated in child misbehavior with boys showing less committed or internalized compliance than girls (for a meta-analysis, see Silverman, 2020), boys being more physically aggressive than girls (Björkqvist, 2018), and boys generally showing more tantrum behavior after 21 months of age than girls (Potegal & Archer, 2004). Third, there is also evidence that both mothers and fathers respond differently to boys' and girls' misbehavior (for a review, see Endendijk et al., 2018). In general, mothers and fathers appear to use more negative parenting practices in response to boys' misbehavior than to girls' misbehavior (e.g., power assertion, Kim et al., 2014; corporal punishment, Mehlhausen-Hassoan, 2021; physical discipline, Endendijk et al., 2017). Children themselves also reported that their mothers and fathers would punish boys more severely for misbehaving than they would punish girls (Sorbring et al., 2003).

Parental attributions have hardly been studied in the context of gender socialization (Bugental & Corpuz, 2019). However, based on the literature above one could argue that because disruptive behavior is more typical in boys than in girls, and fathers and mothers react more negatively to boys' misbehavior, parents might hold more internal and less external attributions for boys' misbehavior. Additionally, according to gender schema theories, parental gendered attributions might play a role in gender socialization as

well (Bem, 1983; Martin, 1991). Parental gendered attributions can be considered as a type of gender schemas, that is, cognitive knowledge structures containing gender-related information (Grusec et al., 1997; Martin, 1991). Gender schemas are assumed to be associated with parental gender socialization because of the notion of schematic consistency, with parents acting in ways that are consistent with their gender schemas (Martin, 1991). Indeed, research on gender stereotypes revealed that fathers with gender-stereotyped expectations about career and family use more physical control with boys than with girls (Endendijk et al., 2017) and mothers' traditional parenting style has been associated with more traditional gender-role stereotypes (Ex & Janssens, 1998). Gender stereotypes and gendered attributions are also assumed to be related because certain gender-stereotyped beliefs (e.g., "Boys will be boys") might convey internal and stable causes for boys' (mis)behavior (Reyna, 2000). Regarding gendered attributions, this could mean that when parents hold different attributions for the behavior of boys and girls (e.g., attributing misbehavior more to internal causes for boys), they might also respond to those behaviors differently (e.g., using more negative parenting in response to their son's misbehavior).

The few studies that examined differences in parents' attributions of boys' and girls' misbehavior has produced mixed findings. For instance, two studies focusing on toddlers as well as school-aged children found that both mothers and fathers attributed boys' risky misbehaviors (i.e., misbehavior that could lead to injury) more to inborn factors, whereas girls' risky misbehaviors were attributed more to the situation (Morrongiello et al., 2010; Morrongiello & Hogg, 2004). Similarly, mothers attributed the misbehavior of preschool-aged boys more to being typical for the child or to dispositional causes than they did for the misbehavior of girls (Hastings & Coplan, 1999). Furthermore, in a vignette study, both mothers and fathers perceived the misbehavior of a hypothetical school-aged boy with attention-deficit/hyperactivity disorder (ADHD) to be more intentional, but less biologically caused, than the misbehavior of a hypothetical girl with the same diagnosis (Maniadaki et al., 2005). In contrast, research on school-aged children with conduct disorder revealed that mothers, but not fathers, made more deliberate attributions for daughters than for sons (Palm et al., 2019). Similarly, in a community sample of school-aged children and their mothers, child negative as well as positive behavior was attributed more to dispositional factors in girls than in boys (Gretarsson & Gelfand, 1988). Finally, there are some studies including both mothers and fathers that do not find evidence for an association between child gender and parental attributions for child misbehavior in school-aged children (Chen et al., 2008; Mills & Rubin, 1990; Nelson et al., 2013).

These mixed findings might partly be explained by methodological differences between the studies. For instance, studies demonstrating that fathers as well as mothers made more internal attributions for boys' misbehavior assessed parental attributions to child behavior in hypothetical scenarios (Hastings & Coplan, 1999; Maniadaki et al., 2005; Morrongiello et al., 2010; Morrongiello & Hogg, 2004). However, studies revealing that mothers made more internal attributions for girls' (mis)behavior assessed parents' spontaneous attributions to specific instances of their own child's behavior (Gretarsson & Gelfand, 1988; Palm et al., 2019). These inconsistent gender differences in parental attributions for child misbehavior highlight the need for more research on this topic.

Next to the need for more research on child gender differences in parental attributions, direct relations between parental gendered attributions and gender socialization have not yet been examined. There is, however, some indirect evidence provided by studies that examined both gender differences in parental attributions and differential reactions of parents to the behavior of boys and girls. For instance, both mothers and fathers who attributed risky misbehavior more to inborn factors in boys and situational factors in girls also reacted with more anger and less disappointment to sons' misbehavior than to daughters' misbehavior (Morrongiello et al., 2010; Morrongiello & Hogg, 2004). In these studies, mothers and fathers also were more likely to respond with discipline (Morrongiello et al., 2010) or laxness (for mothers; Morrongiello & Hogg, 2004) to risky misbehavior of sons than to risky misbehavior of daughters. Moreover, both fathers and mothers who attributed misbehavior of hypothetical boys with ADHD more to intentional factors, also were more likely to recommend more strict responses to boys' misbehavior compared to misbehavior of hypothetical girls with ADHD (Maniadaki et al., 2005). In this study, intentional attributions were also related to increased parental strictness with both boys and girls by mothers and fathers. However, none of these studies formally tested mediation, that is, whether parental attributions mediated the association between child gender and parental reactions to child misbehavior. Therefore, it remains unclear whether gendered attributions can actually explain parents' differential responses to boys' and girls' misbehavior.

The present research aimed to examine whether parents' gender-differentiated attributions are associated with gender socialization practices applied by fathers and mothers of preschool-aged boys and girls. More specifically, this research examined (a) whether mothers and fathers hold different attributions about their son's or daughter's misbehavior and (b) whether these different attributions can explain negative parenting reactions to sons' and daughters' misbehavior. In other words, we tested whether parental attributions about child misbehavior mediate the association between child gender and negative parenting practices. Differences between mothers and fathers were examined in an explorative way because there are too few studies on gender attributions conducted with fathers to formulate predictions about parent gender differences.

To this end, two studies were conducted each focusing on different types of parental attributions (Study 1: attributions to intentionality and developmental level; Study 2: typicality attributions) and parental reactions (Studies 1 and 2; negative parenting; Study 2; frustration). A quasi-experimental approach was taken that is commonly used in the attribution literature with both fathers and mothers (Miller, 1995); presenting parents with scenarios illustrating the child behaviors of interest and asking parents to imagine their own child acted in the ways depicted in the scenarios. Following each scenario, parents were asked about their attributions of the child behavior as well as their hypothetical reactions in such a situation.

Study 1

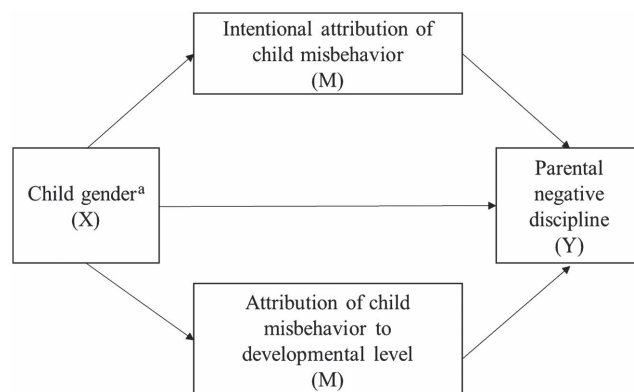
In Study 1, we specifically focused on two types of child-focused attributions that parents can make about their child's misbehavior: intentional attributions and attributions to developmental level. Intentional attributions refer to beliefs that a child acted in a certain

way on purpose (Coplan et al., 2002). Attributions to developmental level are unintentional attributions (Snarr et al., 2009) and refer to beliefs that a lack of knowledge or competencies associated with a child's developmental level is causing a certain behavior (Dix & Grusec, 1985; Snarr et al., 2009). In studies assessing parental attributions to hypothetical scenarios, both mothers and fathers have been found to make more intentional attributions (Maniadaki et al., 2005), as well as other internal attributions (Hastings & Coplan, 1999; Morrongiello et al., 2010; Morrongiello & Hogg, 2004) for boys' misbehavior than for girls' misbehavior. External attributions, such as unintentional attributions, have been made more with girls' risky misbehavior by mothers and fathers (Morrongiello et al., 2010; Morrongiello & Hogg, 2004).

It has been argued that when parents believe their child's misbehavior is intentional, they hold their child responsible for the behavior, which might elicit negative emotions, and subsequently increases the likelihood that parents will respond with negative parenting practices (Bugental et al., 1998; Dix & Grusec, 1985). In contrast, when parents believe that children do not yet possess the necessary competencies to perform a certain behavior (or to refrain from certain behavior), they do not hold their children responsible for the behavior, which in turn is associated with more positive (or less negative) parental reactions to the child's behavior (Bugental et al., 1998; Dix & Grusec, 1985). Several studies indeed show that child-responsible attributions in particular are associated with negative parenting practices in fathers and mothers (Leung & Slep, 2006; Snarr et al., 2009).

Regarding the first aim, we hypothesized that fathers and mothers attribute boys' misbehavior more to being intentional and less to being unintentional (Maniadaki et al., 2005; Morrongiello et al., 2010; Morrongiello & Hogg, 2004) compared to girls' misbehavior. Regarding the second aim, we expected that when fathers and mothers attribute misbehavior more to intentionality with boys than with girls, this will subsequently be associated with more negative parenting reactions to boys' misbehavior (Leung & Slep, 2006; Snarr et al., 2009). See Figure 1 for the mediation model tested in Study 1.

Figure 1
Study 1 Mediation Model With Child Gender (X), Two Parental Attributions (M) and Parental Negative Discipline (Y)



Note. X refers to the predictor. M refers to the mediators. Y refers to the outcome variable.

^a 0 = girl, 1 = boy.

Method

Participants

Student assistants (BA and MA students in Clinical, Child, Family, and Educational Studies) used their personal networks to recruit Dutch parents with at least one child between the ages of 2 and 4 years old for this study. Parents were recruited via information letters (provided in-person or via e-mail) or via information leaflets posted on social media (e.g., Facebook). The information material included a link to the online survey environment (see Procedure) via which parents could participate. The information material stated that the purpose of the study was to examine how parents deal with challenging parenting situations, how they parent their child, and how this relates to the development of their child. We only included participants with complete data on the scenarios (see Instruments) to ensure committed involvement. Consequently, seven parents were excluded, which resulted in a final sample of 123 mothers and 67 fathers. Both parents of a child could participate, which in this sample was the case for 56 couples. There were no significant differences between parent couples and parents who participated on their own on any of the background characteristics (mothers: $ps > .366$; fathers: $ps > .099$) or study variables (mothers: $ps > .223$; fathers: $ps > .390$). Recruitment and data collection took place between January and March 2016. Characteristics of the sample are presented in Table 1.

Procedure

Each parent completed an online survey via Qualtrics that consisted of questions about a series of scenarios (see section “Instruments”) as well as questionnaires about parental cognitions, parenting practices, and child problem behavior (duration: approximately 30 min). In case parents had multiple children between the ages of 2 and 4 years old, they were asked to randomly choose one of these children. If the other parent also participated, they were asked to choose the same child. As a check for linking parents from the same family to each other, parents had to fill out the name and birthdate of the target child. For the present study, only the

Table 1
Study 1 Sample Characteristics

Characteristic	Mothers ($n = 123$)	Fathers ($n = 67$)
Child age, M (SD)	2.93 (0.63)	2.98 (0.69)
Girls, % (n)	52 (64)	54 (36)
Parent age, M (SD) ^a	33.26 (4.34)	35.56 (5.58)
Parent education, % (n) ^a		
Lower secondary education	9 (10)	12 (7)
Higher secondary education	30 (32)	32 (19)
Higher vocational education	43 (47)	32 (19)
University	18 (19)	25 (15)
Married/cohabiting, % (n) ^{a,b}	97 (105)	100 (60)
Number of siblings, % (n) ^a		
0	19 (21)	13 (8)
1	58 (62)	63 (38)
2	20 (22)	22 (13)
3	3 (3)	2 (1)

^a Not all parents provided information on background variables at the end of the survey; therefore, the total n for this variable is smaller than the total number of participating parents. ^b Reference group is single.

questions about the scenarios were used, as well as a questionnaire on child problem behavior (see Covariates). Parents provided informed consent for their participation at the beginning of the survey. Parents received no compensation for their participation. Yet, they could enter a raffle to win tickets for a theme park for the whole family. This study is part of a line of research that received approval of the Ethics Committee of the Faculty of Social and Behavioural Sciences at Utrecht University (FETC20-507).

Instruments

Scenarios. Ten images from the Parental Attributions of Child behavior Task were used (Beckerman et al., 2017). This task has been used with fathers and mothers, eliciting similar levels of negative parental attributions in mothers and fathers (Beckerman et al., 2018, 2020). Each image presented a scenario in which a gender-neutral child (i.e., ambiguous gender, half-long hair, clothes in neutral colors) was engaged in behavior that could be construed as either being misbehavior or clumsy behavior. The choice for ambiguous behaviors was made because previous research demonstrated that parents are particularly likely to be influenced by their preexisting cognitions when they evaluate ambiguous child behavior (Bugental & Johnston, 2000; Milner, 2003). Examples of scenarios were as follows: A child making a mess on the kitchen table with paint, a child knocking over a piece of furniture while chasing a ball down the room, a child sitting on the ground with a ripped off curtain in their hands (for an example picture, see Supplemental Materials, p. 1). Parents were asked to imagine themselves in each scenario with their own child.

Questions. Following each scenario, parents were asked several questions about the child’s behavior, followed by questions about parents’ hypothetical reactions. The same order of questions was used to be able to test the sequence of the proposed mediation model (i.e., attribution > reaction) and all questions were used in each scenario. First, on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) parents indicated how much they agreed with two attributions for their child’s behavior: (a) “My child did this on purpose” (intentional attribution), (b) “My child is too young to know better” (attribution to developmental level). Second, on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) parents indicated their agreement with using two types of negative discipline (i.e., “I would get angry and grasp my child firmly,” “I would make my child feel guilty”) in such a situation.

Parents’ responses to the two attribution questions and the two parental discipline questions were averaged across the 10 scenarios, resulting in the variables “intentional attribution of child behavior” (Cronbach’s α mothers = .80; Cronbach’s α fathers = .84), “attribution to developmental level” (Cronbach’s α mothers = .80; Cronbach’s α fathers = .88), and “parental negative discipline” (Cronbach’s α mothers = .94; Cronbach’s α fathers = .94). Higher scores on these variables indicated that parents respectively attributed the child behavior more to the child’s willful intentions, and more to the child’s developmental level, and agreed to use higher levels of negative discipline reactions across scenarios.

Covariates. As the child’s own disruptive behavior has been associated with parental negative discipline as well as with parental attributions of child behavior (Snyder et al., 2005), it might be important to control for the level of child disruptive behavior in our analyses. Therefore, child disruptive behavior was assessed

with the externalizing scale of the Dutch version of the Strengths and Difficulties Questionnaire—Parent Form for children (van Widenfelt et al., 2003). It consists of 10 items describing conduct problems and hyperactivity-inattention. Each item must be scored on a 3-point Likert scale (0 = *not true*, 1 = *somewhat true*, and 2 = *certainly true*). Scale scores were computed by averaging the scores on the scale items (Cronbach's α mothers = .75; Cronbach's α fathers = .71). Higher scores on the externalizing scale reflect more difficulties. Boys and girls did not differ in externalizing behavior, mother-report: $t(97.19) = 0.30, p = .766$; father-report: $t(58) = -0.95, p = .348$. We also checked whether inclusion of background variables (i.e., child age, parent age, parent education, number of siblings) as covariates in our models, led to changes in results.

Analyses

First, descriptive analyses (Pearson correlations, independent t tests) were conducted in SPSS (Version 28) to examine associations between study variables and to examine differences between boys and girls on the study variables.

Second, Mplus (Version 8.7) was used to test a mediation model (see Figure 1, and for script see Supplemental Materials, p. 2) separately for mothers and fathers. Two indirect effects were modeled: one from child gender via parents' *intentional attribution of child misbehavior* to parents' negative discipline and one from child gender via parents' *attribution to child developmental level* to parents' negative discipline.

For testing mediation in small samples or for complex mediation models, a Bayesian approach is recommended (Koopman et al., 2015; Tofghi & Kelley, 2020) as such an approach yields comparable statistical power to the more commonly used Maximum Likelihood (ML) or bootstrapping approaches without the associated inflated Type I error. Another advantage is that the Bayesian approach does not require the assumption of normality in the sampling distribution of estimates (Yuan & MacKinnon, 2009). Uninformative priors were used in the models, which is conservative in case there is little previous research on a topic. A sample of at least 40 participants is necessary to have enough power (>.80) to detect a moderate effect ($\beta = .39$) in a simple mediation model with uninformative Bayesian priors (Miočević et al., 2017).

Bayesian regression estimates for direct and indirect effects in our models are conceptually similar to more well-known frequentist

mediation models estimated using ML or bootstrapping. Bayesian analysis also produces Credibility Intervals (CI) that use the specific percentile values (2.5th and 97.5th) around the distribution of each parameter, which is known as the posterior distribution. The p values reflect the proportion of the posterior distribution for a given parameter (direct or indirect effect) that is above or below zero. The Proportional Scale Reduction (PSR) factor was used to determine model convergence and needs to be close to one (<1.05; Asparouhov & Muthén, 2010).

Finally, we explored whether the results were influenced by the dependency in the data of parent couples and whether paths were significantly different between mothers and fathers. To this end, a multigroup (mothers vs. fathers) mediation model with bootstrapped confidence intervals (3,000 bootstraps) and robust standard error computations (in Mplus: Type = Complex) was tested. The sandwich estimator for robust standard error computations in Mplus takes into account dependency between parents within a couple (Murray et al., 2021) and has been shown to reduce the bias to the levels observed when only independent cases are included (Rebollo et al., 2006). Unfortunately, in Mplus, it is not yet possible to combine the sandwich estimator (Type = Complex) with Bayesian estimation, making it necessary to revert to bootstrapped confidence intervals.

Results

Descriptive Analyses

Table 2 displays correlations and descriptive statistics for the study variables separately for mothers and fathers, as well as for boys and girls. For fathers and mothers of boys, attributions to intentionality and developmental level were significantly correlated, although in an unexpected positive direction. It appears that parents who attribute boys' misbehavior more to intentionality, also attribute it more to boys' developmental level. For girls, both types of attributions were not correlated. For fathers, more intentional attributions of child misbehavior were related to more negative parenting practices. Regarding differences between boys and girls, t tests revealed that mothers did not differ in their attributions of boys' and girls' misbehavior, intentionality: $t(121) = 0.39, p = .700$; developmental level: $t(121) = 0.30, p = .763$, nor in negative parenting reactions toward boys and girls, $t(121) = -0.38, p = .700$. Fathers attributed misbehavior more to intentionality

Table 2

Study 1 Correlations and Descriptive Statistics for Study Variables, Separately for Boys and Girls, Mothers and Fathers

Study variable	1	2	3	Boys <i>M (SD)</i>	Girls <i>M (SD)</i>
Mothers					
1. Intentional attribution	—	.26*	.25	2.24 (.60)	2.28 (.54)
2. Attribution to developmental level	.14	—	.03	3.09 (.59)	3.12 (.61)
3. Negative parenting	.24	.24	—	1.91 (.61)	1.86 (.62)
Fathers					
1. Intentional attribution	—	.46**	.38*	2.53 (.52)	2.26 (.55)
2. Attribution to developmental level	-.18	—	.07	3.03 (.67)	3.28 (.67)
3. Negative parenting	.47**	.11	—	2.24 (.65)	2.11 (.61)

Note. Correlations above the diagonals (—) refer to parents of boys and correlations below the diagonal refer to parents of girls.

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

with boys than with girls, $t(65) = -2.07, p = .042$, but attributions to developmental level did not differ between boys and girls, $t(65) = 1.55, p = .126$. Fathers' negative parenting also did not differ between boys and girls, $t(63) = -0.81, p = .420$.

Parental Attributions Mediating the Association Between Child Gender and Negative Discipline

Table 3 (mother and father parts) presents Bayesian parameter estimates of the mediation models testing the indirect effects from child gender via two parental attributions of child misbehavior (i.e., intentionality, developmental level) on parental negative discipline. For mothers, the Bayesian CI of both indirect effects included zero, indicating that indirect effects were not present in the data. Only for the association between intentional attributions and negative discipline the CI did not include zero and had a positive sign, indicating that more maternal intentional attributions of child misbehavior were associated with more negative discipline.

For fathers, the CI for the indirect effect from child gender via intentional attributions on negative discipline did not include zero and had a positive sign, indicating that fathers made more intentional attributions with boys than with girls which in turn was associated with higher levels of negative discipline. The CI for the indirect effect via paternal attributions to developmental level did include zero, indicating that an indirect effect was not present. The CI for the direct effect from child gender to paternal negative discipline did include zero, indicating that a direct effect was not present.

Convergence was achieved for both models (PSR factor stable and below 1.01 after 1,000 iterations in both maternal and paternal model). Inclusion of the covariates lead to highly similar estimates and CI's for the indirect effects (see Supplemental Tables S1–S4), so they were not included in the final models.

Finally, the bottom part of Table 3 displays the outcomes of the difference tests from the multigroup mediation model that controlled for dependency in the data of parent couples. Both the effect from child gender to intentional attributions and the indirect effect from child gender via intentional attributions on negative discipline were significantly stronger in fathers than mothers, confirming the results from the Bayesian analyses.

Discussion

In line with expectations, but only for fathers, it was found that boys' misbehavior was attributed more to intentional causes than girls' misbehavior. Hereby, we extend previous research conducted that also showed that misbehavior of hypothetical boys with ADHD was also more attributed to being intentional by fathers and mothers (Maniadaki et al., 2005). This child gender difference in paternal attributions is apparently also present in community samples. Yet, neither mothers nor fathers attributed girls' misbehavior more to developmental level (i.e., unintentional causes) compared to boys' misbehavior, which might be because misbehavior is very common for both boys and girls in the preschool period (Wakschlag et al., 2007).

Table 3

Study 1 Estimates and Credibility Intervals of the Mediation Analyses Testing the Indirect Effects From Child Gender Via Two Parental Attributions on Parental Negative Discipline

Parameter	Estimate	Posterior SD	p	95% CI	
				LL	UL
Mothers^a					
Child gender > intentional attribution	-0.04	0.10	.702	-.245	.165
Child gender > attribution to developmental level	-0.03	0.11	.776	-.249	.182
Intentional attribution > negative discipline	0.24	0.10	.018	.043	.439
Attribution to developmental level > negative discipline	0.10	0.10	.312	-.090	.282
Child gender > negative discipline	0.06	0.11	.596	-.161	.274
Child gender > intentional attribution > negative discipline	-0.01	0.03	.702	-.069	.044
Child gender > attribution to developmental level > negative discipline	-0.001	0.02	.848	-.039	.026
Fathers^a					
Child gender > intentional attribution	0.27	0.14	.046	.005	.540
Child gender > attribution to developmental level	-0.25	0.17	.136	-.586	.082
Intentional attribution > negative discipline	0.49	0.14	<.001	.217	.763
Attribution to developmental level > negative discipline	0.04	0.12	.698	-.185	.270
Child gender > negative discipline	-0.004	0.16	.978	-.314	.301
Child gender > intentional attribution > negative discipline	0.13	0.08	.046	.002	.308
Child gender > attribution to developmental level > negative discipline	-0.01	0.04	.742	-.092	.058
Difference in effects (fathers–mothers)^b					
Child gender > intentional attribution	0.31	—	—	.003	.643
Child gender > attribution to developmental level	-0.22	—	—	-.590	.169
Intentional attribution > negative discipline	-0.25	—	—	-.581	.145
Attribution to developmental level > negative discipline	0.05	—	—	-.208	.343
Child gender > negative discipline	-0.06	—	—	-.375	.247
Child gender > intentional attribution > negative discipline	0.14	—	—	.009	.326
Child gender > attribution to developmental level > negative discipline	-0.01	—	—	-.096	.057

Note. LL = lower limit; UL = upper limit.

^aBayesian statistics are presented for these models. Estimate represents median effect. CI represents credibility interval. ^bFrequentist statistics are presented for this model, as Bayesian estimation is not yet available. CI represents bootstrapped confidence interval.

Additionally, we found that fathers attributed misbehavior more to intentionality with boys than with girls, which was subsequently associated with more negative parenting reactions to boys' misbehavior compared to girls' misbehavior. We hereby extend previous research that also demonstrated gender differences in parental attributions as well as gender-differentiated responses to boys and girls by fathers and mothers (Maniadaki et al., 2005; Morrongiello et al., 2010; Morrongiello & Hogg, 2004), by showing that gendered attributions can actually explain gender-differentiated treatment by fathers. Thus, fathers' differential attribution of boys' and girls' misbehavior could explain differential negative parenting practices in response to boys' and girls' misbehavior. That the mediational process was different for fathers and mothers might indicate that fathers differentiate more between boys and girls when they show ambiguous child behaviors that can be interpreted as misbehavior. The lack of a significant mediation model for mothers might also be due to the lower levels of negative discipline reported by mothers (i.e., floor effect). Mothers attributed the child behaviors in the hypothetical situations slightly less to being intentional than fathers (although this difference was not significant, $p = .276$), which might indeed indicate that they interpreted the child behavior more as clumsy than as misbehavior.

Interestingly, mothers and fathers who attribute boys' misbehavior more to intentionality, also attributed it more to boys' developmental level. This could indicate they think boys' misbehavior originates both from internal causes (i.e., doing it on purpose) and external causes (i.e., too young to know better). Parents might see purposeful misbehaviors of boys as inherent to their developmental level. This finding might be specific for the preschool period in which misbehavior is highly prevalent due to children's limited self-regulation abilities (Wakschlag et al., 2007).

Study 2

Study 2 was designed to extend and partly replicate the hypothesis that parents' differential attributions of boys' and girls' misbehavior might explain parents' negative parenting in response to boys' and girls' misbehavior. Yet, the focus in Study 2 was on a different parental attribution, that is, attribution of child behavior to typicality. Typicality attributions refer to beliefs that a certain behavior is typical for the child (Johnston et al., 1998) and can be considered internal attributions (Coplan et al., 2002). Mothers and fathers have been found to attribute risky misbehaviors more to inborn factors or to being typical for boys than for girls (Hastings & Coplan, 1999; Morrongiello & Dayler, 1996; Morrongiello et al., 2010; Morrongiello & Hogg, 2004). Moreover, disruptive behaviors in general were believed to be more typical for boys than for girls (Maniadaki et al., 2003). Such internal attributions have been associated with negative affective reactions in mothers (Dix et al., 1989; Slep & O'Leary, 1998) and use of negative discipline strategies by fathers and mothers (Bugental & Corpuz, 2019; Miller, 1995).

In addition, as scholars have called for more systematic attention to mediating processes in the relation between parental attributions and parenting practices (Bugental & Corpuz, 2019), in this study, we focused on parental negative affect (i.e., frustration) as mediator. Affective components are supposed to play an important role in the attribution process (Bugental & Johnston, 2000; Eisenberg et al.,

1998), acting as both cause and consequence of the attribution process (Bugental, 1992). For this study, we examined parental emotions as consequence of the parental attributional process. From the standpoint of cognitive appraisal theory (Lazarus, 1991), the activation of emotions follows from at least some minimal appraisal of the significance and cause of ongoing events. Not surprisingly, negative parental attributions of child behavior have been associated with increased negative affect in mothers (i.e., being upset; Dix et al., 1989; defensive arousal; Bugental et al., 1993; anger and frustration; Chavira et al., 2000), but it is not yet known whether this is also true for fathers. Parents emotional responses to child behavior in turn can affect the strategies they use in response to their child's behaviors (Bugental, 1992; Mills & Rubin, 1990). Previous research showed that parental negative affect is often a precursor to harsh/coercive parenting behavior in mothers and fathers (Ateah & Durrant, 2005; Rodriguez et al., 2021; Rueger et al., 2011) or negative discipline by mothers (Dix et al., 1989; Mills & Rubin, 1990). Regarding gender differences in negative affect, mothers, but not fathers, have been found to react with more anger when sons misbehaved in a risky fashion compared to when daughters misbehaved (Morrongiello et al., 2010; Morrongiello & Hogg, 2004), which might be explained by gender differences in typicality attributions.

In sum, we examined a double mediation in which the association between child gender and negative discipline is mediated by parental attributions of child misbehavior and subsequently the level of frustration in reaction to child misbehavior (see Figure 2). We hypothesized that fathers and mothers attribute misbehaviors more to being typical for boys than for girls (Maniadaki et al., 2003; Morrongiello & Dayler, 1996; Morrongiello et al., 2010; Morrongiello & Hogg, 2004). Additionally, we expected that when parents attribute misbehavior more to being typical for boys than for girls, this would subsequently be associated with more parental frustration regarding boys (Bugental et al., 1993; Chavira et al., 2000; Dix et al., 1989) and in turn with negative parenting reactions to boys' misbehavior (Ateah & Durrant, 2005; Dix et al., 1989; Mills & Rubin, 1990; Rodriguez et al., 2021).

Method

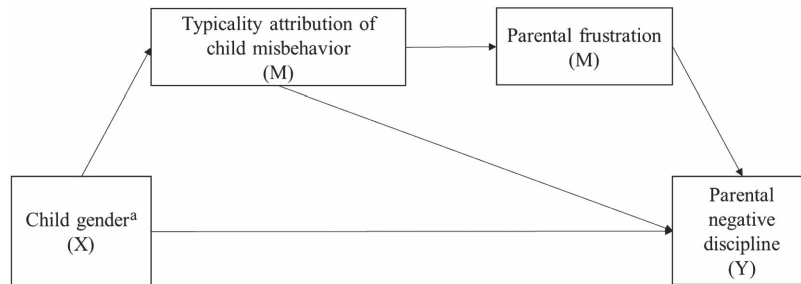
Participants

The recruitment strategy was the same as in Study 1. Complete data were available from 161 mothers and 126 fathers. In addition, there were 54 unfinished surveys. Both parents of a child could participate, which in this sample was the case for 12 couples. Recruitment and data collection took place between April 2018 and January 2022. Characteristics of the sample are presented in Table 4. There were no significant differences between parent couples and parents who participated on their own on any of the background characteristics (mothers: $ps > .317$; fathers: $ps > .117$) or study variables (mothers: $ps > .283$; fathers: $ps > .063$).

Procedure

The procedure was similar to Study 1, with parents filling out an online survey with scenarios (see Instruments). However, we decided to use less ambiguous scenarios (e.g., with clear examples of child misbehavior) in this study than in the first study, to more

Figure 2
 Study 2 Mediation Model With Child Gender (X), Parental Typicality Attributions and Frustration (M) and Parental Negative Discipline (Y)



Note. X refers to the predictor. M refers to the mediators. Y refers to the outcome variable.
^a 0 = girl, 1 = boy.

specifically capture parents' attributions of child misbehavior. In addition, in Study 2, participants were not entered in a lottery to win tickets for a theme park. They did not receive any other form of compensation either. Finally, the negative discipline measure had a different rating scale in Study 2 (see Instruments). This study was part of a line of research that received approval of the Ethics Committee of Faculty of Social and Behavioural Sciences at Utrecht University (FETC20-507).

Instruments

Scenarios. Eight scenarios were developed in which a gender-neutral child was engaged in different types of misbehavior: that is, (a) refusing to clean up, (b) refusing to put on a coat, (c) playing more wildly when asked to calm down, (d) get angry/loose temper when asked to come inside, (e) whining for the parent to join in play after parent said no, (f) whining for an ice cream after parent said no, (g) whining to play with a ball after parent said no, (h) get angry/loose temper when asked to turn of the tv. Each scenario consisted of a picture and a description of the situation (see [Supplemental Materials](#), p. 1). An example description of a scenario is: "Your child is playing wildly and accidentally knocks something over. You ask your child to be careful. Your child starts playing even more wildly." Parents are asked to imagine that they are in each scenario with their own child. The order in which the scenarios are presented is the same for all parents. Following each scenario

parents answered several questions (see below). After answering the final question, parents were presented with a fictitious compliance response from their child ("Now your child starts to help cleaning up the room"), and then proceeded to the next scenario with the same questions.

Questions. Following each scenario, parents are asked several questions about the child's behavior and parents' hypothetical reactions. The same order of questions was used to be able to test the sequence of the proposed mediation model (i.e., attribution > frustration > reaction) and each question was asked in each scenario. First, on a 6-point scale (1 = *strongly disagree*, 6 = *strongly agree*) parents indicated how much they agree with the following attribution for their child's behavior: "Such a reaction/behavior is typical for my child." Second, on the same 6-point scale, they indicated whether their child's behavior would frustrate them (i.e., "This reaction/behavior of my child would frustrate or irritate me."). Finally, parents were asked to indicate how they would react in the situation, by choosing one of eight reactions ranging from positive to negative discipline. For the present study, we specifically focused on four reactions indicating negative discipline, that is, threaten with something (e.g., "if you do not clean up, then ..."), raise my voice and speak to my child with a firm tone, use physical means to make my child comply (e.g., move my child in the right direction), physically punish my child (e.g., spank) that were dichotomously scored (0 = *not chosen by parent*, 1 = *chosen by parent*) per scenario.

Parents responses to the attribution question, frustration question, and the four parental negative discipline items were averaged across the eight scenarios. This resulted in the following variables: attribution of child behavior to typicality (Cronbach's $\alpha = .78$), parental frustration (Cronbach's $\alpha = .88$), and parental negative discipline (Cronbach's $\alpha = .41$). Higher scores on these variables indicated, respectively, attributing more typicality to a child's behavior, higher levels of parental frustration, and a greater proportion of negative discipline reactions across scenarios. A proportion score was necessary for negative discipline because parents were asked to choose 1 of 8 possible reactions, instead of rating their agreement with each type of discipline like in Study 1. A different negative discipline measure was used in Study 2 to capture the fact that in real-life parents also have to choose between several discipline options.

Table 4
 Study 2 Sample Characteristics

Characteristic	Mothers ($n = 161$)	Fathers ($n = 126$)
Child age, M (SD)	2.96 (0.90)	3.02 (0.73)
Girls, % (n)	53 (85)	45 (57)
Parent age, M (SD)	31.84 (4.43)	35.56 (5.58)
Parent education, % (n)		
No education	2 (3)	2 (2)
Secondary education	29 (47)	25 (32)
Higher vocational education	52 (83)	51 (64)
University	17 (28)	22 (28)
Married/cohabiting, % (n) ^a	98 (157)	98 (123)

^a Reference group is single.

Covariates. Similar to Study 1, the included covariates were child age, parent age, parent education, and frequency of child misbehavior. Frequency of misbehavior of parents' own child was assessed in each scenario by parents reporting on how often a similar situation occurred with their child (1 = *almost never*, 5 = *multiple times a day*). Responses were averaged across the scenarios (Cronbach's $\alpha = .75$). Boys ($M = 2.44$; $SD = 0.75$) and girls ($M = 2.29$; $SD = 0.77$) did not differ in frequency of misbehavior, $t(285) = -1.65$, $p = .100$.

Analyses

The same analytic strategy was used as in Study 1, with the only exception that a double mediation model was tested in Mplus (see Figure 2, for script, see Supplemental Materials, p. 2) separately for mothers and fathers. Two indirect effects were modeled: one from child gender via parents' typicality attribution of child misbehavior to parents' negative discipline, and one from child gender via parents' typicality attribution of child misbehavior, to parents' frustration, to parents' negative discipline. Models with a third indirect effect from child gender via parents' frustration to parents' negative discipline were not presented because the focus of this article was on mediation by attributions. Results of models with this nonsignificant indirect effect included are presented in the Supplemental Table S9, p. 5. A sample of at least 100 participants is necessary to have enough power ($>.80$) to detect a moderate effect ($\beta = .36$) in a sequential mediation model with Bayesian statistics and noninformative priors (Tofighi & Kelley, 2020).

Results

Descriptive Analyses

Table 5 displays correlations and descriptive statistics for the study variables separately for mothers and fathers, as well as for boys and girls. For mothers, attributing child misbehavior more to typicality is significantly correlated with higher levels of frustration, regardless of child gender. Furthermore, higher levels of frustration were significantly associated with higher levels of negative discipline by mothers of boys. Maternal attributions were not associated

with negative discipline. For fathers, only the association between frustration and higher levels of negative discipline with girls was significant.

Regarding differences between boys and girls, t tests revealed that mothers attributed boys' misbehavior more to typicality than girls' misbehavior, $t(159) = -2.13$, $p = .035$, whereas for fathers there was no gender difference in the attribution of misbehavior, $t(124) = -0.400$, $p = .690$. Parental frustration levels were not different between boys and girls, for both mothers, $t(159) = 0.18$, $p = .860$, and fathers, $t(110.19) = -1.58$, $p = .116$. Boys and girls were not treated differently in terms of negative discipline by mothers, $t(159) = -0.13$, $p = .895$, and fathers, $t(124) = -1.77$, $p = .078$.

Parental Attributions and Frustration Mediating the Association Between Child Gender and Negative Discipline

Table 6 (mother and father parts) presents Bayesian parameter estimates of the mediation models testing the indirect effects from child gender via parental attribution of child misbehavior and frustration on parental negative discipline. Convergence was achieved for both models (PSR factor stable and below 1.01 after 500 iterations in both maternal and paternal model). For mothers, the Bayesian CI of the double mediation effect from child gender via typicality attributions and frustration on negative discipline did not include zero and had a positive sign. This indicated that mothers made more typicality attributions with boys than with girls, which in turn was associated with higher levels of frustration and subsequently to higher levels of negative discipline with boys than with girls. The CI for the single mediation effect via mothers' typicality attributions did include zero, indicating that an indirect effect was not present. For fathers, the CI's of both indirect effects included zero, indicating that indirect effects were not present in the data.

Inclusion of the covariates lead to highly similar estimates and CI's for the indirect effects (see Supplemental Tables S5–S8), so they were not included in the final models.

Finally, the bottom part of Table 6 displays the outcomes of the difference tests from the multigroup mediation model that controlled for dependency in the data of parent couples. None of the direct

Table 5
Study 2 Correlations and Descriptive Statistics for Study Variables, Separately for Boys and Girls, Mothers and Fathers

Study variable	1	2	3	Boys <i>M (SD)</i>	Girls <i>M (SD)</i>
Mothers					
1. Typicality attribution	—	.35**	.06	3.14 (0.90)	2.86 (0.79)
2. Frustration	.30**	—	.30**	3.47 (0.59)	3.50 (1.04)
3. Negative discipline	.01	.13	—	0.20 (0.17)	0.20 (0.19)
Fathers					
1. Typicality attribution	—	.17	.07	3.06 (0.74)	3.00 (0.86)
2. Frustration	.08	—	.04	3.47 (0.80)	3.21 (0.95)
3. Negative discipline	.19	.35**	—	0.25 (0.19)	0.19 (0.16)

Note. Correlations above the diagonals (—) refer to parents of boys and correlations below the diagonal refer to parents of girls.

** $p < .01$.

Table 6

Study 2 Estimates and Credibility Intervals of the Mediation Analysis Testing the Indirect Effects From Child Gender Via Parental Typicality Attributions and Frustration on Parental Negative Discipline

Parameter	Estimate	Posterior <i>SD</i>	<i>p</i>	95% CI	
				<i>LL</i>	<i>UL</i>
Mothers^a					
Child gender > typicality attribution	0.28	0.14	.036	.021	.551
Typicality attribution > negative discipline	-0.007	0.02	.682	-.042	.029
Typicality attribution > frustration	0.36	0.09	<.001	.187	.539
Frustration > negative discipline	0.04	0.02	.012	.008	.067
Child gender > negative discipline	0.01	0.03	.808	-.050	.064
Child gender > typicality attribution > negative discipline	0.00	0.006	.694	-.015	.009
Child gender > typicality attribution > frustration > negative discipline	0.003	0.003	.048	.0001	.011
Fathers^a					
Child gender > typicality attribution	0.06	0.15	.692	-.228	.343
Typicality attribution > negative discipline	0.02	0.02	.244	-.016	.062
Typicality attribution > frustration	0.14	0.10	.154	-.055	.338
Frustration > negative discipline	0.03	0.02	.066	-.002	.068
Child gender > negative discipline	0.05	0.03	.148	-.016	.108
Child gender > typicality attribution > negative discipline	0.001	0.005	.764	-.007	.012
Child gender > typicality attribution > frustration > negative discipline	0.00	0.001	.764	-.002	.003
Difference in effects (fathers–mothers)^b					
Child gender > typicality attribution	-0.23	—	—	-.606	.143
Typicality attribution > negative discipline	0.03	—	—	-.018	.077
Typicality attribution > frustration	-0.22	—	—	-.470	.046
Frustration > negative discipline	-0.01	—	—	-.051	.041
Child gender > negative discipline	0.04	—	—	-.036	.119
Child gender > typicality attribution > negative discipline	0.003	—	—	-.010	.018
Child gender > typicality attribution > frustration > negative discipline	-0.004	—	—	-.011	.001

Note. *LL* = lower limit; *UL* = upper limit.

^aBayesian statistics are presented for these models. Estimate represents median effect. CI represents credibility interval. ^bFrequentist statistics are presented for this model, as Bayesian estimation is not yet available. CI represents bootstrapped confidence interval.

or indirect effects were significantly different between fathers and mothers.

Discussion

Partly in line with previous research assessing paternal and maternal attributions for child misbehavior in hypothetical scenarios (Hastings & Coplan, 1999; Maniadaki et al., 2003; Morrongiello et al., 2010; Morrongiello & Hogg, 2004), we found that mothers attribute misbehaviors more to being typical for boys than for girls. Additionally, mothers who attributed misbehavior more to being typical for boys than for girls, subsequently reported more frustration and in turn more negative parenting reactions to boys' misbehavior. This is in line with cognitive appraisal theory (Lazarus, 1991) that assumes the activation of emotions follows from at least some minimal appraisal of the significance and cause of ongoing events. Previous research already found evidence for parts of this mediational process for mothers, with negative parental attributions being associated with increased negative affect in parents (Bugental et al., 1993; Chavira et al., 2000; Dix et al., 1989), and negative affect being associated with negative parenting practices (Ateah & Durrant, 2005; Rodriguez et al., 2021). The present study extends this by showing evidence for the mediating role of maternal affect in the attributional process, as well as by showing the attributional process depends on child gender. Importantly, we cannot conclude that this attributional process is different between mothers and fathers because we did not find significant differences between mothers and fathers in any of the direct or indirect effects.

General Discussion

The goal of this research was to examine (a) whether mothers and fathers hold different attributions about their son's or daughter's misbehavior and (b) whether these different attributions can explain negative parenting reactions to their sons' and daughters' misbehavior. Across two quasi-experimental studies, assessing parental attributions for child misbehavior in hypothetical scenarios, fathers attributed boys' misbehavior more to being intentional, whereas mothers attributed boys' misbehavior more to being typical for the child. Furthermore, fathers' intentional attributions mediated the association between child gender and negative parenting reactions in response to child misbehavior. For mothers, the association between child gender and negative parenting reactions in response to child misbehavior was mediated by typicality attributions as well as frustration.

Even though there were some differences in the types of attributions mothers and fathers made about the misbehavior of their sons and daughters, both intentional attributions and typicality attributions can be considered internal attributions (Coplan et al., 2002; Hastings & Coplan, 1999). So, for the hypothesis that parents would make more internal attributions for boys' than girls' misbehavior there is some evidence for replication across the two studies, with Study 1 showing this difference for fathers and Study 2 revealing this for mothers. The finding that fathers attribute boys' misbehavior more to intentionality than girls' misbehavior, could indicate that they hold sons more responsible for misbehavior than girls (e.g., Bugental et al., 1998; Dix & Grusec, 1985). On the other hand,

mothers attributed boys' misbehavior more to typicality than girls' misbehavior, which could indicate that they attribute boys' misbehavior more to boys being boys (e.g., Hilton, 1991). An explanation for the higher level of intentionality and typicality attributions made with sons might be that misbehavior is more frequent for boys than for girls in the preschool period (Björkqvist, 2018; Potegal & Archer, 2004; Silverman, 2020). Frequency of misbehavior has been associated with more internal attributions (Johnston & Freeman, 1997; Wilson et al., 2006). However, in the present studies, the child's own level of misbehavior was not an influential covariate in the attributional process, and boys and girls did not differ in level of misbehavior. The gender differences in maternal and paternal attributions might also be due to the gender stereotypes that preschool boys are believed to be more agentic, dominant, and noisy than girls (Koenig, 2018). Such gender-stereotyped beliefs (e.g., "Boys will be boys") convey internal and stable causes for boys' misbehavior (Reyna, 2000).

Moreover, for both mothers and fathers, we found that the differential attributions parents make to explain sons' and daughters' misbehavior could elucidate why they responded differently to the misbehavior of their sons and daughters. More specifically, more internal attributions for boys' misbehavior were associated with more negative parenting responses to boys' misbehavior in fathers (Study 1) and with more frustration and subsequently more negative parenting in mothers (Study 2). Overall, these findings are in line with the prediction of gender schema theories that parents would act in ways that are consistent with their gender schemas (Bem, 1983; Martin, 1991). So, for this prediction, there is some evidence for replication across studies, even though in Study 1, evidence was found for fathers and in Study 2 for mothers. Previous research already demonstrated that parents' internal attributions for child misbehavior are associated with negative maternal affect (Dix et al., 1989; Slep & O'Leary, 1998) and an increased likelihood that mothers and fathers would respond with negative parenting practices (Bugental & Corpuz, 2019; Miller, 1995). The present findings extend this research by showing that this attributional process can be gender-differentiated (i.e., different for boys and girls). Yet, gender-differentiated attribution of misbehavior to developmental level does not seem to play a role in parents' different treatment of boys and girls, as this attribution did not mediate associations between child gender and negative discipline.

Overall, we found more similarities than differences between mothers and fathers in how parental attributions mediated the association between child gender and parental responses to child misbehavior. This implies that the gender-differentiated attributional process is rather similar for mothers and fathers, which is consistent with previous research examining the attributional process in mothers and fathers (Bugental & Corpuz, 2019; Miller, 1995; Park et al., 2018). Although not significantly different between mothers and fathers, we did find that mothers' negative emotions (i.e., frustration) were a mechanism underlying the association between the higher level of internal attributions made with boys and the higher level of negative parenting in response to boys' misbehavior. There are some indications in the literature that maternal negative affect is more strongly linked to negative parenting practices than paternal negative affect (Le et al., 2017), as well as risky misbehavior eliciting stronger gender-differentiated emotions in mothers than in fathers (Morrongio et al., 2010).

Yet, it is important to keep in mind that the single and double mediational processes were examined in different experiments and samples, and with different types of attributions. So, more research is necessary on differences between mothers and fathers in the gender-differentiated attributional process.

Unexpectedly, in Study 2, fathers' typicality attributions did not mediate the association between child gender and negative parenting practices (neither directly nor via their level of frustration). It appears that fathers of sons do not differ from fathers of daughters in how much they attribute misbehavior to being typical for their child, whereas mothers did use typicality attributions more for sons' than for daughters' misbehavior. Previous research also demonstrated that fathers did not perceive boys as having more externalizing problems than girls, whereas mothers and teachers reported clear gender differences (Webster-Stratton, 1996). It might be that fathers are more tolerant of misbehavior from sons (Webster-Stratton, 1996), or that misbehavior from sons is less salient to them (Ridgeway & Correll, 2004), and fathers therefore differentiate less between boys and girls in the attribution of misbehavior to typicality. In addition, fathers might not interpret boys' misbehavior as misbehavior but see it as part of the father-child activation relationship that is characterized by rough-and-tumble play, challenge, and competition (Paquette, 2004).

The findings from this research need to be viewed in light of some limitations. First, in both studies a between-family quasi-experimental design was used, in which parental attributions and responses to child misbehavior were compared between parents of sons and parents of daughters. Additionally, our samples included a limited number of parent couples (mother and father) from the same families. Consequently, we could not examine whether findings for mothers and fathers were the same between-families and within-families. Such between-family designs are hampered by the fact that it is impossible to rule out that the families differ on other characteristics instead of parent gender or the gender of the child they imagined in the hypothetical scenarios (Endendijk et al., 2018). Although the inclusion of background variables as covariates in our models did not change the results, we still recommend future research to examine the gender-differentiated attributional process within-families with a mother and a father that have both a son and a daughter to better control for between-family differences. Second, the internal consistency of the negative discipline items in the second study was low, which might be due to the dichotomous answer-scale and the high number of options parents could choose from as a reaction to child behavior. Third, the design of the second study only allowed for examining parental emotions as consequence of parental attributions. Additional research is necessary to test whether parental frustration can act as both cause and consequence of the gender-differentiated attribution process (Bugental, 1992). Fourth, the participants were generally highly educated and all but one mother had the Dutch nationality. Therefore, findings might not be generalizable to families with more diverse educational or ethnic backgrounds. Similarly, no data were available on the gender identity and sexual orientation of parents. Gender-differentiated attribution might be less pronounced in nonheterosexual families or parents who do not identify as cisgender. Further research on the gender-differentiated attribution process is therefore necessary with diverse samples in terms of gender, sexual orientation, educational levels, ethnicity, as well as family composition. Finally, additional research is needed

on the gender-differentiated attributional processes for other types of behavior and emotions on which gender differences are found (e.g., prosocial behavior, anger, sadness, anxiety), as well as on parents' attributions of the actual behavior of their children instead of hypothetical behaviors.

To conclude, this quasi-experimental research demonstrated that mothers and fathers make differential inferences about the causes of their son's and daughter's behaviors, attributing son's misbehavior more to internal factors than girls' misbehavior. In turn, such internal attributions for boys' misbehavior were associated with eliciting more frustration in mothers, and negative parenting practices in both mothers and fathers. These gender-differentiated attributions thus seem to underlie how parents respond to boys' and girls' misbehavior, and thus, more broadly seem to play a role in parents' gender socialization practices. Yet, both the type of internal attributions (i.e., typicality, intentionality) and the underlying mechanism for this gender-differentiated attributional process (i.e., frustration) seems to be different for mothers and fathers. This signals the need for examining different types of attributions and underlying emotions to further elucidate how and why fathers and mothers attribute boys' and girls' (mis)behavior to different causes. These findings also suggest it might be important to create awareness in parents of this gender-differentiated attributional process in order to foster more egalitarian parental treatment of boys and girls.

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