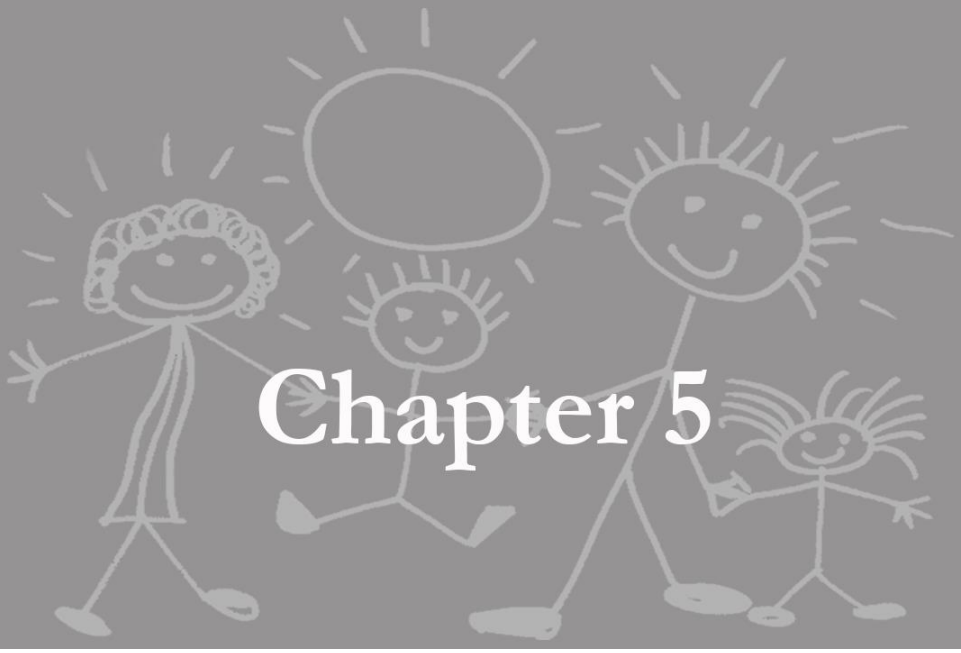
Focus on feelings. Parental emotion socialization in early childhood

Pol, L.D. van der



Chapter 5

Longitudinal Relations Between Fathers' and Mothers' Psychopathology Symptoms, Parental Emotion Socialization, and Child Social-Emotional Development

Lotte D. van der Pol, Marleen G. Groeneveld, Judi Mesman, Joyce J. Endendijk, Sheila R. van Berkel, Elizabeth T. Hallers-Haalboom, and Marian J. Bakermans-Kranenburg

An adapted version of this chapter is submitted for publication

ABSTRACT

In this study we tested whether the relation between fathers' and mothers' psychopathology symptoms and child social-emotional development was mediated by parents' use of emotion talk about negative emotions in a sample of 241 two-parent families. Parents' internalizing and externalizing problems were measured with the Adult Self Report and parents' emotion talk was observed while they discussed a picture book with their children (child age: 3 years). Children's parent-reported internalizing and externalizing problems and observed prosocial behaviors were assessed at the age of 3 years and again 12 months later. We found that mothers' use of emotion talk partially mediated the positive association between fathers' internalizing problems and child internalizing problems. Fathers' internalizing problems predicted more elaborative mother-child discussions about negative emotions, which in turn predicted more internalizing problems in children a year later. Mothers' externalizing problems directly predicted more internalizing and externalizing problems in children. These findings emphasize the importance of examining the consequences of parental psychological difficulties for child development from a family-wide perspective, and point to a bias toward negative emotions in mothers during parent-child discussions when fathers have psychological difficulties. Mothers' heightened focus on negative emotions in the interaction with their children can in turn elicit internalizing problems like rumination in preschoolers.

Keywords: parental psychopathology symptoms, emotion socialization, fathers, mothers, child social-emotional development

INTRODUCTION

Children who grow up in families characterized by parental psychological difficulties are at increased risk for developing social-emotional behavior problems (see for meta-analytic evidence Connell & Goodman, 2002; Goodman et al., 2011). One of the key mechanisms through which parental psychological difficulties affect child social-emotional development is maladaptive parenting (e.g., Goodman & Godlib, 1999). Given that psychopathology symptoms often reflect disturbances in emotional functioning (Kring & Bachoroswki, 1999), one area of parenting that might be particularly prone to the impact of parental psychological problems is emotion socialization, i.e., parents' emotional expressiveness, their reactions to child emotions, and parental emotion talk (Eisenberg, Cumberland, & Spinrad, 1998). Indeed, studies have found that parents with psychological difficulties show less optimal emotion socialization practices such as low sensitive responsiveness to negative child emotions (e.g., Zelkowitz, Papageorgiou, Bardin, & Wang, 2009). Parental emotion socialization in turn plays a central role in several domains of child social-emotional development (e.g., Denham, Bassett, & Wyatt, 2010). However, the indirect effect of parental psychopathology symptoms on child social-emotional development via parents' emotion socialization behaviors has rarely been studied. Moreover, parents' psychological difficulties may not only impair their own emotion socialization behaviors. Theory and research suggest that psychopathology symptoms in one of the parents also influences the other parent's parenting behavior (e.g., Ponnet et al., 2013), but most studies include only mothers. In this study we examined the links between fathers' and mothers' psychopathology symptoms, the degree to which parents elaborate on negative emotions with their preschoolers, and preschoolers' social-emotional functioning using a longitudinal design.

A large body of research has demonstrated the (prospective) link between parental psychopathology symptoms and impaired child social-emotional development (see for meta-analytic evidence Connell & Goodman, 2002; Goodman et al., 2011; Kane & Garber, 2004). For example, various parental psychopathology symptoms such as depression, anxiety, and antisocial traits have been related to children's internalizing problems such as withdrawn behavior and externalizing problems such as aggression (e.g., Breaux, Harvey, & Lugo-Candelas, 2013; Papp, Cummings, & Goeke-Morey,

2005; Connell & Goodman, 2002). Furthermore, parental psychopathology symptoms have been associated with impaired social skills of children, including social withdrawal and a lack of prosocial behavior (e.g., Elgar, Mills, McGrath, Waschbusch, & Brownridge, 2007; Lieb et al., 2000). From the perspective of developmental psychopathology it has been proposed that in addition to biological mechanisms (e.g., genetic inheritance; Tsuang & Faraone, 1990) and stressful contextual factors (e.g., marital conflict; Cummings, Keller, & Davies, 2005), parental psychopathology symptoms affect child development via impaired parenting (Goodman & Godlib, 1999). Consistent with this hypothesis, there is ample evidence that depression in both fathers and mothers is associated with various maladaptive parenting behaviors such as low parental warmth and responsiveness to child signals, and increased levels of hostility toward the child (see for meta-analytic evidence Lovejoy, Graczyk, O'Hare, & Neuman, 2000; Wilson & Durbin, 2010). In addition, several studies have shown that other parental psychological disorders such as schizophrenia and anxiety disorders are related to dysfunctional parenting practices, including a lack of parental monitoring and high negative expressivity toward the child, although it should be noted that most of these studies focused only on mothers (see Berg-Nielsen, Vikan, & Dahl, 2002 for a review).

Many symptoms of psychopathology reflect disturbances in emotion processing and emotion regulation (Kring & Bachoroswki, 1999). For instance, depression and schizophrenia are marked by a flattened affect (e.g., Levin, Hall, Knight, & Alpert, 1985), while anxiety disorders are characterized by the intense experience of negative emotions (e.g., Mennin, Heimberg, Turk, & Fresco, 2002). Further, symptoms of antisocial personality disorder have been related to higher levels of impulsivity and feelings of aggression (Fossati et al., 2004). Given the close link between psychopathology symptoms and emotional functioning, parents' psychological difficulties may particularly impair their emotion socialization behaviors, i.e., parents' emotional expressiveness in the presence of their children, parents' responses to child emotions, and parent-child discussions of emotions (Eisenberg et al., 1998). Impaired parental emotion socialization behaviors may in turn affect children's social-emotional development, suggesting that parental emotion socialization acts as a mediator in the relation between parental psychopathology symptoms and child outcomes.

There is ample evidence for the direct paths that form the basis for this potential mediation effect, namely (1) the path from parents' psychopathology symptoms to impaired parental emotion socialization behaviors and (2) the path from impaired emotion socialization to maladaptive child social-emotional development. Regarding the first path, several studies have found that parents with symptoms of psychopathology express more negative emotions in the home (e.g., Cummings, Cheung, & Davies, 2013; Kaitz & Maytal, 2005) and are less sensitive to their child's emotions (e.g., Zelkowitz et al., 2009). Although research on the relation between psychopathology symptoms and parental emotion talk is scarce, there is some observational evidence that mothers with psychopathology symptoms are more likely to dwell on negative feelings and to repeatedly discuss stressful experiences with their children (i.e., co-rumination) than mothers without psychopathological symptomatology (e.g., Grimbos, Granic, & Pepler, 2013).

The second path representing the influence of parents' emotion socialization behaviors on various domains of child social-emotional development has also been well-documented, albeit mostly for mothers (e.g., Eisenberg et al., 2003; Grimbos et al., 2013) and to a much lesser extent for fathers (e.g., Denham et al., 2010). For example, mothers' positive emotional expressivity and supportive reactions to child emotions have been linked to higher levels of self-regulation and positive affect in children (e.g., Kogan & Carter, 1996; Eisenberg et al., 2003). Regarding parental emotion talk, there is evidence that mothers' high emphasis on negative emotions like fear and sadness during parent-child discussions can lead to negative child outcomes such as depressed mood and impaired social skills (Denham, Mitchell-Copeland, Strandberg, Auerbach, & Blair, 1997; Grimbos et al., 2013).

There is also some empirical evidence supporting the mediating role of parental emotion socialization in the relation between parents' psychopathology symptoms and child social-emotional development. In two studies mothers' depressive symptoms were negatively associated with their responsiveness to child emotions (Feng, Shaw, Skuban, & Lane, 2007; Silk et al., 2011). In these studies lower maternal responsiveness was related to children's higher levels of internalizing problems (Silk et al., 2011) and negative affect (Feng et al., 2007). However, neither study formally tested mediation and both focused only on mothers' psychopathology symptoms. To our knowledge there is only one study that tested a mediational pathway

from both fathers' and mothers' psychopathology symptoms to child social-emotional behavior through parental emotion socialization using a longitudinal design. In this study Cummings and colleagues (2013) found that both parents' depressive symptoms predicted more child internalizing problems over time as a function of parents' self-reported negative emotional expressiveness. Although these findings suggest that parental emotion socialization indeed mediates the relation between both parents' psychopathology symptoms and child social-emotional development, studies using observational data of parental emotion socialization are needed, because parents' psychological difficulties may bias their report on their emotional expressiveness in the home. In addition, previous studies suggesting a mediating role of emotion socialization focused on more implicit emotion socialization practices of which parents are not or only partially aware, i.e., parents' direct responses to child emotions and their own emotional expressiveness, and little is known about more explicit emotion socialization practices such as parental emotion talk.

Parental psychopathology symptoms may not only affect child social-emotional development through impaired emotion socialization of that particular parent. It is also conceivable that psychological difficulties in one of the parents affect emotion-related parenting practices of both parents, which increases the risk for maladaptive child social-emotional development. According to family systems theories individual family members as well as family sub-systems exert a continuous and reciprocal influence on each other's daily functioning (Cox & Paley, 1997). In a related vein, the cross-over hypothesis proposes that a family member's affective state influences all family interaction patterns due to the emotional interdependence between family members (Ponnet et al., 2013; Larson & Almeida, 1999). Although there is indeed increasing evidence that one parent's psychopathology symptoms affect the other parent's parenting behaviors (e.g., Beestin, Hugh-Jones, & Gough, 2014; Malmberg & Flouri, 2011; Ponnet et al., 2013), it remains unclear whether this effect is negative or positive. Some studies have found evidence for a negative impact of fathers' and mothers' psychopathology symptoms on their partners' supportive parenting characteristics (Goodman, 2008; Malmberg & Flouri, 2011; Ponnet et al., 2013). In contrast, there are also studies suggesting that parents (mostly fathers) try to compensate for the lower-quality parenting of their

psychologically disturbed partners by intensifying their own positive interactions with their children (e.g., Beestin et al., 2014; Edhborg, Lundh, Seimyr, & Widstrom, 2003). These mixed findings may be due to the different types of samples that were involved. Generally, studies that found a negative effect of one parent's psychological difficulties on the other parent's childrearing behaviors focused on parental psychopathology symptoms in a community-based sample, whereas studies finding evidence for compensatory mechanisms often focused on small groups of families in which one of the parents was diagnosed with depression. Perhaps parents feel more inclined to intensify positive interactions with their children when their partners suffer from severe psychological problems due to the unmistakable negative consequences of parental psychopathology for the ill parent's childrearing behaviors, notwithstanding the high levels of family stress the other parent is likely to encounter.

Despite the fact that both theory and research suggest that psychopathology symptoms in one of the parents affect *both* parents' emotion-related parenting behaviors, most studies examining the association between parental psychopathology symptoms and emotion socialization focus on a single parent per family, mostly the mother. The same is true for studies examining the effect of parental emotion socialization on child social-emotional development. In this study we investigated the links between fathers' and mothers' internalizing and externalizing problems, the degree to which they elaborate on negative emotions while reading a picture book with their preschoolers, and early child internalizing and externalizing problems and prosocial behaviors, using a within-family longitudinal design. Based on the literature, we test three hypotheses. First, because we examined a community-based sample we expected that fathers' and mothers' internalizing and externalizing problems would be positively related to their own as well as their partners' level of elaborateness during parent-child discussions of negative emotions. Second, we expected that more elaborative parent-child discussions of negative emotions would be positively related to child internalizing and externalizing problems, and negatively related to child prosocial behavior. Third, we expected that fathers' and mothers' use of emotion talk would mediate the relation between either parent's psychopathology symptoms and child social-emotional functioning.

METHOD

Sample

This study is part of the longitudinal research project *Boys will be boys?*, which examines the influence of gender-differentiated socialization on the social-emotional development of girls and boys in the first 4 years of life. The current paper focuses on the associations between fathers' and mothers' psychopathology symptoms, the degree to which they elaborate on negative emotions during parent-child discussion of a picture book, and the social-emotional development of preschoolers (51% boys). This paper reports on data from the third wave, when the children were on average 3.1 years old (SD = 0.05), and the fourth wave, when the children were on average 4.0 years old (SD = 0.11), which will be referred to as the 3-year wave and the 4-year wave, respectively. All children were the second-born child in the family.

Families with two children in the Western region of the Netherlands were selected from municipality records. Families were eligible for participation if the second-born child was around 12 months of age at the time of recruitment and the oldest child was around 2 years older. Exclusion criteria were single parenthood, severe physical or intellectual impairments of parent or child, and having been born outside the Netherlands and/or not speaking the Dutch language. Between April 2010 and May 2011 eligible families were invited by mail to participate in the study. Both parents were asked to participate in one home visit each per year for a period of 4 years. In addition to the home observations, participation in the study included computer testing and filling in questionnaires. Of the 1,249 eligible families 31% (n = 390) agreed to participate. The participating families did not differ from the non-participating families on age of fathers (p = .13) or mothers (p = .83), the educational level of fathers (p = .10) or mothers (p = .17), and the degree of urbanization of the place of residence (p = .77).

At the time of the 4-year wave, 18 families dropped out due to emigration, family issues, considering participation as too demanding, or because they could not be reached by phone or mail. For the current analyses families were excluded when one or both of the parents had missing data for one or both of the pertinent scales for self-reported parental psychopathology symptoms (n = 104), or when they did not read the Emotion Picture Book with their children (n = 2). Further, for each wave families in which both parents had missing data for one or both of the pertinent scales for parent-

reported child problem behavior were excluded (n = 20), as well as families of which no observational data was available on child prosocial behavior (n = 5). If data on child behavior was available from one of the parents (child problem behavior) or from one of the two home visits (child prosocial behavior), this was taken as the best estimate of the missing scores per wave. Our main findings were similar when these families were excluded from the analyses.

The final sample consisted of 241 families. The participating families did not differ from the excluded families regarding age of mothers at the 4-year wave, degree of urbanization of residence, and fathers' and mothers' educational level (all ps > .05). However, fathers in the participating families were slightly older than fathers in the excluded families at both waves (ps < .01) and mothers were slightly older than mothers in the excluded families at the 3-year wave (p < .05).

At the 3-year wave, fathers were between 28 and 65 years old (M = 39.3, SD = 5.4) and mothers were aged between 27 and 48 years (M = 36.3, SD = 3.9). Most of the parents had finished academic or higher educational schooling (fathers: 77%, mothers: 81%). At each wave, most of the participating parents were married or had a registered partnership or cohabitation agreement (> 90%). At the time of the 4-year wave a total of five couples were divorced.

Procedure

At both waves, each family was visited twice within about 2 weeks, once with the father and the children and once with the mother and the children. The order of father and mother visits was counterbalanced. The participating families received a yearly gift of 30 Euros and small presents for the children. Before each home visit, both parents were asked to individually complete some questionnaires. If parents had not completed the questionnaires at the second home visit, they were send up to two reminders within 4 weeks after this visit. During the home visit, parent-child interactions and sibling interactions were filmed. All visits were conducted by pairs of trained students. Informed consent was obtained from all families. Ethical approval for this research was provided by the Research Ethics Committee of the Institute of Education and Child Studies of Leiden University.

Measures

Parental psychopathology symptoms. At the 3-year wave, the scales for Internalizing Problems and Externalizing Problems from the Adult Self Report (ASR; Achenbach & Rescorla, 2003) were used to measure parental psychopathology symptoms. Fathers and mothers were asked to fill in on a 3-point scale whether they considered any of the 74 items on the internalizing and externalizing scale (e.g., "I cry a lot", "I am mean to others") to be typical of themselves during the past 6 months. The internal consistencies of the internalizing scale (39 items) were .88 for fathers and .90 for mothers. The internal consistencies of the externalizing scale (35 items) were .81 for fathers and .79 for mothers.

Emotion talk. At the 3-year wave, fathers' and mothers' use of emotion talk was measured with a newly developed emotion picture book. This book consists of eight pictures without text or storyline, with drawings of children showing the following facial emotion expressions: anger, fear, sadness, and happiness. In the current study we focused on the emotions anger, fear, and sadness. Each emotion was shown twice; once within a context indicating the cause of the emotion (e.g., deep water causing fear and a broken toy causing sadness) and once displaying only the face of the child. The children on the pictures were drawn in such a way that they were gender neutral (i.e., ambiguous gender, half-long hair). Two versions of the Emotion Picture Book were developed because the children would read the book twice (once with father, once with mother, in counterbalanced order). The two book versions included drawings of the same children but with different hair colors and clothes, and comparable context pictures (e.g., a broken swing or a broken scooter causing sadness). To examine whether the emotions in the Emotion Picture Book were interpreted as they were intended, we asked 67 respondents (36% male) between 20 and 63 years of age (M = 34.0, SD = 12.9) with a similar socioeconomic background as the participants in the main study to label the emotions of the children in the pictures. The depicted emotions were labeled correctly in the vast majority of the cases (79%-97%, mean: 92%).

During the home-visits, fathers and mothers were asked to discuss the pictures in the Emotion Picture Book with their child without further directives. Five minutes were allotted for this discussion, but the task could be ended earlier if the parent had finished the book. A coding system was

developed for coding parents' emotion talk, focusing on three aspects of emotion talk: 1) *talking about emotion*, referring to parental comments about the emotions shown in the pictures. 2) *talking about emotion behavior*, indicating parental statements about the behavioral expression of emotions. 3) *talking about the cause* of the emotion, referring to comments about contextual factors that can cause an emotion. For each of these three aspects we coded the presence (score 1) versus absence (score 0) of the following types of comments per picture: asking questions, labeling, referring to the child's experiences, referring to others' experiences (see Table 1 for examples). The potential score range of the total score for use of emotion talk was 0-12 with a score of 12 referring to the presence of each of the four types of emotion talk for each of the three aspects of emotion talk.

Intercoder reliability was established on 30 observations. Intraclass correlations (single rater, absolute agreement) for all pairs of the 16 coders were higher than .70. Fathers and mothers within the same family were coded by different coders to guarantee independency among ratings.

Table 1. *Examples of Emotion Talk.*

Variable of interest		Example
Emotion Talk		
Talking about emotion		
	Asking	"How does she feel?"
	Labeling	"This child is angry."
	Involving child	"You got angry too yesterday."
	Involving other	"Your sister is sad sometimes."
Talking about emotion behavior		
	Asking	"Is he crying?"
	Labeling	"She is smiling."
	Involving child	"He looks just like you, always smiling."
	Involving other	"He is screaming, just like John."
Talking about the cause		
	Asking	"Why is he screaming?"
	Labeling	"Her swing is broken, that is why she is so sad."
	Involving child	"Are you afraid of the deep water?"
	Involving other	"Lisa gets angry too when she is not allowed to eat candy."

Child behavior problems. At both waves, the scales for Internalizing Behavior and for Externalizing Behavior from the Child Behavior Checklist for preschoolers (CBCL/1½-5; Achenbach & Rescorla, 2000) were used to measure behavior problems of the child. Both fathers and mothers were asked to indicate whether they had observed any of the described 55 behaviors on the internalizing and externalizing scale in the last 2 months on a 3-point scale (0 = *not true*, 1 = *somewhat or sometimes true*, 2 = *very true or often true*). The internal consistencies ranged from .76 to .80 for the internalizing scale (19 items) and from .90 to .93 for the externalizing scale (36 items). At every wave, the CBCL scores of fathers and mothers were significantly correlated for each scale (.42 - .44, *p*s < .01). To obtain a composite measure for children's behavior problems, father and mother scores were averaged for each scale at each wave.

Child prosocial behavior. At both waves, sharing was used as a measure of child prosocial behavior. The children received a small box of raisins (a common children's treat in the Netherlands) and were instructed by the experimenter to share these with their older sibling. The sharing task was administered during both the father and mother visits. During the first minute of the task, the parent was present, but was instructed not to intervene. After this minute, the parent was free to intervene if he or she considered this necessary. Here we focus on child prosocial behavior during the whole task. Using child prosocial behavior during the first minute of the task, based on a smaller sample in which neither parent interfered in the first minute at both waves (n = 124), yielded similar results as using child prosocial behavior throughout the task.

The task was filmed and the numbers of treats eaten by the child and shared with his or her older sibling were counted. Treats shared with or by the parent were not counted; when a child took treats back from the older sibling, these were subtracted from the total number of shared treats. Parents within the same family were coded by different coders to guarantee independency among ratings. Interobserver reliability was adequate; the intraclass correlations (single rater, absolute agreement) between all pairs of 15 independent coders were (equal to or) above .70.

From the total number of treats that were eaten by the two children, we calculated the proportion of treats given to the older sibling. Sharing behavior was significantly correlated between the visit with the father and the visit with

the mother at the 3-year wave (r = .29, p < .01) as well as the 4-year wave (r = .22, p < .01). We therefore used a mean score for children's sharing behavior at each wave.

Data-analysis

All measures were inspected for possible outliers that were defined as values more than 3.29 *SD* above or below the mean (Tabachnick & Fidell, 2012). Outliers were found for fathers' externalizing problems (n = 3), mothers' externalizing problems (n = 2), maternal emotion talk (n = 2), child internalizing problems at the 3-year wave (n = 2) and the 4-year wave (n = 1), and child prosocial behavior at the 4-year wave (n = 1). The outlying values were winsorized, meaning that they were given a score that was no more extreme than the most extreme value that fell within the accepted range of a normal distribution. Because both parents' internalizing problems were positively skewed, logarithmic (log10) transformations of scores were used to approach normal distributions (Tabachnick & Fidell, 2012).

Pearson correlation coefficients were computed to examine the associations between all variables. To examine whether fathers' and mothers' internalizing and externalizing problems had an indirect effect on child social-emotional functioning through parents' use of emotion talk about negative emotions, a set of mediation analyses was performed. Therefore, the Preacher and Hayes approach to test mediation was applied using the macro package for SPSS available online, which allows for multiple predictors and mediators (Hayes, 2013). This method adopts the bootstrapping approach that does not assume that the sampling distributions of the indirect effect are normal, unlike the Sobel test (Preacher & Hayes, 2004). Sampling distributions are estimated from random samples based on the original data. Five thousand bootstrap resamples were taken and 95% BC confidence intervals were computed (Preacher & Hayes, 2008).

RESULTS

Preliminary analyses

The means, standard deviations, and bivariate correlations of the studied variables are presented in Table 2. Parental internalizing and externalizing problems were positively correlated for fathers as well as for mothers. In addition, fathers' and mothers' psychopathology symptoms were positively

correlated, and fathers' internalizing problems were positively related to maternal emotion talk. Children's behavior problems were highly correlated between waves and their scores on the internalizing and externalizing problem scales were positively associated both within and across waves. In addition, children's prosocial behaviors at the 3-year wave were positively related to their internalizing problems at the 4-year wave. Fathers' and mothers' psychopathology symptoms were positively associated with children's internalizing and externalizing problems. Further, maternal emotion talk was positively associated with child internalizing problems at the 4-year wave.

Table 2. *Summary of Means, Standard Deviations, and Correlations for all Study Variables (n = 241).*

	1	2	3	4	5	6	7.	8.	9.	10.	11.	*M*	*SD*
3-year wave													
1. Father INT												9.11	7.21
2. Father EXT	.52**											7.55	4.99
3. Father EM	.04	.09										2.50	0.73
4. Mother INT	.24**	.15*	.10									10.44	8.31
5. Mother EXT	.28**	.16*	.11	.63**								7.34	4.76
6. Mother EM	.17**	.09	.16*	.04	-.02							2.59	0.74
7. Child INT	.30**	.26**	-.03	.19**	.18**	.08						5.18	3.31
8. Child EXT	.42**	.37**	.08	.30**	.38**	.09	.45**					20.23	8.61
9. Child PRO	.02	-.06	.00	.07	.02	.04	.06	.03				0.50	0.16
4-year wave													
10. Child INT	.36**	.20**	-.03	.24**	.29**	.15*	.68**	.39**	.14*			4.52	3.22
11. Child EXT	.35**	.30**	.02	.26**	.36**	.07	.38**	.72**	.04	.53**		16.46	8.68
12. Child PRO	-.10	.01	.01	-.03	-.09	.10	.03	.00	.03	-.07	-.05	0.53	0.15

Note. INT (internalizing problems), EXT (externalizing problems), EM (emotion talk) PRO (prosocial behavior). To facilitate interpretation, the nontransformed scores are presented. Child prosocial behavior is the proportion of treats shared with the older sibling.
* $p < .05$. ** $p < .01$.

Mediation model

Using the SPSS macro package (Hayes, 2013), we examined whether fathers' and mothers' psychopathology symptoms at the 3-year wave had an indirect effect via either parent's use of emotion talk about negative emotions at the 3-year wave on child internalizing and externalizing problems and prosocial behaviors at the 4-year wave, while controlling for these child behaviors a year earlier. Because the macro package allows for multiple predictors and mediators in a single model, a total of three regression analyses were performed to test the mediation hypothesis for each of the child outcome behaviors (internalizing, externalizing, and prosocial) including fathers' and mothers' internalizing and externalizing problems as predictors and fathers' and mothers' emotion talk as mediators. In the mediator variable model, which was the same for all three analyses (predicting fathers' emotion talk and mothers' emotion talk from each parent's internalizing problems and externalizing problems, controlling for child behavior at the 3-year wave), fathers' internalizing problems positively predicted maternal emotion talk about negative emotions (B = 0.36 - 0.38, SE = 0.16, ps < .01). In the first dependent variable model, mothers' emotion talk predicted more child internalizing problems (B = 0.12, SE = 0.06, p < .05). These results suggest that maternal emotion talk mediates the relation between fathers' internalizing problems and children's internalizing problems. Indeed, the indirect path from fathers' internalizing problems to child internalizing problems through maternal emotion talk was significant (B = 0.04, SE = 0.03, BC CI = 0.003, 0.14). The direct effect of fathers' internalizing problems on child internalizing problems was significant as well (B = 0.38, SE = 0.14, p < .01). Figure 1 shows the complete mediation model for child internalizing problems. Regarding children's externalizing problems and prosocial behaviors, the indirect paths from fathers' and mothers' psychopathology symptoms through either parent's use of emotion talk were not significant.

In addition to the direct and indirect effects of fathers' internalizing problems, mothers' externalizing problems had a direct effect on child internalizing and externalizing problems both with and without controlling for both parents' emotion talk. That is, more externalizing problems of the mother predicted more internalizing (B = 0.03, SE = 0.01, ps < .05) and externalizing problems of the child (B = 0.21 – 0.22, SE = 0.11, ps < .05). We

found no effects of either parent's psychopathology symptoms on child prosocial behavior.

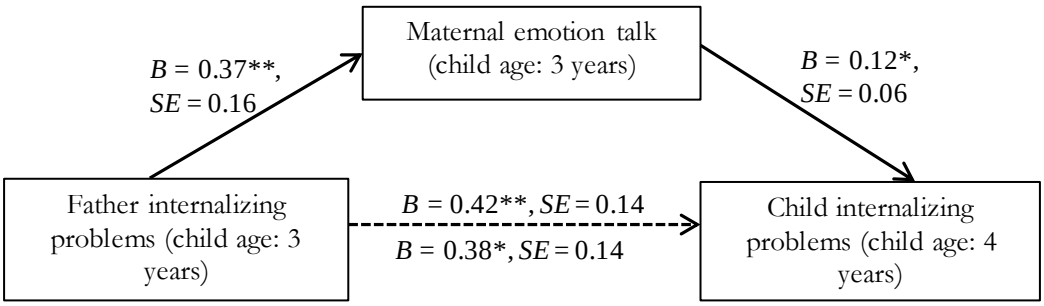


Figure 1. Mediation Model Predicting Child Internalizing Problems at 4 Years of Age From Fathers' Internalizing Problems Through Maternal Emotion Talk About Negative Emotions, Both at 3 Years of Age (n = 241).

Note. The indirect effect of fathers' internalizing problems is presented while controlling for child internalizing problems at age 3 years, fathers' and mothers' psychopathology symptoms, and both parents' emotion talk. The results below the dotted arrow refer to the relation between fathers' internalizing symptoms and child internalizing behavior controlling for parental emotion talk. Total effects model (including predictor and control variables): R^2 = 0.52. Mediator variable model (predicting mediator from predictor variables): R^2 = 0.03. Dependent variable model (including predictor, control, and mediator variables) R^2 = 0.53.

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

DISCUSSION

Our study provides insight in the intergenerational transmission of parental psychopathology to child behavior problems via emotion socialization. Mother-child discussions of negative emotions when children were 3 years of age partially mediated the positive relation between fathers' internalizing psychological problems at age 3 years and child internalizing problems a year later. More internalizing problems of the father predicted more elaborative mother-child conversations about negative emotions, which, in turn, predicted more child internalizing problems. Further, more externalizing problems of the mother directly predicted more internalizing and externalizing problems in preschoolers.

Contrary to our expectations, we found no relation between fathers' and mothers' psychopathology symptoms and their own use of emotion talk with their preschoolers. This finding might be due to the fact that most parents in our study were highly educated, which can result in parents' higher awareness of their own psychological issues and the potential consequences of these

issues for their child's social-emotional development. This awareness may, in turn, stimulate parents to shield their children from their psychological difficulties, thus preventing a spill-over effect of parents' psychopathology symptoms to their parenting skills. Indeed, there is evidence that parental educational level acts as an important protective factor in the association between parental psychopathology and maladaptive parenting (e.g., Greeff, VanSteenwegen, & Ide, 2006; Serbin et al., 1998).

Although we found no association between parents' symptoms of psychopathology and their own use of emotion talk, fathers' internalizing problems did predict more elaborative mother-child conversations about negative emotions. Parents whose partners have psychological problems often experience high levels of family stress (Logan, 2011), which increases the risk for maladaptive parent-child interaction patterns such as parent-child co-rumination, which refers to excessively discussing negative feelings, stressful events, and personal issues (Grimbos et al., 2013). In a related vein, consistent with theories on emotional contagion, according to which intimate partners are highly vulnerable to each other's emotions (Goodman & Shippy, 2002), it could be that mothers are biased toward negative emotions due to their partners' psychological difficulties, leading mothers to elaborate more on these emotions with their children.

The fact that fathers' use of emotion talk was not related to mothers' psychopathology symptoms may be due to our focus on the way parents *talk* about emotions with their children rather than the way parents express their emotions and their reactions to child emotions. Although previous studies have shown that mothers' psychological difficulties influence fathers' parenting practices in terms of affect expression during parent-child interactions and sensitive responses to child signals (e.g., Goodman, 2008; Ponnet et al., 2013), these studies did not include parent-child discussions of emotions. A large body of research has shown that women talk more about their emotional experiences with others than do men (for a review see Brody & Hall, 2008). There is also evidence that mothers are more likely than fathers to discuss family-related issues (e.g., marital conflict) with their children (Peris, Goeke-Morey, Cummings, & Emery, 2008). These findings suggest that a partner's psychological problems may trigger mothers more than fathers to discuss (the causes of) negative emotions with their children. This is not to say that mothers are more affected by family stressors including the

partner's psychological problems than fathers. In contrast, differences between fathers' and mothers' parenting stress when faced with family stressors such as children's behavior problems or the birth of a preterm infant are often found to be negligible (e.g., Deater-Deckard, 1998; Schappin, Wijnroks, Uniken Venema, & Jongmans, 2013; Theule, Wieler, Tannock, & Jenkins, 2012).

Consistent with our expectations, parental psychopathology symptoms in part influence child social-emotional development via parental emotion socialization. Mothers' use of emotion talk mediated the positive association between fathers' internalizing problems and children's internalizing problems with more elaborative mother-child discussions about negative emotions at age 3 years predicting more internalizing problems in children a year later. This finding corresponds with research on parent-child co-rumination in which mothers' tendency to dwell on negative feelings with their children has been related to children's internalizing characteristics such as anxiety and sadness (e.g., Calmes & Roberts, 2008; Grimbos et al., 2013; Waller & Rose, 2010). Although there is evidence that by talking about emotions mothers can foster their child's adequate emotion understanding and regulation (for a review see Eisenberg et al., 1998), mothers' focus on negative emotions during discussions may carry the risk of arousing children's cogitation on stressful experiences and the accompanying feelings (Zahn-Waxler, 2000). An alternative explanation for the indirect effect of fathers' internalizing problems on child internalizing problems via maternal emotion talk is that mothers who are confronted with their partners' psychological issues not only talk more about negative emotions with their children, but also attribute more problematic behaviors to their children. However, separate mediation analyses for mother-reported and father-reported child internalizing problems yielded comparable results.

In addition to an indirect effect via maternal emotion talk, fathers' internalizing problems also directly predicted more internalizing problems in their children. Further, mothers' externalizing problems directly predicted more internalizing and externalizing problems in children. The fact that less optimal child outcomes were related to different types of psychopathology symptoms in fathers and mothers might reflect children's internalized gender role standards about appropriate behaviors of males and females. In most Western countries, women are expected to express more internalizing

emotions like sadness and anxiety than men, whereas men are expected to express more disharmonious emotions (e.g., anger) that assert one's own interests over others' (Brody, 2000; McIntyre & Edwards, 2009). Already from the age of 2 years, children start internalizing gender-typed ideas about which behaviors are appropriate for men and women (Poulin-Dubois, Serbin, Eichstedt, Sen, & Beissel, 2002). This may lead preschoolers to consider fathers' internalizing problems as less normal and thus more puzzling than mothers' internalizing problems, while the opposite may be true for externalizing problems. Given that most parents in our study had subclinical levels of psychopathology symptoms, it could be that only symptoms that contradict gender stereotypes had a negative impact on children as these symptoms may cause more confusion and anxiety than symptoms that are in line with gendered ideas about emotion expression in men and women. Consistent with this idea, low levels of mothers' physical aggression (spanking) have been found to be related to child problem behavior, while for fathers only high levels of physical aggression predicted more child problem behavior (Mackenzie, Nicklas, Waldfrogel, & Brooks-Gunn, 2013).

The current study has some limitations. First, we did not examine the content and affective tone of parental emotion talk, which could have provided further insight in the positive relations we found between fathers' psychological difficulties and maternal emotion talk and between maternal emotion talk and child internalizing problems. Research has shown that differences in level of attention for emotions during parent-child discussions, regardless of content and tone, are associated with various aspects of child social-emotional development (e.g., Jenkins, Turrell, Kogushi, Lollis, & Ross, 2003; Perez Rivera & Dunsmore, 2011). Nevertheless, the degree to which parental emotion talk is related to positive social-emotional functioning in children is likely to be influenced by the quality of the interaction (Eisenberg et al., 1998). Second, parents' psychological problems and children's behavior problems were both measured with parent reports. There is accumulating evidence that the way parents perceive and evaluate their child's behavior is influenced by parents' own emotional wellbeing (e.g., Chilcoat & Breslau, 1997). Although we used aggregate scores based on father-reports and mother-reports of child behavior problems and we observed child prosocial behavior in the home, future studies should include observations of child externalizing problems and interviews on child internalizing problems (e.g.,

the Berkley Puppet Interview; Ringoot et al., 2013) to avoid potential response biases based on parents' own psychological difficulties. Third, our sample was rather homogeneous in terms of both parent and child characteristics. As previously stated, most participating parents had a high educational level and parents and children had relatively low scores on internalizing and externalizing problems, which limits the generalizability of our results. Despite these limitations, this study extents previous research by formally testing a mediation model including both mothers' and fathers' observed parenting behavior, and examining the relation between parents' psychological problems and their own as well as their partners' emotion socialization behavior.

To conclude, our findings indicate that parents' psychopathology symptoms not only affect child development through their own parenting behavior, but also through their partner's parenting behavior. To uncover the conditions under which parental psychopathology is likely to spill-over to the other parent's parenting behavior, it is important to study potential moderators of the relation between parental psychological problems and the parenting qualities of the partner in future research. Further, our findings suggest that children's internalized gender-typed ideas about which emotions are more accepted in males and females possibly influence the link between parental psychopathology symptoms and child social-emotional development. To clarify whether this is the case, research tapping into potentially gendered ways in which children experience and conceive their fathers' and mothers' psychopathology symptoms is needed. This study illustrates the emotional interdependence between individual family members, and emphasizes the importance of including both parents' childrearing behavior when examining the consequences of parental psychopathology for child development.