The bidirectional relation between parental controlling behavior and child anxiety

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4 Parenting behavior as a mediator between young children’s negative emotionality and their anxiety/depression*

The goal of this longitudinal study was to examine observed paternal and maternal control (psychological control and autonomy granting) and support (rejection and emotional warmth) as mediators of the relation between children’s negative emotionality at 3.5 years of age and depression and anxiety problems at 4.5 years. For 35 children, 60-minute unstructured parent-child interactions were rated at 4.5 years. Results indicated that maternal rejection mediated the relation between children’s negative emotionality and their later anxiety/depression. Higher levels of child negative emotionality predicted more psychological control in mothers, but did not predict any parenting behaviors in fathers. Higher levels of paternal autonomy granting were associated with more child anxiety/depression. Unexpectedly, however, more maternal emotional warmth was related to higher levels of child anxiety/depression. The findings offer new insights to guide future research on the (mediating) role of parenting behaviors in the relation between children’s negative emotionality and their internalizing problems.

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4.1 Introduction

Children’s negative emotionality—described as the tendency to react to stressors with high degrees of emotionality—is considered to be the core of the “difficult temperament” concept (Bates, 1989; Prior, 1992; Rothbart, Ahedi, & Hershey, 1994; Shiner, 1998), and it has been identified as an important antecedent of childhood internalizing problems, such as anxiety and depression (e.g., Anthony, Lonigan, Hooe, & Phillips, 2002; Clark, Watson, & Mineka, 1994; Compas, Connor-Smith, & Jaser, 2004; Hudson & Rapee, 2004; Nigg, 2006; Phillips, Lonigan, Driscoll, & Hooe, 2002; Shaw, Keenan, Vondra, Delliquadri, & Giovannelli, 1997). Most studies examine direct effects of negative emotionality on internalizing problems (see Sanson, Hemphill, & Smart, 2004 for a review), and therefore cannot demonstrate how children’s negative emotionality becomes connected with internalizing problems. Mediation by parenting may be a plausible indirect pathway linking temperament with internalizing problems (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000; Rothbart & Bates, 1998). For example, Paulussen-Hoogeboom, Stams, Hermanns, Peetsma, and Van den Wittenboer (2008) conducted a cross-sectional study, showing that mother self-report of parenting mediated the relation between perceived children’s negative emotionality and internalizing behavior. The current longitudinal study examines observed parenting as a mediator of the relation between perceived negative emotionality and internalizing problems in both fathers and mothers.

Maccoby and Martin’s (1983) parenting continuums of support and control can be used to organize much of the variation in measurement of parenting. The support continuum refers to parental behavior in order to make the child feel comfortable in the relationship with his or her parent (Rollins & Thomas, 1979). A way of framing the second continuum, control, deals with the extent to which control threatens the autonomy of the child (Grusec & Davidov, 2007). Meta-analyses by McLeod, Wood, & Weisz (2008), McLeod, Weisz, & Wood (2008), and Van der Bruggen, Stams, & Bögels (2008) showed that both support and control are associated with children’s internalizing problems, and that the distinct child-rearing dimensions that represent the opposite ends of the support and control bipolar continuums need to be examined separately (see also Silk, Morris, Kanaya, & Steinberg, 2003; Verhoeven, Bögels, & Van der Bruggen, 2008).
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Whereas parental rejection and emotional warmth can be viewed as the opposite ends of the support continuum, psychological control and autonomy granting can be viewed as the opposite ends of the control continuum.

Children do not passively undergo parental influences, but actively contribute to the interaction with their parents (Ge et al., 1996). In particular children’s temperament may influence parenting (Bell, 1968; Lytton, 1990). Negative emotionality is a temperament characteristic that in general makes children harder to parent (Chess & Thomas, 1984; Paulussen-Hoogeboom, Stams, Hermanns, & Peetsma, 2007). Therefore, perceived negative emotionality in children may elicit more negative parenting, characterized by more psychological control and rejection, and less positive parenting, characterized by lack of autonomy granting and emotional warmth due to difficulties in comforting and soothing these difficult children (Rubin & Mills, 1991). To illustrate, parents who experience their children as high in negative emotionality perceive their children as reacting to stressors with high degrees of emotionality, which may elicit parental controlling behaviors that are intended to minimize children’s emotional expressions (Rubin & Mills, 1991). However, in the long run, parental autonomy granting is a more adequate strategy in helping children to cope with stressors (e.g., Bögels & Brechman-Toussaint, 2006).

Recent (meta-analytic) reviews found that higher levels of parental control and rejection and lower levels of autonomy granting and emotional warmth were associated with children’s internalizing problems, such as anxiety and depression (Berg-Nielsen, Vikan, & Dahl, 2002; McLeod et al., 2007; McLeod et al., 2007; Van der Bruggen et al., 2008). Children exposed to high levels of psychological control and children experiencing lack of parental autonomy granting are thought to be at risk for internalizing problems, because their ability to manage their emotions is damaged (Barber, 1996), their perceived control over stressors is reduced (Chorpita, Brown, & Barlow, 1998), and because stressors are avoided, diminishing children’s development of new skills to cope with these stressors (Barlow, 2002). Moreover, parental rejection or lack of parental emotional warmth sets the stage for children’s internalizing problems by promoting a sense of helplessness in children (Garber & Flynn, 2001) and undermining children’s self-esteem (Hammen, 1992).

Studies of the relations between children’s negative emotionality and parenting and between parenting and internalizing problems predominantly
examined mothers. There are no a-priori reasons, however, to assume that fathers would be less important (Bögels & Phares, 2008; Phares & Compas, 1992), while there is accumulating empirical evidence showing that parenting behaviors differ between mothers and fathers (Bögels & Phares, 2008; Grossmann, Grossmann, Fremmer-Bombik, Kindler, Schreuer-Englisch, & Zimmerman, 2002; Paquette, 2004). Mothers tend to be more focused on care in the interaction with their children. Father’s role can be characterized by more risk taking behavior in relation with their children, providing challenge and stimulating independency.

Although not consistent, the strength of the associations between the opposite poles of the control continuum – psychological control and autonomy granting – and children’s internalizing problems appears to differ (McLeod et al., 2007; McLeod et al., 2007; Silk et al., 2003; Van der Bruggen et al., 2008). With respect to support, parental rejection was found to be more strongly related to children’s internalizing problems than emotional warmth (McLeod et al., 2007; McLeod et al., 2007). Therefore, it is important to examine control in terms of both psychological control and autonomy granting, and support in terms of both rejection and emotional warmth.

Literature suggests that parents’ perception of their child’s negative emotionality will have a greater impact on parenting behaviors than their child’s actual negative emotionality (e.g., Murphey, 1992). For instance, longitudinal research indicated that parents’ perception of child temperament, but not more objective observations of child shyness predicted a lack of future autonomy granting by parents (Rubin, Nelson, Hastings, & Asendorpf, 1999). Moreover, actual parenting behaviors, more than perceived parenting, could influence children’s anxiety and depression (McLeod et al., 2007). This study examined perceived child’s negative emotionality and observed parenting behaviors.

Although cross-sectional designs represent a reasonable starting point for testing parenting as a mediator of the relation between children’s negative emotionality and internalizing problems, longitudinal designs provide a first step in addressing causation. The goal of this longitudinal study was to examine observed control (psychological control and autonomy granting) and support (rejection and emotional warmth) as mediators of the relation between perceived children’s negative emotionality at 3.5 years of age and depression and anxiety problems at 4.5 years. We hypothesized that higher levels of child negative emotionality would be related to less adequate parenting in terms of more
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psychological control and less autonomy granting and more rejection and less emotional warmth. Subsequently, less adequate parenting was hypothesized to be associated with more depression/anxiety. The hypotheses were tested separately for fathers and mothers. Parenting behaviors were observed at home. As it is difficult to disentangle anxiety and depressive problems among preschoolers (Gimpel & Holland, 2003), anxiety and depressive problems of children are examined as one internalizing dimension.

4.2 Method

4.2.1 Participants

Thirty-five children (17 boys and 18 girls) and both their parents participated. The sample was drawn from a sample of 114 preschool-aged children and their parents recruited in collaboration with Dutch child health centres (Paulussen-Hoogeboom et al., 2008). The families in the current sample agreed to participate in the second wave of the study one year later (T2). All parents were biological parents and living in the same household as the participating child. Mean age of the children was 3.69 (SD = .38) years at the Time 1 assessment (T1). Forty-nine percent of the children were first born, and 51% were second or later born. The mean age of mothers was 35.57 years (SD = 4.03) and fathers’ mean age was 38.26 years (SD = 4.15) at T1. Families were primarily Dutch (97%). Socioeconomic status of the family, a combination of the educational and vocational background of both parents, was computed on the basis of a sample-specific factor loadings and standard deviations. Mean scores correspond to socioeconomic strata in the following way: from 3 to 9, lower class; from 9 to 12, middle class; from 12 to 16 upper class (Bernstein & Brandis, 1970). It was established that 51% of the families was of lower socioeconomic status, 40% was middle class, and 9% was of higher socioeconomic status. In 74% of the families the mother performed most parenting tasks and in 26% of the families parenting tasks were divided equally between fathers and mothers at T1.

Both parents completed the Children’s Behavior Questionnaire (CBQ; Majdandzic & Van den Boom, 2001; Rothbart, Ahedi, Hershey, & Fisher, 2001) at T1 (study of Paulussen-Hoogeboom et al., 2008). A year later, a recruitment letter was sent to the 114 families from Paulussen-Hoogeboom et al.’s study, and
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followed up by a telephone call. In 35 of these 114 families (31%) both mothers and fathers agreed to participate at T2. The T2 measurement consisted of observations of the parent-child interaction and completion of the Child Behavior Checklist/4-18 (CBCL; Achenbach, 1991) by both parents. Frequent reasons for not participating were time constraints and father not wanting to cooperate. The T2 subsample was comparable to the main sample with respect to mother- and father-reported children’s negative emotionality, child gender, the mean ages of children and both parents, children’s birth order, ethnic background, socioeconomic status, and division of parenting tasks between fathers and mothers (significance level set at \( p < .05 \)).

4.2.2 Procedure

Informed consent was obtained from both parents. Parent-child interactions during two home visits were videotaped during a 60-minute unstructured situation, once with mother and once with father (order of parents was counterbalanced). Parents were told that during the observation they would have a meal together with their child and that both parent and child were free to choose a joint activity during the remaining time of the 60-minute observation. Frequent activities were doing a game and having a conversation. Two trained raters (clinical psychologists), who were blind to the child’s temperament and level of internalizing problems, coded the parent-child interactions that were recorded on video tape. Inter-rater reliability was established on 26% of the videotapes.

4.2.3 Measures

Children’s negative emotionality. Parent-reported children’s negative emotionality was assessed using five scales loading on the negative affectivity factor of the Children’s Behavior Questionnaire (CBQ; Rothbart et al., 2001; Majdandzic & Van den Boom, 2001): (a) anger/frustration concerns negative emotionality related to interruption of ongoing tasks or goal blocking, (b) discomfort relates to negative emotionality related to sensory qualities of stimulation, (c) fear includes unease, worry or nervousness, which is related to anticipated pain or distress and/or potentially threatening situations, (d) sadness concerns negative emotionality and lowered mood and energy related to exposure to suffering, disappointment and object loss, (e) soothability concerns the rate of recovery from peak distress, excitement or general arousal. Each scale consisted
of 12 or 13 items, rated on a 7-point scale (from 1 = extremely untrue of your child at all to 7 = extremely true of your child). Parents were also provided with a not applicable response option. The scales demonstrated adequate internal consistency and convergent validity (Rothbart et al., 2001). Scores on the five scales were averaged to obtain a total score for negative emotionality (Paulussen-Hoogeboom et al., 2008). The internal consistency (Cronbach’s α) of this total score was .78 for mothers and .76 for fathers. Father- and mother-report of children’s negative emotionality were only moderately associated (ICC = .39, p < .01), and therefore did not permit aggregation into a summary score for child negative emotionality.

Parenting behaviors. The ratings were based on coding systems that were devised by Siqueland, Kendall, & Steinberg (1996) and Hudson and Rapee (2002). Every 10-minute period of the 60-minute parent-child interaction was coded for the frequency of parental autonomy granting, psychological control, emotional warmth, and rejection behaviors. The advantage of using 10-minute instead of shorter intervals relies in increased variance. Autonomy granting was assessed by frequency counts of parents’ encouraging and accepting behavior of children’s decisions, ideas, or emotions. Psychological control was assessed by frequency counts of the following behaviors: constraining the child’s verbal expression, invalidating feelings or opinions, love withdrawal, and guilt induction. Emotional warmth was rated on three subscales: (a) verbally showing confidence and affection, (b) positive behaviors as laughing, smiling, joking, and touching, (c) positive facial expression, eye contact, and tone of voice. Rejection was coded on three subscales: (a) verbally showing rejections, disappointment, and lack of confidence, (b) negative behaviors as responding snappy, yelling, sighing, rolling with the eyes, and striking, (c) negative facial expression, eye contact, and tone of voice. At the end of each 10-minute period, frequency counts were transformed in a 5-point scale (from 0 = absent to 4 = very frequent). The inter-rater agreement (intraclass correlation coefficient) for the scales indicated satisfactory reliability of these measures, .40 < ICC < .77. For each scale, the scores of the six 10-minute periods were averaged to obtain a total score of the interaction.

Children’s anxiety/depression. Parent-reported child anxiety and depression was assessed using the scale anxiety/depression of the Child Behavior Checklist 4-18 (Achenbach, 1991; Verhulst, Van der Ende, & Koot, 1996). This scale
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consisted of 14 items and parents responded on a 3-point scale whether behavioral descriptions were: 0 = not true, 1 = somewhat or sometimes true, or 2 = very true or often true). The scale anxiety/depression demonstrated adequate internal consistency and the overall score of the CBCL demonstrated reasonable construct validity (Verhulst et al., 1996). In the current study, internal consistency (Cronbach’s α) for the anxiety/depression scale was .63 for mothers and .77 for fathers. The agreement between father- and mother-report of children’s anxiety/depression was only moderate (ICC = .37, p < .05). Aggregation into an overall score for anxiety/depression was therefore not warranted. The descriptive statistics for the variables under study are presented in Table 1.

Table 1: The Mean Scores and Standard Deviations for Children’s Negative Emotionality at T1, Parenting Behaviors at T2, and Children’s Anxiety and Depression at T2 (N = 35 child-mother-father triads)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mothers</th>
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<th>Fathers</th>
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<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
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<tr>
<td>T1 Negative emotionality</td>
<td>3.48</td>
<td>.57</td>
<td>3.26</td>
<td>.49</td>
</tr>
<tr>
<td>T2 Autonomy granting</td>
<td>1.35</td>
<td>.86</td>
<td>1.58</td>
<td>1.14</td>
</tr>
<tr>
<td>T2 Psychological control</td>
<td>.09</td>
<td>.14</td>
<td>.13</td>
<td>.46</td>
</tr>
<tr>
<td>T2 Emotional warmth</td>
<td>1.88</td>
<td>.50</td>
<td>1.80</td>
<td>.59</td>
</tr>
<tr>
<td>T2 Rejection</td>
<td>.05</td>
<td>.07</td>
<td>.01</td>
<td>.04</td>
</tr>
<tr>
<td>T2 Anxiety/Depression</td>
<td>1.56</td>
<td>2.02</td>
<td>1.29</td>
<td>1.90</td>
</tr>
</tbody>
</table>

4.3 Results

4.3.1 Descriptive statistics and data analysis framework

Separately for fathers’ and mothers’ autonomy granting, psychological control, emotional warmth, and rejection, the mediation hypothesis was examined (in total 8 mediation hypotheses). For each mediation hypothesis, Baron and Kenny’s (1986) criteria were used: (1) children’s negative emotionality at T1 (the independent variable) must be significantly related to children’s
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anxiety/depression (the dependent variable) at T2, (2) perceived children’s negative emotionality (the independent variable) must be significantly related to parenting behavior at T2 (the potential mediator), (3) the potential mediator (parenting behavior) must be significantly related to the dependent variable (children’s anxiety/depression) after controlling for the independent variable (perceived child negative emotionality), and (4) the relation between the independent and dependent variable should no longer be significant after controlling for the potential mediator. Criteria 1-3 were tested by means of simple correlational analyses. Criterion 4 was tested in additional regressions, but only if criteria 1 to 3 were met.

4.3.2 Mothers’ parenting

Table 2 shows the correlations between maternal perception of child negative emotionality at T1, maternal parenting behaviors at T2, and mothers’ perceived child anxiety/depression at T2. Children’s negative emotionality and anxiety/depression were positively associated, \( r = .34, p < .05 \) (criterion 1). Mother-report of children’s negative emotionality was also positively associated with both maternal rejection, \( r = .40, p < .01 \), and maternal psychological control, \( r = .48, p < .01 \) (criterion 2), and a positive association was found between maternal rejection and children’s anxiety/depression, \( r = .42, p < .01 \), which was \( r = .32, p < .05 \) after controlling for child negative emotionality (criterion 3).

A positive trend was found between maternal psychological control and children’s anxiety/depression, \( r = .27, p < .10 \), which was absent after controlling for perceived child negative emotionality, \( r = .12, p > .10 \). Unexpectedly, a trend was found for a positive association between maternal emotional warmth and children’s anxiety/depression, \( r = .31, p = .08 \) (two-tailed), which was \( r = .30, p < .09 \) (two-tailed) after controlling for perceived child negative emotionality. Higher levels of maternal emotional warmth were thus associated with increased levels of anxiety/depression. Finally, maternal autonomy granting proved to be unrelated to child anxiety/depression.

The correlational analyses indicated that only one mediation path could be formally tested. To examine if maternal rejection was a possible mediator of the relation between perceived children’s negative emotionality and anxiety/depression, a multiple regression analysis was conducted to test whether the relation between children’s negative emotionality and anxiety/depression was
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reduced after controlling for maternal rejection (criterion 4). The association between children’s negative emotionality and their anxiety/depression ($b = .34, p < .05$) was non-significant after entering maternal rejection into the regression equation ($b = .21, ns – F (2, 31) = 4.10, p < .05$ – which indicated mediation.

4.3.3 Fathers’ parenting

Table 2 shows the associations between paternal perceptions of child negative emotionality at T1, fathers’ parenting behaviors at T2, and fathers’ perceived child anxiety/depression at T2. A positive association was found between father-reports of their children’s negative emotionality and later anxiety/depression, $r = .43, p < .01$. No significant relations, however, were found between paternal perceptions of child negative emotionality and fathers’ later parenting behaviors. In line with expectations, a negative association was found between paternal autonomy granting and children’s anxiety/depression, $r = -.30, p < .05$, which was $r = -.29, p < .05$ after controlling for child negative emotionality. The other paternal child-rearing behaviors (emotional warmth, rejection, and psychological control) were unrelated to child anxiety/depression.

Table 2 Pearson correlation coefficients between Children’s Negative Emotionality, Parenting Behaviors, and Children’s Anxiety and Depression (N = 35 child-mother-father triads)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>1</td>
<td>T1</td>
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</tr>
<tr>
<td>2</td>
<td>T2</td>
<td>.34*</td>
<td>-.08</td>
<td>-.16</td>
<td>.19</td>
<td>-.14</td>
</tr>
<tr>
<td>3</td>
<td>T2</td>
<td>Autonomy granting</td>
<td>.13</td>
<td>.12</td>
<td>-</td>
<td>.16</td>
</tr>
<tr>
<td>4</td>
<td>T2</td>
<td>Psychological control</td>
<td>.48**</td>
<td>.27†</td>
<td>-.02</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>T2</td>
<td>Emotional warmth</td>
<td>.08</td>
<td>.31†</td>
<td>.38**</td>
<td>.10</td>
</tr>
<tr>
<td>6</td>
<td>T2</td>
<td>Rejection</td>
<td>.40**</td>
<td>.42**</td>
<td>.09</td>
<td>.67***</td>
</tr>
</tbody>
</table>

Note. Correlations for mothers are in the lower triangle (below the diagonal), and correlations for fathers are in the upper triangle.

† $p < .10$. * $p < .05$. ** $p < .01$, One-tailed.

*Two-tailed significance.
4.4 Discussion

This longitudinal study was set out to examine observed parenting behavior as a mediator of the relation between perceived child negative emotionality at 3.5 years of age and parent-report of child anxiety/depression at 4.5 years of age. It was found that maternal rejection mediated the relation between perceived children’s negative emotionality and their anxiety/depression. In line with expectations, higher levels of child negative emotionality predicted more psychological control in mothers. Unexpectedly, more maternal emotional warmth was related to higher levels of child anxiety/depression, even after controlling for child negative emotionality. Perceived child negative emotionality was not associated with fathers’ parenting behaviors. Finally, higher paternal autonomy granting was associated with less child anxiety/depression.

This study is in line with most studies of lower-to-middle-class samples showing that children who are high in negative emotionality according to their parents are harder to parent, resulting in maternal rejection and/or inadequate maternal control which may, as the present study shows, set the stage for children’s anxiety/depression (Paulussen-Hoogeboom et al., 2007). An empirically supported explanation is that maternal rejection and inadequate maternal control install a sense of helplessness in children (Garber & Flynn, 2001), undermining their self-esteem (Hammen, 1992). As perceived children’s negative emotionality and fathers’ parenting behaviors were not related, it seems that fathers respond less to their child’s temperament (Field, 2006), whereas mothers seem to be more susceptible to children’s emotions (Buck, Savin, Miller, & Caul, 1974).

Unexpectedly, more maternal emotional warmth was related to higher levels of child anxiety/depression. A first explanation for this unexpected relation could be that high levels of maternal warmth may be associated with lack of limit-setting or discipline (Gallagher, 2008). Such limit setting or discipline might create opportunities for children to “fight” with their parents, which may make them stronger and less susceptible to anxiety/depression. In addition, parental discipline may give children a sense of safety, whereas lack of limits and too much power assertion may create anxiety in young children. A second explanation for the positive relation between maternal emotional warmth and child anxiety/depression is that (too) high emotional warmth may co-occur with
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overinvolvement, diminishing children’s development of new skills to cope with stressors, because parents make sure that stressors are avoided (Barlow, 2002), resulting in the development of more anxiety/depression. A third explanation could be that mothers respond to their child’s anxiety/depression with more emotional warmth.

When children deal with situations that evoke anxiety/depression, mothers may exert the largest influence in the domain of support compared to the domain of control, whereas children might be more sensitive to paternal behaviors in the domain of control compared to support (Bögels & Phares, 2008; Grosmann et al., 2002; Paquette, 2004). The present study is in line with this idea, as fathers’ but not mothers’ autonomy granting proved to be associated with children’s anxiety/depression, whereas mothers’ but not fathers’ rejection was associated with children’s anxiety/depression. As mothers spend more time with their young children, the influence of mothers’ parenting seems more important when children are 3 to 5 years of age (Lamb, 2000). The results of the current study support this idea, as more relations were found for mothers’ than for fathers’ parenting behaviors in relation to children’s negative emotionality and anxiety/depression. However, as children grow older, fathers’ participation increases and therefore also their influence on their children (Baily, 1994). An alternative explanation for the fact that more maternal parenting behaviors were associated with child negative emotionality and child anxiety/depression, is that the kind of parenting behaviors that we measured in relation to child negative emotionality and child anxiety/depression, were derived from child-rearing models that are based on maternal instead of paternal roles (Bögels & Phares, 2008). For example, paternal stimulation of child risk taking behaviors, as for example expressed in rough and tumble play (Paquette, 2004), might be important in the prevention of child anxiety and depression, whereas paternal passivity and wariness might reinforce child anxiety and depression.

This study has several limitations. First of all, the small sample size results in lack of both statistical power and statistical precision (Cohen, 1988), and precludes adjustment for multiple testing due to further loss of power. Although separate analyses for fathers and mothers doubles the number of statistical tests, which results in increased risk of chance findings, chance capitalization would have been greater when neglecting statistical dependency, conducting joint hypothesis tests for both parents. We want to emphasize that the findings of this
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study should be interpreted with caution, and in terms of preliminary evidence. It seems important to replicate the results of this study in a larger sample before more definitive conclusions can be reached.

The focus on a relatively homogeneous non-clinical sample limits the ability to generalize results of the present study to other families, such as families with a clinically anxious or depressed child. As parenting behaviors and children’s anxiety/depression were measured at the same time, we have to be careful with making causal inferences. Future research on mediation models should measure children’s negative emotionality, parenting behaviors and anxiety/depression at 3 subsequent assessment moments in order to test mediation in a more robust way (Kenny, 2005). Furthermore, genetic and biological similarity of parents and children, rather than the direct influence of negative emotionality on parenting and subsequently parenting on anxiety/depression, may explain found relations (Scarr, 1992). Finally, both child negative emotionality and child anxiety/depression were assessed from the parents’ perspective, which may inflate correlations. Although parents’ perception of their child’s temperament and anxiety/depression has been found to be a stronger predictor of parenting behavior than children’s actual temperament and anxiety/depression (McLeod et al., 2007; Rubin et al., 1999), we need to assess child anxiety/depression from other sources as well, such as the child, the teacher, and behavioral measures in order to be able to account for possible reporter and common method biases (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Despite the limitations of this study, results offer new insights to guide theory development and research on the (mediating) influence of parenting behaviors in the relation between children’s negative emotionality and internalizing problems. As current results revealed a mediating role for maternal rejection, future studies should assess maternal rejection and attempt to replicate our findings. Furthermore, once there is a stronger body of evidence for the specific maternal and paternal child-rearing behaviors that reinforce or diminish child anxiety/depression, the determinants of such parenting behaviors need to be further explored. Next to children’s initial temperament, parents’ personality and anxiety/depression as well as their own childhood relationship experiences are possible determinants. Finally, future studies of children’s internalizing problems should examine the role of both mothers and fathers.