The bidirectional relation between parental controlling behavior and child anxiety

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Citation for published version (APA):
Maternal control and autonomy granting do not influence spider anxious girls’ approach of spider*

This experimental study examined maternal control and autonomy granting as mediators of the relation between girls’ fear and girls’ approach behavior. Fifty spider anxious girls, aged 8-12 years, conducted a spider exposure task in the presence of their mother. The influence of mothers’ perception of their daughters’ and their own state fear on mothers’ control and autonomy granting was studied. The degree of daughters’ and mothers’ state fear was manipulated by having girls execute the exposure with either a larger or a smaller spider. Results indicated that daughters’ high rating of how frightening the spider was resulted in less approach behavior. Unexpectedly, maternal control nor autonomy granting influenced their daughters’ approach behavior. Mothers responded with less autonomy granting, but not more control, in response to their own fear, but no influence of daughters’ fear was found. To conclude, no evidence was found for maternal control and autonomy granting mediating the relation between daughters’ fear and daughters’ approach behavior. Results suggest that mothers’ behaviour is of little influence in daughters’ coping with anxiety.

5.1 Introduction

Clinically anxious children tend to avoid situations that induce anxiety. In the short term, avoidance is an effective strategy decreasing anxious feelings. However, on the long term, anxiety maintains because of avoidance of the feared situation (Mower, 1960), whereas approaching the anxiety-inducing situations will eventually diminish anxiety (Marks, 1973). One of the purported active ingredients of the effective treatment Cognitive Behavioral Therapy (CBT) are exposure tasks in which the child approaches the situations that induce the anxiety (e.g., Kendall, Robin, Hedtke, Suveg, Flannery-Schroeder, & Gosch, 2005). Parents’ behaviors, especially maternal control, considered as the pressure parents put on their children to think, feel, or behave in desired ways, and its theorized opposite autonomy granting, seem to influence the opportunities that children approach anxiety-arousing challenging situations. Children receive the message that they are not capable of handling these situations when parents are controlling. As a result, children will avoid these situations and anxiety will maintain (Barlow, 2002). The current study examined maternal control and autonomy granting as mediators of the relation between daughters’ fear and their approach behavior during an anxiety-inducing situation.

The association between parental control and child anxiety has witnessed a resurgence of interest (See Ballash, Leyfer, Buckley, & Woodruff-Borden, 2006; Bögels & Brechmann-Toussaint, 2006; Rapee, 1997; Wood, McLeod, Sigman, Hwang, & Chu, 2003, for a review). Recently, two meta-analytic reviews showed a medium positive overall effect size for the relation between parental control and child anxiety (McLeod, Wood, & Weisz, 2007; Van der Bruggen, Stams, & Bögels, 2008). Recent focus of researchers discussed the transactional nature of parent-child interactions and the effect of child anxiety on parental control and autonomy granting. In anticipation of their child’s anxiety related distress, parents may have less confidence in their child’s autonomy, and as a result encourage the child’s autonomy less and exert more control (Hudson & Rapee, 2004). Having established that parental control and autonomy granting are related to child anxiety, the reaction of parents to child’s anxiety seems the next step to understand this relation. Literature suggests that parents’ perception of their children’s anxiety will have greater impact on their parenting behaviors than their actual anxiety (e.g., Murphey, 1992). Some prospective longitudinal studies,
found that child anxious temperament predicted parental controlling and autonomy granting behavior (Feldman, Greenbaum, Mayes, & Erlich, 1997; Rubin, Nelson, Hastings, & Asendorpf, 1999). However, from these studies statements about whether parents respond with more control and less autonomy granting to children’s (temperamental) anxiety can only be inferential. Therefore, the field is really ready to move from correlational designs to experimental methodology. Only an experimental design can exclude the possible influence of e.g. genetic factors affecting both parenting and child anxiety (McLeod et al., 2007; O’Connor, 2002; Tiwari, Podell, Martin, Mychailyszyn, Furr, & Kendall, 2008). The exclusive benefit of pure experimental manipulation is to modify one layer of the situation, manipulating the anxiety, and in that way investigating if parents respond differently on a higher level of anxiety.

Results of far older experimental research indicated that child dependent behavior elicits more control and less autonomy granting in parents compared to child independent behavior (Marcus, 1975; Osofky & O’Connell, 1972). Findings of Brunk and Henggeler (1984) suggested that anxiety behaviors of an unrelated child elicit more verbal assistance in mothers compared to child oppositional behaviors. Recently, Hudson, Comer, and Kendall (2008) manipulated emotions by focusing parent-child discussions on anxiety, anger, or happiness-provoking situations and examined its effect on the parental control level. Results revealed that mothers of clinically anxious children were more controlling than mothers of non-anxious children when children showed negative emotions (particularly angry emotions) compared to positive emotions. Hudson et al. (2008) stated that their findings merit replication with standardized situations during a real-time event. In conclusion, experimental studies indicate that child behaviors and emotions influence behavior in parents. Interestingly, there is no experimental study in which the anxiety level was manipulated in order to investigate its effect on parental control and autonomy granting.

Child anxiety alone may not be a sufficient explanation for the degree of control and autonomy granting parents execute. In particular parents’ own anxiety level has been proposed to influence parental control and autonomy granting (e.g., Bögels & Brechman-Toussaint, 2006; Ginsburg & Schlossberg, 2002; Wood, 2006; Woodruff-Borden, Morrow, Bourland, & Cambron, 2002). However, in contrast to these theoretical models, the meta-analytic review of Van der Bruggen et al. (2008) found no evidence for the hypothesized relation
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between parent anxiety and parental control during a parent-child interaction. One explanation for this lack of a relation between parent anxiety and parental control is that the research reviewed measured parent trait anxiety, but not parent’s actual state anxiety during the parent-child interaction in which control had been measured.

Most research has relied on the implicit assumption that parental control and autonomy granting constitute opposite ends of a continuum (Steinberg, 1990). However, confirmatory factor analyses and structural equation modelling showed that parental control and granting of autonomy should be considered as distinct child-rearing dimensions (Silk, Morris, Kanaya, & Steinberg, 2003). Therefore, the strength of the parental response on child and parent anxiety may be different for parental control than autonomy granting behavior. Past results based on correlational designs are inconsistent on whether the strength of the association between child and parent anxiety and control differs from the relation between anxiety and autonomy granting (McLeod et al., 2007; Silk et al., 2003; Van der Bruggen et al., 2008).

The current experimental study examined maternal control and autonomy granting as mediators of the relation between children’s fear and children’s approach behavior in 50 spider anxious girls during a spider exposure task in the presence of their mother. As spider fear is far more prevalent in girls and women than in boys and men (Cornelius & Averill, 1983; Kindt, Brosschot, & Muris, 1996), this study is focused on the mother-daughter dyad. The influence of mothers’ perception of their daughters’ state fear as well as their own state fear on mothers’ control and autonomy granting was studied. The degree of daughters’ and mothers’ state fear was manipulated by girls executing the task with either a larger or a smaller spider. This study examined whether mothers respond more controlling and less autonomy granting in response to their daughters’ and their own high fear level. It was hypothesized that: (I) high daughters’ spider fear results in less approaching towards the spiders; (II) mothers respond with more control and less autonomy granting to their perception of their daughters’ and their own high fear level; (III) more maternal control and less autonomy granting result in less approaching behaviors of their daughters; (IV) maternal control and autonomy granting mediate the relation between daughters’ state fear and their approaching behavior.
5.2 Method

5.2.1 Participants
Fifty girls and their biological mother participated, recruited through elementary schools in the south of the Netherlands. The girls ranged from 8 to 12 years of age, with a mean age of 10.30 (SD = 1.20) years and mean age of mothers was 40.35 (SD = 5.77) years. The mothers were primarily Dutch (98%) and college-educated (66% of the mothers having a college degree) and married or living together (88%). Most girls (84%) were second or later born. None of the girls executed a spider-in-vivo task before.

To determine whether girls were high spider anxious, girls completed the Spider Phobia Questionnaire for Children (SPQ-C; Kindt et al., 1996), and mothers completed the SPQ-C about their daughters. Mother-daughter dyads were asked to participate in the study if their (averaged child and mother-report) score on the SPQ-C was in the highest quartile (cut-off for girls: 12; Kindt et al., 1996). Of the 432 mother-daughter dyads that completed the SPQ-C, 167 scored in the highest quartile and were asked to participate in the experiment. Of these 167 dyads, 12 (7%) could not be contacted due to lacking of contact information, and 105 (63%) dyads declined to participate in the experiment, mostly citing time constraints and concerns about the difficulty of the spider-in-vivo task for the girls. No difference on the SPQ-C (child and mother-report aggregated) was found between the 117 non-participating and 50 participating dyads, \( t(165) = .33, p > .10 \).

5.2.2 Procedure
The study was approved by a medical ethics board and informed consent was obtained. Mother-daughter dyads were invited to take part in a study about child spider fear at the University lab. During the introductory period mother-daughter dyads were familiarised with the procedure and the spider-in-vivo task. To manipulate daughters’ and mothers’ state fear, girls were randomly assigned to completing the task with either a larger, more frightening spider, or a smaller, less frightening spider.

Children who did not participate in the experiment (\( n = 23 \), aged 8 to 12 years) scored 18 different larger and smaller spiders on how frightening these spiders were using a 4-point Likert scale. The most and least frightening spiders
were used in the task. The task was as follows: daughter and mother entered a room in which a table and two chairs were located. Mother was instructed to take place in the chair that was seated next to the table. Daughter was told to take place in the chair that was 1 m. away from the table. A closed jar containing a living spider was placed on the table. Daughter was asked to complete the task of approaching the spider in a stepwise manner: (1) move your chair to the table; (2) touch the jar for more than 10 sec; (3) lift the jar; (4) shake the jar; (5) open the jar; (6) touch the spider with a pencil for more than 10 sec; (7) remove the spider from the jar into a tray; (8) touch the spider with a finger for more than 10 sec; (9) put the spider on the hand for more than 10 sec; and (10) put the spider on the arm for more than 10 sec. The mother-daughter dyad could read the steps from a sheet of paper placed on the wall. Dyads were instructed that exposure to the situation that induces (spider) fear will reduce fear in children in the long-term. They were told that to overcome the spider fear, it was important that the girl did her upper best to complete the task, but that they both could decide whether to stop the task earlier. Mothers were instructed that they could help their daughter, when they thought their daughter needed it.

During the experiment, the instructor was not present in the room, and the experiment was videotaped. The instructor could see the experiment on a television screen outside the room. Two trained raters (clinical psychologists), who were blind to the manipulation, spider fear levels, and questionnaire-measured parental control and autonomy granting, coded the videotapes on maternal control and autonomy granting levels, and the last step of the task accomplished by the daughters. One rater coded all tapes and the second rater coded 15 (30%) of the tapes. Forty-eight (96%) mothers completed the revised version of the Parental Rearing Questionnaire (PRQ; Bögels, & Van Melick, 2004) and the Spider Phobia Questionnaire for adults (SPQ; Klorman, Weerts, Hastings, Melamed, & Lang, 1974) after the experiment.

5.2.3 Measures

Daughters’ and mothers’ trait spider fear. Trait spider fear of the daughter was assessed using the Spider Phobia Questionnaire for Children (SPQ-C; Kindt et al., 1996) self-report and mother-report. This questionnaire consists of 29 items rated on a 2-point scale (0 = not true and 1 = true). Internal consistency and test-retest reliability were high and SPQ-C scores predicted actual approach/avoidance
behavior confronted with a spider (Kindt et al., 1996). Trait spider fear of the mother was measured using the Spider Phobia Questionnaire for adults (SPQ; Klorman et al., 1974). This questionnaire consists of 31 items rated on a 2-point scale \((0 = \text{not true} \text{ and } 1 = \text{true})\). Internal consistency and test-retest reliability were high and the questionnaire was able to differentiate between spider phobics and non-phobics (Muris & Merckelbach, 1996).

**General maternal control and autonomy granting.** Self-reported maternal control and autonomy granting were assessed by the Parental Rearing Questionnaire (PRQ; Bögels & Van Melick, 2004; for the new subscale structure see Verhoeven, Bögels, & Van der Bruggen, 2009). Both the control and autonomy granting subscales consisted of 7 items, rated on a 4-point scale (from \(1 = \text{not true at all} \text{ to } 4 = \text{very true}\)). Internal consistencies for the subscales control and autonomy granting were acceptable, and confirmatory factor analysis showed that these constructs should be considered as distinct child-rearing dimensions (Verhoeven et al., 2009).

**Daughters’ perception of how frightening the spider is.** Before the experiment, in the absence of mother, daughters were shown the spider and rated how frightening the spider was on a 100 mm. visual analogue scale (VAS).

**Mothers’ perception of daughters’ state fear.** After the experiment, mothers rated their daughters’ fear level during the experiment on a 100 mm. VAS.

**Mothers’ state fear.** After the experiment, mothers rated their own fear level during the experiment on a 100 mm. VAS.

**Maternal control and autonomy granting during the experiment.** The coding system was developed based on coding systems of Siqueland, Kendall, and Steinberg (1996) and Hudson and Rapee (2002). Maternal controlling behavior was rated on four scales: (a) providing intrusive unsolicited help, (b) controlling position, i.e., hovering over the daughter, (c) constraining daughter’s verbal expression, (d) invalidating emotions and opinions. Maternal autonomy granting behavior was rated on two scales: (a) encouraging and accepting decisions and ideas, (b) encouraging and accepting emotions. Each control and autonomy granting scale was rated on a 5-point scale (from \(0 = \text{absent} \text{ to } 4 = \text{very frequent}\)). Internal consistencies of the scales maternal control and autonomy granting in terms of Cronbach’s \(\alpha\) were .59 and .62 respectively. The inter-rater agreement (intraclass correlation coefficient) for maternal control and autonomy granting indicated consistency for these measures, \(.53 < ICC < .79\). Scores on the control
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scales were averaged to obtain a total score of maternal control and the scores on the autonomy granting scales were averaged to obtain a total autonomy granting score. The low correlation between these total scores, \( r = .19, p > .10 \), strengthens the idea that parental control and autonomy granting should be considered as distinct child-rearing dimensions.

Daughters’ approach behavior. The last step (1 to 10) of the exposure task accomplished by the daughters was coded.

5.3 Results

5.3.1 Manipulation check

The means for trait spider fear of daughters (daughter and mother-report aggregated) and mothers were 14.77 and 8.00 respectively (SDs = 3.32 and 4.32). The means for general self-reported maternal control and autonomy granting were 15.77 and 21.69 respectively (SDs = 3.11 and 3.08). To manipulate fear during the experiment, 26 girls completed the task with a larger spider and 24 with a smaller spider. T-tests showed no differences between the larger and smaller spider group on baseline levels of trait spider fear of daughter (SPQ-C, self-report and mother-report) nor mothers (SPQ), on general self-reported maternal control nor autonomy granting (PRQ-R), nor on personal characteristics of girls and mothers, indicating that the randomisation was successful.

The means for daughters’ perception of how frightening the spider was (VAS) was 64.46 (SD = 18.74) for the larger spider group, and 49.48 (SD = 23.30) for the smaller spider group, \( t(48) = -2.51, p < .05 \). The means for mothers’ perception of daughters’ state fear during the experiment was 70.89 (SD = 21.87) for the larger, and 50.43 (SD = 28.89) for the smaller spider group, \( t(48) = -2.84, p < .01 \). The means for mothers’ perception of their own state fear during the experiment was 38.21 (SD = 29.78) for the larger, and 23.00 (SD = 27.76) for the smaller spider, \( t(48) = -1.87, p < .10 \). These results indicate that for (perception of) daughters’ fear manipulation succeeded, and a trend with a medium effect size was found for mothers’ fear. The means for maternal control during the experiment were 1.30 (SD = .94) for the larger, and .80 (SD = .78) for the smaller spider group, \( t(48) = -2.02, p < .05 \). The means for maternal autonomy granting
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during the experiment were 2.29 (SD = 1.42) for the larger, and 2.04 (SD = 1.17) for the smaller spider group, t(48) = -.67, p > .10.

5.3.2 Data analyses

To examine the mediation hypothesis Baron and Kenny’s (1986) criteria were used: (1) daughters’ perception of how frightening the spider was (the independent variable) must be related to daughters’ approach behavior (the dependent variable), (2) mothers’ perception of daughters’ state fear (the independent variable) must be related to mothers’ control and autonomy granting (the potential mediators), (3) the potential mediators (maternal control and autonomy granting) must be related to the dependent variable (daughters’ approach behavior) after controlling for the independent variable (daughters’ perception of how frightening the spider was), and (4) the relation between the independent and dependent variable should no longer be significant after controlling for the potential mediators. Criteria 1-3 were tested by means of regression analyses, controlled for the size of the spider. Testing criterion 2, the influence of mothers’ own state fear was included in the analyses. Criterion 4 was tested in additional regressions, but only if criteria 1-3 were met.

In addition, regression analyses were calculated to examine the relations between mothers’ perception of the general and state levels of their control and autonomy granting and their daughters’ and their own spider fear (in total 4 regressions). In these analyses, we controlled for the effect of the experimental manipulation. Size of the spider and general self-reported control and autonomy granting, and mothers’ perception of daughters’ and their own trait spider fear, were added in the regressions predicting mothers’ perception of their control, autonomy granting, their daughters’ and own state spider fear during the experiment.

Criterion 1: Influence of daughters’ perception of how frightening the spider was on daughters’ approach behavior

Predicting daughters’ approach behavior during the experiment (n = 50), results revealed a significant effect for both daughters’ perception of how frightening the spider was, β = -.41, p < .01, and the size of the spider, β = -.32, p < .05, F(2, 49) = 13.21, p < .001. Effects were in the direction that daughters’
high rating of how frightening the spider was and the large spider resulted in less approach behavior.

Criterion 2: Influence of mothers’ perception of daughters’ and own state fear on maternal control and autonomy granting

Predicting maternal controlling behavior during the experiment \((n = 50)\), no effects were found for size of the spider, mothers’ perception of daughters’ nor own state fear on maternal control, \(\beta = .26, \beta = -.06, \) and \(\beta = .16\) respectively, \(ps > .10, F(3, 49) = 1.79, p > .10.\)

Predicting maternal autonomy granting behavior during the experiment \((n = 50)\), mothers’ perception of their own state fear was significant, \(\beta = -.29, p < .05,\) in the direction that higher fear was associated with lower autonomy granting. No effect was found for mothers’ perception of daughters’ fear, \(\beta = .20, p > .10,\) nor the size of the spider, \(\beta = .10, p > .10, F(3, 49) = 2.18, p = .10.\)

Criterion 3: Influence of maternal control and autonomy granting on their daughters’ approach behavior

Predicting daughters’ approach behavior during the experiment \((n = 50)\), no effect was found for maternal control, \(\beta = -.01, p > .10,\) nor maternal autonomy granting, \(\beta = -.01, p > .10,\) after controlling for the daughters’ perception of how frightening the spider was (independent variable). Consistent with the results of criterion 1, an effect was found for both daughters’ perception of how frightening the spider was, \(\beta = -.41, p < .01,\) and the size of the spider, \(\beta = -.32, p < .05, F(4, 49) = 6.33, p < .001.\)

Mothers’ perception of trait and state levels of parenting behaviors and daughters’ and own fear

Predicting observed maternal control during the experiment \((n = 48)\), significant effects were found for general self-reported maternal control \((PRQ), \beta = .32, p < .05, \) and the size of the spider, \(\beta = .33, p < .05, F(2, 45) = 4.75, p < .05.\) Predicting observed maternal autonomy granting \((n = 48)\), neither general self-reported maternal autonomy granting \((PRQ), \beta = .03, p > .10,\) nor the size of the spider were significant, \(\beta = .15, p > .10, F(2, 45) = .53, p > .10.\) Predicting mothers’ perception of daughters’ fear during the experiment \((n = 50)\), no effect was found for mothers’ general perception of daughters’ spider fear \((SPQ-C), \beta = .
.34, $p > .10$, but a significant effect was found for the size of the spider, $\beta = .39, p < .01, F(2, 49) = 4.57, p < .05$. Predicting mothers’ fear during the experiment ($n = 48$), mothers’ general spider fear (SPQ) was significant, $\beta = .59, p < .001$, but no effect was found for the size of the spider, $\beta = .18, p > .10, F(2, 45) = 14.46, p < .001$.

5.4 Discussion

This experimental study was set out to examine maternal control and autonomy granting as mediators of the relation between spider anxious girls’ fear and approach behavior during a spider exposure task. In line with expectations, daughters’ high rating of how frightening the spider was resulted in less approach behavior. Unexpectedly, maternal control nor autonomy granting influenced their daughters’ approach behavior. To conclude, no evidence was found for maternal control and/or autonomy granting mediating the relation between daughters’ fear and daughters’ approach behavior. Unexpectedly, mothers’ perception of their daughters’ fear did not influence their degree of control nor autonomy granting. However, mothers responded with less autonomy granting in reaction to their own fear.

Daughters’ own view of how frightening the spider was, influenced daughters’ approach behavior, but not mothers’ controlling nor autonomy granting behaviors. No support was found for the hypothesis that more maternal control and/or less autonomy granting behaviors decrease the opportunities that daughters are exposed to anxiety-arousing challenging situations, as daughters receive the message that they are not capable of handling this situation. Possibly, daughters were preoccupied with their own fear so that they paid little attention to following mothers’ behaviors (Eysenck, 1992). In addition, daughters may have overweighed the verbal and written exposure instructions over their mothers’ responses to the experiment. The finding that daughters’ approach behavior was not influenced by their mothers’ control nor autonomy granting, but by their own fear and a characteristic of the task (large or small spider), is in line with findings that involving parents in CBT of children does not enhance the treatment effects (Bodden et al., 2008; and see In-Albon & Schneider, 2006 for a meta-analytic review).
Opposite to hypothesis, mothers’ perception of their daughters’ fear did not influence their degree of control nor autonomy granting. No support was found for the theory that in anticipation of their daughter’s anxiety related distress, mothers may have less confidence in their daughter’s autonomy, and as a result encourage the child’s autonomy less (Hudson & Rapee, 2004). However, mothers responded with less autonomy granting in reaction to their own fear. This result suggests that when anxious girls are in a stressful or challenging situation, mothers with lower fear for this situation grant the autonomy of their daughters more than mothers with higher fear. It might well be that such more challenging and stressful situations are where mothers have the idea that adequate maternal guidance matters the most. High anxious mothers seem less capable than low anxious mothers to stimulate their daughters’ autonomy (Ballash et al., 2006; Bögels & Brechman-Toussaint, 2006). When daughters have to conduct a fearful task, anxious mothers may experience their own struggle with their personal anxiety or anxiety history. Perhaps mothers’ own experience (or memory) of anxious emotions becomes so intense and overwhelming that they have little reserve for following the exposure instructions in this anxiety-provoking situation, and are therefore not capable of granting their daughters’ autonomy (Tiwari et al., 2008; Woodruff-Borden et al., 2002).

In sum, the current results do not support the transactional nature of the mother-daughter interaction describing the effect of child anxiety on parental control and autonomy granting (Hudson & Rapee, 2004), but indicate that both mothers’ and daughters’ behaviors during a spider exposure task are internally motivated by their own fear. Not maternal control nor autonomy granting, but daughters’ high fear level decreased their approach behavior, and not daughters’ fear, but mother’s own high fear level decreased mothers’ autonomy granting behavior. It might well be that during a real-time anxiety-arousing exposure task, daughters and mothers were preoccupied with their own feelings with little attention for each other (Eysenck, 1992). In contrast, during a non-anxiety-eliciting task, mothers and daughters may be paying more attention to each others’ behavior.

The current findings have to interpreted with caution, as they are limited in several ways. The study lacked power, because of the rather small sample sizes. As this is one of the first experimental studies examining maternal control and autonomy granting as mediators for the relation between daughters’ fear and
daughters’ approach behavior and the role of mothers’ fear, it is important to replicate the current findings with large sample sizes. Although spider fear (and its relations with parenting processes) can be used as a model for other kinds of pathological anxiety (Kindt, Brosschot, & Muris, 1996), the sample sets limits to generalization of the findings to other domains of anxiety (e.g., social and separation anxiety). The focus on mother-daughter dyads of spider anxious girls limits ability to generalize results of the present study to other family-dyads. There are no a-priori reasons to assume that the same parenting processes in relation to anxiety would be evident for boys (Van der Bruggen et al., 2008). It has been suggested that fathers play a different and perhaps more important role in helping children overcome certain fears and therefore, experiments like the present one should be replicated including fathers (Bögels & Phares, 2008). Moreover, the interaction between child and parent gender (same-sex versus opposite-sex parent-child dyads) needs attention in future research.

In this study a spider fear paradigm was used. Results indicated that mothers’ general self-reported spider fear and maternal control predict mothers’ state fear and maternal controlling behavior during the exposure task. Therefore, mothers’ controlling behavior and their fear during this spider fear experiment can to some extent be generalized to questionnaire-measured maternal control and spider fear in daily life. However, no relations were found for self-reported maternal autonomy granting and mother-report of daughters’ spider fear in daily life, and autonomy granting and daughters’ fear during the spider experiment. Therefore, the result of this experiment with respect to autonomy granting and mothers’ perception of daughters’ fear have to be interpreted with caution. More research is needed to understand the situation specificity of maternal child-rearing behaviors and mothers’ perception of fear levels, as well as factors that influence self-report and observation of mothers’ child-rearing behavior (e.g., social desirability versus a self-critical attitude).

Differential findings for maternal control and autonomy granting may suggest that these parenting constructs play different roles in the etiology and maintenance of childhood anxiety (Silk et al., 2003). In terms of direction for future research, further experimental investigation of separately parental control and autonomy granting in relation to children’s approach and avoidance of anxiety-arousing situations is needed. The current result of maternal control nor autonomy granting influencing daughters’ approach behavior, does not imply that
other maternal behaviors do not influence the maintenance of daughters’ fear. For example, how adequate mothers cope with their own spider fears may directly influence daughters’ spider fear due to observational learning (Windheuser, 1977). Moreover, work on what underlying factors explain how mothers’ and daughters’ fear influence their behaviors should be useful for theory refinement and would provide more specific implications to translate the current findings into clinical practice.

The present findings may help inform intervention programs, for example CBT, focused on treating children’s anxiety disorders. The results of the current experiment suggest that maternal control nor autonomy granting, but daughters’ perception of how frightening the situation is, and the size of the spider, influence daughters’ approaching behavior. Therefore, treatment of girls’ spider fear may benefit more from direct exposure to spiders than from changing mothers’ controlling behavior to encouraging daughters’ autonomy when daughters are confronted with spiders. However, maternal control and autonomy granting may have influenced the etiology of spider fear. As the current results imply that not daughters’ fear, but mothers’ own fear determines their degree of autonomy granting, intervention may benefit from helping mothers not to let their autonomy granting behaviors be guided by their own (irrational) anxieties.

Acknowledgements

We would like to thank Bianca Stultiens, Mariëlle Jennekens, Vera Kruiver, and Sarah de Schutter for their assistance in conducting this research.