The bidirectional relation between parental controlling behavior and child anxiety
van der Bruggen, C.O.

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7 General discussion

In this thesis, five studies from independent data collections were presented. The findings of the studies (except the meta-analytic review in Chapter 2) have to be interpreted with caution, as the studies lacked power, because of the rather small sample sizes. Moreover, the many differences between the studies’ research designs and methods limit the ability to make clear conclusions on the thesis’ themes. For example, the five samples differed with respect to clinically anxious or normal samples, parent gender, children’s age, child gender, and assessment of parent-child interactions.

In this section the results of the five studies are discussed centered among the thesis’ main theme: Bidirectionality of parental control and child anxiety (§7.1). Moreover, two subthemes are discussed in relation to the main theme: the influence of parent anxiety (§7.2) and the role of parent gender (§7.3). Different research designs were used in the five studies presented in this thesis, and their values are explored (§7.4). Finally, clinical implications and ideas for future research are presented (§7.5 and §7.6, respectively).

7.1 Main theme: Bidirectionalitiy between parental control and child anxiety

A recent focus of research into the relation between parental control and child anxiety is its bidirectionality. Theories suggest that when parents are controlling—considered as the pressure parents put on their children to think, feel or behave in desired ways—they enhance child anxiety (Barlow, 2002; Bögels & Brechman-Toussaint, 2006; Rapee, 2001). Moreover, theoretical models explain that children do not passively undergo parental influences, but actively contribute to the interaction with their parents (Chess & Thomas, 1984). In anticipation of children’s expression of anxiety parents may exert more control (Hudson & Rapee, 2004; Rubin & Mills, 1991). Previous literature discussed the underlying mechanisms explaining how parental control and child anxiety may influence one another. However, attempts to examine this bidirectionality in research is scarce.
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(i.e., Tiwari, Podell, Martin, Mychailyszyn, Furr, & Kendall, 2008). In this thesis my aim was to investigate the bidirectionality of the relation between parental control and child anxiety.

A first step before examining the bidirectionality was to provide a clear answer as to whether there is a substantial relation between parental control observed during a parent-child interaction and child anxiety. In Chapter 2, the meta-analytic review showed a medium-to-large association between observed parental control and child anxiety. However, no information was available on the influence of parental control on increasing anxiety in children, and/or the reverse, the role of child anxiety in eliciting controlling behavior in parents. In the following chapters a series of studies are described to examine bidirectionality between parental control and child anxiety in different contexts, using different designs and research methods.

The results of this thesis seem inconsistent as to whether child anxiety influences parental control. Results of Chapter 3 indicated that when children showed anxiety-related avoidant behaviors during parent-child interaction, parents were more controlling. In line with Chapter 3, findings of Chapter 4 showed that high children’s negative emotionality -considered as a precursor of child anxiety- resulted in more controlling behavior in mothers one year later. Contradicting the findings of Chapters 3 and 4, and contrary to my hypothesis, Chapter 5 showed that during an anxiety-provoking situation, children’s anxiety does not appear to influence mothers’ controlling behavior.

This contradiction in results is surprising. In Chapter 5, high spider anxious children conducted a spider exposure task, a context which is high anxiety-provoking. In contrast, the contexts in Chapters 3 and 4 were less anxiety-provoking, i.e., solving a Tangram task or doing a game, respectively. I would expect a stronger impact of child anxiety on parental control during anxiety-provoking compared to less anxiety-provoking situations.

That is, previous literature suggested that the relation between parental control and child anxiety becomes more evident in anxiety-eliciting situations. The effect of child anxiety on parental control is expected to be stronger in anxious situations, as if anxiety gets too high, parents are expected to move in with being controlling in order to minimize their children’s emotional expressions (Bell & Chapman, 1986; Ginsburg, Grover, Cord, & Ialongo, 2006). In line with the view that the effect of child anxiety on parental control is stronger in anxious
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situations, the meta-analysis (Chapter 2) showed the relation between child anxiety and parental control to be stronger in emotion-arousing compared to non-emotional-arousing parent-child interactions.

Also contrary to the hypothesis, Chapter 5 indicated no influence on the other direction, of maternal control on children’s approach behavior of the anxiety-provoking stimulus (i.e., spiders). That is, it seemed likely that, especially in anxious situations, children are susceptible to their parents’ behavior, as they use their parents’ approach as a reference on how to cope with the situation. In conclusion, the unexpected findings that child anxiety seem to influence parental control during a non-anxiety-eliciting situation (i.e., solving a Tangram task or doing a game, respectively Chapters 3 and 4), but not during an anxiety-eliciting situation (i.e., spider exposure task in Chapter 5), and also in the reverse direction, parental control does not seem to effect children’s approach behavior of an anxiety-provoking situation, requires an alternative explanation. It could be that during a situation that elicits strong anxiety, parents do not influence their children, and vice versa, because then parents and children are preoccupied with their own feelings with little attention or energy to react to one another (Eysenck, 1992). In contrast, during a non-anxiety-eliciting situation, parents and children may be more capable of paying attention to each other’s behaviors.

In contrast to the finding in Chapter 5 that maternal control did not influence spider-anxious children’s approach behavior toward a spider, Chapter 6 demonstrated a decrease in clinical child anxiety symptoms after parents had followed a Cognitive Behavioral Parent Training (CBPT) which taught parents to be less controlling, but to stimulate their children’s autonomy. This inconsistency in results may be explained by a further reaching effect of an intensive training, teaching parents to be less controlling with their children in many (daily routine and anxiety-provoking) situations, than parental control during one single anxious situation. Another possible explanation is that after a parent-child interaction, children need time to reflect on the meaning of their parents’ behavior during the interaction. It takes time for children’s “event-dependent beliefs”, formed during and immediate after interacting with their parents, to transfer into more stable “schematic beliefs” (Bugental & Johnston, 2000). When parents followed CBPT (Chapter 6) children had the opportunity to reflect on their parents’ behavior in order to change their schematic beliefs. In contrast, directly after a situation (Chapter 5) only event-dependent beliefs may be formed, as children had no time.
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to reflect on the meaning of their parents’ reaction. A third explanation might be that CBPT consisted of various components, and teaching parents to be less controlling was only one element of the CBPT, presented in Chapter 6.

To conclude, results of this thesis are inconclusive on the effect of child anxiety on parental control, and the reverse direction, the influence of parental control on child anxiety. In future studies on the bidirectionality between parental control and child anxiety, special attention is needed for differences in learning processes during low versus high emotion-arousing situations.

7.2 Subtheme 1: Influence of parent anxiety

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 (Adam, Gunnar, & Tanaka, 2004; Bögels & Brechman-Toussaint, 2006; Ginsburg, Grover, & Ialongo, 2004; Turner, Beidel, Roberson-Nay, & Tervo, 2003). Theories assume that highly anxious parents are more controlling to their children (Wood, 2006). Unexpected and surprising, results discussed in this thesis on the role of parent anxiety in relation to parental control (Chapters 2, 3, 5, and 6), indicated no positive significant relation between parent anxiety and parental control.

An explanation for the absence of a significant association between parent anxiety and parental control might be that parent anxiety can result not only in parental control but also in parental lack of control or withdrawal (Woodruff-Borden, Morrow, Bourland, & Cambron, 2002). Notably, the association between parent anxiety and parental control might be curvilinear, as was indeed shown in Chapter 3. That is, high parent anxiety was associated with both high and low levels of parental control. The underlying mechanism for parent anxiety being associated with a lack of control is that anxious parent might be preoccupied with their own feelings with little attention or energy to react to their children. This may result in a reduced effort that parents put into interaction with their children. As similar reactions were found in parents who suffer from depression (Lovejoy, Graczyk, O’Hare, & Neuman, 2000), future research on the relation between parent anxiety and parenting could learn from studies examining depressive parents. Another underlying mechanism for anxious parents to show a lack of
control, is that anxious parents withdraw from interacting with their child in challenging situations to avoid their own anxious feelings (Tiwari et al., 2008).

In conclusion, opposite to expectations, overall no evidence was found for a positive relation between parent anxiety and parental control. Possibly, this relation between parent anxiety and parental control is curvilinear. I proposed different underlying factors responsible for this possible curvilinear relation. That is, highly anxious parents may become either more controlling to avoid these situations or more withdrawn, because of the preoccupation with their own anxiety and/or in order to avoid their own anxious feelings.

7.3 Subtheme 2: Role of parent gender

Studies of the relation between parenting and child anxiety predominantly examined mothers. There are no a-priori reasons, however, to assume that fathers would be less important, while there is an accumulation of empirical evidence showing that parenting behaviors differ between fathers and mothers (Bögels & Phares, 2008; Grossmann, Grossmann, Fremmer-Bombik, Kindler, Schreuer-Englisch, & Zimmerman, 2002; Paquette, 2004). A complementary balance of roles may exist for mothers and fathers, with each role serving a distinctive and quite separate function: mothers to soothe and fathers to stimulate (Bögels & Perotti, 2009). Mothers tend to be more focused on care in interaction with their children and calming them when they show a high degree of emotionality or anxiety. Fathers’ role could be characterized by stimulating children’s independence and empowering them in opening their world outside the family. In this thesis, the role of parent gender in the relation between child anxiety and parental control was an important theme.

In Chapter 6, father-mother differences on their roles in helping their anxious children to overcome clinical anxiety was formally tested. As fathers’ role can be characterized by stimulation of children’s independence and empowering them in opening their world outside the family, fathers might be more effective change agents if it comes to stimulating and guiding their children through high anxiety-arousing situations. Therefore, father CBPT may be more effective than mother CBPT in decreasing anxiety in clinically anxious children. As expected, father CBPT was more effective in reducing children’s anxiety symptoms on the long-
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term than mother CBPT. Moreover, fathers’ reduction in parental control was related to a decrease in their children’s anxiety during the course of CBPT, but this was not found for mothers.

In contrast to the results of Chapter 6, in general, Chapters 3 and 4 found no clear role of parent gender in the relation between child anxiety and parental control. A possible explanation for this contradiction is that in these chapters normal children, instead of clinically anxious children (Chapter 6), were studied. As fathers’ behaviors seem crucial in learning to cope with anxiety (Bögels & Phares, 2008), especially the fathers of clinically anxious children might show dysfunctional behavior with respect to their role of changing agent, for example showing high controlling behavior. As a result, compared to normal children, the difference between paternal and maternal control might be stronger in the direction that fathers are more controlling. Consequently, in a normal sample the levels of paternal control might be within the normal range of not effecting children’s anxiety. However, the high level of paternal control in a clinical sample might be outside a normal range of increasing children’s anxiety (Scarr, 1992). In conclusion, the role of paternal control may be of more importance for clinically anxious children than for normal children. Clearly, further research is needed to test this hypothesis.

As explained above, overall the chapters describing normal children (Chapters 3 and 4) found no clear influence of parent gender on the association between parental control and child anxiety. An exception was that higher levels of children’s negative emotionality predicted more control in mothers, but not in fathers, as was shown in Chapter 4. This father-mother difference was in the direction opposite to the hypothesis of a crucial role for fathers. Possibly, children’s younger age (4-5 years in Chapter 4, instead of 7-12 years in the other Chapters) is an explanation. As mothers spend more time with their younger children (Lamb, 2000), mothers might be more susceptible to their children’s anxiety than fathers. However, as children grow older, fathers’ susceptibility to children’s anxiety may increase as fathers’ participation in their children’s parenting increases (Baily, 1994). The meta-analysis (Chapter 2) showed that the relation between child anxiety and parental control did not differ with respect to parent gender. However, power to identify the moderating effect of parent gender was reduced, as the studies included in the meta-analysis almost exclusively examined mother-child interactions.
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To summarize, inconclusive results were found indicating father-mother differences in the relation between parental control and child anxiety. This inconsistency in findings might be explained by whether children suffer from an anxiety disorder. That is, in accordance with my hypothesis, paternal control seems of more importance than maternal control in clinically anxious children. No clear father-mother differences in the relation between child anxiety and parental control were indicated for normal children. Possibly, parental control in fathers of clinically anxious children might effect children’s anxiety, as this high level might be outside a normal range effect on children’s coping with anxiety.

7.4 Exploration of research designs

In order to examine the (bidirectional) relation between parental controlling behavior and child anxiety, different types of research designs can be used. The vast majority of previous research has been cross-sectional (e.g., Chapter 3), fewer studies used a longitudinal (intervention) design (e.g., Chapter 4 and 6), and a minority applied an experimental design (e.g., Chapter 5). Indeed, the meta-analytic review, described in Chapter 2, showed that of the studies examining the relation between observed parental control and child anxiety 82.4% was cross-sectional, 17.6% used a longitudinal design, and 0% was experimental.

Conducting cross-sectional studies is an important first step in establishing whether observed parental control and child anxiety are related. The meta-analytic review (Chapter 2) summarized the results of these studies and found a medium-to-large association between observed parental control and child anxiety. Longitudinal designs can examine the relation between observed and child anxiety over time. However, for a deeper understanding of how parental control and child anxiety influence one another and whether parental control is the cause and/or result of child anxiety, cross-sectional and longitudinal correlational designs show their disadvantages. That is, possible genetic and biological similarities of parents and children, rather than the direct influence of child anxiety on parental control and parental control on child anxiety, may explain the found relations (Scarr, 1992). Only experimental research can examine the direct causal influence of child anxiety and parental control on one another (Scarr, 1992). The exclusive benefit of pure experimental manipulation is to modify one
layer of the situation in the parent-child interaction, manipulating for example children’s anxiety, and in that way investigating if parents respond with more control on a higher level of child anxiety.

As parent-child interactions are likely to be dynamic instead of one-dimensional in nature (Bronfenbrenner, 1977), manipulating exclusively one layer of a parent-child interaction appears to be complex. The experimental study, presented in Chapter 5, illustrated this complexity of isolating and manipulating one layer of a parent-child interaction. In order to examine its effect on maternal control, an attempt was made to manipulate exclusively child anxiety by exposing children to a larger or smaller spider. Interestingly, apart from the anxiety level of the children, also mothers’ anxiety was found to be manipulated. Likely, mothers’ anxiety was manipulated directly by the anxiety-provoking stimulus (i.e., spiders) and/or indirectly by the effect of their children’s anxiety level when exposed to a large or small spider. Apparently, there was an interplay between parent and child anxiety in relation with parental control (Ginsburg, Siqueland, Masia-Warner & Hedtke, 2004). Future experimental research should account for the complexity of bidirectional processes between parents and children.

To conclude, as the relation between parental controlling behavior and child anxiety seems to be established, future research should focus on refining experimental designs to examine causal relations between parents and their children with considering its dynamic nature.

### 7.5 Clinical implications

Past evidence supports CBT for treating children with anxiety disorders (Cartwright-Hatton, Roberts, Chitsabesan, Fothergill, & Harrington, 2004; In-Albon & Schneider, 2006). One of the purported active ingredients of CBT is exposure to the situations that induce the anxiety (e.g., Kendall, Robin, Hedtke, Suveg, Flannery-Schroeder, & Gosch, 2005). Approaching the anxiety-eliciting situation will diminish anxiety (Marks, 1973). Parents can play an important role in stimulating and guiding their children to expose themselves to high anxiety-arousing challenging situations. Likely, how parents approach their children, being controlling or stimulating autonomy, before and during these situations is important (Barlow, 2002). Findings of the clinical intervention study described in
Chapter 6 may inform the role of parents in intervention programs, for example CBT, focused on treating anxiety disorders in children. As described in paragraph 7.1, findings of Chapter 6 may indicate that an intensive training (CBPT), teaching parents to be less controlling in anxiety-eliciting situations as well as in daily situations with their children, seemed effective in changing children’s avoidance of anxious situations.

The most common treatment for children’s anxiety disorders is not the format of CBPT, but individual or family CBT. Previous studies indicate that involving parents in individual CBT of children does not enhance the treatment effects (e.g., Bodden et al., 2008; and see In-Albon & Schneider, 2006 for a meta-analytic review). Perhaps individual CBT for children is more effective in treating anxiety disorders, because individual CBT stimulates children’s independency of parents and the development of children’s autonomy. Individual CBT might be more autonomy encouraging for anxious children than family CBT, as children receive an intervention alone and can attribute the success to their own coping skills (Bodden et al., 2008). Based on this finding, it could be expected that individual CBT is more effective than CBPT in decreasing children’s clinical anxiety. In paragraph 7.1, some indication was found that when children show less anxiety in daily life, their parents are less controlling. Possibly, with individual CBT for children, parents’ beliefs will change in perceiving their children as more competent in overcoming difficult situations (Hudson & Rapee, 2004; Rubin & Mills, 1991). This again may further increase children’s beliefs in perceiving less threat and more control over difficult situations (Barlow, 2002; Rapee, 2001), which may result in a further decrease of their anxiety.

As described in paragraph 7.2, high anxious parents may become more controlling or more withdrawn to their children. Changing parental control is an important focus in treatment programs for parent of anxious children (e.g., Wood, Piacentini, Southam-Gerow, Chu, & Sigman, 2006). However, decreasing parents’ withdrawal in interaction with their children, but increasing stimulation of their children’s autonomy also seem important targets for treatment. Possibly, treatment programs that include teaching parents how to tolerate their children’s anxious feelings (Tiwari et al., 2008) would be effective for decreasing parents’ withdrawn behavior.

As shown in Chapter 6, a clinical implication might be to include (motivated) fathers in CBT treatment of children’s anxiety disorders. That is, results indicated
that father CBPT is more effective than mother CBPT. In clinical practice, more
effort should be done to include fathers in the treatment of their anxious children
(Phares, 2006).

In conclusion, CBPT might be effective in treating clinical anxiety in
children. It must be questioned, however, whether individual CBT may be more
effective than CBPT. That is, individual CBT may in fact stimulate children’s
autonomy more than teaching parents to stimulate their children’s autonomy. This
comparison would be interesting for future research. Moreover, clinical
practitioners should be more alert to parents’ withdrawn parenting behavior and
the fathers of anxious children.

7.6 Future research

Suggestions for future research have been discussed throughout this Chapter.
However, there are two other ideas that are worth mentioning.

In this thesis, research is presented that was conducted to explore
bidirectionality between parental control and child anxiety. However, it would be
interesting to study other pathways through which parents may cause or maintain
anxiety in their children. In this thesis, I studied the role of parent anxiety in
relation to parental control. A great deal of research showed that anxiety
aggregates in families (Beidel & Turner, 1997; Last, Hersen, Kazdin, Orvaschel,
& Perrin, 1991). Possibly, a direct pathway, parents showing their children failure
to cope with their own anxiety, more than showing controlling behavior, might
influence child anxiety due to observational learning (Muris, Steerneman,
Merkelbach, & Meesters, 1996). Moreover, previous studies indicated that
parents’ modeling of courageous behavior results in less anxiety and more
approach behavior in their children (de Rosnay, Cooper, Tsigras, & Murray,
2006; Gerull & Rapee, 2002; Windheuser, 1977).

A new research topic could be the bidirectional relation between parents’ and
children’ courageous modeling. That is, children’s courageous behavior, for
example during an exposure task, might have a positive effect on parents’
courageous behavior as well as parents’ anxiety level. This idea is in line with our
finding that in father CBPT a reduction of children’s anxiety symptoms was
related to a decrease in their parents’ anxiety, as described in Chapter 6.
Moreover, results of Bodden et al. (2008) indicating that child CBT is superior over an intervention involving parents if parents were anxious themselves, support this idea.

A second suggestion for future research is to explore the different, possibly more important, role of fathers in the etiology and maintenance of children’s anxiety. The kind of parenting behaviors that I measured in relation to child anxiety, such as parental control, were derived from child rearing models that are based on maternal in stead of paternal roles (Bögels & Phares, 2008). However, more father-orientated behaviors, such as stimulation of child risk taking behaviors, as for example expressed in rough and tumble play (Bögels & Phares, 2008; Paquette, 2004), might be important in the prevention of child anxiety.