The bidirectional relation between parental controlling behavior and child anxiety

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Citation for published version (APA):
van der Bruggen, C. O. (2009). The bidirectional relation between parental controlling behavior and child anxiety
Amsterdam: SCO-Kohnstamm Instituut

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6 Effects of targeting fathers versus mothers in Cognitive Behavioral Parent Training for parents of children with an anxiety disorder*

This study examined differential effectiveness between fathers and mothers helping their children overcome anxiety disorders by means of Cognitive Behavioral Parent Training (CBPT). Of 34 children, aged 7-12 years, with an anxiety disorder, 18 mothers vs. 16 fathers were randomly assigned to CBPT. Father-mother differences in improvements in child anxiety diagnoses and anxiety symptoms, parental control and autonomy granting, and parents’ own anxiety after CBPT were investigated. Results indicated that CBPT was effective in reducing children’s anxiety diagnoses and symptoms and parents’ own anxiety symptoms. No significant differences were found between father and mother CBPT on child anxiety diagnoses and parent anxiety, but a trend was found in the direction that father CBPT was more effective in reducing child anxiety symptoms. Moreover, significant parent gender effects were found in the sense that father, but not mother CBPT was effective in reducing parental control and improving their autonomy granting behavior. Lastly, for father, but not for mother CBPT, children’s anxiety reduced inasmuch as the improvement in autonomy granting behavior and reduction of parent anxiety. The findings suggest that fathers play an important role in helping children overcome anxiety disorders.

6.1 Introduction

Parents have a significant effect on the development and maintenance of their children’s anxiety (see for a review Bögels & Brechmann-Toussaint, 2006). Parents’ own anxiety level (see Connell & Goodman, 2002 for a meta-analytic review) and their parenting behaviors, such as control (see meta-analytic reviews of McLeod, Wood, & Weisz, 2007; Van der Bruggen, Stams, & Bögels, 2008) have been found to be associated with anxiety disorders in their children. Based on this notion, it is illustrative to test the role of teaching parents how to manage their children’s anxiety disorders and evaluating the effect on children’s functioning without treating the children at all (Ginsburg, Silverman, & Kurtines, 1995). Advantages of applying a parent-only format are that especially parents can play an important role in stimulating generalization of treatment gains in the child’s daily life (Barmish & Kendall, 2005), and that is has appeal in that it spares children inconvenience and possible stigmatization associated with clinical visits (Thienemann, Moore, & Tompkins, 2006).

A few uncontrolled pilot studies investigated the effectiveness of parent-only group interventions of childhood anxiety disorders by working primarily with and through parents, according to the idea of “transfer of control” (Ginsburg et al., 1995): transfer of knowledge, skills, and methods to produce change from therapist, to parent, to child. Results of Cartwright-Hatton, McNally, White, and Verduyn (2005) suggested that a parenting skills group training is effective in decreasing anxiety symptoms. Results of Thienemann et al. (2006) indicated the effectiveness of a Cognitive Behavioral Therapy (CBT) group intervention in which mothers learn how to guide their anxious children in overcoming their anxiety disorder. Past evidence supports CBT for treating children with anxiety disorders (see Cartwright-Hatton, Roberts, Chitsabesan, Fothergill, & Harrington, 2004 for a systematic review; In-Albon & Schneider, 2006 for a meta-analytic review). One of the purported active ingredients of CBT is exposure to the situations that induce the anxiety (e.g., Kendall, Robin, Hédiké, Suveg, Flannery-Schroeder, & Gosch, 2005). Parents can play an important role in stimulating and guiding their children to expose themselves to high anxiety-arousing challenging situations.

The few studies examining parent-only interventions for clinical anxiety in children, 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 roles differ between mothers and fathers (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 distress and anxiety.

Fathers role can be characterized by stimulating children’s independence and empowering them in opening their world outside the family. Therefore, fathers’ behaviors might well be crucial in learning to cope with anxiety and father participation CBT for anxiety-disordered children might be more effective than mother participation. That is, fathers for example might be more effective change agents if it comes to stimulating and guiding their children through exposure to high anxiety-arousing situations (Bögels & Phares, 2008). Indeed, past research found that the most social secure and competent children are especially those whose fathers, but not whose mothers are encouraging their children’s autonomy (Grossmann, Kindler, & Strasser, 2003).

Despite the theoretical emphasise on the essential role fathers play in the development of anxiety in children, fathers are involved in treatment for child problems to a far lesser extent than are mothers. Far more research is needed to help clarify the importance of including fathers into child-related treatment (Palm & Fagan, 2008; Phares, Fields, & Binitie, 2006; Saracho & Spodek, 2008). The current clinical trial is the first randomly assigning families to receive Cognitive Behavioral Parent Training (CBPT) for mother or father for children coping with an anxiety disorder. Parents act as lay cognitive-behavioral therapists for their anxious children. A group format has appeal because of economics and supported effectiveness (Thienemann et al., 2006). A father-friendly training was created by offering training sessions in the evening (Carr, 1998).

Parental control, considered as the pressure parents put on their children to think, feel or behave in desired ways, and its theorized opposite, autonomy granting, have been found to be associated with anxiety disorders in their children (McLeod et al., 2007; Van der Bruggen et al., 2008). Strategies, such as changing parenting behaviors, are therefore used, to unblock pathways between parent and
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child that may interfere with treatment success (Bögels & Siqueland, 2006; Ginsburg et al., 1995; Silverman & Kurtines, 1999). Teaching parents to be less controlling, but to stimulate their children’s autonomy might help their children to expose themselves to anxiety-arousing situations in order to overcome the severe anxiety. Moreover, parents’ own anxiety level is an important factor related to the etiology and maintenance of anxiety disorders in children (Connell & Goodman, 2002; Beidel & Turner, 1997; Messer & Beidel, 1994). Highly anxious parents may find the anxiety management strategies they learned in order to assist their anxious children to be useful for themselves, helping them to reduce their own anxiety (Ginsburg & Schlossberg, 2002).

This study examines differential effectiveness between fathers and mothers helping their children overcome anxiety disorders by means of a parent training. Moreover, the current study investigated whether parenting behaviors and parents’ own anxiety changed during the course of the CBPT, and whether these changes differed. Lastly, the extent to whether these changes in parenting and parents’ anxiety were related to a possible decrease in children’s anxiety level, and whether these relations differed between fathers and mothers, was investigated. We hypothesized that CBPT for fathers would be more effective in decreasing the anxiety level in children than CBPT for mothers. We predicted that parenting behaviors of the parent who participated in the training would improve and parents’ own anxiety diminish during the course of the CBPT. We explored whether improvement in parenting and parents’ own anxiety was related to improvement in child anxiety, and whether there were differences between fathers and mothers as participating parent in the relation between parent and child improvement.

6.2 Method

6.2.1 Participants

Eighteen target mothers (mothers who participated in the CBPT) and 16 target fathers (fathers who participated in the CBPT) of anxiety disorder children (16 boys and 18 girls) of 7-12 years old participated, recruited by community announcement, meeting inclusion criteria. Inclusion criteria were the child having a primary anxiety disorder, both parents willing to participate, no prior CBT for
the child and no parent treatment in relation to the child’s anxiety. The study was performed in University of Amsterdam’s mental health clinic for children and parents. The mean ages of children, mothers, and fathers were 9.82, 41.33, and 44.32 respectively ($SD$s = 1.92, 4.73, and 5.50). In thirty families (88%) both father and mother were Dutch. Twenty-five mothers (74%) and 30 fathers (85%) were college-educated. All mothers and fathers were biological parents and all parents were living in the same household as the participating child. In 23 families (68%) mothers and fathers spent the same amount of time with their child, in 10 families (29%) mothers, and in 1 family (3%) father spent more time with their child. Twenty-six children (77%) were first born, and 8 (23%) were second or later born.

The mean number of anxiety diagnoses was 2.74 ($SD = 1.50$). The primary diagnoses of the children were separation anxiety disorder ($n = 6$), social phobia ($n = 5$), specific animal phobia ($n = 8$), specific nature phobia ($n = 7$), specific other phobia ($n = 4$), generalized anxiety disorder ($n = 3$), and post traumatic stress disorder ($n = 1$). Twenty-eight children (82%) had indication of one or more co-morbid anxiety diagnosis: specific nature phobia ($n = 12$), separation anxiety disorder ($n = 11$), social phobia ($n = 9$), specific other phobia ($n = 8$), generalized anxiety disorder ($n = 5$), specific blood phobia ($n = 4$), specific situational phobia ($n = 4$), specific animal phobia ($n = 3$), agoraphobia ($n = 2$), and panic disorder without agoraphobia ($n = 1$). Eleven children (32%) had indication of other co-morbid diagnoses: ADHD ($n = 7$), oppositional defiant disorder ($n = 2$), depression ($n = 1$), and enuresis ($n = 1$). For four children medication had been prescribed for non-anxiety mental problems and medication was kept constant during the parent training and follow-up period. Four children had a history of (unsuccessful) treatment for anxiety: social skills training ($n = 2$), psychotherapy ($n = 1$), and medication ($n = 1$). In three other families parent(s) had followed a general parent training.

6.2.2 Procedure and design

The study was approved by a medical ethics board and informed consent was obtained. Parents were randomly assigned to either the mother ($n = 18$) or father ($n = 16$) CBPT condition. Families meeting inclusion criteria (probably anxiety disorder present) were invited for the pretest. Trained raters (clinical psychologist) evaluated the diagnostic status of the child with the Anxiety
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Disorder Interview Schedule Child and Parent versions (ADIS C/P; Silverman & Albano, 1996) separately interviewing both parents and the child. Moreover, this pretest consisted of child, mother, and father separately filling out the Screen for Child Anxiety Related Emotional Disorders (SCARED-71; Bodden, Bögels, & Muris, 2009) measuring child anxiety, mother and father self-report of the SCARED-71 adult version, and mother and father self-report and partner-report on the Parental Rearing Questionnaire (PRQ; Bögels & Van Melick, 2004). Directly after the CBPT (posttest) child, mother, and father separately completed the SCARED-71 measuring child anxiety. Than, a follow-up period of 6 weeks started in which no further treatment was delivered. A 6 weeks follow-up test was administered, consisting of the same interviews and questionnaires as the pretest. After the follow-up test, therapists informed families about the results and discussed possible further treatment (if needed).

Of the 49 families enrolled, after randomization, 10 families (6 fathers and 4 mothers) did not participate in the CBPT. Frequent reasons for not participating were a preference for individual treatment, because of the complexity of the child’s anxiety problems, and rapid improvement. No obvious difference was observed in the given reasons between the non-participating mothers and fathers. Parents who attended 4 or more of the 6 sessions were considered to have received the CBPT. Parents who did not attend a sessions were telephoned by the therapist to discuss the content of the session and the homework for the next week. Of the 39 families, 5 parents (13%, 2 mothers and 3 fathers), dropped out during CBPT. In all cases they evaluated the CBPT as not suitable for their complex problems. Two parents withdrew after the third session and the other three parents after the second session. Further measurements were collected from 2 dropout families (both mothers as participating parent) at posttest. For the other 3 dropout families the last assessment was carried forward, assuming no change. Results were analyzed for the 34 families completing the training and the 39 families that started the training. Of the 34 completers, post- and follow-up tests were missing for 1 family (mother as participating parent) and the child anxiety questionnaire at follow-up test was missing for another family (father as participating parent). For these 2 families last assessment was carried forward, assuming no change.
6.2.3 Measures

Child anxiety diagnoses. The diagnostic status of the children was evaluated using the Anxiety Disorder Interview Schedule Child and Parent versions (ADIS C/P; Silverman & Albano, 1996). The ADIS is a commonly used semi structured interview based on the DSM-IV classification of psychopathology (American Psychiatric Association, 1994) to assess child anxiety and commonly co morbid disorders, providing diagnoses and an interference score, ranging from 0 (no interference) to 8 (high interference). Consensus diagnoses were made using both child- and parents- reports. Diagnoses were considered present if the ADIS C/P consensus interference score was 4 or more. The ADIS C/P possesses good inter-rater reliability (Lynham, Abbott, & Rapee, 2004) and high test-retest reliability (Silverman & Eisen, 1992).

Child anxiety symptoms. Child, mother, and father completed the Screen for Child Anxiety Related Emotional Disorders (SCARED-71; Bodden et al., 2009), a questionnaire assessing children’s anxiety symptoms of all DSM-IV anxiety disorders. This SCARED-71 consists of 9 subscales, in total 71 items rated on a 3-point scale (0 = almost never, 1 = sometimes, and 2 = often), possesses good internal consistency and scores differentiate clinically anxious from non-anxious children (Bodden et al., 2009). Child-, mother- and father-report were aggregated into an overall score for child anxiety symptoms.

Parenting behaviors. Mother and father completed a self- and partner-report version of the scales control and autonomy granting of 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 consists of 7 items, rated on a 4-point scale (from 1 = not true at all to 4 = 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). Self- and partner-report were aggregated into an overall score of control and autonomy granting.

Parent anxiety symptoms. Mother and father filled in a self-report adult version of the SCARED-71 (Bögels & Van Melick, 2004) to measure adult anxiety on all DSM-IV anxiety disorders. The SCARED-71 adult version possesses good internal consistency (Bögels & Van Melick, 2004) and scores
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differentiate clinically anxious adults from non-anxious adults (Bögels, Bamelis, & Van der Bruggen, 2008).

6.2.4 CBPT

The CBPT was based on earlier work of Bögels and Siqueland (2006) and Bodden et al. (2008). The training consisted of 2-hour group meetings once a week for 6 weeks. Father and mother CBPT had the same format and content. Standard format of the sessions was as follows: discussing home assignments in subgroups, followed by introducing new concepts through discussing information, practicing, e.g. using role-play and in-vivo practice, and ending with discussing new home assignments. In the first session group members interviewed each other with respect to the anxiety complaints of their child and the way the parent struggled and coped with it. Moreover, psycho-education was provided on children’s anxiety (disorders). Third, the rationale for Cognitive Behavioral Therapy (CBT) through parents was given and hope for improvement provided. Session 2 was focused on relaxation and task concentration techniques (see Bögels, 2006). Furthermore, parents were encouraged to give attention to their children in a non-directing and non-judgmental way (see Cartwright-Hatton et al., 2005). Goals of session 3 were to teach parents CBT skills to guide their anxious children, cope with their own anxiety, and to challenge their dysfunctional beliefs about their children’s anxiety, their own parenting behaviors, and safety of their children’s world. Session 4 was focused on improving communication between parents (see Siqueland & Diamond, 1998), and acting as a parent-team in coping with children’s anxiety and other problems (“co-parenting”, see McHale & Rasmussen, 1998). Session 5 addressed parenting behaviors as parental control versus granting children’s autonomy, courageous modelling, and encouraging risk taking. In the last session the training goals were evaluated and relapse prevention was rehearsed. Furthermore, parents were shown a compilation of the video-tapes of their group during the 5 previous sessions. Parents received a workbook, which is available by request from the second author. Outcomes of 2 mother groups and 2 father groups were compared. Three parent groups consisted of 8 parents, whereas 10 mothers participated in one group. The therapists were four trained clinical psychologists, who were supervised weekly by the second author, checking protocol adherence. Therapists followed a standard protocol, which is available from the second author. Two
therapists led each group, and therapists were counterbalanced between mother and father groups.

6.3 Results

6.3.1 Data analysis framework

To evaluate CBPT effects for all families and separately for mother and father as participating parent, within-subject changes were examined on number of child anxiety diagnoses, child anxiety symptoms, parental control and autonomy granting, and parents’ anxiety. Using paired *t* tests, changes from pretest to posttest and pretest to follow-up were analyzed. To examine whether effects differ between father and mother as participating parent on within-subject changes on these variables, independent-samples *t* tests were calculated. Effect sizes of (parent gender difference in) change (Cohen’s *d*) were calculated. Effect sizes of about *d* = .20, *d* = .50, and *d* = .80 were considered as indices of small, medium, and large effects, respectively (Cohen, 1988).

Three hierarchical regression analyses were calculated to examine if possible improve in parental control, autonomy granting, and parents’ anxiety improve inasmuch as children improve with the CBPT, and examining if this is different for father versus mother. In order to diminish the chance of overanalyzing the data, only change in child anxiety symptoms (SCARED-71 child-, mother-, and father-report on the child combined) was used as the dependent variable. The SCARED-71 questionnaire, rather than the ADIS interview was chosen for two reasons. First, questionnaire results might be less biased than interview results, as parents or children might want to make a favourable impression on the interviewer after the training. Second, the SCARED-71 is a dimensional measure, whereas the ADIS is categorical, and dimensional measures might be more sensitive to treatment changes. Standardised variable values of changes in parental control, autonomy granting, and parents’ anxiety and their cross-product interaction with parent gender were examined. In step 1, child gender and changes in parental control, autonomy granting or parents’ anxiety were added in the model to examine their contribution on a possible change in child anxiety. To determine whether the relation between changes in parenting behaviors and parents’ anxiety and a change in children’s anxiety differed as a function of the
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gender of the participating parent, in step 2 parental control, autonomy granting, or anxiety × gender parent interaction term was entered. To examine the nature of the significant interaction effects, additional correlation analyses and Cohen d’s, separately for fathers and mothers as participating parent, were calculated.

6.3.2 Pre-training comparison

Families were randomly assigned to receive CBPT for mother or father for their children’s anxiety disorder. T-tests showed no differences at pretest between father and mother as target parent on number of children’s anxiety diagnoses, levels of child and parent anxiety, parental control and autonomy granting, and demographic characteristics (mean age of child and parents, child gender, parents’ educational level, time spent with child, and birth order), indicating that randomization was successful.

6.3.3 Child anxiety diagnoses

Table 1 presents the number of child anxiety diagnoses (ADIS child- and parents-report combined) at pretest and follow-up test (at posttest no ADIS was administered) for all families, and separately of fathers and mothers as participating parents. A significant reduction in the number of child anxiety diagnoses for completers was obtained, \( t(33) = 3.67, p < .001, d = .70 \). A significant reduction maintained after examining all families that started the CBPT, \( t(38) = 3.41, p < .01, d = .57 \). No significant difference was found between father and mother CBPT on the reduction of the number of children’s anxiety diagnoses, \( t(32) = 1.08, p > .10, d = .37 \).

6.3.4 Child anxiety symptoms

A significant reduction in children’s anxiety symptoms (SCARED-71 child-, mother- and father-report combined) for completers was obtained at posttest, \( t(33) = 4.71, p < .001, d = .70 \), and reduction maintained or further reduction occurred at follow-up test, \( t(33) = 5.79, p < .001, d = .79 \) (see Table 1). A significant reduction maintained after examining all families that started the CBPT, \( t(38) = 4.97, p < .001, d = .62 \) at posttest, \( t(38) = 5.97, p < .001, d = .70 \) at follow-up test. No significant difference was found between father and mother as participating parent, on the reduction of children’s anxiety at posttest, \( t(32) = 1.38, p > .10, d = .47 \). At follow-up test, a trend was found for parent gender, \( t(32) \).
6.3.5 Parental control and autonomy granting

A significant improvement in parental autonomy granting (PRQ self- and partner-report combined) of the target parents was observed at follow-up test, \( t(33) = -2.12, p < .05, d = -.27 \). No significant change in parental control (PRQ self- and partner-report combined) was found, \( t(33) = .66, p > .10, d = .08 \) (see Table 1). However, a significant large difference in the change in parental control of the target parent was found between father and mother CBPT, \( t(32) = 2.44, p < .05, d = .84 \). Target fathers reduced their control after CBPT, \( t(15) = 2.86, p < .05, d = .34 \), whereas target mothers showed a non-significant increase in control, \( t(17) = -1.01, p < .10, d = -.21 \) (see Table 1). Moreover, a significant large difference in the change in parental autonomy granting was found between father and mother CBPT, \( t(32) = -2.28, p < .05, d = .78 \). Target fathers increased their autonomy granting after CBPT, \( t(15) = -3.69, p < .01, d = -.72 \), whereas no significant change was found for target mothers’ autonomy granting, \( t(17) = -.06, p > .10, d = -.01 \) (see Table 1).

Examining the contribution of the change in parental control of the target parent on the improvement in child anxiety symptoms and the effect of parent gender, in step 1 no significant effect was found for a change in parental control, \( \beta = .09, p > .10 \), nor parent gender, \( \beta = -.26, p > .10 \), \( F(2, 31) = 1.59, p > .10 \). Examining the interaction between parent gender and change in parental control, step 2 showed a significant interaction, \( \beta = -.62, p < .05, F(3, 30) = 2.56, p < .10 \). Interpreting this interaction effect, correlations, separately for fathers and mothers as participating parent, revealed a trend for a correlation for target fathers, \( r = .44, p < .10, d = .98 \), whereas no significant relation for target mothers was found, \( r = -.19, p > .10, d = -.39 \). These results suggest that in case fathers participated in the CBPT, a decrease in fathers’ controlling behavior was related to a reduction in their children’s anxiety. Examining the contribution of the change in parental autonomy granting on the improvement in child anxiety and the effect of parent gender, in step 1 no significant effect was found for a change in parental autonomy granting, \( \beta = -.25, p > .10 \), nor parent gender, \( \beta = -.20, p > .10 \), \( F(2, 31) = 2.50, p < .10 \). Examining the interaction between parent gender and change in
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parental autonomy granting, step 2 showed a significant interaction, $\beta = .84$, $p = .001$, $F(3, 30) = 6.40$, $p < .01$. Interpreting this interaction effect, correlations, separately for fathers and mothers as participating parent, revealed a strong and significant correlation for target fathers, $r = -.73$, $p = .001$, $d = -2.14$, whereas no significant relation for target mothers was found, $r = .19$, $p > .10$, $d = .39$. Thus, in case fathers participated in the CBPT, increase in fathers’ autonomy granting was related to a reduction in their children’s anxiety.

6.3.6 Parent anxiety symptoms

A significant reduction in anxiety symptoms of the participating parents (SCARED-71 self-report) was obtained at follow-up test, $t(33) = 3.78$, $p < .001$, $d = .41$ (see Table 1). No significant difference was found between father and mother as participating parent, on the reduction of target parents’ anxiety, $t(32) = -.12$, $p > .10$, $d = -.04$.

Examining the contribution of the change in target parent anxiety on the change in child anxiety and the effect of parent gender, in step 1 a trend was found for parent gender, $\beta = -.30$, $p < .10$. No effect was found for change in parent anxiety, $\beta = .24$, $p > .10$, $F(2, 31) = 2.60$, $p < .10$. Examining the interaction between parent gender and change in parent anxiety, step 2 showed a trend for an interaction, $\beta = -.46$, $p < .10$, $F(3, 30) = 2.60$, $p < .10$. Interpreting this interaction effect, correlations, separately for fathers and mothers as participating parent, revealed a significant correlation for fathers, $r = .53$, $p < .05$, $d = 1.25$, but no significant relation for mothers, $r = -.05$, $p > .10$, $d = .10$. This suggests that in case father participated in the CBPT, reduction in their own anxiety level was related to a reduction in their children’s anxiety.
Table 1  Change in number of children’s anxiety diagnoses, child and parent anxiety symptoms, parental control, and autonomy granting: Mean (SDs), t-tests, and effect sizes (d) (total N = 34, fathers N = 16, mothers N = 18)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up</th>
<th>Pre-post t</th>
<th>d</th>
<th>Pre-FU t</th>
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<tbody>
<tr>
<td><strong>ADIS C/P</strong></td>
<td></td>
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<tr>
<td>Total CBPT</td>
<td>2.74 (1.50)</td>
<td>1.74 (1.33)</td>
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<td>3.66***</td>
<td>.70</td>
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<tr>
<td>Father CBPT</td>
<td>2.88 (1.86)</td>
<td>1.56 (1.46)</td>
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<td>2.95**</td>
<td>.87</td>
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<tr>
<td>Mother CBPT</td>
<td>2.61 (1.14)</td>
<td>1.89 (1.23)</td>
<td></td>
<td>2.18*</td>
<td>.54</td>
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<td><strong>SCARED-71 C/F/M</strong></td>
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<tr>
<td>Total CBPT</td>
<td>40.30 (14.82)</td>
<td>30.63 (12.05)</td>
<td>28.67 (14.22)</td>
<td>4.71***</td>
<td>.70</td>
<td>5.79***</td>
<td>.79</td>
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<tr>
<td>Father CBPT</td>
<td>43.47 (17.00)</td>
<td>30.94 (12.57)</td>
<td>28.35 (14.45)</td>
<td>3.84**</td>
<td>.82</td>
<td>4.72***</td>
<td>.96</td>
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<tr>
<td>Mother CBPT</td>
<td>37.39 (12.47)</td>
<td>30.35 (11.92)</td>
<td>28.95 (14.42)</td>
<td>2.86*</td>
<td>.58</td>
<td>3.65**</td>
<td>.62</td>
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<td><strong>PRQ Ag Control</strong></td>
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<tr>
<td>Total CBPT</td>
<td>1.75 (.41)</td>
<td>1.71 (.38)</td>
<td></td>
<td>.66</td>
<td>.08</td>
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<tr>
<td>Father CBPT</td>
<td>1.71 (.45)</td>
<td>1.55 (.34)</td>
<td></td>
<td>2.86*</td>
<td>.34</td>
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<tr>
<td>Mother CBPT</td>
<td>1.79 (.37)</td>
<td>1.86 (.36)</td>
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<td>-1.01</td>
<td>-.21</td>
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<tr>
<td><strong>PRQ Ag Autonomy granting</strong></td>
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<tr>
<td>Total CBPT</td>
<td>3.06 (.35)</td>
<td>3.15 (.34)</td>
<td></td>
<td>-2.12*</td>
<td>-.27</td>
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<tr>
<td>Father CBPT</td>
<td>2.91 (.24)</td>
<td>3.10 (.28)</td>
<td></td>
<td>-3.69**</td>
<td>-.72</td>
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<tr>
<td>Mother CBPT</td>
<td>3.19 (.38)</td>
<td>3.19 (.39)</td>
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<td>-.06</td>
<td>-.01</td>
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**Bidirectionality between parental control and child anxiety**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Follow-up</th>
<th>Pre-post</th>
<th>Pre-FU</th>
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<td>SCARED-71 A</td>
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<tr>
<td>Total CBPT</td>
<td>23.09 (14.00)</td>
<td>17.59 (12.77)</td>
<td></td>
<td>3.78***</td>
<td>.41</td>
</tr>
<tr>
<td>Father CBPT</td>
<td>21.88 (16.58)</td>
<td>16.56 (13.67)</td>
<td></td>
<td>2.52*</td>
<td>.33</td>
</tr>
<tr>
<td>Mother CBPT</td>
<td>24.17 (11.52)</td>
<td>18.50 (12.25)</td>
<td></td>
<td>2.75*</td>
<td>.48</td>
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</tbody>
</table>

*Note.* ADIS = Anxiety Disorder Interview Schedule; SCARED-71 = Screen for Child Anxiety Related Emotional Disorders-71; PRQ = Parental Rearing Questionnaire; CBPT = Cognitive Behavioral Parent Training; C = child-report; P = parent-report; F = father-report; M = mother-report; Ag = aggregated self and partner-report of participating parent; A = adult-report.
6.4 Discussion

This is the first study examining differences between fathers and mothers in the effectiveness of decreasing anxiety in clinically anxious children of a Cognitive Behavioral Parent Training (CBPT). Opposite to the hypothesis, no difference was found in the reduction of the number of child anxiety diagnoses between father and mother CBPT. However, a trend with a medium-to-large effect size was found on the reduction of children’s anxiety symptoms at follow-up test in the direction that the reduction of children’s anxiety was stronger after father than after mother CBPT. Possibly, differences between father and mother CBPT will increase on the long-term.

Apart from teaching parents CBT skills another goal of the training was teaching parents to be less controlling, but to stimulate their children’s autonomy in order to help them overcome severe anxiety. Current results indicated that father CBPT was effective in reducing their control and improved their autonomy granting behavior towards their anxious child, whereas target mothers showed no change in control nor autonomy granting. It might be that mothers for some reason, are more resistant than fathers to change their controlling and autonomy granting behavior. For example, if mothers are evolutionary or socially more predisposed to protect their children, whereas fathers would be more predisposed to challenge their children’s autonomy (Bögels & Perotti, 2009), fathers who display much control would have an easier time giving that up than mothers. A second explanation for fathers’ improvement in parenting behavior, whereas no change was found for mothers, might be that levels of fathers’, but not mothers’ control and autonomy granting were more dysfunctional before CBPT. We post-hoc tested if fathers and mothers differed in their controlling and autonomy granting behavior at pretest. No difference was found for parental control, \( t(29,07) = -0.56, p > .10 \), but at pretest these fathers’ granted their anxious children’s autonomy less than mothers, \( t(29,39) = -2.56, p < .05 \). This result is consistent with the idea that fathers’ autonomy granting behavior might well be crucial for children to learn to cope with anxiety-arousing situations (Bögels & Phares, 2008). Possibly, fathers more than mothers needed to change their autonomy granting behavior to help children overcome an anxiety disorder.

As parents’ own excessive anxiety is an important factor related to anxiety disorders in children (Connell & Goodman, 2002), the current study investigated
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whether target parents’ own anxiety changed during the course of CBPT. Results indicated a reduction in parents’ own anxiety after CBPT. Highly anxious parents may find the anxiety management strategies they learned in order to assist their anxious children to be useful for themselves, helping them to reduce their own anxiety (Crawford & Manassis, 2001). No target father-mother difference in the reduction of target parents’ own anxiety symptoms during the course of the CBPT was found, indicating that fathers and mothers were equally sensitive to change with respect to their own dysfunctional anxieties.

No relations were found between changes in target parents’ parenting behaviors nor their own anxiety symptoms and the decrease in children’s anxiety level during the course of CBPT. Differences were indicated between father and mother CBPT. Results showed that for father CBPT, children’s anxiety level reduced inasmuch as target fathers’ improvement in autonomy granting behavior and reduction in fathers’ anxiety. A trend was found for the relation between the reductions in fathers’ controlling behavior and children’s anxiety. No relations with changes in mothers’ parenting behaviors nor their anxiety symptoms with children’s anxiety were found when mothers were the participating parent. These father-mother differences are in line with idea that fathers’ role can be characterized by stimulating of children’s independence and empowering them in opening their world outside the family. Fathers’ behaviors might well be of more significance in learning children to cope with excessive anxiety than maternal behaviors (Bögels & Phares, 2008). The relations between fathers’ own improvement in parenting behaviors and anxiety and decrease in their children’s anxiety could also indicate that fathers are more susceptible to children’s change in anxiety than mothers. In anticipation of their children’s anxiety related distress, parents may be more anxious themselves, exert more control and encourage less their children’s autonomy (Bögels & Siqueland, 2006; Hudson & Rapee, 2004). However, it is hard to explain why fathers would be more susceptible to their children’s anxiety in terms of their own anxiety than mothers.

The current findings have to be interpreted with caution, as they are limited in several ways. The study lacked power, because of the rather small sample sizes. As this is the first study examining differences between fathers and mothers in the effectiveness of decreasing anxiety in clinically anxious children, it is important to replicate the current findings with large sample sizes. Moreover, more long-term follow-up measurements are of particular importance in order to investigate
if father-mother differences will maintain or increase. In this study, parenting behaviors were questionnaire-reported. Therefore, it remains an open question whether fathers actually improved more in their parental control and autonomy granting, or whether parents perceived they or their partners changed more, than mothers did. In the current study, families were randomly assigned to receive father or mother CBPT. Therefore, only families were included of which both mother and father were willing to participate in the training, and were willing to be randomised for a condition in which their partners, and not themselves, would participate. Therefore, the ability to generalize the current positive results of father training to other families, for example families in which fathers cannot be motivated to participate, is limited.

Despite the limitations of this study, results offer new insight on the role of the father in childhood anxiety disorders. Results suggest a significant value of including (motivated) fathers in CBT treatment of children’s anxiety disorders. Also for research programmes on prevention of child anxiety disorders, father’s role might be important. Moreover, the role of fathers’ own anxiety, and their controlling and autonomy granting behaviors seem important factors in treatment and theory.

Acknowledgements

We would like to thank Loes Jongerden, Mirjam van der Brug, Dorreke Peijnenburg, and Laura de Koning for their assistance in conducting this research.