Parenting behaviors associated with youth AD diagnosis vs. youth ADHD diagnosis.

Maric, M.; Bögels, S.M.

DOI
10.1016/j.ejpsy.2018.07.003

Publication date
2019

Document Version
Final published version

Published in
European Journal of Psychiatry

Eur. J. Psychiat. 2019;33(1):17–23

THE EUROPEAN JOURNAL OF PSYCHIATRY

www.elsevier.es/ejpsy

ORIGINAL ARTICLE

Parenting behaviors associated with youth AD diagnosis vs. youth ADHD diagnosis

M. Maric*, S.M. Bögels

Department of Developmental Psychology, University of Amsterdam, Amsterdam, the Netherlands

Received 23 May 2018; accepted 31 July 2018
Available online 5 September 2018

KEYWORDS
Anxiety disorders;
ADHD;
Children;
Paternal and maternal rearing strategies

Abstract
Background and objectives: Extensive research investigated maternal parenting behaviors of children with anxiety disorders (ADs). No research has compared parenting behaviors of children with anxiety disorders (ADs) and ADHD, which is important to understand the common or specific role of parenting in both disorders, and also to inform interventions including parents.
Methods: We compared the presence of paternal and maternal behaviors of autonomy granting, control, and rejection in youths with AD ($n = 16$; $M_{age} = 11.63$, $SD = 2.96$) to the presence of these behaviors in youth with ADHD ($n = 14$; $M_{age} = 10.64$, $SD = 2.65$) and in community sample (CS) youths ($n = 24$; $M_{age} = 11.4$, $SD = 2.64$) using aggregated child, parent-about-self, and parent-about-partner report. Parental anxiety was also assessed.
Results: Fathers of youths with ADs were *less* controlling than fathers of youths with ADHD and CS fathers. Fathers of youths with ADHD were more rejecting of their children than fathers of children with ADs and CS fathers. With respect to maternal behaviors, no differences between the three groups occurred. No group differences were found in parental anxiety.
Conclusion: Results provide little evidence for the assumed controlling and lack of autonomy encouragement style of parents of children with ADs. This study points to the importance of involving fathers in the treatment of youth ADHD. Irrespective of whether paternal dysfunctional behaviors are involved in the development of ADHD or are a consequence of ADHD, it is likely that such behaviors negatively contribute to the therapy course and pace and should be targeted during treatment.

Introduction

Given the high prevalence and associated impairments of anxiety disorders and Attention-Deficit Hyperactivity

* Corresponding author.
E-mail address: m.maric@uva.nl (M. Maric).

https://doi.org/10.1016/j.ejpsy.2018.07.003

Disorder (ADHD) in children and adolescents,[1,2] it is considered an imperative to continue research on the etiology and maintenance of these problems. With regard to youth anxiety disorders, an extensive body of research has identified parenting behaviors as a key factor in the development and maintenance of anxiety.[3,4] In general, four parenting behaviors arise from meta-analyses as risk factors for youth anxiety: control, lack of autonomy encouragement, rejection, and lack of parental warmth and acceptance.[5–7] These behaviors are likewise continuously recognized in the clinical practice with anxious youths and are an important treatment target of family-interventions for anxiety-disordered youth.[8]

While great attention has been given to the role of parenting behaviors in youth anxiety disorders, much less research has been devoted to the role of parenting factors in youths with ADHD. Mostly dictated by neuropsychological theories of the development of ADHD, research has predominantly focused on genetics and cognitive factors in children with ADHD,[9] even though ADHD is now understood to be caused by gene–environment interactions.[10] Further, one of the most effective psychological treatments for childhood ADHD[11] concerns the use of behavior training for parents directed at targeting parental rearing practices, making this current state-of-the field even more surprising. Knowledge about the potential risk factors related to parenting behaviors in youth with ADHD may provide empirical support for the parenting behaviors targeted during the treatment and may also help tailor treatment to the needs of this specific group of youths.

In the scarce ADHD literature addressing parenting factors, parenting behaviors have been mainly conceptualized in terms of negative (e.g., control) and positive (e.g., acceptance) behaviors, using the same classifications as in the parenting literature with respect to youth anxiety and depression.[5,6,12] So far, empirical research supports the presence of these parental behaviors in community samples of children with ADHD symptoms; using self-report assessment methods, a recent study found that parental rejection was found to be associated with ADHD symptoms in a sample of 747 elementary school children.[13] Data using clinical ADHD sample found similar results regarding negative parental strategies; mothers of adolescents with ADHD were more overprotective and controlling towards their children and less affectionate and caring in comparison to mothers of a control group.[14] In another study, maternal positive parenting style moderated the relationship between ADHD symptom severity and child impairment, indicating that a positive parenting style plays a protective role in the functioning of children dealing with various levels of hyperactive/inattentive symptomatology.[15] While there is a clear rise in the number of studies investigating parenting behaviors in youths with ADHD in the past years, more research is needed, and even more so because of the general tendency to focus on maternal behaviors only.

The majority of research identifying (anxiety-) promoting parenting behaviors has been conducted with mothers, leaving a gap in our current knowledge about the role of fathers' parenting behaviors. Recent theoretical models of parenting behaviors suggest that mothers and fathers interact differently with their children which may, in turn, differently influence children's anxiety levels.[16,17] According to these models, the role of the mothers is considered to be mainly protective and caring, and their parenting behavior may turn into overinvolved and overcontrolling parenting sooner than that of fathers. Paternal rearing behavior is characterized by challenging practices that not only promote an active and independent attitude in the children, but also may be associated with lower anxiety.[17] Very few studies with youths with ADHD or youths with anxiety disorders directly compared parenting behaviors between mothers and fathers. In children with ADHD, there is evidence that paternal, but not maternal rejection, as experienced by children (a parenting factor close to parental reactivity), longitudinally increases the child's ADHD.[18] To date, the only longitudinal study relating to observed parenting and the development of childhood ADHD including fathers showed that fathers, but not mothers, who interrupt or take over the child's activity, and limit the child's influence on content and pace of play (i.e., controlling parenting), compromise the development of behavioral self-regulation in children showing early signs of ADHD.[19] In anxious children, the meta-analysis of Van der Bruggen et al.[6] showed that the association of parental control and child anxiety was large in studies that did include fathers and medium in studies that included mothers only. In sum, fathers are understudied in the role of parenting in youth with ADHD as well as anxiety disorders, but scarce previous research indicated that paternal and maternal behaviors may be differentially associated with outcomes in children with ADHD and anxiety symptoms and should also both be targeted in clinical research.

To further understand factors in ADHD and anxiety disorders related to family functioning, it is important to systematically examine the role of paternal and maternal behaviors in these problem areas. The major aim of this study was to compare parental behaviors in youth with AD versus youth with ADHD and youth from a community sample. No hypotheses were formulated with respect to the differences between the groups in the use of specific parenting strategies (i.e., autonomy granting, control, acceptance and rejection) given the lack of theory and research, other than that parents of youth with AD are expected to be more controlling than those of youth from a community sample. Based on some evidence that fathers' role might be more important than mothers' role in anxiety disorders and in ADHD (i.e., control[6,17–19]) – we were particularly interested in differences between fathers and mothers.

Method

Participants and procedure

A cross-sectional design was used. Participants were 20 children and adolescents with anxiety disorders (the 'AD sample'), 15 children and adolescents with ADHD disorders (the 'ADHD' sample), and 24 non-referred children and adolescents (the 'community sample'). The AD and ADHD samples were youths aged between 7 and 16 years referred to the Mental Health Centre Maasland in Maasmechelen (Belgium) who received a primary DSM-IV diagnosis of anxiety disorder or ADHD at intake, as assessed via the face-to-face administration by trained clinicians of the Anxiety Disorders Interview Schedule for Child/Parents (ADIS-C/P[20]) for the

AD sample and via the ADIS-Parents for the ADHD sample. After the diagnostic interview, children and their parents filled in the questionnaires under the supervision of a trained research assistant. The institutional ethical review board of Maastricht University approved this investigation, and written informed assent and consent was obtained from youths and their parents, respectively.

Parenting behaviors scores of one participant were extreme ($z > 3.5$ on the paternal Rejection subscale, and $z < -4.5$ on the paternal Acceptance subscale), and from the inspection of the questionnaire booklets of this particular participant (adolescent and mother), we learned that the participant and the mother had no contact with the father for the past ten years, and for this reason a very negative stance towards him, and both adolescent and mother could not have made a reliable judgment of paternal behaviors. This outlier was removed from the analyses, leaving a subtotal of 14 participants in the ADHD sample. In the AD sample, 4 participants had a comorbid ADHD diagnosis. As these comorbid diagnoses could operate as confounding variables and prohibit us from making statements about the specificity of parenting factors in children with ADHD or anxiety disorders, we decided to remove these cases from the analyses, leaving a subtotal of 16 participants in the AD sample and 54 participants in the total sample. Further, ratings of parenting behaviors of one father in the community sample were missing. Based on methodological suggestions, this sample size should be sufficient to address our goals. For example, when comparing groups on a certain construct, an approximate sample size of fourteen participants per cell will yield power of 0.80, given at least three cells (as is the case in our study), and an effect size of .50.[21] Further, as a rule of the thumb Tabachnick and Fidell[22] suggest that, when using multivariate analyses, it is important to have more cases than dependent variables in every cell, as we have.

The AD sample (9 boys and 7 girls, mean age 11.63 years, age range 7–16; $SD = 2.96$) comprised children and adolescents all diagnosed with at least one anxiety disorder (mean = 1.86) according to the ADIS-C/P. The percentages of different anxiety disorders in the sample were as follows: specific phobia (75%), generalised anxiety disorder (56%), social anxiety disorder (37%), separation anxiety disorder (6%), panic disorder (6%), and obsessive-compulsive disorder (12%). One child met criteria for a depressive disorder. Of the 16 families, 1 (6.25%) were divorced. In all 16 families, both the father and the mother participated; one father was not the biological father.

The ADHD sample (9 boys and 5 girls, mean age 10.64, age range 7–16; $SD = 2.65$) consisted of children and adolescents all diagnosed with ADHD according to the ADIS-P. Nine children had a co-morbid diagnosis: Oppositional Defiant Disorder [ODD] ($n = 6$; 42%) or Conduct Disorder [CD] ($n = 3$; 18%). High comorbidity of ODD/CD in referred children with ADHD is typical in clinical populations.[23,24] Of the 14 families, 3 (21%) were divorced. In 3 families, only the mother participated. One mother and one father were not the biological parents.

The community sample comprised children and adolescents (12 boys and 12 girls, mean age 11.4, age range 6–16; $SD = 2.64$) and was drawn from an elementary school and a high school in Maasmechelen, and matched as much as possible with the ADHD and anxiety samples on age, gender, and educational level of the child. Of the 24 families, 1 (4%) was divorced. In 22 families, both parents participated, in one family only the mother, in one only the father. One father was not the biological father.

Measures

Parenting behaviors

The child or adolescent and both parents reported about parenting behaviors using the Rearing Behavior Questionnaire (RBQ[25]). Youths filled in the questionnaire separately for mother and father. The 28 items are rated on a 4-point scale (from 1 = not true at all to 4 = very true) from the perspective of three reporters: (a) child, (b) parent about him/herself, and, to obtain a potentially more objective ratings of parents' behavior, (c) parent ratings of the partner behaviors are also included. The questionnaire contains four subscales: (a) Autonomy Granting (7 items, e.g., ''encourages me to do things by myself''), (b) Control (6 items, e.g., ''tells me that, If I really care about him/her, I wouldn't do anything that worries him/her''), (c) Acceptance (5 items, e.g., ''sometimes disapproves things that I do, but (s)he never rejects me as a person''), and (d) Rejection (10 items, e.g., ''doesn't like hanging around with me''). The subscale Autonomy Granting indicates the degree to which the parents accepted and encouraged the child's independence, self-reliance and the development of social and other skills. The Control subscale assesses the degree to which the parents overprotected the child, worried about the child's health and safety, and failed to help the child function independently. The Acceptance subscale refers to the degree to which the parents communicated love, acceptance, and appreciation of the child. Finally, the Rejection subscale taps into viewing the child as undesirable, a burden, a nuisance, and a source of unhappiness and disappointment. Confirmatory factor analysis indicated that the four-factor model represented an overall good fit to the data and that the correlations between the subscales were low to moderate (range between .01 and −.21), strengthening the idea that the RBQ assesses four distinct constructs of parenting.[26] Except from the Chronbach α's for maternal and paternal self-reported Acceptance which were low (.39 and .53, respectively), internal consistency of the other three subscales was acceptable, ranging between .65 and .78, mean $\alpha = .73$.[26] Internal consistencies in the current study with regard to individual child, father and mother reports ranged between .65–.80 for Autonomy granting, .73–.84 for Control, .10–.68 for Acceptance, and .65–.84 for Rejection. Because of the low reliability scores in the current and Verhoeven et al.[26] study, it was decided to remove subscale Acceptance from further analyses.

Youth anxiety

Anxiety symptoms were measured with a 71-item anxiety symptom questionnaire, the Screen for Child Anxiety and Related Emotional Disorders (SCARED-71[27]). For each item, the respondent needs to indicate how often a particular symptom is endorsed (0 = almost never, 1 = sometimes, 2 = often). The total score of both the child and parent version of the SCARED-71 was used in this study. In previous

studies, excellent internal consistencies for child and parent report are demonstrated, as well as good discriminant and predictive validity.[27] In the current study, internal consistency was .93 for child self-report, .94 for maternal report, and .93 for paternal report.

Parental anxiety

To assess anxiety in parents, an adult version of the Screen for Child Anxiety Related Emotional Disorders (SCARED-A[25]) has been used. The SCARED-A is an adaptation of the SCARED-71[27] and contains 71 items rated on a three-point scale (0 = almost never to 2 = often). The content of the SCARED-A items is the same as in SCARED-71 items; however, the items were reformulated based on an adult perspective. The internal consistency, and convergent and divergent validity of SCARED-A are good.[28] In the current study, the homogeneity of the total score was high (mothers $\alpha = .95$, fathers $\alpha = .93$).

Data analytic strategy

Differences between the groups on demographic variables were investigated and, in case differences existed, the main analyses were corrected for the influence of those variables. Further, differences in both child and parental anxiety symptoms were investigated across the three groups. As the reliability and validity of rearing questionnaires improves when increasing the number of informants and items,[25] analyses were conducted with the aggregated informant responses, i.e., the combined measures of child-, parent self-, and partner-reported parenting. To address the differences in parenting behaviors between youth with ADHD, anxiety disorders, and a community sample two MANCOVA-tests were conducted with ''group'' entered as an independent variable and ''parenting behaviors'' as dependent variables, separately for paternal and maternal behaviors.

Results

Preliminary analyses

The ADHD, AD and community sample did not significantly differ with respect to child's gender [$X^2(2) = 0.74$, $p = .692$], age [$F(2, 51) = .54$, $p = .589$], educational level [$X^2(10) = 7.95$, $p = .634$], country of birth [$X^2(4) = 4.081$, $p = .395$], number of children in the family [$F(2, 50) = .21$, $p = .815$], place of the child between the other children [$X^2(8) = 9.044$, $p = .339$], number of divorced families [$X^2(2) = 3.381$, $p = .184$], participation of non-biological parents [$X^2(2) = 1.094$, $p = .579$], educational level father [$F(2, 44) = .36$, $p = .698$], educational level mother [$F(2, 47) = 2.33$, $p = .108$], and age of the father [$F(2, 46) = .495$, $p = .613$]. However, there was a significant difference in age of the mother between groups [$F(2, 51) = 3.13$, $p = .05$]. Post-hoc analyses revealed that mothers of children with ADHD were older ($p < .05$) than mothers of children from the community sample. The other post-hoc comparisons were non-significant. All analyses were therefore corrected for the age of the mother.

Children of the three groups differed significantly in anxiety, according to their aggregated self-, father, and mother report [$F(2, 50) = 22.32$, $p < .001$]. Post-hoc analyses showed that differences were in the expected direction: children from the AD group had higher anxiety compared to children from the ADHD group ($p < .001$) and to children from the control group ($p < .001$). Children from the ADHD and control group did not differ significantly on child anxiety. Further, no significant differences were found in reports of own anxiety between the three groups for fathers $F(2, 46) = .22$, $p = .805$ and for mothers $F(2, 49) = .96$, $p = .391$.

Means and standard deviations for the four aggregated scales are presented in Table 1, together with the correlations between the four subscales, for paternal and maternal rearing practices, separately. Internal consistencies of the aggregated informant responses were acceptable for all scales (Table 1).

Differences in parenting behaviors

The results from the main analyses were as follows. ''Age of the mother'' was added as a covariate in both analyses. Levene's test showed that group variances were equal, indirectly assuring that slightly different group sizes did not affect the results. The results arising from the MANCOVAs are presented in Table 1. In the first analysis, investigating three scales of paternal behavior, the multivariate test was significant, Roy's = .347, $F(3, 48) = 5.551$, $p < .01$. Univariate F tests (Table 1) revealed that the differences between the three groups were significant for Control and Rejection subscales. Post-hoc between group analyses revealed that fathers from the ADHD sample had higher Rejection and Control scores than fathers from the AD sample, with large effect size differences (Table 1). These fathers also had significantly higher Rejection scores than fathers from the community sample. Further, fathers from the AD sample had lower Control scores than fathers from the community sample of youths, with large effect size differences.

In the second MANCOVA investigating three scales of maternal rearing behavior, the multivariate test was not significant, Roy's = .098, $F(3, 49) = 1.597$, $p = .202$, indicating no significant differences between the three groups on mothers' parenting.

Discussion

To our knowledge, no research to date has directly compared parenting behaviors of youths with anxiety disorders and with ADHD, and compared them to a community sample of youth. Main results of this study can be summarized as follows. First, the findings from our study point to the potential role of specific negative parenting behaviors in children and adolescents with ADHD as fathers of these youths were found to be more rejecting of their children than fathers of youths with anxiety disorders and fathers of typically developing youths. Further, fathers of youths with ADHD were also more controlling than fathers of anxiety-disordered youths. These results suggest paternal negative rearing behaviors as an environmental factor in children with ADHD, and add to previous findings which indicated that paternal (but not maternal) control[19] and rejection[18] was related to more

Table 1 Descriptives, Pearson correlations, Alpha's and *F*-tests comparing paternal and maternal child rearing behaviors per group.

	(1)	(2)	(3)	(4)	(5)	(6)	α	AD sample ($N_{fathers}$ = 16; $N_{mothers}$ = 16)	ADHD sample ($N_{fathers}$ = 11; $N_{mothers}$ = 14)	Community sample ($N_{fathers}$ = 23; $N_{mothers}$ = 23)	*F*	d_1	d_2	d_3
								Mean (SD)	Mean (SD)	Mean (SD)				
Father														
(1) Autonomy granting	–	.07	−.24				.74	20.08 (2.76)	19.29 (2.41)	20.38 (2.30)	.757	.30	.47	.12
(2) Control		–	.55**				.86	12.19 (2.92)	16.14 (2.41)	15.41 (4.13)	7.256**	1.47	.20	.87
(3) Rejection			–				.85	12.79 (2.77)	16.57 (4.65)	14.29 (3.50)	4.975*	1.00	.58	.47
Mother														
(4) Autonomy granting				–	−.09	−.14	.76	20.83 (2.46)	20.74 (2.92)	21.04 (2.39)	.168	.03	.11	.08
(5) Control					–	.55**	.91	14.13 (3.64)	16.45 (2.34)	16.94 (5.29)	2.434	.75	.11	.60
(6) Rejection						–	.80	12.31 (2.56)	13.19 (2.82)	13.04 (2.56)	.602	.33	.06	.29

Note. d_1 = effect size AD vs. ADHD, d_2 = effect size ADHD vs. community sample, d_3 = effect size AD vs. community sample.
* $p < .05$.
** $p < .01$.

ADHD symptoms. More specifically, scarce longitudinal studies on the role of maternal and paternal rearing practices found that fathers' rejecting parenting style predicted childhood ADHD, whereas for mothers the direction was opposite, childhood ADHD symptoms predicted maternal rejection.[18] A few explanations can be offered for the potentially important role of fathers in children's ADHD than mothers. First, as ADHD has a strong genetic component and the prevalence is higher in males,[9] it is plausible, albeit not controlled for in this study, that fathers in our ADHD sample also experienced ADHD symptoms themselves.[29] Paternal difficulties in managing their child's disruptive behavior, may in this case potentially be due to their own poor self-regulation skills and inability to synchronize their actions to the child's behavior. In this line, indirect evidence from a recent intervention study shows that behavioral parent training for children's ADHD symptoms is most effective when fathers also experience ADHD, potentially through improvements in their dysfunctional parenting skills.[30]

A second, in light of the previous theory, somewhat surprising finding from our study is that fathers of children and adolescents with anxiety disorders show less controlling behaviors than fathers of children and adolescents with ADHD, and fathers of the youths from the community sample. So far, the dominant view was that controlling parenting is important in the development and maintenance of childhood anxiety[4]; however, this is the first study comparing controlling behavior between clinical groups (anxiety versus ADHD), and a community sample and most studies focused on maternal (and not paternal) behaviors.[5,6] Additionally, in a more recent study by Jongerden and Bögels[31] that looked into both paternal and maternal behaviors, no differences were found between clinical anxiety-disordered and control youth with regard to controlling parenting behavior, further challenging the common perspective on the importance of parental control in the development and maintenance of childhood anxiety. Recently, fathers have been repeatedly acknowledged to have a more challenging stance towards their anxious children stimulating their children's approaches of novel situations (a stance perhaps opposite to controlling behavior), and it has been shown that this is associated with less child anxiety.[32] Interestingly, although not significantly different, mean scores of maternal controlling behavior in our study suggest that not only fathers, but also mothers of youths with anxiety disorders score the lowest on this type of behavior when compared to the two other groups, suggesting that maternal overcontrol is not associated with clinical child anxiety.

Finally, the results from our study seem to indicate that mothers of youths with anxiety disorders and ADHD implement similar parenting, since we found no differences between the two groups in maternal rearing practices. The mothers from the two clinical groups also did not differ from the typically developing youths in these three maternal strategies bringing under question the real dysfunction in these specific maternal behaviors among clinical groups of youths. At the same time, it is interesting to observe that (although not significant) the mean scores on Control and Rejection subscales are the lowest for mothers of youths with ADs which is in line to findings related to paternal behaviors, and does not support the assumption

that maternal control and rejection is associated with child anxiety disorders.

Some study limitations merit consideration. The fact that this is an intensive clinical type of research and our decision to remove comorbid cases has resulted in a rather limited sample size, and the results could be underpowered because of this. Focus on effects sizes when interpreting our results would in this regard be more advisable. Further, although the three groups did not differ with regard to parental ratings of their own anxiety symptoms, it remains unknown whether potential ADHD symptoms of parents themselves may have influenced their parental practices. Future studies should address the issue of parental psychopathology moderating the relationship between parenting and ADHD and anxiety. Also, no diagnostic interviews were administered in the community sample, and it, thus, remains uncertain whether the children from this group experienced clinical ranges of psychopathology. Future studies should investigate specific types of parenting control and rejection that may be specifically associated with ADHD type behaviors (hyperactive vs. inattentive). Another aspect to consider in future research is the amount of time parents spend interacting with their children. Finally, longitudinal research incorporating samples of children with anxiety disorders, ADHD, and comorbid ADHD and anxiety disorders would further permit investigation of the specificity in parenting behaviors and the possibility of a bi-directional relationship between rearing practices and maladaptive behavior. Given that parenting behaviors have been found to shape self-regulatory capacities in children,[9,33] parental rearing practices should be further investigated as moderators of the relationship between e.g., executive functioning on the one hand and ADHD and anxiety symptoms on the other hand using observational methods, next to self- and other-report.

In summary, from our study it turns out that, in comparison to anxious and typically developing youths, rejecting and controlling behaviors are more characteristic of the families (fathers) of children and adolescents with ADHD. Irrespective of whether paternal dysfunctional parenting behaviors are involved in the development of ADHD symptoms or are a consequence of ADHD, it is likely that such behaviors contribute to the difficulties associated with ADHD, and should be targeted in treatments for these children. Opposite to theories that parental control causes or maintains child anxiety, lack of controlling parenting was found to be more characteristic of fathers of children with anxiety disorders.

Conflict of interest

There are no conflicts of interest.

Funding

There are no financial disclosures.

References

1. Costello EJ, Mustillo S, Erkanli A, Keeler G, Angold A. Prevalence and development of psychiatric disorders in childhood and adolescence. Arch Gen Psychiatry. 2003;60:837–44.
2. MTA Cooperative Group. Moderators and mediators of treatment response for children with attention-deficit/hyperactivity disorder: the multimodal treatment study of children with attention-deficit/hyperactivity disorder. Arch Gen Psychiatry. 1999;56:1088–96.
3. Bögels SM, Brechman-Toussaint ML. Family issues in child anxiety: attachment, family functioning, parental rearing and beliefs. Clin Child Rev. 2006;26:834–56.
4. Drake KL, Ginsburg GS. Family factors in the development, treatment, and prevention of childhood anxiety disorders. Clin Child Fam Psychol Rev. 2012;15:144–62.
5. McLeod BD, Wood JJ, Weisz JR. Examining the association between parenting and childhood anxiety: a meta-analysis. Clin Psychol Rev. 2007;27:155–72.
6. Van der Bruggen CO, Stams GJM, Bögels SM. The relationship between child and parent anxiety and parental control: a meta-analytic review. J Child Psychol Psychiatry. 2008;49:1257–69.
7. Wood JJ, McLeod BD, Sigman M, Hwang WC, Chu BC. Parenting and childhood anxiety: theory, empirical findings, and future directions. J Child Psychol Psychiatry. 2003;44:134–51.
8. Bodden DHM, Bögels SM, Nauta MH, Haan E, de Ringrose J, Appelboom C, et al. Child versus family cognitive-behavioral therapy in clinically anxious youth: an efficacy and partial effectiveness study. J Am Acad Child Adolesc Psychiatry. 2008;47:1384–94.
9. Nigg JT. What causes ADHD? Understanding what goes wrong and why. In: New York. Guilford Press; 2006.
10. Sonuga-Barke EJS. 'It's the environment stupid!' On epigenetics, programming, and plasticity in child mental health. J Child Psychol Psychiatry. 2010;51:113–5.
11. Barkley RA. Defiant children: a clinician's manual for parent training. 2nd ed. New York, NY: Guilford Press; 1997.
12. McLeod BD, Weisz JR, Wood JJ. Examining the association between parenting and childhood depression: a meta-analysis. Clin Psychol Rev. 2007;27:986–1003.
13. Kim DH, Yoo IY. Relationship between attention deficit hyperactive disorder symptoms and perceived parenting practices of school-age children. J Clin Nurs. 2012;22:1133–9.
14. Gau SS, Chang JP. Maternal parenting styles and mother–child relationship among adolescents with and without persistent attention-deficit/hyperactivity disorder. Res Dev Disabil. 2013;34:1581–94.
15. Healey DM, Flory JD, Miller CJ, Halperin JM. Maternal positive style is associated with better functioning in hyperactive/inattentive preschool children. Infant Child Dev. 2011;20:148–61.
16. Bögels SM, Perotti EC. Does father know best? A formal model of the paternal influence on childhood social anxiety. J Child Fam Stud. 2011;20:171–81.
17. Bögels SM, Phares V. The role of the father in the development, prevention and treatment of childhood anxiety disorders: a review and new model. Clin Psychol Rev. 2008;28:539–58.
18. Lifford KJ, Harold GT, Thapar A. Parent–child relationships and ADHD symptoms: a longitudinal analysis. J Abnorm Child Psychol. 2008;36:285–96.
19. Rogers MA, Wiener J, Marton I, Tannock R. Academic parental involvement in children with and without attention-deficit/hyperactivity disorder. J School Psychol. 2009;47:167–85.
20. Silverman WK, Albano AM. Anxiety Disorders Interview Schedule for DSM-IV, Child and Parent Versions. San Antonia, TX: Psychological Corporation; 1996.
21. Kraemer HC, Thiemann S. How many subjects? Statistical power analysis in research. Newbury Park, CA: Sage; 1987.
22. Tabachnick BG, Fidell LS. Using multivariate statistics. 3rd ed. New York: HarperCollins; 1996.
23. Angold A, Costello EJ. The epidemiology of disorders of conduct: nosological issues and comorbidity. In: Hill J,

Maugham B, editors. Conduct disorders in childhood and adolescence. Cambridge: Cambridge University Press; 2001. p. 126–68.
24. Reeves J, Werry JS, Elkind GS, Zametkin AZ. Attention deficit, conduct, oppositional, and anxiety disorder in children: II. Clinical characteristics. J Am Acad Child Adolesc Psychiatry. 1987;87:144–55.
25. Bögels SM, Van Melick M. The relationship between child-report, parent self-report, and partner report of perceived parental rearing behaviours and anxiety in children and parents. Pers Indiv Differ. 2004;37:1583–96.
26. Verhoeven M, Bögels SM, van der Bruggen CO. Unique roles of mothering and fathering in child anxiety: moderation by child's age and gender. J Child Fam Stud. 2012;21:331–43.
27. Bodden DHM, Bögels SM, Muris P. The diagnostic utility of the Screen for Child Anxiety Related Emotional Disorders-71 (SCARED-71). Behav Res Ther. 2009;47:418–25.
28. Van Steensel FJA, Bögels SM. An adult version of the Screen for Child Anxiety Related Emotional Disorders (SCARED-A). Neth J Psychol. 2014;68:81–7.
29. de Graaf R, ten Have M, van Gool C, van Dorsselaer S. Prevalence of mental disorders and trends from 1996 to 2009. Results from the Netherlands Mental Health Survey and Incidence Study-2. Soc Psychiatry Psychiatr Epidemiol. 2012;47:203–13.
30. Van den Hoofdakker BJ, Hoekstra PJ, van der Veen-Mulders L, Sytema S, Emmelkamp PM, Minderaa RB, Nauta MH. Paternal influences on treatment outcome of behavioural parent training in children with attention-deficit/hyperactivity disorder. Eur Child Adolesc Psychiatry. 2014.
31. Jongerden L, Bögels SM. Parenting, family functioning and anxiety-disordered children: comparisons to controls, changes after family versus child CBT. J Child Fam Stud. 2014, http://dx.doi.org/10.1007/s10826-014-0005-6.
32. Lazarus RS, Dodd HF, Majdandzic M, de Vente W, Morris T, Byrow Y, Bögels SM, Hudson JL. The relationship between challenging parenting behaviour and childhood anxiety disorders. J Affect Disord. 2016;190:784–91.
33. Roskam I, Stievenart M, Meunier J-C, Noël M-P. The development of children's inhibition: does parenting matter? J Exp Child Psychol. 2014;122:166–82.