Anxiety disorders in young children: Parent and child contributions to the maintenance, assessment and treatment

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Chapter 4

Can young children aged 4 – 7 years provide informative self-reports of their anxiety symptoms?

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Abstract
Two studies were conducted to increase understanding regarding the assessment of anxiety in young children. For study 1, a sample of referred clinically anxious (n = 32; 16 boys) and healthy control (n = 61; 31 boys) children aged 4-7 years, their parents and teachers, completed measures of child anxiety. Children diagnosed with anxiety disorders self-reported higher anxiety levels than healthy controls on the Picture Anxiety Test (PAT; medium effect), but not on the Koala Fear Questionnaire (KFQ). A large positive correlation was found between these self-report measures and both were positively correlated with parent- and teacher-reported child anxiety (small to moderate correlations), although only the associations for the PAT reached significance. In a second study, a community sample of 169 children with and without anxiety disorders, and their parents completed the PAT. Children with anxiety disorders showed higher anxiety levels than those without anxiety disorders across all respondents (child self-report medium effect). In addition, moderate positive correlations between child self-report of anxiety and parental report were demonstrated. Taken together, the results of the two studies indicate that young children can provide informative self-report of their anxiety using the PAT and there is no reason not to include child self-report in research and practice.
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Introduction
It is evident that anxiety disorders are present in pre-school aged children (Egger & Angold, 2006), however, young child self-report is seldom included in studies (Cartwright-Hatton, McNicol, & Doubleday, 2006). Including young children’s self-report seems important for assessing anxiety, as symptoms may not always be observed by others (Kendall & Flannery-Schroeder, 1998). In line with this, parents of children aged 5-12 years reported less anxiety symptoms than their children, indicating possible underreporting of child anxiety symptoms by parents (Cartwright-Hatton et al., 2006). However, parents may also over report child anxiety levels, due to their own symptomatology (Moreno, Silverman, Saavedra, & Phares, 2008).

There are several reasons that young children’s perspective on their anxiety is rarely measured. First, the developmental level of young children might be associated with problems in understanding and verbally reporting their own emotions (Manassis et al., 2009). In addition, it may be difficult for an interviewer to gain information from a young child who is anxious around strangers (Manassis et al., 2009). Further, as young children cannot read yet, anxiety questionnaires designed for older children cannot be used.

With these challenges in mind, different measures, including the Koala Fear Questionnaire (KFQ, Muris, Meesters, & Mayer, 2000) and the Picture Anxiety Test (PAT; Dubi & Schneider, 2009), have been designed to assess self-reported anxiety in young children. Preliminary evidence regarding the psychometrics of these self-report measures is promising. For instance, moderate (r = .42; Muris et al., 2003) to high agreement (r = .50; Dubi, Lavallee, & Schneider, 2012) has been found between children’s self-reported anxiety using different measures. When child self-report is examined alongside others’ reports on the child’s anxiety, correlations between children and their parents/teachers range from low (all rs ≤ .12) in a community sample (Dubi et al., 2012) to moderate-to-high agreement (r = .30-.52) in a mainly clinical sample (Dubi & Schneider, 2009). However, low correlations between young children’s self-report and parent/teacher report do not necessarily mean that young children are not able to report on their anxiety. Low agreement has also been reported between parents/teachers and older children, in clinical (e.g. Comer & Kendall, 2004; Grills & Ollendick, 2003; Salbach-Andrae, Lenz, & Lehmkuhl, 2009) and non-clinical (e.g. Engel, Rodrigue, & Geffken, 1994; Foley et al., 2004) samples, with correlations ranging from r = .15 to r = .35 (Choudhury, Pimentel, & Kendall, 2003).

Accurate assessment of anxiety in young children is important for the identification of children who require treatment and the evaluation of that treatment. However, the majority of the studies on the assessment or treatment of anxiety in young children do not include child self-report. Even though their perspectives may
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be unique (Egger, 2009) and provide supplemental information to those of adult reporters. The present paper reports two independent studies, conducted with the goal of gaining more knowledge about self-report of anxiety in young children.

The first study concerns referred clinically anxious children with an anxiety disorder and children from the general population without an anxiety disorder. The aims of this first study were to investigate whether clinically anxious and healthy control children differed in their self-reports of anxiety (i.e. discriminant validity) and to examine the consistency between informants reporting on anxiety in young children. The second study included an independent community sample of children and aimed to directly compare self-reported anxiety scores of children with parent-reported anxiety symptoms using a parallel parent-report measure.

Study 1

The first study aimed to examine whether clinically anxious young children can be differentiated from healthy control children on the basis of their self-reported anxiety symptoms, and to assess inter-informant agreement on reports of child anxiety by mothers, fathers, teachers and children.

Method

Participants

The sample consisted of 93 children aged 4-7 years; 32 referred anxious children and 61 healthy control children. For an overview of the demographics of the two samples, see Table 1. The clinically anxious children were referred to mental health care centers, where the families took part in an ongoing project about the efficacy of Cognitive Behavioral Therapy (CBT) for young anxious children. For clinical children to be included in this study, they had to meet criteria for a primary anxiety disorder as assessed with the Anxiety Disorder Interview Schedule – parent version (ADIS-P; Silverman & Albano, 1996) and children had to have completed both child measures. Principal anxiety diagnoses were specific phobia ($n = 17$), social anxiety disorder ($n = 6$), separation anxiety disorder ($n = 6$), obsessive-compulsive disorder ($n = 2$), and generalised anxiety disorder ($n = 1$).

The children from the control sample were recruited through convenience sampling, including relatives, schools, local contacts, and sports clubs. Parents of the control children were also interviewed using the ADIS-P. Of the original sample ($n = 86$), 25 met criteria for an anxiety disorder, mostly specific phobia as principal diagnosis ($n = 19$). These children were excluded from the analyses giving a final sample of 61 healthy control children.
Measures

Koala Fear Questionnaire (KFQ). Children self-reported their fear and fearfulness with the KFQ (Muris et al., 2000). This measure is designed for children aged 4-12 years and contains 31 pictures. Each item (e.g. ‘heights’ and ‘telling a story in front of the class’) is read aloud to the child and they are shown the corresponding picture. The children indicate their fear levels using a visual scale depicting koala faces expressing increasing levels of fears, ranging from 1 (no fear) to 3 (a lot of fear). For community children ages 4-6 years, satisfactory internal consistency (Cronbach’s alpha > .80), test-retest reliability (ICC coefficient 0.92), and validity ($r = 0.42$) have been reported (Muris et al., 2003). In the current study, a Cronbach’s alpha of .89 was found for both the community and clinically referred anxious children.

Picture Anxiety Test (PAT). Children reported their anxiety and avoidance on the PAT (Dubi & Schneider, 2009), a self-report measure for children 4-8 years. It contains 21 vignettes, e.g. ‘birds’ and ‘separation from parents’. Within each vignette, children are presented with two pictures: one depicts a child showing a fearful and avoidant response, whereas the other shows a neutral response. After reading the vignette aloud, children are asked whom he or she resembles the most (i.e. the child demonstrating the anxious or the neutral response). Thereafter, they indicate their level of resemblance (really true or sort of true). The resulting anxiety scale for each item ranges from 0 (not at all anxious) to 3 (very anxious). Thereafter, children are asked to indicate the degree to which they would avoid the object/situation. Both the
anxiety and the avoidance scores were assessed, however, for this study, only the anxiety scores were used, as not all children were able to understand the concept of avoidance. Although the administration instructions permit the interviewer to modify the child’s score based on their judgment, this was not done for this study, as we wanted to measure children’s own capabilities. The PAT anxiety scale has shown internal consistency (Cronbach’s alpha .73 and .78), test-retest reliability \((r .63 \text{ and } .65)\), convergent and discriminant validity in both a clinical (Dubi & Schneider, 2009) and a nonclinical sample (Dubi et al., 2012). In the current study a Cronbach’s alpha of .80 and .69 were found for the community sample and the clinically anxious children, respectively.

**Social Competence and Behavior Evaluation – 30 (short version; SCBE-30).** Fathers, mothers (LaFreniere, 1990) and teachers (LaFreniere & Dumas, 1996) completed the SCBE-30. This scale contains three subscales: anxiety-withdrawal, anger-aggression and social competence, each comprising 10 items, rated on a scale from 1 to 6. In this study we only used the anxiety-withdrawal scale, measuring behaviors related to anxiety, depression, isolation and over-dependence, e.g. ‘inactive/ prefers to watch’ and ‘worries’. For the teacher version, LaFreniere and Dumas (1996) showed good interrater reliability \((.78-.88)\), internal consistency (Cronbach’s alpha’s .77-.85), test-retest reliability (.78 after two weeks), temporal stability (.63 and .75 after 6 months) and convergent validity. Kotler and McMahon (2002) and van Brakel, Muris, and Bögels (2004) examined the parent version of this questionnaire and demonstrated internal consistency (Cronbach’s alpha .73 and .74 respectively) and construct validity for the subscale. In the current study, Cronbach’s alpha’s for the anxiety-withdrawal scale were .82, .73, .88 for mothers, fathers and teachers in the community sample; and .76, .66, .88 for mothers, fathers, and teachers in the clinically referred anxious children.

**Procedure**
Participating families completed consent forms. Parents completed the questionnaires at home and delivered the questionnaire to the teacher. The clinically anxious children completed their questionnaires at the clinic, with the help of a research assistant. For the clinical sample, of the 32 participating families, 32 children (100%), 30 mothers (94%), 24 fathers (75%) and 21 teachers (66%) completed the relevant measures for this study.

For the children from the community sample, parents were either given the questionnaires in person or they were posted to them. Children completed their questionnaires at home with the help of a masters student. When parents were
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present or nearby they completed their own questionnaires first, so that they were not affected by the child’s responses and were instructed not to interfere with the child assessment in order not to affect the child. Of the 61 families from the control group, 61 children (100%), 60 mothers (98%), 57 fathers (93%), and 45 teachers (74%) completed the questionnaires relevant for this study.

**Analytical Plan**

Although group differences were found for child age and paternal age (see Table 1), child age was not significantly related to anxiety reports by any informant, nor was paternal age to paternal report ($r$'s $<$ .30, $p$'s $>$ .05). These variables were therefore not considered as covariates that needed to be controlled for in the analyses. Independent samples $t$-tests were conducted to examine differences between anxiety levels for the clinical and control children. To analyze the relationship between informant ratings, Pearson’s correlations were performed. Where the assumption of normality was violated, non-parametric tests were conducted. As the overall pattern of results and significance was consistent, we report the parametric results for consistency. Outliers ($Z$ score $>$ (-) 3.29) were adjusted to no longer be outliers, and all analyses were rerun. This yielded consistent results, so we report the results including outliers.

**Results**

**Clinical versus control children**

Table 2 shows the means and standard deviations for the clinical and control children’s anxiety as reported by different informants. Independent samples $t$-tests indicated that all informants rated the clinically anxious children as significantly more anxious than the non-anxious control children ($p$ $<$ .05), with the exception of child self-report using the KFQ ($p$ $>$ .05). Note that the effect sizes for parents and teachers are large, whereas those of children were small (KFQ) to moderate (PAT).

**Correspondence between informants**

Table 3 shows significant and large correlations between mother, father and teacher report of child anxiety. There were small positive significant correlations between children and their parents on the PAT, but for the KFQ these correlations were only borderline significant. The correlation between teacher report and child self-report was significant for the PAT but not for the KFQ. A high and significant correlation was found between the two child anxiety self-report measures (i.e. KFQ and PAT).
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Conclusion

Results showed that young clinically anxious children could be differentiated from healthy control children on the basis of their self-report on the PAT. Scores on the KFQ did not differentiate these groups. Furthermore, there was evidence for some association between PAT scores and parent- and teacher-report of child anxiety.

Table 2 Means and standard deviations for reports on child anxiety in the clinically anxious and control group according to different informants

<table>
<thead>
<tr>
<th>Score Type</th>
<th>Clinically anxious children</th>
<th>Healthy control children</th>
<th>Group differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>SCBE-AW-M***</td>
<td>30</td>
<td>25.76</td>
<td>6.12</td>
</tr>
<tr>
<td>SCBE-AW-F***</td>
<td>24</td>
<td>24.96</td>
<td>5.14</td>
</tr>
<tr>
<td>SCBE-AW-T***</td>
<td>21</td>
<td>24.69</td>
<td>8.16</td>
</tr>
<tr>
<td>KFQ-C</td>
<td>32</td>
<td>55.63</td>
<td>11.88</td>
</tr>
<tr>
<td>PAT-C**</td>
<td>32</td>
<td>15.94</td>
<td>7.55</td>
</tr>
</tbody>
</table>

Note. ** p < .01; *** p < .001
C = child; CI = confidence interval; F = father; KFQ = Koala Fear Questionnaire; M = mother; PAT = Picture Anxiety Test; SCBE-AW = Social Competence and Behavior Evaluation – 30, anxiety-withdrawal scale; T = teacher.

Table 3 Correlations between different informants on child anxiety

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SCBE-AW-M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. SCBE-AW-F</td>
<td>.62***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. SCBE-AW-T</td>
<td>.58***</td>
<td>.53***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. KFQ-C</td>
<td>.20‡</td>
<td>.21‡</td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. PAT-C</td>
<td>.32**</td>
<td>.24*</td>
<td>.27*</td>
<td>.55***</td>
<td></td>
</tr>
</tbody>
</table>

Note. ‡ p < .10, * p < .05, ** p < .01, ***p < .001
C = child; F = father; KFQ = Koala Fear Questionnaire; M = mother; PAT = Picture Anxiety Test; SCBE-AW = Social Competence and Behavior Evaluation – 30, anxiety-withdrawal scale; T = teacher.

Conclusion

Results showed that young clinically anxious children could be differentiated from healthy control children on the basis of their self-report on the PAT. Scores on the KFQ did not differentiate these groups. Furthermore, there was evidence for some association between PAT scores and parent- and teacher-report of child anxiety.
Study 2
The aim of this study was to better assess agreement between parents and children by directly comparing child-report of anxiety with parent-report using the same questionnaire. The PAT was used since study 1 showed most favorable outcomes for this measure.

Method
Participants
Community children and their parents were recruited through convenience sampling, including relatives, local contacts, and schools. Of the 169 children, all children (100%), 162 mothers (95.9%) and 148 fathers (87.6%) completed the PAT. This sample is entirely separate from the first sample. The majority of children ($n = 137$; 81.1%) did not meet criteria for an anxiety disorder based on the ADIS-P (Silverman & Albano, 1996). For those who met criteria for an anxiety disorder, principal diagnoses were specific phobia ($n = 23$), social anxiety disorder ($n = 4$), generalized anxiety disorder ($n = 3$), and separation anxiety disorder ($n = 2$). Demographics of the total sample, and subsamples of children with and without anxiety disorders are displayed in Table 4.

| Table 4 Demographics of the community sample: the sample including both children with and without anxiety disorders, and separately for the children with and without anxiety disorders |
|-----------------|-----------------|-----------------|
| Children*       | Total sample ($n = 169$) | Children with anxiety disorders ($n = 32$) | Children without anxiety disorders ($n = 137$) |
| Gender, boys ($n$, %) | 82 (48.5%) | 15 (46.9%) | 67 (48.9%) |
| Age, mean ($SD$) | 5.38 (1.06) | 5.44 (1.16) | 5.37 (1.04) |
| Mothers*b       | Age, mean ($SD$) | 36.15 (4.94) | 36.55 (5.37) | 36.05 (4.86) |
| Educational level*, mean ($SD$) | 7.41 (1.37) | 7.32 (1.38) | 7.43 (1.38) |
| Fathers*c       | Age, mean ($SD$) | 38.59 (5.80) | 38.52 (3.87) | 38.60 (6.20) |
| Educational level*, mean ($SD$) | 7.02 (1.76) | 7.24 (1.75) | 6.97 (1.77) |

Note. * $p < .05$
*Based on data reported by mothers; *Only the mothers and fathers that completed the Picture Anxiety Test were included in these analyses; *Measured on a scale ranging from 1 (none) to 9 (university). Information concerning educational level was missing for two fathers. Information with respect to age was missing for one mother and three fathers.
Measures
Child and parent report of child anxiety was assessed using the PAT (Dubi & Schneider, 2009; see study 1). For the children, the measure was administered as in study 1. Parents completed an adapted version independently; the vignettes were printed and written instructions provided. Cronbach’s alpha’s in this study were respectively for fathers, mothers, and children .80, .73, and .76 for the subsample of anxiety-disordered children; and .82, .80 and .83 for the subsample of non anxiety-disordered children.

Analytical plan
No group differences were found for any of the demographic variables between children with and without an anxiety disorder (see Table 4). Outliers (Z-score > (·) 3.29) were modified such that they were no longer outliers and the analyses were rerun. As this yielded consistent findings, we report the results including outliers.

To replicate the findings from study 1, independent samples t-tests were conducted to examine whether children could be differentiated as having an anxiety disorder or not based on their self-report (the PAT). Identical analyses were also conducted for mother and father report of their child’s anxiety, given that the PAT has not been used previously as a parent-report instrument. Pearson’s correlations were performed to assess agreement between mothers, fathers and children. Thereafter, a one-way repeated measure ANOVA was performed to test for differences between mothers, fathers and children, reporting on the same child and using the same questionnaire to assess child anxiety.

Results
Anxiety disordered versus non-anxiety disordered children
Table 5 shows that significant differences were found between children with and without anxiety disorders on reports by all informants. The effect sizes found were large for mothers and fathers, and moderate for children.

Correspondence and discrepancy between informants
Results showed a large positive correlation between maternal and paternal reports on child anxiety, \( r = .69, n = 145, p < .001 \). Child self-reports showed a medium positive correlation with maternal report, \( r = .47, n = 162, p < .001 \), and paternal report, \( r = .48, n = 148, p < .001 \). A one-way repeated measure ANOVA showed no significant differences in reports of fathers \( (M = 13.43, SD = 8.12) \), mothers \( (M = 13.96, SD = 8.56) \) and children \( (M = 13.27, SD = 9.50) \), Wilks’s Lambda = .99, \( F (2, 143) = .61, p = .55 \).
Conclusion

In line with study 1, young children could be differentiated as having anxiety disorders or not based on their self-report of anxiety using the PAT. Robust correlations were found between child and parent report, and no significant differences were found between children, mothers, and fathers in their reported levels of child anxiety, indicating that young children are able to report on their anxiety.

General discussion

To ensure that children are correctly referred for treatment and that treatment can be effectively evaluated, the importance of gaining both child and parent report has been emphasized (e.g., Cartwright-Hatton et al., 2006). However, child self-report is rarely used for children younger than age 8. In the present article we conducted two studies that examined self-report measures of anxiety designed for young children. In the first study, clinically anxious and healthy control children participated. The extent to which self-reports differentiated clinically anxious children from healthy control children was examined, as was inter-informant agreement. In the second study, using an independent sample of community children with and without anxiety disorders, parents and children completed the same child questionnaire, the PAT. Again differences between children with and without anxiety disorders were examined, as well as agreement and discrepancy between the informants.

The main findings were: (1) Clinically anxious children reported higher levels of anxiety than healthy control children using the PAT (medium effect size) but not the KFQ (small effect size) (study 1). This result was replicated in study 2. (2) Correlations between different measures of child self-report of anxiety (PAT and KFQ) were high (study 1). Correlations between child self-reports (KFQ and PAT)

Table 5 Means and standard deviations for reports on child anxiety with the PAT for the community children with and without anxiety disorders according to different informants

<table>
<thead>
<tr>
<th></th>
<th>Children with anxiety disorders</th>
<th>Children without anxiety disorders</th>
<th>Group differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Mother***</td>
<td>31</td>
<td>21.26</td>
<td>8.34</td>
</tr>
<tr>
<td>Father***</td>
<td>29</td>
<td>21.70</td>
<td>8.41</td>
</tr>
<tr>
<td>Child**</td>
<td>32</td>
<td>17.22</td>
<td>8.96</td>
</tr>
</tbody>
</table>

** $p < .01$; *** $p < .001$
and reports by mothers, fathers and teachers (SCBE) were low but significant for
the PAT and not significant for the KFQ (study 1). (3) Child self-report correlated
positively and significantly (medium effect size) with both father and mother report
and there were no significant differences between reporters when respondents all
completed the same questionnaire (the PAT; study 2).

Overall, results indicate that, with age appropriate measures, young children
can report on their anxiety symptoms. As symptoms of anxiety are not necessarily
visible by others (Kendall & Flannery-Schroeder, 1998), incorporating young children’s
self-report may provide additional insights into the child’s anxiety, which may facilitate
clinicians’ case conceptualization and increase the efficacy of treatment. The results
were particularly supportive of the PAT as a self-report measure of anxiety; across
both studies using different samples, PAT scores were correlated with parent report of
child anxiety and differentiated between young children who had an anxiety disorder
and those who did not. This later finding is consistent with Dubi and Schneider’s
(2009) findings. These results are encouraging; including young child self-report in
the assessment and treatment of anxiety is possible and could be useful.

Despite these promising results, there were also some issues that should be
considered. First, the finding that clinically anxious and non-anxious children could
not be differentiated by their responses on the KFQ requires consideration. One
explanation is that the KFQ items most often subscribed (e.g. ‘fire’, ‘being hit by a
car or truck’ and ‘a burglar breaking into your house’ (see Muris et al., 2003); all not
incorporated in the PAT) may have induced fear in all children, anxiety disordered
or not, resulting in less sensitivity to differentiate anxious from non-anxious children.
Another explanation is that young children may find it easier to choose between
two pictures (showing an anxious or a neutral response; PAT) and then indicate
the degree of resemblance, rather than reporting their fear level in response to one
picture (KFQ).

A second issue concerns the reliability of the PAT, which was somewhat low
for the anxiety disordered children in the first study (Cronbach’s alpha .69), although
satisfactory in the second study (Cronbach’s alpha .74) and in the study by Dubi
and Schneider (2009). For the first study, analyses showed no problematic items
that could be removed to increase reliability. The differences found between the
two studies in the reliability of the PAT could possibly be explained by differences in
comorbid disorders between the two subgroups of children with anxiety disorders.
That is, the group of clinically referred children had a higher percentage of children
with comorbid ADHD, ODD or ASD, which may have influenced the reliability of
their self-reports (e.g. for comorbid ASD see van Steensel, Deutschman, & Bögels, 2012).

A third issue that warrants consideration is that the correlations between child self-report and the reports of others in study 1 were low. These low correlations could be because slightly different anxiety constructs were measured by the child report measures and the parent/teacher report measure in study 1. Parents and teachers completed the SCBE, which includes items such as “My child is unnoticed in groups”. The items of the KFQ and PAT are more concrete e.g. “to tell something in front of the class” and “heights”. Indeed, when parents and children completed the same questionnaire in study 2, correlations were significant and almost large, indicating that when children and parents report on the same anxiety construct, agreement increases.

A last important consideration is that the child questionnaires contained items concerning fears, rather than cognitions, somatic complaints or worries (although two items regarding generalized anxiety are included in the PAT). This means that the present findings are limited to report of fears; it is possible that young children would find it more difficult to report on their worries, cognitions and somatic complaints. In keeping with this, Luby, Belden, Sullivan, and Spitznagel (2007) examined the usefulness of young children’s self-report of depressive symptoms. Results showed that children, using an age-appropriate interview, could provide self-report of concrete symptoms (e.g. feeling happy or sad and crying a lot) but not of more abstract symptoms (e.g. feeling lonely, tired or worthless). This may also explain why we found higher correlations between child and parent report than those reported for older children (r = .15 to r = .35; Choudhury et al., 2003), as anxiety questionnaires for older children also include less concrete symptoms (e.g. worries and cognitions). Taken together, however, the results demonstrate that young children can provide self-reports on concrete fears, at least with the PAT.

To conclude, the results of this study extended previous research on child self-report (Dubi & Schneider, 2009; Dubi et al., 2012; Muris et al., 2003) as: 1) the PAT and KFQ were compared within the same sample and 2) mothers and fathers completed the same questionnaire (the PAT) as their child. Overall, the results are promising and indicate that young children can provide useful self-reports, at least with regards to concrete fears, and there seems to be no reason not to implement child self-report in research and practice. As anxiety is an internalizing disorder, children may report on fears that are not visible to parents, and therefore child self-report is important. Or, from a preventative perspective, results indicate that
classroom screening is possible, which could identify children with high anxiety who may be in need of treatment.

**Strengths, limitations and future research**

The studies had several strengths: 1) the inclusion of multiple informants; we not only included mother reports, but also father and teacher reports; 2) the focus on child self-report, which is a neglected area of research in young children; 3) participants were from both a clinical and community sample; and 4) the aims were addressed across two independent studies, which allowed our findings to be replicated.

Limitations should also be mentioned. The sample of clinical children with anxiety disorders was relatively small. It would be of value to replicate the studies using larger clinical samples. In addition, the samples were relatively homogenous (well-educated, urban, Dutch), thus it is not clear how results generalize to other samples and more research investigating the use of child self-report in different contexts is needed. Furthermore, the questionnaires used assessed concrete fears; it is unknown whether young children would be able to report on more abstract concepts of anxiety (e.g. cognitions, worries). Finally, findings are limited to questionnaires and may not generalize to studies using observation or interview measures. Future studies could examine the predictive value of young children's self-report versus parents and other informants using objective anxiety measures such as observations and behavioral approach tests.
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References


