DSM-IV criteria for childhood separation anxiety disorder: Informant, age, and sex differences

Jennifer L. Allen, Kristen L. Lavallee, Chantal Herren, Katharina Ruhe, Silvia Schneider

Department of Psychology, University of Basel, Missionstrasse 64a, Basel 4055, Switzerland
Institute of Psychiatry, Kings College, London
Department of Psychology, Ruhr University of Bochum, Germany

A R T I C L E   I N F O

Article history:
Received 22 March 2010
Received in revised form 23 June 2010
Accepted 23 June 2010

Keywords:
DSM
Diagnosis
Separation anxiety disorder

A B S T R A C T

Background: The present study examines frequency of DSM-IV symptom and diagnostic criteria for separation anxiety disorder (SAD) by informant, age, and sex.

Methods: Children aged 4–15 years with a primary DSM-IV diagnosis of SAD (N = 106) were assessed using structured diagnostic interviews (Kinder-DIPS; DSM-IV-TR Version). Frequency of DSM-IV symptom and diagnostic criteria were examined as a function of informant and child characteristics, along with impairment and distress ratings.

Results: The most frequently reported symptoms were separation-related distress, avoidance of being alone, and sleeping away from caregivers. Findings suggest that parents may be best placed to determine impairment and distress based on child report.

Conclusions: The primary indicators of SAD appear to be separation distress, avoidance of being alone, and sleeping away from caregivers. Findings suggest that parents may be the most accurate reporters of more covert internal distress. Implications for clinicians are that reports from multiple informants should be used to gain the most comprehensive information about childhood SAD.

1. Introduction

Separation anxiety disorder (SAD) is characterized by persistent, excessive, and developmentally inappropriate fear of separation from major attachment figures, usually parents. Symptom criteria for SAD, according to the DSM-IV-TR (American Psychiatric Association, 2000) include fearful cognitions, behavioral avoidance, and physiological or somatic symptoms. According to DSM-IV criteria, children must display three of eight symptom criteria for at least 4 weeks for diagnosis. DSM-III criteria indicated three of nine symptoms for at least 2 weeks (APA, 1987). Recurrent excessive distress about anticipated or actual separation were collapsed into one symptom in DSM-IV, with all other symptom criteria remaining unchanged since DSM-III. Further, the presence of significant impairment or distress is also a requirement for a DSM-IV diagnosis. Although the DSM-IV was published 15 years ago (APA, 1994), little is currently known about the frequency of SAD symptom criteria; for example whether certain symptoms are more characteristic of SAD than others, and whether differences exist according to age, sex, or informant.

There is speculation that the nature and frequency of separation anxiety symptoms may alter as children develop. DSM-IV includes developmental considerations, such that younger children are less likely to experience somatic symptoms or fears of threats to their parents, homes or themselves than older children. However, it is also possible that changes in the behavioral manifestation of SAD may lead to its under-detection in adolescence. One of the few studies to examine the frequency of SAD symptom criteria according to DSM-III criteria (N = 45) indicated some developmental variations (Francis, Last, & Strauss, 1987). Children diagnosed with SAD aged 5–8 presented with more symptoms overall than diagnosed children aged 9–12. That is, all young children presented with four or more symptoms but only 69% of children aged 9–12 fulfilled this criterion (31% met diagnostic criteria based only on the minimum of three symptoms). Surprisingly, 78% of adolescents aged 13–16 years presented with four or more symptoms, and as such did not differ from the two younger age groups in the total number of symptoms. Younger children were more likely than older children to report nightmares and excessive distress upon separation, with a trend for adolescents to report more physical symptoms on school days.
days than younger children. Some additional evidence also lends support to developmental variations in overall symptom frequency. For example, one examination of both community and clinical samples indicated that children (8–12 years) reported more symptoms overall than adolescents (Compton, Nelson, & March, 2000).

Studies comparing prevalence of SAD in boys and girls have resulted in mixed findings. Some indicate a greater prevalence of SAD for girls than boys in both community (Compton et al., 2000; Foley et al., 2004; Hale, Raaijmakers, Muris, & Meeus, 2005; Hewitt et al., 1997; Ogliari et al., 2006) and clinical samples (Last, Hersen, Kazdin, Finkelstein, & Strauss, 1987). Various explanations, including a stronger interpersonal orientation (Hankin & Abramson, 2001) or a greater genetic susceptibility to SAD in girls (Silberg, Rutter, & Eaves, 2001), have been offered to account for the higher prevalence rate in females. However, other studies have shown relatively equal gender distribution in community (Cohen et al., 1993) and clinical samples (Francis et al., 1987; Last, Perrin, Hersen, & Kazdin, 1992). Compton et al. (2000) even found a reversed gender effect with increased symptoms in boys in a clinical sample, prompting the authors to suggest that parents may be more likely to seek help for boys due to a greater societal acceptance of anxiety for females. Finally, the informant may also influence symptom reporting. Research indicates that sex differences in prevalence rates may be more prominent when based on parent as compared to child report, with girls more likely to receive an SAD diagnosis in a community sample of twins (Foley et al., 2004). The informant also influenced the overall rate of SAD, in that child interviews tended to yield a higher prevalence of SAD than interviews with parents.

In addition to symptom criteria, the criterion of impairment or distress is also of interest. Impairment or distress (a child must evidence at least one of the two) has only recently been indicated as a requirement for diagnosis in the DSM-IV (APA, 1994) and appears to be an important factor in identifying SAD. Results of one study indicated that the rate of SAD dropped from 8.6% to 2.4% when impairment was required for diagnosis in preschool-age children (Egger & Angold, 2006). Little else is known about how diagnosis rates change when ratings of impairment and distress are taken into account, their relationship to one another, and how impairment and distress differ according to sex, age, and informant.

The primary aim of the present study is to examine frequency of symptom and diagnostic criteria for SAD as a function of child characteristics (age and sex) and informant (parent and child). On the basis of past findings, younger children are expected to report more distress upon separation and nightmares than older children. Adolescents may report more somatic symptoms than younger children. Girls are expected to evidence more symptoms than boys. An examination of the variation in number of symptoms and specific symptom prevalence by informant is exploratory. As the present study utilized a largely parent-referred clinical sample, parents may be more likely than children to indicate an SAD diagnosis, with more symptoms reported overall. The impairment/distress requirement for diagnosis will also be explored, as very little research exists in this area. Impairment and distress are expected to be highly, but not perfectly, correlated. It is expected that some children will not receive a diagnosis due to low impairment or distress ratings. Rate of diagnosis is expected to decrease when both impairment and distress are required for diagnosis. The correlation between the number of symptoms reported and the degree of impairment/distress will be analyzed on an exploratory basis.

2. Methods

2.1. Participants

Participants were 106 children with a primary diagnosis of SAD, based either on parent or child interview, and their parents. Children were aged 4–15 years (mean age = 8.6, SD = 2.4; 50 boys, 56 girls). Most children (93%) came from two-parent families. All participants were Caucasian, with the majority of children identified as Swiss (82%) followed by “other” European (18%). The sample was predominantly middle to upper middle class, with a median monthly income of 4001–8000 CHF (44%). Participants were recruited through local media advertisements and university-based and community outpatient mental health clinics in the cities of Basel and Zurich, Switzerland. Families formed part of an ongoing randomized trial of CBT for SAD and received subsidized treatment for their participation. Exclusion criteria were insufficient knowledge of the German language, developmental delay, or use of psychotropic medication.

2.1.1. Structured diagnostic interview

The Diagnostic Interview for Children and Youth for DSM-IV-TR: Child and Parent Versions (Kinder-DIPS; DSM-IV-TR Version; Schneider, Unnewehr, & Margraf, 2009) are structured interviews designed to assess mental disorders common in childhood and adolescence according to DSM-IV-TR criteria. The child version is administered only to children 8 years of age and older, as younger children appear unlikely to have developed the verbal and or cognitive skills needed to provide an accurate report of symptoms (Grills & Ollendick, 2003). Clinician-based ratings of symptom frequency are assessed on a 4-point scale from 0 (never/seldom) to 3 (very often). Each symptom criterion is considered fulfilled when a symptom frequency rating of ≥ 2 is awarded. Clinician-based ratings of the degree of distress caused by the presenting symptoms as well as the associated degree of impairment for the child (separately for the home, school, friendship and leisure domains) are provided on a 4-point scale from 0 (not at all) to 3 (very strong). As in structured diagnostic interviews commonly used in English-speaking samples (e.g., ADIS; Silverman & Albano, 1996), the disorder with the highest overall clinician-judged general severity rating (on a scale from 1 to 8, and based on the combined impairment and distress ratings) was considered the child’s primary diagnosis, with secondary diagnoses representing all other disorders where DSM-IV criteria were met. The Kinder-DIPS is widely used in German-speaking populations and has demonstrated good retest reliability (child version, k = .48–.88; parent version, k = .85–.94; all DSM-IV diagnoses) and validity, with moderate parent–child agreement for SAD (k = .54). Inter-rater reliability estimates are good for diagnoses of SAD (child version: k = .81; parent version: k = .83) and moderate to very good for an overall diagnosis of an anxiety disorder (child version: k = .48; parent version: k = .85; Adornetto, In-Albon, & Schneider, 2008; Schneider et al., 2009).

2.2. Procedure

Families who expressed interest in participating were sent institutional ethics review board-approved information and consent forms. Consenting (parents) and assenting (children) completed the Kinder-DIPS as part of a pretreatment assessment protocol. Diagnostic interviews were administered by qualified, trained, and supervised clinical psychologists and graduate students at a university-based outpatient clinic. Parent interviews were conducted with both parents present (77%), with mothers only (22%), or with fathers only (1%). Parent and child interviews were conducted separately and administered by different clinicians to control for possible bias. Diagnoses for children under 8 years (n = 43) are based on information obtained during parent interviews only. Following each interview, clinicians provided diagnoses and severity ratings, producing two separate clinician-based profiles of symptom and diagnostic criteria for each child (over 8 years) based on parent report and child self-report. The diagnosis receiving the highest clinical severity rating on the basis of parent or child interview
considered the primary diagnosis. Secondary diagnoses refer to all other diagnoses where DSM-IV criteria are met.

3. Results

3.1. Diagnoses

3.1.1. Parent interviews

Number of children meeting SAD criteria based on parent, child, and combined clinician-based diagnoses are displayed in Table 1. All children met criteria for at least one DSM-IV diagnosis based on parent interview. Primary diagnoses included SAD (n = 101), primary insomnia (2), specific phobia (1), GAD (1), and Tourette's disorder (1). Children receiving the latter four diagnoses were included based on child reported SAD diagnoses. Secondary diagnoses included specific phobia (19), social phobia (8), GAD (5), OCD (1), primary insomnia (4), ADHD (3), ODD (3), tic disorders (3), enuresis (2), major depression (2) and sleep disorder (2).

3.1.2. Diagnoses: child interviews

Sixteen of the sixty-three 8–14-year-old children who were administered the child version of the Kinder-DIPS did not meet criteria for any DSM-IV diagnoses based on child interview alone. For the remainder, primary diagnoses were as follows: SAD (n = 43), social phobia (2), and generalized anxiety disorder (GAD; 2). Children receiving the latter two diagnoses were included based on parent reported SAD diagnoses. According to agreement indices (Table 1), there was no significant association between raters on diagnosis of SAD. Sixteen children met DSM-IV criteria for a secondary diagnosis, including specific phobia (6), GAD (2), agoraphobia without panic disorder (n = 1); primary insomnia (2), sleep disorder (2), ODD (1), ADHD (1), and tic disorder (1).

3.2. Missing data

Missing symptom criteria data for the child interviews were as follows: A7 (n = 2), and A8 (2). Missing data for the parent interviews were as follows: A1 (n = 3), A2 (5), A3 (7), A4 (1), A5 (1), A6 (1), A7 (9), and A8 (3). Missing data were due to parent or child uncertainty regarding symptom presence, and in some cases, incomplete interviewer questioning. In one case, no specific symptom questions were asked because the parent indicated that the child did not have separation anxiety although the child report indicated a positive SAD diagnosis.

3.3. Total number of symptoms

Table 2 presents frequency of diagnostic symptom criteria as a function of informant as well as agreement between informants.

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of children meeting DSM-IV criteria for SAD based on parent, child, or combined clinician-based diagnoses, and inter-rater agreement.</td>
</tr>
<tr>
<td>Diagnostic basis</td>
</tr>
<tr>
<td>Parent report alone</td>
</tr>
<tr>
<td>Child report alone</td>
</tr>
<tr>
<td>Combined report</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>(κ)</td>
</tr>
<tr>
<td>(φ)</td>
</tr>
<tr>
<td>% agreement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of children presenting with each symptom, based on child and parent reports.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>A1</td>
</tr>
<tr>
<td>A2</td>
</tr>
<tr>
<td>A3</td>
</tr>
<tr>
<td>A4</td>
</tr>
<tr>
<td>A5</td>
</tr>
<tr>
<td>A6</td>
</tr>
<tr>
<td>A7</td>
</tr>
<tr>
<td>A8</td>
</tr>
</tbody>
</table>

* p < .05.
” p < .01.
for the older children. A mixed model ANOVA was conducted to examine the effects of sex, age, and informant (entered as a repeated measure) on the total number of symptoms (0–8) reported. For these analyses, missing data for individual symptoms were accounted for by taking the average number of symptoms and then multiplying by 8 within subject and informant. Results indicated a significant effect of informant, parent mean = 4.48, SD = 1.68, child mean = 3.23, SD = 1.84, F(1, 134.10) = 18.96, p < .001, d = .71. Main effects of sex and age, and sex by age and informant by age interactions were all non-significant. A trend-level interaction between informant and sex emerged, F(1, 134.10) = 3.01, p = .085, d = .30. A follow-up t-test examining number of symptoms by sex separately for parent and child reports indicated that parents tended to report more symptoms for girls (mean = 4.93, SD = 1.53) than for boys (mean = 4.29, SD = 1.59); t(104) = −2.11, p < .05, d = .41. While statistically significant, with a medium effect, this difference is not clinically significant, meaning there is no difference between 4.93 and 4.29 symptoms in meeting diagnostic criteria, as the threshold is set at three symptoms.

As more children than parents gave reports that did not result in a diagnosis of SAD, a follow-up paired-samples t-test was conducted including only reports resulting in SAD diagnosis to further investigate the informant effect. Results indicated that among reports resulting in a diagnosis, parents reported a greater number of symptoms (M = 4.88, SD = 1.48) than children (M = 4.05, SD = 1.47), t(37) = −3.05 p < .01, d = .56.

3.4. Individual symptoms

Agreement on individual symptoms was low for subjective symptoms related to worry and fear, and higher for school refusal, reluctance to sleep alone, nightmares (infrequently reported by both parents and children), and physical complaints. The most frequently reported symptom criteria based on child interview were (A6) persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home (71.4%) and (A5) persistently and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant adults in other settings (61.9%). The least frequently reported symptoms by children were (A4) persistent reluctance or refusal to go to school or elsewhere because of fear of separation (22.2%) and (A7) repeated nightmares involving the theme of separation (11.5%).

The most frequently reported symptom criteria based on parent interview were (A1) recurrent excessive distress when separation from home or major attachment figures occurs or is anticipated (87.4%) and (A6) persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home (85.7%), with symptom criterion (A5), persistently and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant adults in other settings (61.9%). The least frequently reported symptoms by children were (A4) persistent reluctance or refusal to go to school or elsewhere because of fear of separation (22.2%) and (A7) repeated nightmares involving the theme of separation (11.5%).

3.5. Symptom criteria presence as a function of informant and child age and sex

Using only reports resulting in SAD diagnosis, Generalized Linear Mixed Models, using R (Bates & Maechler, 2009; Broström, 2009; R Development Core Team, 2009), were employed to ana-

---

1 Data as a function of sex and age group are available online at the journal website.
lyze symptom presence (dichotomous dependent variable) as a function of age (continuous between-subjects), sex (dichotomous between-subjects), informant (dichotomous within-subjects), and their interactions (Table 3). Results indicated four significant main effects, and no significant two-way interactions. Criterion A1 (recessive excessive distress when separation from home or major attachment figures occurs or is anticipated) was more likely to be endorsed on the basis of parent than child report, whereas criterion A7 (repeated nightmares involving the theme of separation) was less likely to be met based on parent compared to child interview. Girls and younger children were more likely to manifest reluctance or refusal to go to school or elsewhere because of fear of separation (A4).

3.6. Impairment ratings

Impairment ratings in each of four domains (home, school, leisure, and friendship) were summed to create a total impairment score. Descriptive statistics for impairment and distress ratings are displayed in Table 4. A 2 (sex) X 2 (informant) X 3 (age group) mixed model was conducted with informant as a repeated factor, and impairment as the dependent variable, using only those reports resulting in diagnosis. There was a significant main effect of informant on impairment ratings, F(1, 106.81) = 7.10, p < .01, d = .61, indicating that higher impairment ratings were awarded on the basis of parent than child interview. A parallel model with distress as the dependent variable revealed no significant effects. Correlations between impairment and distress, using all available data, were non-significant for both child (r = .15, p = ns, N = 57) and parent reports (r = .11, p = ns, N = 103). Using only those reports resulting in diagnosis and which had complete symptom data, correlations indicated significant associations between the number of symptoms and child-reported distress (r = .48, p < .01, N = 41) and parent-reported impairment (r = .34, p < .01, N = 85).

Of the 16 children who did not meet criteria for a primary diagnosis of SAD based on child report, one child had enough symptoms to meet criteria A, but did not receive the diagnosis based on low impairment and distress ratings (i.e., impairment in all domains < 2 and distress < 2). The remaining children did not meet criteria due to fewer than three symptoms or duration of symptoms less than the 4 weeks required. The five children who did not meet criteria for a primary SAD diagnosis based on parent report were not given the diagnosis based on too few symptoms, and thus criterion D (impairment or distress) was not the primary determinant of the lack of an SAD diagnosis.

Among the 43 children with an SAD diagnosis based on child report, 23 (53.5%) reported impairment OR distress (ratings in one of the four impairment domains OR in distress of 2 or greater), and 20 (46.5%) reported both. Among the 101 parents whose reports led to an SAD diagnosis for their children, 38 (37.6%) parents reported impairment OR distress, and 63 (62.4%) reported both. That is, if both impairment and distress were required for diagnosis of SAD, 53.5% of child reports and 37.6% of parent reports that resulted in a diagnosis based on the current criteria of impairment OR distress, would not have resulted in diagnosis. Chi-squares indicated no significant differences in the presence of either impairment or distress or both impairment and distress together across informant, and between sexes or age groups within informant.

4. Discussion

Results indicated that parent reports were more likely to result in diagnosis, with parents tending to report more symptoms than children. This is not surprising, as the sample was parent-referred rather than being a community sample. Thus current findings may only generalize to other samples relying on parent-referral, which is especially likely to be the case for SAD given its early age of onset (Kessler et al., 2005). The imperfect agreement between parent and child interviews is also in accordance with past research (Comer & Kendall, 2004; Foley et al., 2004). Contrary to past results (i.e., Compton et al., 2000; Francis et al., 1987), present findings indicated no significant age differences. Past research on sex differences has been very mixed, and we found only a trend-level difference of sex on the overall number of symptoms reported.

Both children and parents generally reported child reluctance to be without major attachment figures at home and at bedtime, with the vast majority of parents additionally reporting child distress upon separation. Few cases of nightmares involving separation were reported. Only a small number of children reported reluctance to go to school, while few parents reported child fear that untoward events would lead to separation. Parents generally reported more separation distress and fewer child nightmares than children did. Also, girls and younger children manifested more school refusal than boys and older children. These results highlight that some symptom criteria are much more prevalent than others among parent-referred clinical samples. If these findings are replicated in other samples, future versions of the DSM may benefit from inclusion of information about such variations to inform clinician expectations, as well as recommendations for the use of both child and parent report in the diagnosis of SAD. At this time, we do not advise removing low-frequency symptoms such as separation-related nightmares, from diagnostic criteria, as even one symptom may still cause significant impairment and distress.

Lastly, results pointed to interesting findings in the areas of impairment and distress. When examined as continuous variables, parents gave higher impairment but not distress ratings than children. However, there were no differences in the presence of impairment/distress (i.e., criterion D) by informant, age, or sex when presence was examined as a dichotomous variable. Contrary to our predictions, continuous impairment and distress ratings were not significantly correlated for either child or parent reports. Further, number of symptoms was correlated with impairment based on parent report, and with distress based on child report. Parents may be better able to judge impairment, as they have a more objective view of the child’s functioning. Children,
5. Conclusions

As clinicians continue to diagnose SAD based on structured diagnostic interviews adhering to DSM-IV criteria, several findings from the present study may aid in illuminating diagnosis. First, parents in this clinical sample were more likely to provide reports resulting in a diagnosis than children, and reported more symptoms overall than children. The most common symptoms reported by both parents and children were reluctance to be without major attachment figures at home and at bedtime, with parents also frequently reporting child distress upon separation. Few children seemed to experience nightmares regarding separation. Age and gender differences were not widespread or pronounced, however girls and younger children were more likely to refuse to attend school. Further, parents may be best placed to determine impairment, while children may be the most accurate reporters of more covert internal distress. Implications for clinicians are that reports from multiple informants should be used to gain the most comprehensive information about childhood SAD, yet requiring the presence of impairment or distress. Fulfillment of diagnostic criteria via both parent and child report may be too stringent and could potentially result in the under-detection of children in need of treatment.

Acknowledgements

The first and second author contributed equally to the production of this manuscript. This study was supported by grant PPO01-68701; 105314-116517/1, “Etiology and Psychological Treatment of Separation Anxiety Disorder in Childhood,” awarded to Prof. Dr. Silvia Schneider by the Swiss National Science Foundation. We appreciate the participants in this study, as well as the research assistants and graduate students on the Taff project at the University of Basel for their assistance. We also thank Dr. Andrea Meyer for his statistical assistance. Jennifer Allen is now at the Institute of Psychiatry, Kings College London. Silvia Schneider is now at the Department of Psychology, Ruhr University of Bochum, Germany.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.janxdis.2010.06.022.

References

Dubi & Schneider, 2009). The present study confined analyses to prevalence of SAD symptoms in parent-referred children attending outpatient university and community mental health clinics. Thus, findings may not be representative of the community at large. Future research could improve on the present study with the addition of comparison samples of children from the general community, as well as a clinical control group, with the aim of determining the generalizability of this data, and its specificity to SAD.

There are several important clinical implications that may be drawn from the present study findings. The diagnostic validity of the use of the “or-rule” (i.e., considering symptoms present even if only indicated by one informant) must be further examined due to the unclear validity of diagnoses based on this rule given the poor diagnostic agreement between parents and children (Foley et al., 2004). Based on the current findings, the “or-rule” seems more practical than a conservative “and-rule,” where diagnostic criteria are only met if reported by all informants. Using the “or-rule” increases the likelihood that all clinical cases are identified (Comer & Kendall, 2004), and thus is more likely to ensure that all children who are experiencing distress or impairment due to SAD symptoms have access to treatment.

While use of composite diagnoses is recommended (American Academy of Child and Adolescent Psychiatry, 1997), child interviews in this study were conducted only with children aged 8 years and older, as poor reliability has been found for interviews with younger children (Schniering, Hudson, & Raape, 2000). Clinicians seeking to use multiple informants should consider making use of pictorial measures (Dubi & Schneider, 2009). Alternatively, other measures likely to enhance the validity of diagnosis include other measures likely to enhance the validity of diagnosis include

Indeed, if both impairment and distress were required for diagnosis in this sample, many children whose families felt there was need enough for treatment would not have received it based on the failure to fulfill diagnostic criteria.

One important limitation of the present study relates to ethnicity. Children in the present sample were primarily Caucasian-European, from middle class families with well-educated parents. Another limitation relates to the lack of an interview measure for the youngest children, although pictorial measures are currently being developed for this purpose (Dubi & Schneider, 2009). The present study confined analyses to prevalence of SAD symptoms in parent-referred children attending outpatient university and community mental health clinics. Thus, findings may not be representative of the community at large. Future research could improve on the present study with the addition of comparison samples of children from the general community, as well as a clinical control group, with the aim of determining the generalizability of this data, and its specificity to SAD.

Conclusions

As clinicians continue to diagnose SAD based on structured diagnostic interviews adhering to DSM-IV criteria, several findings from the present study may aid in illuminating diagnosis. First, parents in this clinical sample were more likely to provide reports resulting in a diagnosis than children, and reported more symptoms overall than children. The most common symptoms reported by both parents and children were reluctance to be without major attachment figures at home and at bedtime, with parents also frequently reporting child distress upon separation. Few children seemed to experience nightmares regarding separation. Age and gender differences were not widespread or pronounced, however girls and younger children were more likely to refuse to attend school. Further, parents may be best placed to determine impairment, while children may be the most accurate reporters of more covert internal distress. Implications for clinicians are that reports from multiple informants should be used to gain the most comprehensive information about childhood SAD, yet requiring the presence of impairment or distress. Fulfillment of diagnostic criteria via both parent and child report may be too stringent and could potentially result in the under-detection of children in need of treatment.

Acknowledgements

The first and second author contributed equally to the production of this manuscript. This study was supported by grant PPO01-68701; 105314-116517/1, “Etiology and Psychological Treatment of Separation Anxiety Disorder in Childhood,” awarded to Prof. Dr. Silvia Schneider by the Swiss National Science Foundation. We appreciate the participants in this study, as well as the research assistants and graduate students on the Taff project at the University of Basel for their assistance. We also thank Dr. Andrea Meyer for his statistical assistance. Jennifer Allen is now at the Institute of Psychiatry, Kings College London. Silvia Schneider is now at the Department of Psychology, Ruhr University of Bochum, Germany.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.janxdis.2010.06.022.

References


