Most feared situations related to separation anxiety and characteristics by age and gender in late childhood

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Abstract: This article analyzes the most fear-provoking situations related to separation anxiety for a Spanish sample of 1407 children aged between eight and eleven, and examines gender and age differences in late childhood. It was used a specific self-report measure for separation anxiety disorder, the Separation Anxiety Scale for Children, developed for Spanish-speaking children and based on the DSM-IV-TR and ICD-10 diagnostic criteria. Results showed that children have more cognitive symptoms than psychophysiological or motor responses. The most feared situations found are related to the possibility that something bad happen to the parents and the less common situations are those related to somatic complaints. Separation anxiety symptoms were experienced by 3.9% of the sample, were more common in girls than in boys and decreasing with age. The clinical implications of these and other findings are discussed.

Key words: Anxiety disorders; separation anxiety; assessment; late childhood.

Introduction

Anxiety is a normal characteristic of child development and constitutes a protective mechanism when faced with the dangers of the environment (Campbell, 1986). The frequency of separation anxiety symptoms without clinical significance is over 50% in children (Kashani & Orvaschel, 1990). In clinical cases, separation anxiety is out of proportion and disoriented, for example, when its intensity surpasses what is expected for the level of child development and negatively affects schooling. In such cases, treatment is recommended and cognitive-behavioral therapy must be considered the treatment of choice (Méndez, Orgilés y Espada, 2008, 2010; Orgilés, Méndez, Rosa e Inglés, 2003).

The separation anxiety disorder (SAD) is the only anxiety disorder included in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, American Psychiatric Association, 2000) as a childhood or adolescent disorder, because the onset of the problem should have occurred before the age of 18. The disorder onset occurs around seven to twelve years old (Compton, Nelson & March, 2000), with peaks at seven to nine years old, but it may also appear in the age of 18.

The clinical implications of these and other findings are discussed.

Epidemiological studies estimate that the prevalence for SAD is from 3% to 5% (Anderson, Williams, McGee & Silva, 1987; Bird et al., 1988; Prior, Sanson, Smart & Obe, 1987; Last & Strauss, 1999) and the prevalence of SAD tends to decrease with age, being lower in adolescence than in childhood. The Ontario Child Health Study carried out on a community sample of 1299 adolescents, aged 12-16 years, found a lower prevalence of 2.4% (Bowen, Offord & Boyle, 1987; Bird et al., 1988; Prior, Sanson, Smart & Obe, 1987; Last & Strauss, 1999). A child with SAD may also report specific phobias, which along with excessive distress, are the most prevalent anxiety disorders in younger children (Ollendick & King, 1994).

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The purpose of this study was to examine the most fear-provoking situations related to separation anxiety for Spanish children in late childhood, aged between 8 and 11. An additional issue to be analyzed was the gender and age differences in separation anxiety. The age range selected responded to two reasons. The first one is the developmental evolution of SAD. The average age for the onset of SAD is eight (Keller et al., 1992; Last, Perrin, Hersen & Kazdin, 1992), and the symptoms of separation anxiety reach a peak at nine and begin to decrease from eleven (Méndez, Inglés, Hidalgo, García-Fernández & Quiles, 2003). Secondly, some previous studies on prevalence have found the higher number of anxiety symptoms from separation in the age range selected (e.g., March, Parker, Sullivan, Stalling & Conners, 1997), so examining it in detail could be interesting.

The study has included three innovative features compared to other studies. Firstly, previous studies have examined how separation anxiety symptoms change along the child development, finding differences by gender and age, but to date there are no studies that focus specifically on the age range at which these anxiety symptoms are more frequent. Secondly, it is used a specific assessment instrument for separation anxiety disorder, which has been developed and adapted to Spanish population. Finally, it increases significantly the size of the sample used respect to other studies.

Method

Participants

One thousand six hundred and twenty seven children from the 3rd to 6th grade attending 15 randomly selected primary schools in two south-eastern counties in Spain were recruited. Thirty subjects (1.84%) were eliminated due to data incomplete and 190 (11.68%) for being 12 years old or over. The sample was made up of 1,407 subjects, 723 boys (51.39%) and 684 girls (48.61%), with the ages of 8 (110 boys and 112 girls), 9 (189 boys and 175 girls), 10 (217 boys and 199 girls) and 11 (207 boys and 198 girls). The average age was 9.74 (SD =1.04). All children were Spanish. There were not significant differences between schools in gender, sex and socioeconomic level of participants.

Measure

Separation Anxiety Scale for Children (SASC; Méndez, España, Orgilés, Hidalgo & García-Fernández, 2008). This scale assesses separation anxiety among children from eight to eleven years old. The questionnaire, based on the diagnostic criteria of DSM-IV-TR and ICD-10, requires a short completion time of about 20 minutes.

Children must express on a five-point scale their discomfort at certain situations related to the separation from affective figures or from home. The test consists of 26 items, structured on three factors: a) Discomfort from separation, which includes 16 items (range 16-80), and is related to psychophysiological and motor responses when the child is separated from their parents or anticipates the separation (e.g., Do you have headache when you have to separate of your mum or your dad?), b) Worry about separation, with five items (range 5-25), includes uneasiness for the possibility that negative events occur during the separation, and predominantly assesses cognitive aspects (e.g., Are you worried about your mum or your dad having an accident?), c) Calm at separation, which includes five items (range 5-25) and is related to the confidence of the child at the time of separation from their parents (e.g., Are you calm when it gets dark and your mum or your dad isn’t with you?). The total score in the questionnaire varies in a range from 26 to 130. The instrument has an internal consistency (Cronbach’s alpha) of .83 for the complete scale, .85 for factor 1, .72 for factor 2, and .63 for factor 3. Test-retest reliability was .98 four weeks after the first administration. It has appropriate predictive validity, with a correct diagnosis of 97.9% of the cases with the cut-off score diagnosis set at 85.

Procedure

The research team contacted the schools to explain the goals of the investigation and ask for their collaboration. Written information was given to the principals. When the governing board agreed to participate, a letter was sent to the parents, informing and asking them for written authorization. The subjects completed the scale collectively (groups of 20-30) during class time and the confidentiality of their answers was guaranteed. The research assistants read the instructions aloud to the children. Two researchers provided individual help to any student who was having difficulty. In order to avoid bias, researchers were asked not to report the objective of the scale until subjects had all finished. The average time for administering the questionnaire was 20 minutes.

Data analysis

The study of the age and gender differences in separation anxiety was performed by the variance analysis (ANOVA) inter-subjects 2x4 (gender x age) using the total and the subscale scores in the SASC.

Results

Frequency of separation anxiety

The total mean score of the sample was 59.80 and the standard deviation 15.39. The minimum and maximum scores were respectively 26 and 122, with a median score of...
59. To estimate the frequency of anxiety related to parent’s separation, a score that exceed the mean in two standard deviation was established. Fifty-five children (3.9%) met this criterion \( (M = 99.23; \ SD = 6.74) \), 26 (46.8%) boys and 29 (53.2%) girls. Regarding the age, 15 (27.6%) were 8 years, 16 (29.8%) were 9, 16 (29.8%) were 10, and 8 (12.8%) were 11.

**Most feared situations**

Three items of the SASC had a mean score above 4 (see Table 1): item 13, “Are you concerned about your mum’s or dad’s health?”, item 21 “Are you worried about something bad happening to your mum or your dad?” and item 25, “Are you worried about your mother or father suffers an accident?”. The lowest scores were found in item 3, “Do you have headache when you have to separate of your mum or your dad?”, item 16, “Do you have stomach-ache when you have to separate of your mum or your dad?”, item 18, “Are you disappointed when your mum or your dad go out at night?”, and item 26, “Do you feel like crying when your mum or your dad say goodbye to you at school?”.

Table 1: Items with the highest and the lowest scores

<table>
<thead>
<tr>
<th>Factor Item</th>
<th>Total Gender</th>
<th>Mean (and standard deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 25</td>
<td></td>
<td></td>
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<tr>
<td>1 3</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>1 16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 26</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Differences in separation anxiety by age and sex**

Table 2 shows means (and standard deviation) of the SASC and of the three factors by age and gender. Statistically significant differences were found by age \( F_{1,403} = 18.468; \ p = .000 \) and by gender \( F_{1,403} = 11.24; \ p = .000 \), but only marginally significant by the interaction of these variables \( F_{3,1403} = 2.082; \ p = .101 \). The general trend was for separation anxiety to decrease with age. Post hoc comparisons with statistical significance were 8 vs 11 years old, 9 vs 11 and 10 vs 11. Older children had lower scores in separation anxiety. The highest SASC score was reached at 8 years old, decreasing at 9-10 years old and even more at 11 years old. According to Cohen (1988), the only difference that reached a medium size was between extreme ages, that is 8 and 11 years old \( (d = .64) \), while 8-year-old children scored a higher average than 11-year-old children. The effect size was low for the comparisons 9 vs 11 \( (d = .39) \) and 10 vs 11 \( (d = .40) \). Girls presented a significantly higher separation anxiety in comparison with boys, but the magnitude of this gender difference was very small \( (d = .12) \).

In factor 1, Discomfort from separation, significant differences in age \( F_{3,1403} = 18.300; \ p = .000 \), in gender \( F_{1,403} = 6.427; \ p = .011 \), and in interaction age x gender \( F_{3,1403} = 2.937; \ p = .032 \) were found (Table 3). Post hoc comparisons by means of the Scheffe’s (S) test revealed statistical differences \( (p \leq .05) \) for all ages except for 9-10 years old. Although significant differences in age were found, the effect size was low for these comparisons \( d = .28 \) for the comparison between 8 and 9 years, \( d = .28 \) for 8 vs 10 years, \( d = .38 \) for 9 vs 11, and .38 for 10 vs 11, except between 8 and 11 years, where 8-years-old children had the highest scores with a medium-high effect size \( (d = .71) \). Statistical differences between boys and girls were revealed, with a low effect size \( (d = .12) \).

In factor 2, Worry about separation, the differences were statistical significant in age \( F_{3,1403} = 3.697; \ p = .011 \) and gender \( F_{1,403} = 5.497; \ p = .019 \), but not the interaction \( F_{3,1403} = .983 \). The only significant comparison was between 10 and 11 years old \( (S = .20, \ p \leq .05) \), with the highest scores in 10 years old children. The effect size was low in this comparison \( (d = .25) \), as well as in the comparison between boys and girls \( (d = .13) \).

Similarly, in factor 3, Calm at separation, statistical differences were found in age \( F_{3,1403} = 7.720; \ p = .000 \) and gender \( F_{1,403} = 5.097; \ p = .024 \), but not in the interaction \( F_{3,1403} = 1.543; \ p = .202 \). Two significant age comparisons were found between 8 and 11 years old and between 9 and 11 years old, but it revealed a low effect size \( (d = .36) \) in the comparison between 8 and 11 years, and \( d = .30 \) in the comparison between 9 and 11 years. Statistical differences between boys and girls were found, but the effect size was low \( (d = .13) \).
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Table 2: Means (and standard deviation) in the variables gender and age in each factor and total score of SACS.

<table>
<thead>
<tr>
<th></th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>All ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>SACS: Total score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>62.58 (15.71)</td>
<td>58.10 (14.95)</td>
<td>60.58 (15.50)</td>
<td>54.59 (14.61)</td>
<td>58.45 (15.36)</td>
</tr>
<tr>
<td>Girls</td>
<td>64.43 (16.67)</td>
<td>64.20 (15.80)</td>
<td>61.54 (14.87)</td>
<td>55.91 (12.79)</td>
<td>61.23 (15.30)</td>
</tr>
<tr>
<td>Total</td>
<td>64.63 (16.30)</td>
<td>60.87 (15.62)</td>
<td>60.97 (15.19)</td>
<td>55.23 (13.75)</td>
<td>59.80 (15.39)</td>
</tr>
</tbody>
</table>

Factor 1: Discomfort from separation (Range 16-80)

|                   |      |      |      |      |          |
| Boys              | 29.57 (12.73) | 26.64 (10.89) | 28.32 (11.77) | 24.62 (8.34) | 26.97 (10.90) |
| Girls             | 33.20 (13.26) | 30.03 (11.82) | 28.03 (10.77) | 24.41 (7.10) | 28.28 (10.98) |
| Total             | 31.51 (13.11) | 28.18 (11.43) | 28.19 (11.29) | 24.52 (7.74) | 27.60 (10.95) |

Factor 2: Worry about separation (Range 5-25)

|                   |      |      |      |      |          |
| Boys              | 17.43 (5.94) | 17.10 (5.01) | 18.25 (4.74) | 16.89 (5.07) | 17.44 (5.10) |
| Girls             | 18.11 (4.91) | 18.17 (4.61) | 18.60 (4.48) | 17.55 (4.76) | 18.10 (4.68) |
| Total             | 17.79 (5.41) | 17.59 (4.85) | 18.41 (4.61) | 17.21 (4.93) | 17.76 (4.91) |

Factor 3: Calm at separation (Range 5-25)

|                   |      |      |      |      |          |
| Boys              | 15.57 (5.27) | 14.36 (5.60) | 14.00 (5.11) | 13.06 (5.14) | 14.03 (5.34) |
| Girls             | 15.11 (4.87) | 15.99 (5.12) | 14.76 (4.94) | 13.94 (5.20) | 14.86 (5.09) |
| Total             | 15.32 (5.05) | 15.10 (5.48) | 14.36 (5.04) | 13.49 (5.18) | 14.43 (5.23) |

Table 3: Post hoc comparisons (S de Scheffe) in the variable age.

<table>
<thead>
<tr>
<th></th>
<th>8 vs 9</th>
<th>8 vs 10</th>
<th>9 vs 10</th>
<th>9 vs 11</th>
<th>10 vs 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>SACS</td>
<td>3.7640</td>
<td>3.6704</td>
<td>9.4042*</td>
<td>-.0936</td>
<td>5.6402*</td>
</tr>
<tr>
<td>Discomfort from separation</td>
<td>3.3510*</td>
<td>3.3209*</td>
<td>6.9913*</td>
<td>-.101</td>
<td>3.6603*</td>
</tr>
<tr>
<td>Worry about separation</td>
<td>.2034</td>
<td>-.6193</td>
<td>.5776</td>
<td>-.8226</td>
<td>.3742</td>
</tr>
<tr>
<td>Calm at separation</td>
<td>.2297</td>
<td>-.9688</td>
<td>1.8353*</td>
<td>-.7391</td>
<td>1.6056*</td>
</tr>
</tbody>
</table>

* p < .05

Discussion

The objectives of this study were to analyze the most feared situations related to separation anxiety in a wide Spanish-speaking late childhood sample, the age range in which this problem is more common, and examining gender and age differences.

To achieve these goals we used the Separation Anxiety Scale for Children, a self-report instrument that provides information about the more problematic areas and making it possible to plan a therapeutic intervention. Child self-report measures are one of the most used tools to assess separation anxiety; in fact, the self-report schedules are considered the tool of choice for children fear assessment (Gullone, 1999). They are easy to administer, useful in assessing treatment progress, and require little therapist time and effort. An additional advantage is that they are valuable for epidemiological research.

Based on the criterion of two standard deviation above the mean, the frequency of separation anxiety found in our study was 3.9%, similar to the percentage obtained in other samples (e.g., Anderson et al., 1987; Bird et al., 1988; Prior et al., 1999). The frequency reached in a previous study (2.9%) with a Spanish-speaking population (Bragado et al, 1996) was lower, maybe because the authors did not use a specific test for separation anxiety disorder.

In the present study the most feared-provoking situations were related to the possibility that something bad happens to the parents, for example, having an accident or being sick. Scores were higher in girls than in boys in the three most fear-provoking situations. Besides, children reported less frequently complaints of physical symptoms (headache, stomachache) and feeling of crying with a trend showing that decreases with age. The results seemed to show that cognitive responses are more common than psychophysiological and motor responses, so children are more worried about their parents and the possibility that something bad happens to them during the separation, but they experience less somatic complaints or motor responses like crying. Based on these results, an aspect to consider is the suitability of using the somatic complaints as diagnostic criterion for the separation anxiety disorder (Hofflich, Hughes & Kendall, 2006). Children with this specific disorder can feel more somatic complaints than those listed in DSM-IV (stomachaches and headaches), so maybe they experience physical symptoms, but different than those included in the self-reported implemented.

The results showed a general trend indicating that separation anxiety decreases with age and is more frequent in girls (4.5%) in comparison with boys (3.5%). Gender differences could be explained, like some authors (e.g. Méndez et al., 2008), due to the greater tolerance of parents to their daughters’ anxiety separation symptoms, compared to the lower tolerance to their sons’ anxiety. Our results support the findings of research in this area; that is to say the tendency for SAD to decrease with age (Breton et al., 1999; McGee et al., 1990) and greater prevalence among girls (Costello, 1989; Tonge, 1994). March et al. (1997) assessed 2384 boys and teenagers, from 8 to 19, by means of the Multidimensional Anxiety Scale for Children (MASC) and...
found a higher number of anxiety symptoms from separation in the age group eight to eleven and among girls. Spence (1998) observed that, from a sample of children from eight to twelve, girls reached higher scores than boys in anxiety by separation. In a sample of children from 6 to 18 years old Chorpita, Yim, Moffitt, Umemoto, & Francis (2000) found that girls’ scores were higher in separation anxiety than the boys’, but decreased with age. Significant differences were also found between girls and boys from the Spanish-speaking child and adolescent population, regarding fear of separation, where the level of anxiety also diminishes with age (Méndez, Inglés, Hidalgo, García-Fernández & Quiles, 2003).

This study presents some methodological limitations. The sample was recruited from a school setting, so the results cannot be generalized to clinical samples. In future investigations it would be recommendable to ask questions about depression in future studies, due to the relationship between this mood and anxiety (Seligman & Ollendick, 1998). Besides this, the inclusion of other sources of information on the degree of the disorder would be appropriate, as well as the comparison of the information provided by the children with that offered by their parents. A good proposal is to ask both child and parent the same questions, to obtain complementary and more precise information of the child’s problem.

To sum up, the study has the following main contributions. First, it estimates the frequency of separation anxiety in late childhood, the period in which separation anxiety symptoms are more common. The frequency found confirms with Spanish-speaking sample the results of previous studies using a specific assessment instrument for separation anxiety disorder. Related to differences by gender and age, results support the pattern found in studies reporting more anxiety in girls and more symptoms at 8 and 9 years. Finally, the study reveals that children this age have more cognitive symptoms than psychophysiological or motor responses, what could be taken into account in order to plan therapeutic interventions and conducting new studies. Knowledge of the predominant symptoms in separation anxiety disorder at each age facilitates the implementation of an individualized and more effective treatment.

References


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