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How does a CBT-based transdiagnostic program for separation anxiety symptoms work in children?: Effects of Super Skills for Life

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Abstract

Super Skills for Life (SSL) is a transdiagnostic program of Anglo-Saxon origin based on cognitive behavioural therapy, aimed at treating emotional problems in children. It has been translated and implemented in the Spanish population, achieving significant reductions in anxious and depressive symptoms. The objective of the current study was to examine the short- and long-term efficacy of SSL in schoolchildren with separation anxiety. The program was attended by 86 Spanish-speaking children aged 8-12 years, who were evaluated before receiving the intervention, immediately after and 12 months later. Results indicated statistically significant improvements both in the main problem, separation anxiety and other comorbid symptoms or problems (depression, behaviour problems, problems with peers, interference of anxiety in daily life, etc.). Overall, the results show that the program was more effective in the long-term than in the short-term. The findings of the study suggest that SSL can be useful for treating emotional problems in children with separation anxiety. Clinical implications of these findings are discussed.
Keywords: separation anxiety; emotional problems; Super Skills for Life; CBT.

Resumen

¿Es eficaz un programa transdiagnóstico basado en TCC para los síntomas de ansiedad por separación infantil? Resultados del programa Super Skills. Super Skills for Life (SSL) es un programa transdiagnóstico de origen anglosajón basado en la terapia cognitiva conductual, dirigido a tratar problemas emocionales infantiles. Se ha traducido e implementado en población española, logrando reducciones significativas en síntomas de ansiedad y depresión. El objetivo del presente estudio fue examinar la eficacia a corto y largo plazo de SSL en escolares con ansiedad por separación. Participaron 86 niños hispanohablantes de 8 a 12 años, que fueron evaluados antes de recibir la intervención, inmediatamente después y 12 meses después. Los resultados indicaron mejoras estadísticamente significativas tanto en el problema principal, la ansiedad por separación, como en otros síntomas o problemas comórbidos (depresión, problemas de comportamiento, problemas con los compañeros, interferencia de ansiedad en la vida diaria, etc.). En general, los resultados muestran que el programa fue más efectivo a largo plazo que a corto plazo. Los hallazgos del estudio sugieren que SSL puede ser útil para tratar problemas emocionales en niños con ansiedad por separación. Se discuten las implicaciones prácticas de estos hallazgos.
Palabras clave: ansiedad por separación; problemas emocionales; Super Skills for Life; TCC.

Anxiety disorders are one of the main problems in childhood and adolescence. Epidemiological studies show a prevalence ranging between 5 and 20% internationally. In Spanish schools, the prevalence of anxiety disorders is around 11% (Arias Gonzalez Gonzalez, Agudelo, & Salazar, 2018; Díaz-Santos & Santos-Vallín, 2018). Moreover, anxiety coexists in most cases with other problems, reaching a comorbidity in Spanish schoolchildren of between 35-40%, with depressive disorders or symptoms being the most frequent (Fernández-Martínez, Espada, & Orgilés, 2019). This fact worsens the prognosis and increases the possibility of the emergence of other prob-

lems such as drug use, reduction of social relations, poorer academic results, suicide, etc. (Díaz- Santos & Santos-Vallín, 2018).

One of the anxiety disorders that has higher rates of occurrence in childhood (3-5%), and that causes a significant deterioration in daily life, is separation anxiety disorder or SAD (Orgilés, Espada, García-Fernández, Méndez, and Hidalgo, 2011). Although it is a normal phenomenon that arises around 4-5 months of life and tends to decrease over time, when it reaches extreme values at non-normative ages, it can be very disabling and disrupt the normal development of the child's individuality (Díaz-Santos & Santos-Vallín, 2018). Also, it is

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normally associated with sleep problems in children, poor school performance and, if chronic, it usually predicts the subsequent appearance of other disorders (Orgilés, Fernández-Martínez, Gonzálvez, & Espada, 2016; Villanueva-Suárez, & Sanz-Rodríguez, 2009). Comorbidity of SAD is very high (86.1%), especially with other anxiety disorders and depression (65.3% and 53.1%, respectively; Orenes, 2015).

The evidence indicates that children and adolescents with anxiety or depression disorders have poorer emotional awareness and high rates of emotional inhibition. Therefore, interventions for emotional problems that address the regulation of vulnerability factors for these disorders are recommended (Ehrenreich-May, Bilek, Queen, & Hernandez-Rodriguez, 2012; Hannesdóttir, & Ollendick, 2007). However, most of the interventions are directed at the treatment of a single problem, hindering the improvement of comorbid conditions and excluding similar individuals from trials investigating these interventions (Ehrenreich-May et al., 2012; Sandín et al., 2019). To address this aspect, and considering the high concurrence and the vulnerability factors common to childhood anxiety and depression, transdiagnostic interventions have been initiated to control causal cognitive and behavioural processes and/or maintainers shared by several disorders (Ehrenreich-May et al., 2012; Pacheco & Ventura, 2009; Queen, Barlow, & Ehrenreich-May, 2014). This approach allows for greater clinical flexibility and it makes easier to cover a greater number of problems with fewer interventions (Diego, 2019; Queen et al., 2014). Transdiagnosis-based cognitive behavioural therapy for child and adolescent anxiety and depression has been considered effective, and therefore, focuses on factors such as perfectionism, intolerance of frustration and uncertainty, emotional avoidance or positive and negative affect, among others (Sandín et al., 2019).

However, despite the importance of preventing child emotional problems and increasing the implementation of programs from a transdiagnostic approach, many protocols are designed to be applied exclusively in adults. Therefore, there is hardly any analysis of the results of such programs in the child population (Diego, 2019; Fernández-Martínez, Orgilés, Morales, Espada, & Essau, 2019; Sandín et al., 2019). Some current interventions that have shown positive effects in reducing childhood anxiety and depression are the *Aussie Optimism Program: Feelings and Friends* (Aussie Optimis, AO; Roberts, 2014) for the prevention of depression, anxiety and other associated problems in children aged 6 to 8, the *Unified Protocol Children: Emotion Detective* (UP-C, ED; Bilek & Ehrenreich-May, 2012) for children ages 7 to 12 with anxiety and/or depressive disorders (Ehrenreich-May et al. , 2012; García-Escalera et al., 2019; Orenes, 2015), or the *EMOTION Protocol: Coping Kids Managing Anxiety and Depression* (Martinsen et al., 2019). The findings of these interventions indicate a significant improvement in most depressive and anxious symptoms in children, but the need for more preventive studies concerning these problems is highlighted.

One of the transdiagnostic intervention protocols targeting children with emotional problems highlighted in recent years is *Super Skills for Life* (SSL). The original program was applied to British children from 8 to 10 years old with symptoms of anxiety. SSL obtained positive results with significant reductions in anxious symptoms, as well as long-term improvements in other problems (externalizing symptoms, hyperactivity, behaviour problems, and inattention; Essau et al., 2014). This program has been translated and applied both in clinical and community samples of Spanish children aged from 6 to 12 years with emotional problems, demonstrating a positive impact on most anxious and depressive symptoms after the intervention, and maintaining this improvement for up to 12 months later (Fernández-Martínez, Morales, Espada, Essau, & Orgilés, 2019). In addition, SSL has proven effective

in improving other variables such as self-concept, prosocial behaviours, behavioural problems and hyperactivity and inattention (Orgilés, Fernández-Martínez, Espada, & Morales, 2019).

Based on the foregoing, and considering the high prevalence of separation anxiety in children, this study aimed to examine for the first time the immediate and 12-month follow-up efficacy of the Spanish-adapted version of the SSL in reducing separation anxiety in a sample of Spanish children who also manifest other comorbid problems. A secondary aim of this study was to assess the impact of SSL on other variables, such as depression, hyperactivity, conduct and peer problems, prosocial behaviour, and self-concept (academic, social, emotional, family and physical) in the same sample.

Based on previous evidence of SSL in the United Kingdom (Essau et al., 2014) and Spain (Orgilés et al., 2019; Fernández-Martínez et al., 2019; Fernández-Martínez et al., 2020), it was hypothesized that, after the intervention, there would be significant imrovements: (1) in separation anxiety symptoms, and (2) in other problems that children manifest as depression (negative self-esteem and dysphoria), hyperactivity, behaviour and peer problems, prosocial behaviour, and self-concept (academic, social, emotional, family and physical). These results would be maintained 12 months after the intervention.
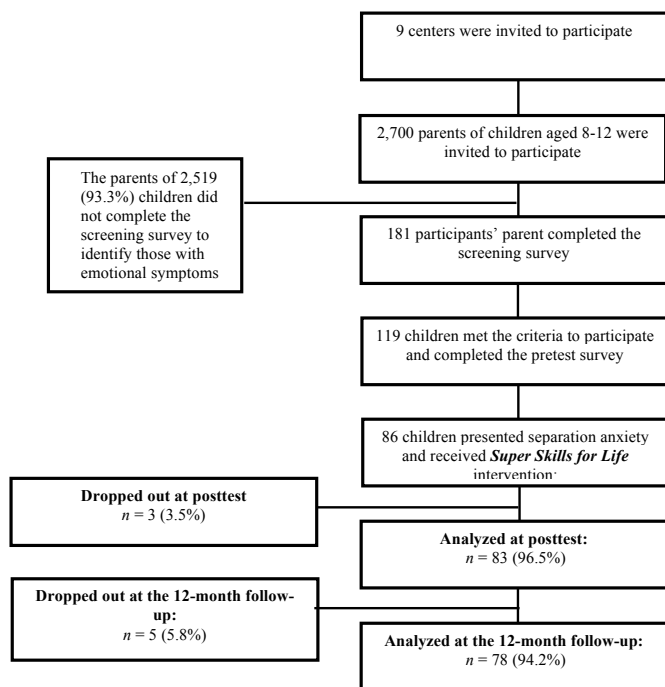
Method

Study design and participants

This study is part of a research project aimed at testing the efficacy of the Spanish version of SSL in a sample of 119 Spanish children aged 8-12 with depressive and anxious symptoms. A quasi-experimental design with one group, including pretest, posttest and 12-month follow-up, was carried out. For this study, only children with separation anxiety were selected ($n = 86$). These were selected from the general sample if they scored 5 or more on the *Screen for Child Anxiety Related Emotional Disorders* (SCARED; Birmaher et al., 1999) separation Anxiety subscale. The return rates were 96.5% ($n = 83$) and 94.2% ($n = 81$) at the posttest and the 12-month post-intervention, respectively (Figure 1).

As shown in Figure 1, nine schools in the south-eastern region of Spain received the invitation to participate in the study. Of the total, 2,700 parents of children aged 8-12 were invited to participate, of whom 181 completed screening tests to identify emotional problems (6.7%). Of these, 119 children met the inclusion criteria and completed the baseline assessment. Of them, 86 children presented separation anxiety symptoms and received the intervention of *Super Skills for Life*. Subsequently, 83 children completed the posttest (96.5% retention) and 81 children completed the 12-month follow-up (94.2% retention). Dropout rates at posttest and at 12 months were 3.5% and 5.8% respectively. Children who provided data at the pretest, posttest and follow-up after 12 months were included in the analyses.

Inclusion criteria for the subsample were: a) students enrolled between 3rd and 6th grades of Primary Education, b) reaching a cut-off point of at least 4 in the Emotional Symptoms subscale of the Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997), which indicates the presence of symptoms and the risk of anxiety and/or depression (Goodman, 2001), and c) reaching a cut-off point of at least 5 on the Separation Anxiety subscale of the SCARED (Brimaher et al., 1999), which measures emotional disorders related to childhood anxiety. Exclusion criteria were: a) presenting a previous psychiatric diagnosis and/or b) receiving psychological or pharmacological treatment for a psychological problem.

Figure 1. Progress of children participating in the trial

| 9 centers were invited to participate |

| 2,700 parents of children aged 8-12 were invited to participate |

| The parents of 2,519 (93.3%) children did not complete the screening survey to identify those with emotional symptoms |

| 181 participants' parent completed the screening survey |

| 119 children met the criteria to participate and completed the pretest survey |

| 86 children presented separation anxiety and received *Super Skills for Life* intervention |

| Dropped out at posttest *n* = 3 (3.5%) |

| Analyzed at posttest: *n* = 83 (96.5%) |

| Dropped out at the 12-month follow-up: *n* = 5 (5.8%) |

| Analyzed at the 12-month follow-up: *n* = 78 (94.2%) |

Measures

The following self-report measures were applied to the participants before the intervention to establish the baseline (pretest), immediately after the intervention (posttest) and at the 12-month follow-up:

– The *Screen for Child Anxiety Related Emotional Disorders* (SCARED; Birmaher et al., 1999). This 41-item questionnaire evaluates emotional disorders related to childhood anxiety. It presents 5 subscales: Panic Disorder, Generalized Anxiety, Separation Anxiety, Social Anxiety and School Anxiety. It is rated on a 3-point scale ranging from 0 (*almost never*) to 2 (*often*). The total score (ranging from 0 to 82) is obtained by adding the scores for each subscale. Higher scores are related to more severe symptoms. The Separation Anxiety subscale, which shows an ordinal alpha for this subsample of .43, was applied to the participants.

– The *Child Depression Inventory* (CDI; Kovacs, 1992). This evaluates depressive symptoms experienced in the 2 weeks prior to the evaluation in children aged between 7 and 17 years. It consists of 27 items that evaluate two dimensions: Dysphoria (17 items) and Negative Self-esteem (10 items). Response options ranged from 0 to 2 indicating the severity of the symptoms. The total score of the questionnaire is obtained by adding all the items (range: 0-54). Higher scores indicate more severe symptoms. The ordinal alpha for this subsample was high (.90) for the total CDI score, and also for the Dysphoria and Negative Self-esteem subscales (.85 and .79, respectively).

– The *Strengths and Difficulties Questionnaire* (SDQ; Goodman, 1997) is a 25-item questionnaire that measures social behaviour and general difficulties in children aged 4 to 17. It consists of 5 subscales: Emotional Symptoms (anxiety and depression), Behavioural Problems, Hyperactivity or Inattention, Peer Relationship Problems and Prosocial Behaviour. The response options range from 0 to 2, with 0 = *Not true*, 1 = *A little true* and 2 = *True*. The total score is obtained by adding the scores of all scales except for Prosocial Behaviour (which is scored inversely). The total score

ranges from 0 to 40. Higher scores reflect greater general problems. The alpha ordinal for this subsample was acceptable (.77), and moderate for the subscales, obtaining values of .67 for Emotional Problems, .67 for Behavioural Problems, .68 for Hyperactivity, .43 for Peer Problems and .66 for Prosocial Behaviour.

– The *Self-Concept Form 5* (AF-5; García & Musitu, 1999) evaluates self-concept with 30 items rated on a Likert scale with 11 response options ranging from 0 = *Never* to 10 = *Always*. It assesses five dimensions of the self-concept: Academic, Social, Emotional, Family and Physical. The reliability in this subsample of the Academic, Family and Physical Self-Concept subscales is high (with ordinal alpha values of .86, .80, and .79, respectively), and moderate for the Social and Emotional Self-Concept subscales (with ordinal alpha values of .65 and .69, respectively).

– The *Strengths and Difficulties Questionnaire - Parent Version* (SDQ-P; Goodman, 1997) was used for sample recruitment. The elements, subscales and ranges of the questionnaire are the same as those of the abovementioned SDQ self-report test. For participant selection, the Emotional Symptoms subscale was used, in which scores ranging from 0 and 3 were considered normal, scores of 4 were considered borderline and scores between 5 and 10 were considered abnormal or pathological. The ordinal alpha of SDQ-P in the current sample was .72.

Procedure

This study was approved by the Ethics Committee of the institution where the authors belong. A total of nine primary education schools in the province of Alicante were invited to participate in the study, selected for their availability and in the attempt to represent the Spanish socio-economic structure. Written informed consent was obtained and a meeting with each of the school directors was held to explain the objectives and procedures of the program. The parents of the children were informed through a letter sent by each school, highlighting the confidentiality of the data. Interested parents filled out an online form providing sociodemographic details and the SDQ-P (Goodman, 1997). Parents were informed of the details of the SSL program at meetings held at the schools. Participating children completed the self-reports before the first session (pretest), immediately after the last session (posttest) and after the 12-month follow-up. The facilitators read each item on the questionnaires while the children completed the tests individually. All the children were informed that their participation in the study was voluntary, that they could leave whenever they wanted and that their responses to the questionnaires would be confidential. The present study did not include a control group, and all participants received the intervention.

Intervention

The original version of the SSL program was provided by the team at the University of Roehampton, London (United Kingdom) and was translated by two psychologists from the Miguel Hernández University (Spain). To check whether the program was correctly adapted to the language and culture, it was tested in a pilot study with children (ages 8-12) who participated voluntarily. During the process, the team was guided by one of the developers of the original program. Before the intervention, the facilitators of the program (six psychologists with a Master's degree in Child and Adolescent Psychology) received training in the program, objectives, procedure and the contents of the sessions. Facilitators attended one meeting per week with the per-

son in charge of the study to review the implementation and deliver the next materials for use. The SSL program was implemented in the schools in the afternoon for 8 weeks. Table 1 presents the description of the activities of each session, as well as the objectives. In all the sessions, the children's behaviour was reinforced, and parents were informed of the activities carried out and of their children's improvements after the sessions.

Table 1. Components of the SSL program applied in this study

Session	Objectives and activities
1. Psycho-education	. Concepts of anxiety and self-esteem. . Recognition of anxiety. . Improve self-esteem.
2. Emotional education	. Concept of emotion. . Recognition of emotions. . Evaluation and control of the subjective degree of well-being.
3. Cognitive restructuring	. Concept of thoughts. . Recognition of positive and negative thoughts. . Detecting and modifying maladaptive thoughts.
4. Explanation of the ABC scheme	. The relation between thoughts, emotions and behaviour. . Recognizing and differentiating body signals.
5. Relaxation techniques	. Relaxation. . Specific relaxation strategies (practice).
6. Social skills training	. Basic social abilities to interact with others. . Practice through *role-playing*.
7. Problem-solving training	. Problem resolution . Practice through social conflicts posed by children
8. Review	. Review the skills acquired during the program.

Statistical Analyses

Children who scored 5 or above in the subscale of Separation Anxiety of the SCARED were selected for this study. Descriptive analyses were used to describe the subsample. The attrition rates for posttest and the 12-month follow-up were calculated. Binary logistic regression was run to identify the profile of participants who dropped out of the study. SSL program impact on primary and secondary outcomes at the posttest and the 12-month follow-up was evaluated using generalized estimating equations (GEE). GEE analyses controls the correlations among responses when participants are clustered in schools; therefore, it is highly used to test programs in cluster-randomized control trial and quasi-experimental studies (Liang & Zeger, 1986). Analyses were adjusted for baseline measure of the outcome, age, gender, and clustering within schools. Adjusted odds ratios (AORs) and 95% confidence intervals (CI) were provided. Immediate changes due to the program were tested by comparing pretest and posttest. Long-term changes due to the program were tested by comparing pretest and the 12-month follow-up. Schools were the unit of randomization, and children were the unit of analysis. All analyses were run using SPSS v26, except for ordinal alpha (evidence of the reliability of the measures in the sample), which was calculated using *R* Studio.

Results

Sample description

Eighty-six participants with separation anxiety symptoms enrolled in the study at the baseline. Of them, 52 of the children were males (60.5%). The mean age was 9.09 years ($SD = 1.43$), and age was distributed as follows: 16 (18.6%) were 7 years old, 16 (18.6%) were 8 years old, 18 (20.9%) were 9 years old, 16 (18.6%) were 10 years old, and 20 (23.3%) were 11 years old. The mean number of siblings was 1.03 ($SD = 0.58$). Most participants were born in Spain ($n = 82$; 95.3%), and all were Spanish-speaking children. Table 2 shows marginal means and standard deviations for primary and secondary outcomes at baseline, posttest, and the 12-month follow-up.

Changes from pretest to posttest

The main objective of the study was to evaluate the effects of the SSL program in reducing symptoms of separation anxiety, as well as to study the program's impact on other secondary outcomes, including children's difficulties and strengths and self-concept. Table 3 provides the immediate effects and the effects 12 months after the application of the SSL program. Compared to the pretest, children obtained significantly lower scores in Separation Anxiety ($p < 0.001$) at posttest. Likewise, significant reductions were also found in the measures of Depression ($p = .05$), Dysphoria ($p = .005$), Total Difficulties ($p = .03$), Internalized Symptoms ($p = .02$) and Emotional Symptoms ($p = .03$) at posttest. Scores for the Academic ($p = .04$) and Physical ($p = .007$) measures of self-concept increased after the intervention, compared to the baseline.

Table 2. Preintervention and postintervention estimated marginal means (SD) of the outcomes

	Pre	Post	12-month Follow-up
Separation anxiety (SCARED)	8.36 (0.09)	7.06 (0.34)	5.83 (0.35)
Depression (CDI total score)	11.38 (0.24)	10.08 (0.59)	8.11 (0.48)
Dysphoria	7.26 (0.16)	6.06 (0.37)	5.10 (0.34)
Negative self-esteem	4.16 (0.29)	4 (0.29)	2.97 (0.23)
Total difficulties (SDQ total score)	14.29 (0.18)	13.05 (0.50)	11.12 (0.54)
Internalizing problems	6.50 (0.12)	5.70 (0.32)	4.32 (0.32)
Externalizing problems	7.75 (0.11)	7.33 (0.32)	6.78 (0.35)
Emotional problems	3.88 (0.10)	3.35 (0.22)	2.74 (0.23)
Conduct problems	3.20 (0.08)	2.92 (0.20)	2.53 (0.20)
Hyperactivity	4.54 (0.06)	4.40 (0.21)	4.24 (0.23)
Peer problems	2.61 (0.08)	2.35 (0.18)	1.57 (0.18)
Prosocial behavior	7.99 (0.07)	8.05 (0.17)	8.24 (0.22)
Self-concept (AF-5)			
Academic	22.50 (0.21)	23.68 (0.46)	24.50 (0.49)
Social	21.48 (0.17)	22.41 (0.49)	23.73 (0.48)
Emotional	18.27 (0.19)	19.11 (0.48)	20.12 (0.59)
Family	25.84 (0.21)	26.65 (0.38)	26.83 (0.46)
Physical	21.35 (0.23)	22.92 (0.49)	23.61 (0.49)

Note. SSL = Super Skills for Life; CI = Confidence Interval. CDI = Children Depression Inventory. SCARED =Screen for Child Anxiety Related Disorders. SDQ = Strengths and Difficulties Questionnaire. AF-5 = Five-Factor Self-Concept Questionnaire. Higher scores indicate greater symptomatology; except for Prosocial behavior (higher scores indicate more prosocial behaviors).

Table 3. Generalized linear model-based estimates 95% confidence intervals (CI), and significance tests for intervention effects on the outcomes

	Postest		12-month Follow-up	
	AOR (95% CI)	*p*	AOR (95% CI)	*p*
Separation anxiety (SCARED)	0.27 (0.13, 0.54)	<0.001	0.07 (0.03, 0.17)	<0.001
Depression (CDI total score)	0.27 (.07, 1.05)	0.05	0.03 (0.01, 0.12)	<0.001
Dysphoria	0.30 (0.12, 0.70)	0.005	0.11 (0.05, 0.26)	<0.001
Negative self-esteem	0.85 (0.43, 1.67)	0.64	0.30 (0.18, 0.50)	<0.001
Total difficulties (SDQ total score)	0.28 (0.09, 0.88)	0.03	0.04 (0.01, 0.13)	<0.001
Internalizing problems	0.44 (0.22, 0.91)	0.02	0.11 (0.05, 0.23)	<0.001
Externalizing problems	0.65 (0.32, 1.34)	0.25	0.37 (0.17, 0.81)	0.01
Emotional problems	0.58 (0.35, 0.96)	0.03	0.31 (0.18, 0.55)	<0.001
Conduct problems	0.75 (0.46, 1.22)	0.25	0.51 (0.32, 0.81)	0.005
Hyperactivity	0.86 (0.55, 1.36)	0.54	0.73 (0.44, 1.23)	0.25
Peer problems	0.77 (0.50, 1.18)	0.23	0.35 (0.22, 0.54)	<0.001
Prosocial behavior	1.06 (0.71, 1.60)	0.74	1.28 (0.78, 2.11)	0.31
Self-concept(AF-5)				
Academic	3.06 (1.03, 9.03)	0.04	6.98 (2.18, 22.34)	.001
Social	2.52 (0.85, 7.49)	0.09	9.49 (3.27, 27.56)	<0.001
Emotional	2.33 (0.80, 6.76)	0.11	6.37 (1.71, 23.67)	0.006
Family	2.25 (0.87, 5.82)	0.09	2.69 (0.90, 8.01)	0.07
Physical	4.80 (1.55, 14.88)	.007	9.54 (2.81, 32.33)	<0.001

Note. AOR = Adjusted Odds Ratio. CI = Confidence Interval. CDI = Children Depression Inventory. SCARED =Screen for Child Anxiety Related Disorders. SDQ = Strengths and Difficulties Questionnaire. AF-5 = Five-Factor Self-Concept Questionnaire. Each analysis was adjusted for the baseline measure, gender, age and school-level.

Changes from pretest to 12-month post-intervention

Twelve months after the intervention, the children obtained significantly lower scores on Separation Anxiety (*p* < .001), compared to the baseline. Furthermore, scores were also significantly lower for measures of Depression (*p* < .001), Dysphoria (*p* < .001), Negative Self-Concept (*p* < .001), Total Difficulties (*p* < .001), Internalizing Symptoms (*p* < .001), Externalizing Symptoms (*p* = .01), Emotional Symptoms (*p* < .001), Behavioural Problems (*p* = .005*)*, and Peer Problems (*p* < .001), compared to the baseline. No reductions in Hyperactivity Symptom scores were found (*p* = .25) or a significant increase in Prosocial Behaviour (*p* = .31) 12 months later. Scores for measures of Academic Self-Concept (*p* = .001), Social Self-Concept (*p* < .001), Emotional Self-Concept (*p* = .006), and Physical Self-Concept (*p* < .001) increased at the 12-month follow-up, compared to the baseline. Family Self-concept also increased in the last measure (compared to the pretest), although the effect was not significant (*p* = .07).

Discussion

The main objective of this quasi-experimental study was to examine the effectiveness of the Spanish version of the SSL program (SSL; Essau & Ollendick, 2013) to reduce symptoms of separation anxiety in a sample of Spanish-speaking children between 8 and 12 years old. We also analysed, as a secondary objective, the impact on other variables such as symptoms of depression, hyperactivity, behavioural problems and problems with peers, prosocial behaviour and self-concept (academic, social, emotional, family and physical). Evaluations were performed immediately after the intervention and 12 months later.

The results show a statistically significant decrease in separation anxiety symptoms at posttest, compared to the pretest. In other comorbid problems, the differences were also significant compared to the pretest. There was a decrease in symptoms of depression, dysphoria, general difficulties and emotional problems, as well as an increase in physical and academic self-concept. Although the data obtained

indicate that there were no significant improvements in the rest of the variables examined (externalizing, behavioural, hyperactivity or peer problems, and social, emotional and family self-concept) immediately after the intervention, overall the results suggest that the SSL program may have a positive short-term impact on separation anxiety and other comorbid problems.

Regarding the results at follow-up, the significant improvement achieved in the posttest in separation anxiety was maintained 12 months later and, in those variables in which a significant change was observed after the intervention, this was maintained at the follow-up. Moreover, most of variables that did not show significant improvement at posttest, showed an improvement at the follow up (negative self-esteem, externalizing, behavioural and peer problems, and social and emotional self-concept). Except for hyperactivity, prosocial behaviour and family self-concept, the rest of the variables improved more at the follow-up than at posttest. Participants showed a decrease in depressive symptoms (dysphoria and negative self-concept) and total difficulties (internalizing and externalizing problems, emotional and behavioural problems, and problems with peers) as well as an increase in self-concept (academic, social, emotional and physical).

In view of the results, we can conclude that the SSL program applied to children with separation anxiety decreases symptoms of separation anxiety and other comorbid problems immediately after the intervention and at the 12-month follow-up. The greatest impact of the intervention occurs in the long term (one year later), obtaining an improvement in 15 of the 17 variables examined. These findings are in line with the original study and other CBT-based prevention programs in which long-term effects are usually greater than short-term ones. Thus, the application of SSL with Spanish children from 8 to 12 years old (Orgilés, et al., 2019) and with children from 6 to 8 years old (Fernández-Martínez et al., 2019) both obtained better long-term results in reducing emotional problems and other comorbid symptoms. The significant long-term changes found in this study suggest that children with separation anxiety generalized the learnings to anxiety-provoking events during the year after the intervention. A

greater amount of time allows children to assimilate and internalize the skills learned (Essau et al., 2014).

Furthermore, there is a lack in the literature of transdiagnostic programs applied to specific samples of children with separation anxiety to treat emotional problems. In this sense, more studies in this line are needed to compare the results and increase the range of action of this type of program as treatment for other psychological disorders in children.

The present study has some limitations that must be considered when interpreting its results. Firstly, there was no control group, so the results should be interpreted with caution. However, despite this limitation, the results are promising, as separation anxiety is not a problem that remits spontaneously or evolutionarily, so the improvement found in the study should not be attributed to the passing of time. In this line, future studies are needed to confirm these results in randomized control trials. Second, only self-report measures were used for the evaluation, so it would be interesting if future studies used multi-report evaluations to control assessment bias by multiple comparisons. Third, the intervention should be applied to larger samples of children with separation anxiety and in different Spanish regions to generalize the results to the entire Spanish territory.

In conclusion, this is the first study evaluating the effectiveness of the SSL program in a sample of children with separation anxiety. Although it cannot be confirmed that it is effective due to the absence of a control group, the results seem to suggest that it could be a useful intervention to reduce emotional problems in children with this type of anxiety disorder and other comorbid problems.

Author note

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Founding

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