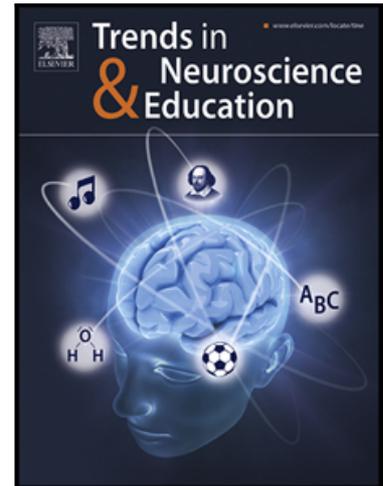


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An executive function training programme to promote behavioural and emotional control of children and adolescents in foster care in Spain

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Abstract

This study assessed the effectiveness of an executive function training programme aiming at reducing the behavioural and emotional problems of 87 minors, aged between 8 and 17, in residential care within the Spanish foster care system. Participants' executive functions were assessed with the Spanish adaptation of the Behaviour Rating Inventory of Executive Function (BRIEF[®]2). For the assessment of their emotional and behavioural problems, the Spanish adaptation of the Assessment System for Children and Adolescents (SENA) was used. The results revealed an improvement in initiative and task supervision. After the intervention, the minors reported having fewer problems with their classmates and fewer symptoms related to traumatic events. According to the educators, those minors also presented better integration and social skills, a greater willingness to study, less isolation, less symptoms of depression, fewer emotional problems and a higher level and variety of personal resources.

Keywords

Executive function intervention, emotional adjustment, behavioural control, child protection, foster care, diversity

1. Introduction

In recent years, the number of minors in the child protection system in Spain has substantially increased. The data provided by the Childhood Observatory in the latest statistical bulletins confirm this trend: in 2018, 3,756 more minors were placed in residential foster care than the year before and in 2019 the total number of minors in residential foster care reached 23,209, which represents an increase of 9.05% with respect to 2018 [47]. Although longitudinal follow-up of children and adolescents in residential foster care is particularly complex ([6, 43]), different studies confirm that these minors present academic and social difficulties ([25, 39, 44]) and, subsequently, their career paths are characterised by greater work precariousness and low income compared to the normative group [32]. Furthermore, these children tend to present difficulties in their executive functions, i.e. the mental skills required to set goals, plan how to reach them and effectively follow through [29]. Executive functions, understood as brain “steering” skills, are at the core of academic achievement ([8, 12]), adjusting to school [24], preparing for school [3], and social relations [65]. Alterations in executive functions negatively impact emotion regulation, awareness of oneself, and social behaviour [58]. Drawing on the above evidence, the aim of this study is to assess the effectiveness of an executive function training programme aimed at promoting the behavioural and emotional control of a group of minors in residential care within the Spanish foster care system. Our hypothesis is that, to the extent that executive functions enable minors to more efficiently control and monitor their emotions and behaviour [4], an intervention focused on improving these skills could have positive effects, resulting in greater emotional and behavioural adjustment ([15, 40]).

2. Cognitive, emotional, and behavioural profile of minors in residential care

The development of executive functions is influenced by brain maturation [5], however, traumas experienced by the children also appear to play a role [16]. Indeed, systematic

reviews and meta-analyses found that the type and duration of trauma is linked to specific executive function problems. Hence, there seem to be more problems of inhibition and cognitive flexibility in fostered or adopted minors when compared with the effects of other types of traumatic situations [48]. Similarly, the sociocultural and economic or material impoverishment of the family is associated with poorer executive control skills [26]. In the case of minors in foster care, more difficulties are observed in the areas of self-regulation [18], inhibitory control [41], and attention [2]. Emotional difficulties are also present and are characterised by high levels of anxiety, stress and depression ([7, 22, 60]), attachment problems [36], and problems identifying ambiguous emotions [51].

Furthermore, preliminary research with children in foster care has identified problems of attention deficit and impulsiveness ([2, 22, 49]), poorer social skills [50], higher levels of aggressiveness [15], and difficulties with peers [28]. These behavioural problems often appear in conjunction with other difficulties related to the academic setting [64] and are manifested in the form of contesting authority or showing little interest in receiving guidance at school ([25, 39, 44]). The longer the period of institutionalisation, the harsher the behavioural and aggressiveness problems become, compromising the personal adjustment of the minors [15].

It is also worth mentioning the Bucharest Early Intervention Project which examined how early institutionalisation influences children's brain and behaviour development and addressed the benefits of high quality foster care from a longitudinal perspective. The results of this project suggest that early institutionalisation leads to cognitive and socio-emotional deficits and to a high rate of psychiatric disorders. However, the minors who were placed in high quality foster care intervention, particularly before the age of 2, showed improvements in the aforementioned areas. On the other hand, except for inhibitory control, high quality

foster care intervention did not lead to significant improvements in executive functions of children up to 12 years old ([61, 62, 63]).

3. Intervention programmes for minors in residential care

Despite the increasing evidence suggesting that the development of executive functions is compromised in children in foster care, only a few educational programmes include activities to improve executive functions, and this indicates a clear gap in terms of intervention in this cohort. In line with the idea that self-regulation of emotions and behaviour has been long recognised as a core feature of adaptive development [1], Pears and colleagues ([52, 53, 54]) carried out the KITS programme (Kids in Transition to School) to prepare children in temporary foster care for school. This intervention, which aimed at improving the transition to school through social and self-regulation skills, was successful at stabilising the children's behaviour [52], improving early literacy and self-regulation skills [53], and reducing disruptive and aggressive behaviour in the classroom [54].

In adoptive families in the United States, Lind et al. [30] designed a programme aimed at enhancing the executive functions of children in foster care. The programme focused on promoting childrearing guidelines which, based on secure attachment relationships, would support children's self-regulation skills. On the whole, the intervention used the parental figure as a co-aid; that is, the parents were trained to identify opportunities to assist in children's self-regulation and to be physically and psychologically available to help children regulate their own emotions and behaviours. The results showed that the adopted children of the families that had received the training had less attention deficit problems and more cognitive flexibility, similar to the low-risk comparison group.

Other examples of intervention programmes addressed to minors in foster care gear towards promoting their psychosocial adjustment and school performance. Among the programmes designed to improve the school learning process at international level, the

scheme developed by the National Working Group on Foster Care and Education is worth of note. This entity brings together 23 US organisations striving to improve educational adjustment and school results of children and young people in foster care. Its 2018 report includes a series of interventions aimed at supporting educational needs from childhood to post-compulsory education. In particular, it includes interventions for securing educational stability (minimising changes of school) and classroom assistance, preventing behaviour problems in schools, addressing special educational needs and promoting school achievement, as well as programmes addressing the transition between the different stages of education. All of these programmes are designed and executed from a comprehensive and systemic perspective, building bridges between the different agents who are responsible for the care of the minors [46]. Also in the US, the Legal Center for Foster Care and Education [27] developed a plan to promote school achievement among this cohort. The aim is to ensure that young people receive adequate support, which will help to prevent school desertion, absenteeism and disciplinary actions, and to get the young people involved in all aspects of their education and equip them to advocate for their own needs and educational goals.

In the United Kingdom, programmes have also been put into action to promote the collaboration between the school and the foster care system, through teachers appointed to provide educational supervision to young people [38]. In Nordic countries, the Skolfam® project aims at promoting school achievement among minors in foster care. The programme was based on a preliminary diagnostic phase that served to detect the strengths and weaknesses of each child and, from there, design the intervention, bringing in psychologists, teachers, and social workers [56]. It is also important to note that meta-analytic studies on the effectiveness of programmes designed to promote school achievement among children in foster care suggest that the best results are achieved by those who have access to tutors, mentors or individualised school support ([20, 35]), when interventions are adapted to the

minors' needs [10], and when a systemic approach is used for their implementation ([10, 35]).

In Spain, educational interventions – through socio-educational programmes – are undertaken by a range of different foster care foundations. For instance, the Caixa Proinfancia programme, set up in 2007 by the La Caixa Foundation, tries to promote inclusive practices at school and school achievement rates of children and teenagers between the ages of 6 and 16 who have experienced difficulties throughout their schooling or are at risk of social exclusion. The goal of these educational reinforcement programmes is to improve school performance, promote planning and personal organisation in relation to studying and social skills developing. These programmes are developed by organisations authorised by the promoting entity, such as schools, community centres, day centres or residential centres, among others. An active participatory approach is used and educational co-responsibility is encouraged between the different agents involved in the school achievement of these minors: families, educational centres, professional services, social educators, among others [13].

In the Community of Madrid (Spain), the Regional Council of Social Policy and Family designed the plan for the development of skills for educational reinforcement, held under the patronage of the Pryconsa foundation over the academic years 2015-2016 and 2016-2017 [57]. This programme was supported by a group of experts who identified the main variables affecting school problems among children in foster care and was divided into four modules focused on providing the educational teams at care centres with the skills to promote, motivate and monitor school learning.

In summary, in recent years different intervention programmes for promoting school adaptation and achievement among foster children have been developed in Spain. However, to our knowledge, most of them are not based on a prior diagnosis that could help determine

which variables could be causing the weaknesses detected among those children, and very few take into account children's executive functions. The present study addressed this issue by examining the effectiveness of an executive function training programme on reducing the behavioural and emotional problems in a group of minors in foster care in Spain. The intervention, was designed *ad hoc* after a diagnostic phase in which the executive, behavioural, and emotional profiles of young people in residential foster care were assessed.

4. Method

4.1 Participants

Eighty-seven minors, 44 boys and 43 girls, aged between 8 and 17 ($M = 13.09$, $SD = 2.22$) participated in the study. All were living in Homes run by the Asociación Nuevo Futuro, belonging to seven branches (Alicante, Burgos, La Línea, Madrid, Murcia, Santander y Sevilla). Fifty-seven participants were secondary school pupils, while the remaining 30 were attending primary school.

4.2 Instruments

To assess participants' executive functions, the Spanish adaptation of the Behaviour Rating Inventory of Executive Function BRIEF[®]2 ([21, 34]) was used and filled out by each minor's key educator. The questionnaire consists of 63 items in total, grouped into nine clinical scales (inhibition, self-supervision, flexibility, emotional control, initiative, working memory, planning and organisation, task supervision, organising materials). The combination of these scales yields four general indexes: the behaviour regulation index, the emotion regulation index, the cognitive regulation index, and the global index of executive functions. Internal consistency using Cronbach's alpha ranges between .74 (initiative) and .91 (emotional control), and test-retest reliability analyses have shown a mean coefficient of stability of .91 [34].

Emotional and behavioural problems were assessed with the Assessment System for Children and Adolescents (SENA; [17]). SENNA comprises nine questionnaires which are addressed to three age groups and can be completed by the person themselves, their family or their teacher. This study used the self-report version which was completed by the minors themselves and the family version completed by each child's key educator. We employed the family version because in each care home, where 6 to 9 children usually live, the key educator is in charge of supervising their school progress and emotional and social adaptation, generating a stable environment for those minors resembling a family context.

SENA includes a series of scales that assess a broad spectrum of internalised problems, such as depression, anxiety, social anxiety, somatic complaints, post-traumatic symptomatology, and obsessive-compulsive behaviours; externalised problems such as attention problems and hyperactivity-impulsiveness; anger management problems, aggressiveness, challenging behaviour, and antisocial behaviour; contextual problems (with family, school and classmates); specific problems (substance use, eating disorders, schizotypy, unusual behaviour); certain areas of vulnerability such as emotion regulation problems and sensation seeking; and personal resources, such as self-esteem, integration and social skills, and awareness of own issues. The scales of specific problems, sensation seeking and awareness of problems exclusively apply to secondary school students and thus have not been taken into account in this study. Grouping scores on different scales also provides a series of global indexes: index of emotional problems, index of behavioural problems, index of problems in executive functions, index of contextual problems, and index of personal resources, which in turn yield a global index of problems. Cronbach's alpha coefficients are above .70 for all scales, and even above .80 in the case of SENNA global indexes, which cover the main emotional and behavioural problems, while test-retest reliability coefficients range between .80 and .90 [17].

4.3 Procedure

This study is part of a broader project that was developed in two phases. During the first phase, we analysed the cognitive, emotional, and behavioural profile of 121 minors in residential foster care at different branches of the Asociación Nuevo Futuro. The results showed a wide range of executive and behavioural problems [9]. In the second phase, presented herein, an executive function training programme was designed and implemented with the aim of equipping minors with strategies that would promote executive, behavioural, and emotional control. This programme was framed within the general context of an Educational Reinforcement Plan being developed by the Asociación Nuevo Futuro.

Permission to conduct the study was obtained from the Dirección General de Servicio para las Familias y la Infancia (Ministerio de Salud, Servicios Sociales e Igualdad). The minors were informed of the general purpose of the study and both the minors and their educators filled in the assessment questionnaires in two instances, before the training programme was implemented and after the reinforcement phase had concluded.

4.3.1 Educational Reinforcement Plan

The individualised Educational Reinforcement Plan (ERP) was drawn up on the basis of the different meetings and psychopedagogical reports prepared by the educational teams in the care home, the school tutor, the career guidance department and the minors' appointed mental health centre. The aims of ERP were set forth in a document agreed upon by the key educator and the minor, including an educational contract detailing the commitments, goals, and system of incentives for ERP fulfilment. The activities included in ERP were grouped into four different blocks (see Table 1) and were all referenced to school tasks and content covered in the classroom; their application was prioritised but without creating additional workload. ERP also included the description of the goals to be met and a record of weekly educational intervention (i.e. document compiling the interim work targets on a weekly basis

and assessing their achievement). Through the activities described, ERP aimed to reinforce the minors' personal, school and social self-esteem based on effective work methods that guaranteed small but progressive successes. Verbal reinforcement was used contingent on the daily work of the minor and a positive and active attitude towards learning was encouraged.

Table 1 *Sequencing of individualised ERP activity blocks*

Block	Activities	Description
Block I	Activities for improving study habits and techniques	Improving habits, organisation and motivation towards study; acquisition of strategies to enhance learning.
Block II	Levelling activities and reinforcement of curricular learning	Development of basic skills in core areas (literacy and numeracy).
Block III	Activities for training and improving cognitive-behavioural skills	Development of basic aptitudes (memory, attention, concentration); improving skills and aptitudes associated with reading; training for improving executive and behavioural control.
Block IV	Activities for integration and the improvement of school behaviour	Internalisation of rules in different contexts; incorporation of routines; development of courtesy guidelines and respect in symmetrical and asymmetrical relationships; participation in activities organised by the school; reinforcement and implementation (generalisation) of self-regulation skills taught in the training programme to improve executive and behavioural control.

4.3.2 Training programme for improving executive control

In order to reinforce the cognitive and behavioural skills of the minors, and after taking into account the data gathered during the diagnostic phase [9], specific executive function training activities were designed covering the following areas: cognitive activation, inhibitory control, cognitive flexibility, decision making, attention and memory, and emotional control. Their implementation was conducted in two stages, the first aimed at training minors' executive functions (period 1) and the second at reinforcing the same skills and helping children to integrate them into their daily routine (period 2) (see Appendix for an example of the activities used).

The objective of the training programme was to provide the minors with strategies that would enable them to choose their own goals and plan the necessary actions to achieve them, thereby controlling their impulsiveness, showing flexibility (i.e. being able to alternate between different tasks or execution patterns according to the contextual demands), and a sound level of emotional control. The ultimate goal was to mitigate some of the most

commonly observed difficulties among this cohort. The activities in period 1 were developed over a total of 12 bi-weekly 45-minute sessions. The distribution of these activities and their sequencing was adaptable to the characteristics of each group and the idiosyncrasies of each care home. At each session, a series of processes – such as activation of attention processes and task monitoring and control, which are dependent on frontal lobe areas, according to Luria's model [33] – were actively stimulated in order for the minors to internalise them and include them in their general day-to-day context.

Before starting each session, the minors were given metacognitive prompts to reflect on their own learning process, their prior knowledge and the skills they had to work on, as well as paying more attention and increasing their motivation towards the activities. The metacognitive prompts were designed based on Marina and Pellicer's [37] didactic model for the training of executive functions. The activities were divided into six blocks, covering the aforementioned intervention areas. In certain cases, the activities were broken down into several tasks; some of them focused on enhancing children's individual development, while others required teamwork. First, the goals and materials needed to carry out the tasks were presented, followed by a brief introductory text or description of the area of intervention, as well as the task description. The way the activities were sequenced and the pursued goals of each one are summarised in Table 2. Once the training was complete, in order to reinforce the skills acquired throughout the intervention phase and their integration into day-to-day contexts, follow-up sessions took place (period 2) focusing on the supervision and compiling of a diary of emotions with specific activities aimed at enhancing emotional control, communication skills, attention, planning and organisation, and memory (see Table 3). It is also important to note that prior to the intervention, the educators received training on the role of executive functions and their link to behavioural and emotional responses in children. They were also provided with a manual detailing the goal of the activities of the training

programme and how they had to administer them. The educators were in contact with the researchers during the course of the intervention programme in order to resolve any questions that might arise.

The study was carried out in accordance with the Declaration of Helsinki and ethical guidelines of the American Psychological Association. Approval was obtained from the Research Ethics Committee at the first author's institution [Reference numbers: NCS021020191 / NCS021020192]

Table 2 *Sequencing of executive function training activities (Period 1)*

Content	Timing	Goals	Activities and tasks
Presentation of the programme and cognitive activation	Sessions 1, 2 and 3	<p><i>Activity 1</i> Analysing the manifestations of executive dysfunction in the classroom based on Lynn Meltzer [42].</p> <p><i>Activity 2</i> Monitoring activation to maintain effort throughout task performance based on the Yerkes-Dodson law.</p> <p><i>Activity 3</i> Providing the students with guidelines that help them sustain the effort until the goal is reached.</p>	<p><i>Activity 1</i> 1.1 Reading and presentation on executive functions. 1.2 Metacognitive analysis of executive functions.</p> <p><i>Activity 2</i> 2.1 Reading and presentation on cognitive activation management. 2.2 Metacognitive analysis of cognitive activation. 2.3 Activation and performance curve. 2.4 Diaphragmatic breathing technique.</p> <p><i>Activity 3</i> 3.1 Metacognitive analysis of motivation. 3.2 Motivation poster.</p>
Inhibitory control	Sessions 4 and 5	<p><i>Activity 4</i> Identifying situations in which impulsive behaviours arise; analysing and changing behaviour.</p> <p><i>Activity 5</i> Training of planning and inhibitory control in visual motor tasks.</p> <p><i>Activity 6</i> Training of inhibitory control in day-to-day real-life situations.</p>	<p><i>Activity 4</i> 4.1 Reading and presentation on inhibitory control. 4.2 Metacognitive analysis of inhibitory control. 4.3 Role-playing for impulse control.</p> <p><i>Activity 5</i> Visual motor tasks using paths and colours.</p> <p><i>Activity 6</i> Response cost: control of impulsive behaviour control.</p>
Cognitive flexibility	Session 6	<p><i>Activity 7</i> Analysing own capacity to adapt to new and changing situations.</p> <p><i>Activities 8 and 9</i> Reinforcing flexible thinking through play.</p>	<p><i>Activity 7</i> 7.1 Reading and presentation on cognitive flexibility. 7.2 Metacognitive analysis of cognitive flexibility.</p> <p><i>Activity 8</i> Play two games simultaneously.</p> <p><i>Activity 9</i> Inventing objects using different shapes.</p>

Decision making	Session 7	<p><i>Activity 10</i> Ascertaining what problem-solving strategies the minor uses.</p> <p><i>Activity 11</i> Problem-solving training based on the Dawson and Guare system [14].</p>	<p><i>Activity 10</i> 10.1 Reading and presentation on decision-making process. 10.2 Metacognitive analysis of decision-making.</p> <p><i>Activity 11</i> 11.1 Problem-solving. 11.2 Making the right decisions.</p>
Attention and memory	Sessions 8 and 9	<p><i>Activity 12</i> Analysing own attention and memory processes.</p> <p><i>Activity 13</i> Offering guidelines and strategies for improving attention processes.</p> <p><i>Activity 14</i> Providing strategies to improve information processing.</p>	<p><i>Activity 12</i> 12.1 Reading and presentation on attention and memory. 12.2 Metacognitive analysis of attention and memory.</p> <p><i>Activity 13</i> 13.1 Word and number search. 13.2 Stroop colour and word test. 13.3 Passive and active attention.</p> <p><i>Activity 14</i> Memory-training strategies.</p>
Controlling emotions	Sessions 10, 11 and 12	<p><i>Activity 15</i> Identifying own emotional responses.</p> <p><i>Activity 16</i> Providing strategies to control anger.</p> <p><i>Activity 17</i> Expressing anger effectively and appropriately and improving relationships with others.</p>	<p><i>Activity 15</i> 15.1 Reading and presentation on emotion control. 15.2 Metacognitive analysis of emotion control.</p> <p><i>Activity 16</i> 16.1 Recognising anger triggers. 16.2 Steps to deal with anger.</p> <p><i>Activity 17</i> 17.1 Analysing passive, aggressive and assertive behaviour. 17.2 Guidelines for expressing emotions assertively.</p>

Table 3 Sequencing of executive function training activities (Period 2)

Content	Timing	Goals	Activities and tasks
Emotional control	Sessions 1 and 2	<p><i>Activity 1</i> Understanding that our emotions depend on our thoughts.</p> <p><i>Activity 2</i> Becoming aware of our thoughts, learning to identify them, and knowing how they influence what we feel.</p>	<p><i>Activity 1</i> 1.1 Thought-emotion-behaviour triangles. 1.2 Play activity: each emotion with its thought.</p> <p><i>Activity 2</i> 2.1 Emotion diary.</p>
		<p><i>Activity 3</i> Helping the minor to reflect on and distinguish their emotions.</p>	<p><i>Activity 3</i> 3.1 Emotional compass. 3.2 Emotion diary.</p>
Communication skills	Sessions 3 and 4	<p><i>Activity 4</i> Differentiating between active listening (or being listened to) and when we don't; developing active listening skills.</p> <p><i>Activity 5</i> Reinforcing the minors' social skills, using strategies to give compliments and to be assertive about saying what we like.</p>	<p><i>Activity 4</i> 4.1 I'm improving my communication (I): active listening dynamics. 4.2 Emotion diary.</p> <p><i>Activity 5</i> 5.1 I'm improving my communication (II): giving and receiving compliments. 5.2 Emotion diary.</p>
Attention	Session 5	<p><i>Activity 6</i> Reinforcing the guidelines and strategies acquired by the minors to</p>	<p><i>Activity 6</i> 6.1 Analysing attention. 6.2 Play activity: the problem of</p>

		improve attention processes.	the shelf in the mirror. 6.3 Emotion diary.
Planning	Sessions 6, 7 and 8	<i>Activity 7</i> Training mental processes involved in planning. <i>Activity 8</i> Exploring an example of how to set priorities, breaking down a task into steps, and deciding the order and importance of each step. <i>Activity 9</i> Helping the minor to define a personal or academic goal and be able to follow it up.	<i>Activity 7</i> 7.1 I'm learning to plan (I): what do I need for...? 7.2 Emotion diary. <i>Activity 8</i> 8.1 I'm learning to plan (II): How do I do...? 8.2 Emotion diary. <i>Activity 9</i> 9.1 I'm learning to plan (III): I work towards my goal. 9.2 Emotion diary.
Memory	Sessions 9 and 10	<i>Activity 10</i> Improving the information processing through play. <i>Activity 11</i> Consolidating strategies to improve information processing.	<i>Activity 10</i> 10.1 I'm training my memory (I): Memory cards. 10.2 Emotion diary. <i>Activity 11</i> 11.1 I'm training my memory (II): Trying out strategies. 11.2 Emotion diary.

4.4 Data analysis

The study used a pre-experimental, one-group pretest-posttest design. First, the assumption of normality for the differences between pairs of scores (i.e. before and after the intervention) on BRIEF[®]2, SENA self-report and SENA family were examined (see Appendix). For scores on BRIEF[®]2, the assumption of normal distribution was met ($ps > .05$), whereas for certain pairs of scores on SENA self-report and SENA family deviations from normality were observed. Therefore, paired differences (i.e. before and after the intervention) were examined using paired samples t -tests for scores on BRIEF[®]2 and both paired samples t -tests and the Wilcoxon signed rank test for SENA (self-report and family). In addition to exact p -values for all paired comparisons, we estimated effect sizes along with the 95% confidence intervals for effect sizes. For the Student t -test, effect sizes are given by Cohen's d , while for the Wilcoxon test, effect sizes are given by the matched rank biserial correlation. Although we conducted multiple comparisons, we did not use Bonferroni adjustments, which are considered to be "at best, unnecessary and, at worst, deleterious to sound statistical inference" ([55] p. 1236). Among the problems related to this method for

adjustments of statistical significance, Perneger [55] points to the “irrelevant null hypothesis” (i.e. all null hypotheses are true simultaneously), the fact that the inferences depend on the total number of tests performed and the inflated type II errors as a result of this type of adjustments. However, the data reported in this study (exact p -values for all comparisons) allow the interested reader to easily estimate and assess the data with Bonferroni correction. In this regard, it is also important to mention that a statistically significant difference is not necessarily a *big* or *meaningful* difference. Therefore, in this study we interpreted the results based on the effect sizes as the aim was to assess whether the training programme could lead to meaningful improvements in children’s executive functions and behavioural and emotional control. Moreover, effect sizes constitute standardised measures and thus allow for comparisons of the effectiveness of the executive function training programme used in this study with similar educational interventions reported in previous work. Furthermore, it is important to clarify that executive functions develop across the life span and this process is linked to important changes occurring in the prefrontal regions of the brain [21]. Therefore, age is an important factor in the development of executive functions [19]. To test age differences, independent samples t -tests were carried out. This analysis did not reveal statistically significant differences between children aged 8 to 12 (primary education) and children aged 13 to 17 (secondary education) in their scores on BRIEF®2 neither prior nor after the intervention (see Appendix).

5. Results

Tables 4, 5 and 6 present descriptive values, mean differences, effect sizes and 95% confidence intervals for effect sizes for scores on BRIEF®2, SENA self-report and SENA family, respectively. Regarding executive functions, the results showed a small effect of the intervention on the scores obtained by the minors on the scales measuring initiative and task supervision ($d = .201$ and $d = .219$, respectively).

Table 4 Mean differences before and after the intervention - BRIEF[®]2

	M PRE	M POST	Statistic	<i>p</i>	Effect size	95% CI	
	(SD)	(SD)				Lower	Upper
Inhibition	59.37	61.126	-1.568	0.121	-0.17	-0.384	0.045
	-15.01	-15.2					
Self-supervision	61.14	61.7	-0.403	0.688	-0.044	-0.256	0.169
	-12.71	-13.06					
Flexibility	62.15	60.13	1.232	0.221	0.134	-0.08	0.347
	-13.83	-14.79					
Emotional control	56.27	56.63	-0.418	0.677	-0.045	-0.258	0.168
	-14.3	-12.72					
Initiative	59.24	56.71	1.938	0.056	0.21	-0.005	0.425
	-13.11	-13.16					
Working memory	60.25	60.08	-0.247	0.805	-0.027	-0.239	0.186
	-12.79	-12.96					
Planning and organisation	60.18	58.66	1.091	0.278	0.118	-0.095	0.331
	-10.59	-11.54					
Task supervision	59.79	56.78	2.018	0.047	0.219	0.003	0.433
	-13.08	-11.66					
Organising materials	58.66	57.84	0.395	0.694	0.043	-0.17	0.255
	-13.52	-13.53					
Behaviour regulation index	61.06	62.53	-1.286	0.202	-0.139	-0.353	0.075
	-14.55	-15.01					
Emotion regulation index	60.17	59.45	0.361	0.719	0.039	-0.174	0.252
	-15.31	-14.39					
Cognitive regulation index	61.45	59.69	1.194	0.236	0.129	-0.084	0.343
	-12.92	-13.16					
Global EF index	62.85	61.9	0.516	0.607	0.056	-0.157	0.269
	-14.1	-14.86					

Note. Effect size is given by Cohen's *d*.

The intervention also had a strong positive effect on integration and social skills, the scale associated with the minors' personal resources and strengths ($d \approx .65$). Moreover, after the intervention, the minors reported having fewer problems with their classmates and fewer symptoms related to traumatic events, but also more emotion regulation problems (effect sizes around .20).

In addition, according to the information provided by the educators, after the intervention the minors had fewer emotional problems and a higher level and variety of personal resources as a result of the intervention (effect sizes around .20). More specifically, the minors presented better integration and social skills, a greater willingness to study – which indicates an improvement in personal resources –, as well as less isolation and fewer symptoms of depression (effect sizes between .20 and .36).

Table 5 Mean differences before and after the intervention – SENA self-report

	M PRE (SD)	M POST (SD)	Test	Statistic	<i>p</i>	Effect size	95% CI Lower	95% CI Upper
Global index of problems	60.43 (14.39)	59.18 (14.11)	Student Wilcoxon	1.105 1383.00	.273 .295	0.128 0.145	-0.101 -0.124	0.357 0.395
Index of emotional problems	57.01 (12.93)	56.01 (12.03)	Student Wilcoxon	0.997 1426.50	.322 .396	0.116 0.116	-0.113 -0.150	0.344 0.367
Index of behavioural problems	62.19 (18.09)	61.31 (16.89)	Student Wilcoxon	0.485 1191.50	.629 .438	0.056 0.111	-0.172 -0.167	0.284 0.372
Index of problems in EF	57.70 (13.37)	56.90 (12.48)	Student Wilcoxon	0.753 1327.50	.454 .621	0.088 0.068	-0.141 -0.198	0.316 0.326
Index of contextual problems	59.12 (13.80)	57.50 (12.55)	Student Wilcoxon	1.233 1521.50	.222 .348	0.143 0.127	-0.086 -0.136	0.372 0.372
Index of personal resources	43.91 (12.95)	45.46 (12.22)	Student Wilcoxon	-1.155 873.50	.252 .098	-0.134 -0.233	-0.363 -0.472	0.095 0.038
Depression	58.19 (13.39)	57.88 (12.35)	Student Wilcoxon	0.282 1353.00	.779 .669	0.033 0.059	-0.195 -0.206	0.261 0.315
Anxiety	54.27 (10.51)	53.19 (10.54)	Student Wilcoxon	1.062 1367.00	.292 .237	0.123 0.165	-0.106 -0.106	0.352 0.414
Social anxiety	52.45 (11.07)	52.38 (10.46)	Student Wilcoxon	0.061 1254.00	.952 .949	0.007 0.009	-0.221 -0.255	0.235 0.272
Somatic complaints	53.62 (11.12)	53.57 (11.26)	Student Wilcoxon	0.053 1229.50	.958 .783	0.006 -0.038	-0.222 -0.296	0.234 0.226
Post-traumatic symptomatology	59.41 (14.27)	57.16 (12.14)	Student Wilcoxon	1.815 1499.50	.074 .081	0.211 0.242	-0.020 -0.025	0.441 0.476
Attention problems	55.28	54.41	Student	1.043	.300	0.121	-0.108	0.350

	(10.87)	(10.16)	Wilcoxon	1385.50	.404	0.115	-0.153	0.367
Hyperactivity - impulsiveness	56.39	55.88	Student	0.442	.660	0.051	-0.177	0.279
	(14.17)	(12.51)	Wilcoxon	1220.00	.776	0.040	-0.229	0.304
Anger management problems	58.15	57.69	Student	0.399	.691	0.046	-0.182	0.274
	(13.29)	(13.08)	Wilcoxon	1168.00	.692	0.057	-0.217	0.322
Aggression	62.73	61.18	Student	0.821	.415	0.095	-0.133	0.323
	(18.46)	(17.14)	Wilcoxon	1261.50	.218	0.176	-0.101	0.428
Challenging behaviour	59.50	58.09	Student	0.647	.520	0.075	-0.153	0.303
	(18.82)	(16.46)	Wilcoxon	1257.00	.463	0.104	-0.170	0.362
Problems with the family	60.55	61.62	Student	-0.578	.565	-0.067	-0.295	0.161
	(14.83)	(14.26)	Wilcoxon	1183.00	.358	-0.124	-0.370	0.138
Problems with the school	55.81	55.23	Student	0.379	.706	0.044	-0.184	0.272
	(14.53)	(12.51)	Wilcoxon	1264.00	.738	0.047	-0.221	0.308
Problems with peers	52.77	50.16	Student	1.728	.088	0.201	-0.030	0.430
	(11.68)	(10.54)	Wilcoxon	990.00	.066	0.286	-0.010	0.535
Problems with emotion regulation	51.96	57.41	Student	-2.816	.006	-0.327	-0.560	-0.092
	(14.71)	(11.42)	Wilcoxon	865.00	.041	-0.284	-0.510	-0.020
Self-esteem	44.72	46.34	Student	-0.971	.335	-0.113	-0.341	0.116
	(13.54)	(12.52)	Wilcoxon	763.00	.191	-0.193	-0.449	0.093
Integration and social skills	31.19	45.78	Student	-5.615	< .001	-0.653	-0.902	-0.400
	(23.46)	(11.77)	Wilcoxon	391.500	< .001	-0.685	-0.803	-0.514

Note. For the Student t-test, effect size is given by Cohen's *d*. For the Wilcoxon test, effect size is given by the matched rank biserial correlation.

Table 6 Mean differences before and after the intervention – SENA family

	M PRE (SD)	M POST (SD)	Test	Statistic	<i>p</i>	Effect size	95% CI Lower	95% CI Upper
Global index of problems	59.61	59.75	Student	0.651	.517	0.070	-0.141	0.280
	(14.80)	(14.71)	Wilcoxon	1938.000	.377	0.112	-0.135	0.345
Index of emotional problems	54.21	51.62	Student	2.050	.043	0.220	0.006	0.432
	(13.26)	(11.79)	Wilcoxon	2154.000	.100	0.207	-0.036	0.427
Index of behavioural problems	64.00	66.31	Student	-1.399	.165	-0.150	-0.361	0.062
	(19.69)	(20.81)	Wilcoxon	1441.000	.302	-0.132	-0.366	0.117
Index of problems in EF	57.22	56.49	Student	0.660	.511	0.071	-0.140	0.281
	(12.92)	(14.17)	Wilcoxon	1854.000	.616	0.064	-0.182	0.302
Index of personal resources	36.52	39.36	Student	-2.151	.034	-0.231	-0.443	-0.017
	(12.48)	(12.25)	Wilcoxon	1352.000	.037	-0.260	-0.471	-0.022
Depression	59.74	55.83	Student	2.988	.004	0.320	0.104	0.535
	(14.17)	(12.60)	Wilcoxon	2267.500	.004	0.366	0.132	0.561
Anxiety	53.14	51.21	Student	1.616	.110	0.173	-0.039	0.384
	(12.61)	(11.35)	Wilcoxon	1903.500	.174	0.175	-0.075	0.405
Social anxiety	49.71	48.14	Student	1.346	.182	0.144	-0.067	0.355
	(10.91)	(9.93)	Wilcoxon	1993.500	.353	0.117	-0.128	0.348
Somatic complaints	50.53	49.83	Student	0.579	.564	0.062	-0.148	0.272
	(12.76)	(11.76)	Wilcoxon	1182.000	.881	-0.021	-0.285	0.245
Attention problems	57.01	56.13	Student	0.898	.371	0.096	-0.115	0.307

	(11.16)	(12.86)	Wilcoxon	1542.500	.405	0.112	-0.149	0.358
Hyperactivity - impulsiveness	54.55	54.18	Student	0.359	.721	0.038	-0.172	0.249
	(12.58)	(13.69)	Wilcoxon	1650.500	.450	0.099	-0.156	0.342
Anger management problems	58.89	60.30	Student	-1.036	.303	-0.111	-0.321	0.100
	(15.57)	(16.39)	Wilcoxon	1592.500	.496	-0.086	-0.322	0.160
Aggression	65.70	68.89	Student	-1.642	.104	-0.176	-0.387	0.036
	(22.63)	(22.77)	Wilcoxon	1168.000	.127	-0.202	-0.433	0.054
Challenging behaviour	57.85	59.33	Student	-1.118	.267	-0.120	-0.330	0.091
	(15.05)	(15.81)	Wilcoxon	1237.000	.180	-0.176	-0.410	0.079
Unusual behaviour	57.46	58.29	Student	-0.434	.666	-0.047	-0.257	0.164
	(18.59)	(18.62)	Wilcoxon	1048.500	.718	-0.052	-0.318	0.222
Problems with emotion regulation	54.77	55.45	Student	-0.602	.549	-0.065	-0.275	0.146
	(12.55)	(13.15)	Wilcoxon	1622.000	.584	-0.069	-0.307	0.176
Rigidity	56.97	55.49	Student	1.169	.246	0.125	-0.086	0.336
	(12.79)	(13.07)	Wilcoxon	1709.000	.293	0.138	-0.117	0.377
Isolation	57.15	54.58	Student	2.128	.036	0.228	0.015	0.440
	(13.49)	(11.87)	Wilcoxon	2178.000	.048	0.250	0.007	0.464
Integration and social skills	40.00	42.61	Student	-1.953	.054	-0.209	-0.421	0.004
	(14.21)	(11.67)	Wilcoxon	1398.500	.085	-0.217	-0.435	0.026
Emotional intelligence	40.69	42.62	Student	-1.303	.196	-0.140	-0.350	0.072
	(10.87)	(12.06)	Wilcoxon	1525.500	.248	-0.145	-0.374	0.099
Willingness to study	37.40	39.97	Student	-2.550	.013	-0.273	-0.487	-0.059
	(12.91)	(12.37)	Wilcoxon	1183.000	.017	-0.305	-0.511	-0.065

Note. For the Student t-test, effect size is given by Cohen's *d*. For the Wilcoxon test, effect size is given by the matched rank biserial correlation.

6. Discussion and conclusions

In light of the scarce number of intervention programmes for minors in foster care that take into account their profile and needs, this study explored the effectiveness of a training programme in improving executive functions in minors in residential foster care with the ultimate aim of enhancing their behavioural and emotional control. The activities were included in the Educational Reinforcement Plan being developed by the Asociación Nuevo Futuro, since school reinforcement is one of the most widely used and accepted compensatory actions in support of school achievement when dealing with situations of educational disadvantage due to sociocultural factors [31]. The different blocks of the intervention specifically addressed the training of cognitive activation, inhibitory control, cognitive flexibility, decision making, attention and memory, and emotional control. After

the twelve training sessions, run over 6 weeks, the data indicated an improvement in some of the areas in which the minors had shown greater difficulty. This result is in line with Lind et al. [30], who managed to improve the attention and cognitive flexibility of adopted children to levels similar to the low-risk group.

More specifically, after the intervention, the minors showed a greater capacity to supervise their own work which facilitates goal attainment (task supervision), as well as fewer problems with task initiation or performing activities autonomously (initiative). In addition, based on the information provided by the minors and their educators, after the intervention the minors seemed to have more personal resources, which act as protective factors when children have to face different kinds of problems, and a noticeable improvement in their ability to initiate and maintain appropriate relationships in order to fit in well in different social groups (integration and social skills); in the educators' opinion, they also displayed a positive attitude towards study and higher motivation levels (willingness to study).

With regard to behavioural and contextual problems, the minors generally displayed a lower incidence of disruptive behaviours. In this regard, there was a reduction in problems with peers, and the minors reported feeling less rejected or isolated by them. This finding aligns with the educators' observations, who reported that the intervention had been effective in reducing isolation and lack of interaction with their peers. These results suggest that, although superior cognitive functions can be bolstered through intervention programmes, improving adaptive behaviour and affective functions among this cohort can be much more complicated [59].

A slight improvement was also observed in relation to emotional problems. The educators reported that, after the intervention, the minors presented fewer emotional problems and specifically fewer symptoms of depression. These results are in line with

evidence from Pears et al. [52] who implemented an intervention programme that achieved an improvement in the emotional readiness of foster children. Although seemingly contradictory, the fact that the minors reported more emotion regulation problems might indicate that the intervention helped them identify their own emotions and thus recognise the difficulties that the regulation of these emotions implies.

Given the adverse situations these minors often have to face [11], it is also worth noting that the minors in this study reported having fewer post-traumatic symptoms, that could entail a threat to their physical or psychological integrity. This finding is particularly relevant since it appears that stressful situations have a negative impact on the perceived psychological well-being of adolescents, and the greater the number of critical changes they experience (e.g. the number of care homes or school changes the minor has been through), the more the perceived life satisfaction decreases [45]. Finally, executive functions have a sequential development: the most intense progress occurs in childhood and slows down later, marking the early-middle adolescence the end of their development [19]. The results of this study did not show significant differences in executive functions between primary and secondary school-age children, neither prior nor after the intervention.

In conclusion, the results of this study corroborate that educational interventions directed at minors in residential foster care should promote executive function training, which is likely to positively contribute to their behavioural and emotional control and enhance their personal resources. This would eventually lead to better academic adjustment and improved school achievement for these minors [23]. Moreover, putting the strategies learned during the implementation of the programme into practice in day-to-day life situations could attenuate the executive, behavioural and emotional dysfunctions usually observed among these minors.

Notwithstanding, the findings of the present study should be interpreted in light of several limitations. The study lacked a control group. This is because the training programme

was framed within the general context of an Educational Reinforcement Plan that the Asociación Nuevo Futuro has been developing with the ultimate goal of facilitating minors' social integration; hence all the children living in those care homes had the opportunity to benefit from it. Another limitation is the reduced time the participants had to put the strategies learned into practice in real contexts before the post-treatment assessment, which prevents the generalisation of the programme results to other contexts. In addition, a follow-up evaluation of the minors was not carried out given the limited time many minors usually stay at foster care homes. In this regard, the lack of statistically significant results with respect to certain emotional or behavioural aspects might be attributable to the fact that the evaluation was carried out immediately after the intervention, thus not allowing time for a greater generalisation to take place (i.e. strategy implementation in real-life contexts). Moreover, sensitive periods for the development of executive functions tend to vary by domain, and for some executive functions it seems important to intervene at an early age ([61, 62, 63]). Future replication studies should also address the influence of variables related to children's academic performance. This would help corroborate whether the executive function training programme can lead to further improvements in school grades. Furthermore, gender differences should be taken into consideration when designing intervention programmes because, as many studies have shown, the distinctive features that characterise the life course of women appear to be a disadvantage likely to cause poorer adjustment to adult life [38].

Compliance with Ethical Standards

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Declaration of Helsinki and its subsequent revisions, or comparable ethical standards.

Informed consent

The study focused on minors in residential care homes. Permission to conduct the study was obtained by the Dirección General de Servicio para las Familias y la Infancia (Ministerio de Salud, Servicios Sociales e Igualdad).

Funding Statement

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Data availability statement

The executive function training programme used in this study and the raw data are available from the corresponding author upon request.

Financial disclosure

There are no financial conflicts of interest to disclose.

Conflict of Interest

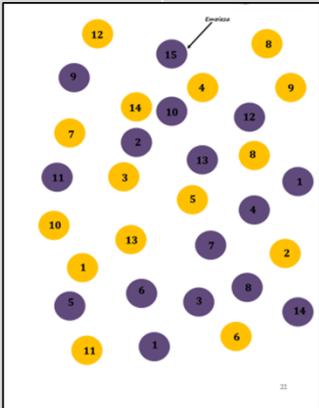
On behalf of all authors, the corresponding author states that there is no conflict of interest.

Declaration of Competing Interest

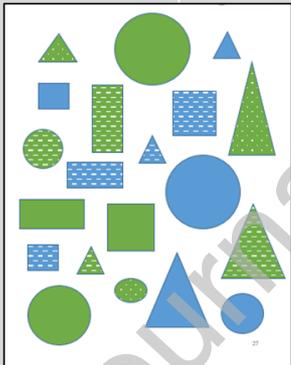
The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix**Examples of activities used in the intervention****Stage 1: Executive function training**

- **Inhibitory control:**

Content	Timing	Goals	Activities and Tasks
II. Inhibitory control 	Sessions 4-5	<p>Goal 4 Identifying situations in which impulsive behaviours arise; analysing them and help students replace these impulsive behaviours.</p> <p>Goal 5 Training of planning and inhibitory control in visual motor tasks.</p> <p>Goal 6 Training of inhibitory control in day-to-day real-life situations.</p>	<p>Activity 4 4.1 Reading and presentation on inhibitory control. 4.2 Metacognitive analysis of inhibitory control. 4.3 Role-playing for impulse control.</p> <p>Activity 5 Visual motor tasks using paths and colorus.</p> <p>Activity 6 Response cost: control of impulsive behaviour in daily life.</p>

- **Cognitive flexibility:**

Content	Timing	Goals	Activities and Tasks
III. Cognitive flexibility 	Session 6	<p>Goal 7 Analysing own capacity to adapt to new and changing situations.</p> <p>Goals 8-9 Reinforce their flexible thinking through play.</p>	<p>Activity 7 7.1 Reading and presentation on cognitive flexibility. 7.2 Metacognitive analysis of cognitive flexibility.</p> <p>Activity 8 Play two games simultaneously.</p> <p>Activity 9 Inventing objects using different shapes.</p>

Stage 2: Reinforcement and integration of skills into children's daily routine

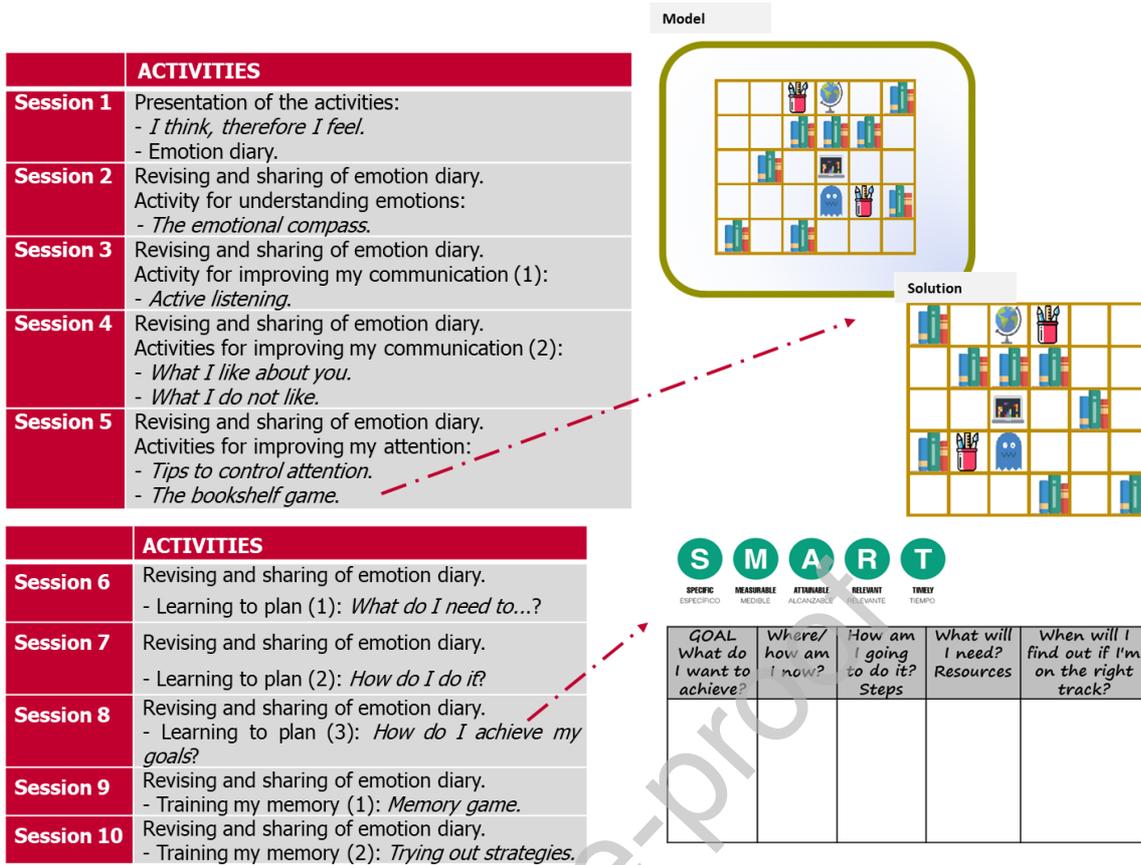


Table I Tests of normality (Shapiro-Wilk) for BRIEF^{®2}

			W	p
PRE_Inhibition	-	POST_Inhibition	0.990	.771
PRE_Self-supervision	-	POST_Self-supervision	0.973	.070
PRE_Flexibility	-	POST_Flexibility	0.984	.383
PRE_Emoional control	-	POST_Emoional control	0.976	.117
PRE_Initiative	-	POST_Initiative	0.984	.356
PRE_Working memory	-	POST_Working memory	0.985	.430
PRE_Planning and organisation	-	POST_Planning and organisation	0.993	.940
PRE_Task supervision	-	POST_Task supervision	0.979	.180
PRE_Organising materials	-	POST_Organising materials	0.988	.610
PRE_Behaviour regulation index	-	POST_Behaviour regulation index	0.988	.648
PRE_Emotion regulation index	-	POST_Emotion regulation index	0.977	.130
PRE_Cognitive regulation index	-	POST_Cognitive regulation index	0.993	.913
PRE_Global EF index	-	POST_Global EF index	0.983	.336

Table II Tests of normality (Shapiro-Wilk) for SENA self-report

			W	p
PRE_Global index of problems	-	POST_Global index of problems	0.977	.202
PRE_Index of emotional problems	-	POST_Index of emotional problems	0.988	.689
PRE_Index of behavioural problems	-	POST_Index of behavioural problems	0.948	.004
PRE_Index of problems in EFs	-	POST_Index of problems in EF	0.986	.566
PRE_Index of contextual problems	-	POST_Index of contextual problems	0.962	.024
PRE_Index of personal resources	-	POST_Index of personal resources	0.961	.023
PRE_Depression	-	POST_Depression	0.987	.640
PRE_Anxiety	-	POST_Anxiety	0.981	.340
PRE_Social anxiety	-	POST_Social anxiety	0.974	.137
PRE_Somatic complaints	-	POST_Somatic complaints	0.985	.513
PRE_Post-traumatic symptomatology	-	POST_Post-traumatic symptomatology	0.991	.866
PRE_Attention problems	-	POST_Attention problems	0.989	.781

PRE_Hyperactivity - impulsiveness	-	POST_Hyperactivity - impulsiveness	0.970	.075
PRE_Anger management problems	-	POST_Anger management problems	0.984	.488
PRE_Aggression	-	POST_Aggression	0.970	.080
PRE_Challenging behaviour	-	POST_Challenging behaviour	0.975	.158
PRE_Problems with the family	-	POST_Problems with the family	0.961	.023
PRE_Problems with the school	-	POST_Problems with the school	0.967	.050
PRE_Problems with peers	-	POST_Problems with peers	0.916	< .001
PRE_Problems with emotion regulation	-	POST_Problems with emotion regulation	0.922	< .001
PRE_Self-esteem	-	POST_Self-esteem	0.926	< .001
PRE_Integration and social skills	-	POST_Integration and social skills	0.934	< .001

Note. Significant results suggest a deviation from normality.

Table III Tests of normality (Shapiro-Wilk) for SENA family

			W	p
PRE_Global index of problems	-	POST_Global index of problems	0.973	.069
PRE_Index of emotional problems	-	POST_Index of emotional problems	0.971	.049
PRE_Index of behavioural problems	-	POST_Index of behavioural problems	0.962	.013
PRE_Index of problems in EF	-	POST_Index of problems in EF	0.988	.590
PRE_Index of personal resources	-	POST_Index of personal resources	0.992	.892
PRE_Depression	-	POST_Depression	0.991	.798
PRE_Anxiety	-	POST_Anxiety	0.974	.080
PRE_Social anxiety	-	POST_Social anxiety	0.984	.347
PRE_Somatic complaints	-	POST_Somatic complaints	0.926	< .001
PRE_Attention problems	-	POST_Attention problems	0.991	.834
PRE_Hyperactivity - impulsiveness	-	POST_Hyperactivity - impulsiveness	0.974	.071
PRE_Anger management problems	-	POST_Anger management problems	0.984	.354
PRE_Aggression	-	POST_Aggression	0.948	.002
PRE_Challenging behaviour	-	POST_Challenging behaviour	0.967	.027
PRE_Unusual behaviour	-	POST_Unusual behaviour	0.915	< .001
PRE_Problems with emotion regulation	-	POST_Problems with emotion regulation	0.993	.939
PRE_Inflexibility	-	POST_Inflexibility	0.986	.488
PRE_Isolation	-	POST_Isolation	0.991	.805
PRE_Integration and social skills	-	POST_Integration and social skills	0.985	.441
PRE_Emotional intelligence	-	POST_Emotional intelligence	0.989	.675
PRE_Willingness to study	-	POST_Willingness to study	0.993	.941

Note. Significant results suggest a deviation from normality.

Table IV Mean differences between primary (8-12 years) and secondary (13-17 years) students in executive functions before and after the intervention

	t	p
PRE_Inhibition	0.191	.849
PRE_Self-supervision	0.023	.981
PRE_Flexibility	0.737	.463
PRE_Emotional control	0.809	.421
PRE_Initiative	1.264	.210
PRE_Working memory	1.042	.301
PRE_Planning and organisation	0.443	.659
PRE_Task supervision	-1.004	.318
PRE_Organising materials	-0.143	.887
PRE_Behaviour regulation index	0.123	.903
PRE_Emotion regulation index	0.675	.502
PRE_Cognitive regulation index	0.381	.704
PRE_Global EF index	0.362	.718
POST_Inhibition	0.154	.878
POST_Self-supervision	-0.148	.883
POST_Flexibility	1.538	.128
POST_Emotional control	0.993	.323
POST_Initiative	1.528	.130

POST_Working memory		0.579				.564
POST_Planning and organisation		1.737				.086
POST_Task supervision		1.045				.299
POST_Organising materials		0.704				.483
POST_Behaviour regulation index		0.044				.965
POST_Emotion regulation index		1.205				.231
POST_Cognitive regulation index		1.181				.241
POST_Global EF index		0.954				.343

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