Revista de Psicodidáctica, 2014, 19(2), 347-365
www.ehu.es/revista-psicodidactica
ISSN: 1136-1034 eISSN: 2254-4372

DOI: 10.1387/RevPsicodidact.10714

The Impact of a School-Based Social and Emotional Learning Program on the Self-Concept of Middle School Students

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Abstract

This controlled pre-post study investigates whether a universal, school-based, socio-emotional learning program implemented in two consecutive years, would promote an increase in *academic, social* and *emotional self-concept* of Portuguese middle school students. It also analyzes if there are differential results by gender and among students with lower self-concept. There were 630 participants (*M*age = 13.54; *SD* = 1.36), 474 students (25 classes) integrated program "Positive Attitude" and 156 (8 classes) in control groups. Self-report questionnaires were administered before and after intervention. There are significant intervention increases in *social*, *emotional* and *total self-concept*, which are stable along the two years and across genders, except for *emotional self-concept* where only boys show benefits. Intervention students with initial lower levels of self-concept profit more than their colleagues in *academic* and *social self-concept*. These results indicate that the intervention positively impacts the self-concept of middle school students, supporting the effectiveness of socio-emotional learning programs.

Keywords: Self-concept, social and emotional learning, middle school.

Resumo

Este estudo investiga se um programa escolar universal de aprendizagem socioemocional, implementado em dois anos escolares consecutivos, promove melhorias no autoconceito académico, social e emocional de estudantes de 3º ciclo. O estudo também analisa a influência do género e dos níveis iniciais de competência sobre os resultados. No total, 630 alunos participaram no estudo: 474 alunos (25 turmas) integrados no programa «Atitude positiva» e 156 (8 turmas) como parte dos grupos de controlo. Foram aplicados questionários de autorrelato antes e depois do Programa. Os resultados mostram ganhos significativas no autoconceito social, emocional e total, que foram estáveis nos dois anos de intervenção e para ambos os géneros, com excepção do autoconceito emocional, no qual apenas os rapazes apresentam ganhos. Adicionalmente, os alunos com níveis mais baixos de autoconceito beneficiam mais da intervenção no autoconceito académico e social. Estes resultados apoiam a efetividade dos programas de aprendizagem socioemocional.

Palavras-chave: Autoconceito, aprendizagem socioemocional, 3º ciclo.

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Introduction

There is an international broad agreement among educators, policymakers, and the public that educational systems should graduate students who are proficient not only in core academic subjects, but are also able to work well with others from diverse backgrounds, engage in healthy behaviours, and behave responsibly and respectfully in socially and emotionally skilled ways (Coelho & Figueira, 2011; Greenberg et al., 2003; Inglés, Martínez-González, García-Fernández, Torregrosa, & Ruiz-Esteban, 2012).

Knapp, McDaid and Parsonage (2011) presented a study that identified Social and Emotional Learning (SEL) programs as the interventions with best cost/benefit ratio in the promotion of mental health. SEL programs yielded positive effects on targeted social-emotional competencies, as well as attitudes about self, others, and school. They also enhanced students' behavioural adjustment in the form of increased pro-social behaviour and reduced conduct and internalizing problems, and improved academic performance on achievement tests and grades (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Greenberg et al., 2003).

Also, in recent years, research on self-concept and self-esteem has been gaining relevance within the context of the identification of protective factors against psychological problems (Garaigordobil, Pérez, & Mozaz, 2008; O'Mara, Marsh, Craven, & Debus, 2006). According to the Organization for Economic Co-Operation and Development self-concept "has important benefits for motivation and for the way in which students approach learning tasks" (OECD, 2003, p. 11).

In a meta-analysis study, Haney and Durlak (1998) reported that primary prevention programs that are not focused on self-concept may still have an impact on it. Therefore, the aim of this study is to analyse the efficacy of a school-based prevention program, whose goals are the enhancement of *academic, social* and *emotional self-concept* in order to facilitate the social integration of the student involved, especially those with lower levels of self-concept in the pre-test.

Self-Concept

Self-concept, defined by Shavelson, Hubner and Stanton (1976) as a set of perceptions that a person holds about him or herself based on personal assessment and feedback from significant others, reinforcements and attributions about one's behaviour, has been widely studied in the field of psychology due to its direct involvement in individual self-regulation of present and future behaviour (Delgado, In-

glés, & García-Fernández, 2013). These authors consider a central element in shaping personality, as well as an indicator of personal satisfaction and psychological well-being.

Self-concept is widely acknowledged as an important construct, particularly in Educational Psychology (Marsh & Craven, 2006), due to its contribution in explaining adjusted and adaptive behaviours in adolescence (Fuentes, Garcia, Gracia, & Lila, 2011a) and its close relatedness to psychosocial adjustment in adolescence (Fuentes, Garcia, Gracia, & Lila, 2011b; Rodríguez-Fernández, Droguett, & Revuelta, 2012). As such, it has been linked through numerous empirical studies to behavioural, academic and psychological outcomes. Therefore, self-concept influences a diversity of adaptive social outcomes such as social competence (Cava & Musitu, 2000; Fuentes et al., 2011b), school engagement (Guay, Marsh, & Boivin, 2003), prosocial behaviour (Inglés et al., 2012) and healthy lifestyles (Pastor, Balaguer, & García-Merita, 2006), and important indicator of the quality of parent-child relationships (Rodrigues, Veiga, Fuentes, & García, 2013; Rodríguez-Fernández et al., 2012). Other authors claim that self-concept influences the low expression of psychopathological symptoms, impulsivity and aggression towards peers (Garaigordobil et al., 2008). In addition, self-concept enhancement is associated with many educational benefits, such as improved school engagement (Cava & Musitu, 2000) as well as improved academic achievement and persistence (Marsh & Craven, 2006). Therefore, enhancing self-concept is widely suggested as a goal of education (O'Mara et al., 2006).

Some authors (O'Mara et al., 2006) warn that many empirical researchers typically did not provide a theoretical definition of self-concept and adopted a one-dimensional perspective in which self-conceptions were seen to be relatively consistent and undifferentiated across social, academic, physical, and other domains (Byrne, 1984). Presently, most researchers use a multidimensional perspective of self-concept (Marsh & Craven, 2006). The multidimensional hierarchical model of self-concept, proposed by Shavelson et al. (1976), suggests that perceptions of personal behaviour in specific situations are located at the base of the hierarchy, inferences about self in broader domains (social, emotional and academic) are at the middle of the hierarchy, while a global, general self-concept or self-esteem is found at the apex. Even so, there is some discussion regarding whether the construct of general self-concept exists and if it can be equated with self-esteem. Marsh and Hattie (1996) argue that both the theoreti-

cal conception and the instruments based on it emphasize an overarching, general, or global construct that implicitly incorporates several specific components. According to Cava and Musitu (2000), this construct depends upon the secondary components, which would be determined by other components of a lower level representing more specific competencies.

In the school context, *academic self-concept* is a central component of educational success, constituting a direct and indirect predictor of academic performance (Miñano & Castejón, 2011), and with particularly strong influence on school adjustment (Guay et al., 2003; Rodríguez-Fernández et al., 2012) supported that achievement has an effect on self-concept and that *academic self-concept* has an effect on achievement. However, other studies demonstrated that the enhancement of not only the *academic self-concept*, but also the social dimension of self-concept contributed to better school engagement (Cava & Musitu, 2000), among students who were rejected by their peers.

In the last two decades there has been an increase in the number of empirical studies of gender differences among the several dimensions of self-concept (Amezcua & Pichardo, 2000). However, Haney and Durlak (1998) reported that this increased attention did not obtain the same development in the production of studies regarding the differential effects of the programs created for the enhancement of self-concept. These authors argue that too few intervention studies reported outcomes separately by gender, which does not allow proper analysis regarding if programs affected differently boys and girls.

Even though there are studies that have not found any significant differences by genders in any dimension of self-concept (Musitu, García, & Gutiérrez, 1997), most of them conclude that there are gender differences in several dimensions of self-concept (Amezcua & Pichardo, 2000; Rodrigues et al., 2013).

There are studies that analyse the differences in self-concept by gender in several settings and populations using the same instrument as the present study, some of them present different outcomes. Musitu et al. (1997), in the validation studies for the Auto-Concepto Forma-A did not find any significant differences by gender in any of the dimensions analysed. However, Musitu, García and Gutiérrez (2001), in the Portuguese adaptation, found that girls showed higher levels of *academic* and *family self-concept*, whereas boys displayed higher levels of emotional self-concept. Also, Amezcua and Pichardo (2000), applying the same instrument to a population similar in age to our study, reported similar results with girls displaying higher levels of *family self-concept*

and boys displaying higher levels of *emotional self-concept*.

Further support for the need to consider gender differences in self-concept can be found in Fuentes et al. (2011a). These authors report that although a positive relationship between *social self-concept* and drug use was found, this significant relationship disappeared once the age and sex of adolescents was controlled statistically.

Another issue that needs to be addressed is how the initial levels of self-concept influence the results of self-concept enhancement intervention as Haney and Durlak (1998) warn that participants do not benefit equally from intervention, although all reflect some improvements. Interventions targeting disadvantaged participants (i.e., those diagnosed with pre-existing problems such as low self-esteem, behavioural problems and learning disabilities) were more effective than preventive interventions. O'Mara and colleagues (2006) also identify this pattern and attribute this to the potential for increasing self-concept being larger in the "at-risk" group unlike groups without pre-existing problem who do not benefit as much from self-concept enhancement interventions. These authors also claim that, given the reciprocal relation between self-concept and academic achievement, it would seem useful to ensure that "at risk" groups experience simultaneously self-concept enhancement and social and emotional competences development in order to close the gap.

In theory, universal Social and Emotional Learning Programs should promote the social and emotional competencies of all the children in a class. However, two large studies carried out by the Conduct Problems Prevention Research Group (2010, 2011) evaluating the Fast Track PATHS (Promoting Alternative Thinking Strategies) curriculum reported that effects were larger in students who showed higher baseline levels of aggression (CPPRG, 2010) and that intervention prevented the lifetime prevalence of all internalizing and externalizing disorders, but only among the group of students who showed higher initial risk (CPPRG, 2011). So a more careful evaluation of how these programs promote competencies in students is needed as they sometimes have different effects depending on the initial levels of competence.

Therefore, the main purpose of this research was to examine the effectiveness of a socio-emotional learning (SEL) program on the *academic, social* and *emotional self-concept* of middle school students, since most studies regarding the results of SEL programs are efficacy studies and, as such, do not report results obtained under the normal day-to-day circumstances of implementation (CPPRG, 2010). The lack of effectiveness studies is particularly noticeable among middle school students because most of

such studies reported were carried with elementary students (Durlak et al., 2011). In fact, in Portugal there are no effectiveness studies of SEL programs among middle school students. In this context, an important issue analysed in this study is the effects of the program among students with lower levels of self-concept, who are most in need of intervention, as part of an intervention that encompasses the whole class. Another goal for the study is to attempt to clarify if the program would have different results by gender given the contradictory results found in the literature.

Given these goals, this study proposes the following hypotheses: (a) students of the intervention groups, in comparison with students of the control groups, will improve their *academic, social* and *emotional self-concept* (Hypothesis one); (b) this improvement is constant in both cohorts of program implementation (Hypothesis two); (c) Students with lower levels of self-concept will profit more from the intervention (Hypothesis three). A research question is also formulated: Are benefits from the intervention different by gender?

Method

Participants

Six hundred and thirty middle school students (7th to 9th grade), of which 319 were girls and 311 boys, aged from 11 to 17 years (M_{age} = 13.54; SD = 1.36), from six Portuguese public middle schools belonging to the municipality of Torres Vedras participated in this study: 474 in the intervention groups (25 classes; 228 boys and 246 girls) and 156 in the control groups (8 classes; 83 boys and 73 girls). In Portugal, 9th grade is the last year of middle school. The total number of pupils per class ranged between 16 and 25 (M = 19.03). The attrition rate was low, with only 11 students (six from the intervention group, of which five boys, and five from the control group, of which two were boys) who filled the pre-test questionnaires leaving school before the end of the program. Schools were extremely homogeneous in terms of ethnicity (1.3% of students were Brazilian and 0.9% were Eastern European). Intervention and control groups are homogeneous in terms of gender [χ^2 (1) = 1.32; $p > .05$] and age [$t(628) = -2.19$; $p > .01$].

Instruments

Variables were analysed through self-report questionnaires, before and after program implementation. Merrell (2001) considers that self-report instruments have been found increasingly useful for evaluating self-concept, since this is a construct that depends totally on the perspective of the subject.

Self-concept. The evaluation of self-concept was carried using Auto-Conceito Forma – A (AFA; Musitu et al., 1997; Musitu et al., 2001). This instrument composed by 36 items, evaluates *total self-concept* (Cronbach's α = .82 for the original instrument; .73 in our sample; Pearson's correlation is .66 for re-test after three months), and four of its dimensions: *Academic* (11 items; e.g. "I am slow finishing school assignments"); *Social* (5 items; e.g. "I make friends easily"); *Emotional* (9 items; e.g. "I worry a lot about everything") and *Family* (6 items; e.g. "My family is disappointed with me"). In our sample internal consistency was adequate for all dimensions with Cronbach's α varying between .66 for *family self-concept* to .76 for *emotional self-concept*. The items are presented as statements to be rated in a three point scale (1 - always; 2 - sometimes; 3 - never). The score for each dimension is given by the sum of their item punctuation. Total self-concept is calculated by adding the scores for the four dimensions.

Procedure

Research design

The research reported here reflects a quasi-experimental design as schools did not accept random sampling, thus not all school and class effects could be controlled for. Although in the second year of implementation they accepted the establishment of a bigger number of control groups. Both control and intervention classes where drawn among those which presented higher school disengagement and less appreciation for school. These groups were chosen by matching as much as possible, classes with same characteristics (rural or urban, class size, gender distribution, and grades).

The research design used was a 2 (intervention vs. control) X 2 (pre vs. post intervention), with data being collected as part of a larger longitudinal study using a cohort-sequential design. Test and re-test for both groups were carried out under the same conditions.

Implementation procedure

Project Positive Attitude was conceived as part of the municipal health promotion and risk behaviour prevention plan, in partnership with three school groupings. After one year of implementation, Project Positive Attitude was asked by the municipality and other school groupings to expand the application of the project to the remaining three school groupings, at this time further programs were created to support elementary school students. These were also based upon the framework proposed by the Collaborative for Academic, Social and Emotional Learning (CASEL, 2005) for social and emotional learning. In

the second year of implementation (2006), all six public school groupings elected to have the middle school SEL program and none were committed to other SEL programs.

As suggested by CASEL (2005) meetings with school grouping directors and teachers were held to better understand the behavioural and social characteristics of each school. In order to ascertain the developmental and cultural suitability, and to create a preliminary prototype program and respective training manual, several activities and program contents were developed and tried during the first year of implementation (2005).

Presently, the "Positive Attitude" program for middle school is a universal program composed by 13 weekly 60 minutes sessions, delivered by a trained psychologist (in the presence of the class teacher) following the program manual which contains a detailed plan for each session. As such, it is classroom-based including all students in each class, infused into the school curriculum and integrated into a multiannual project (Project Positive Attitude). The main theoretical basis, methodologies and activities used in the construction and development of the program are described in detail in Coelho and Figueira (2011).

Experimental procedure

The program was applied as part of the curriculum of a school subject named *Civic Formation*, no SEL contents were developed in the control groups.

The psychologists who implemented the program were present in the meetings in beginning of school year (mandatory for parents), to explain the program and to answer questions. Just one school utilized active informed consent (and only for 7th graders), the other five used passive informed consent, because the program was already part of the school curriculum, following national legislation.

Self-reports were gathered at baseline, post-test and at six month after the program ended, while demographic data was recorded at pre-test. The questionnaires were administered in the second (after a first session for presentation) and last sessions of the program. Questionnaire instructions were read out loud to the students. When necessary, class directors (teachers who coordinate the group of teachers for each specific class) would read the questions individually for students whose reading skills might impair their understanding of the items. If a student was not present in the class during evaluation the questionnaires were administered in another class within a week.

Results

Preliminary analysis

Given the large size of the sample, significance levels were set at .01 for all the tests. Dropout was very low, and thus the attrition was not susceptible of distorting treatment effects.

T tests were used, for comparisons regarding initial levels of social and emotional skills between the intervention and control groups. There were significant differences in the dimensions of *social self-concept* [$t(628) = 2.86$; $p < .01$; $d = 0.28$]; *emotional self-concept* [$t(628) = 3.55$; $p < .001$; $d = 0.32$]; total self-concept [$t(628) = 3.60$; $p < .001$; $d = 0.33$]. No differences were found in the dimensions of *academic* [$t(628) = 0.73$; $p > .01$] and *family self-concept* [$t(628) = 1.40$; $p > .01$]. As Cohen (1988) suggests that *d* scores of .20, .50 and .80 should be interpreted as small, medium and large effects, all effects sizes found can be considered small.

Two-way mixed repeated measures analyses of variance (ANOVA) were employed to explore pre-post intervention increases according to the group conditions. First, intervention effects are reported, followed by findings regarding the consistency of the results during the first two years of implementation. Finally, the analysis about differences according to gender and initial levels of skills are presented. The measure of effect size (ES) used was derived from ANOVA as partial eta-squared (η_p^2). Cohen (1988) suggests that eta-squared values of .01, .06, and .14 should be interpreted as small, medium and large effects, respectively.

Program effects on self-concept

Repeated measures ANOVA with 'time' (pre-test vs. post-test) as a within-subjects factor and 'group' (intervention vs. control) as a between-subjects factor were conducted. Differences in increases in all the variables studied were analysed separately and are summarized in Table 1, along with the descriptive data. Results showed a significant interaction effect, with a significant advantage for the intervention group in *social self-concept* and *emotional self-concept*. There was also a significant interaction in total self-concept. The effect sizes found were small for *emotional self-concept* and *total self-concept*, and medium for *social self-concept*. *Academic self-concept* showed a main effect of time, meaning that both groups decreased their *academic self-concept* from pre-test to post-test. There were no other significant main effects of group or time found.

Table 1

*Pre and Post-Test Means and Standard Deviations for Control and Intervention Group, F Values and Effect Sizes for Interaction Group*Time*

	Control Group (N = 151)		Intervention Group (N = 468)		F	p	η_p^2
	Pre-test M (SD)	Post-test M (SD)	Pre-test M (SD)	Post-test M (SD)			
Academic self-concept	19.26 (2.54)	18.97 (2.44)	19.07 (2.51)	18.86 (2.34)	0.18	.676	.000
Social self-concept	18.62 (2.16)	17.91 (2.21)	18.05 (2.34)	18.50 (2.09)	36.19	<.001	.055
Emotional self-concept	18.81 (2.47)	18.56 (2.18)	18.03 (2.46)	18.31 (2.34)	7.17	.008	.011
Familiar self-concept	17.22 (2.36)	17.03 (2.25)	16.88 (2.24)	16.95 (2.05)	2.47	.116	.004
Total self-concept	73.95 (5.96)	72.48 (6.11)	72.07 (5.56)	72.66 (5.62)	28.15	<.001	.044

Consistency of the effects of the program on self-concept along 2 years of implementation

In order to analyse whether there were differences in post-test mean ratings, a mixed 2 × 2 × 2 ANOVA was conducted with 'time' (pre-test vs. post-test) as a within-subjects factor and 'group' (intervention vs. control) and 'Year of Implementation' (1 vs. 2) as between-subjects factors. Results are displayed in Table 2.

There were no significant three-way interactions between time, group and year of implementation. However, there was a main effect of year of implementation, in *family self-concept* [$F(1, 615) = 23.39$; $p < .001$; $\eta_p^2 = .037$]. This means that the pattern of results was distinct between Year 0 and Year 1, with intervention and control groups following different trajectories during the two years of implementation. Namely the control group showed a non-significant increase in Year 0 and a non-significant decrease in Year 1, while the intervention group showed a non-significant decrease in Year 0 and a non-significant increase in Year 1.

Table 2

Pre and Post-test Means and Standard Deviations for Control and Intervention Group, by Year of Implementation of the Program

	Year 0 (N = 182)				Year 1 (N = 437)			
	Control Group (n = 61)		Intervention Group (n = 121)		Control Group (n = 90)		Intervention Group (n = 347)	
	Pre-test *M* (*SD*)	Post-test *M* (*SD*)	Pre-test *M* (*SD*)	Post-test *M* (*SD*)	Pre-test *M* (*SD*)	Post-test *M* (*SD*)	Pre-test *M* (*SD*)	Post-test *M* (*SD*)
Academic self-concept	19.54 (2.45)	19.31 (2.19)	19.09 (2.16)	18.60 (1.90)	19.07 (2.60)	18.73 (2.58)	19.06 (2.63)	18.95 (2.47)
Social self-concept	18.67 (2.32)	18.16 (1.92)	18.50 (2.11)	18.84 (1.88)	18.59 (2.06)	17.73 (2.38)	17.89 (2.40)	18.38 (2.16)
Emotional self-concept	18.64 (2.58)	18.18 (1.85)	17.70 (2.66)	18.42 (2.04)	18.92 (2.40)	18.81 (2.35)	18.14 (2.37)	18.27 (2.44)
Familiar self-concept	17.80 (2.44)	17.90 (2.00)	17.44 (2.13)	17.35 (1.84)	16.82 (2.24)	16.43 (2.22)	16.69 (2.24)	16.81 (2.10)
Total self-concept	74.66 (6.35)	73.56 (6.04)	72.71 (5.53)	73.28 (5.04)	73.47 (5.67)	71.74 (6.09)	71.85 (5.57)	72.44 (5.80)

Analysis of the results of the program upon self-concept by gender

To analyse if the program had a similar pattern of results upon the Self-concept of students from both genders, three-way mixed 2 × 2 × 2 ANOVAs were conducted to analyse each variable with 'time' (pre-test vs. post-test) as a within-subjects factor and 'group' (intervention vs. control) and 'gender' (boys vs. girls) as between-subjects factors. The descriptive data is displayed in Table 3.

There was a significant two-way interaction between time and group in three dimensions: *social self-concept* [$F(1, 615) = 35.32$; $p < .001$; $\eta_p^2 = .054$], *emotional self-concept* [$F(1, 615) = 7.18$; $p < .01$; $\eta_p^2 = .012$], *total self-concept* [$F(1, 615) = 27.13$; $p < .001$; $\eta_p^2 = .042$]. The results also showed a main effect of gender upon two dimensions of self-concept, namely: *emotional self-concept* [$F(1, 615) = 21.86$; $p < .001$; $\eta_p^2 = .034$], *family self-concept* [$F(1, 615) = 11.92$; $p = .001$; $\eta_p^2 = .019$].

Table 3

Pre and Post-Test Means and Standards Deviations for Control and Intervention Group, by Gender

	Control Group (N = 151)				Intervention Group (N = 468)			
	Boys (n = 70)		Girls (n = 81)		Boys (n = 223)		Girls (n = 245)	
	Pre-test *M* (*SD*)	Post-test *M* (*SD*)	Pre-test *M* (*SD*)	Post-test *M* (*SD*)	Pre-test *M* (*SD*)	Post-test *M* (*SD*)	Pre-test *M* (*SD*)	Post-test *M* (*SD*)
Academic self-concept	19.30 (2.73)	18.74 (2.61)	19.21 (2.33)	19.23 (2.21)	18.91 (2.53)	18.70 (2.54)	19.22 (2.49)	19.00 (2.14)
Social self-concept	18.56 (2.10)	17.77 (2.23)	18.70 (2.24)	18.07 (2.18)	18.16 (2.08)	18.49 (1.99)	17.95 (2.55)	18.51 (2.19)
Emotional self-concept	19.15 (1.87)	18.89 (1.98)	18.41 (2.29)	18.17 (1.85)	18.57 (2.40)	18.91 (2.35)	17.54 (2.41)	17.76 (2.31)
Familiar self-concept	17.09 (2.51)	16.80 (2.40)	17.37 (2.19)	17.29 (2.04)	16.41 (2.26)	16.50 (2.08)	17.31 (2.13)	17.36 (1.94)
Total self-concept	74.09 (6.43)	72.22 (6.49)	73.79 (5.41)	72.77 (5.68)	72.07 (5.37)	72.62 (5.60)	72.07 (5.75)	72.69 (5.65)

These results show that there are differences in these two dimensions by gender. To better clarify the results, separate two-way mixed 2 × 2 ANOVAs (between-subjects 'group', within-subjects 'time') were conducted for both genders in *emotional self-concept* where both a main effect of gender and a significant interaction effect between 'group' and 'time' was found.

In the pre-test scores there were differences between both genders and both groups, with boys of the control groups showing significantly higher levels of *emotional self-concept* than girls of the control groups and boys of the intervention groups, while girls from the intervention groups showed significantly lower levels of *emotional self-concept* than both the girls of the control groups and boys of the intervention groups. In the intervention groups only boys showed increased levels of *emotional self-concept* [$F(1, 302) = 3.80$; $p = .05$; $\eta_p^2 = .012$].

Analysis of the results of the program upon students with lower levels of self-concept

Another purpose of this study was to analyse whether there were differences in intervention increases according to the mean ratings obtained in the pre-test. For such effect, the intervention group was divided into 3 different groups: (a) low, which included students who were in lowest quartile of the sample for that dimension of self-concept; (b) middle, which included students in the 2nd and 3rd quartile for that dimension of self-concept; and (c) high, which included the students who ranked in the highest quartile for that dimension of self-concept.

Following this procedure, it was conducted a mixed 2 × 2 ANOVA on the "low" group of

Table 4

*Pre and Post Means and Standard Deviation for the 'Low' Competence Control and Intervention Group, F Values and Effect Sizes for Interaction Group*Time*

	Control Group		Intervention Group		*F*	*p*	η_p^2
	Pre-test *M* (*SD*)	Post-test *M* (*SD*)	Pre-test *M* (*SD*)	Post-test *M* (*SD*)			
	n = 37		*n* = 116				
Academic self-concept	16.30 (0.78)	16.54 (1.41)	16.14 (1.07)	17.13 (1.83)	4.96	.027	.032
	n = 43		*n* = 106				
Social self-concept	15.79 (1.28)	15.95 (1.59)	14.58 (1.66)	17.01 (2.34)	28.76	.000	.164
	n = 43		*n* = 115				
Emotional self-concept	15.81 (1.20)	16.86 (1.91)	14.81 (1.37)	16.22 (2.08)	.92	.338	.060
	n = 33		*n* = 114				
Family self-concept	13.70 (1.08)	14.58 (1.77)	13.82 (1.36)	15.09 (1.88)	1.06	.305	.007
	n = 32		*n* = 123				
Total self-concept	65.84 (2.59)	66.47 (3.99)	65.05 (2.90)	67.54 (4.37)	5.00	.027	.032

with 'time' (pre-test vs. post-test) as a within-subjects factor and 'group' (intervention vs. control) as between-subjects factors. Descriptive statistics and interaction effects are summarized in Table 4.

As seen in Table 4, the students with lowest levels of self-concept in the intervention groups benefited more from the intervention than students in the control groups in *social and academic self-concept*. This increase in both dimensions of self-concept was enough to also provoke a significant increase in total self-concept. When compared with the total sample, there were significant increases in *academic self-concept* among students in the 'low' group not shown in the total sample and, additionally, there was a bigger effect size in *social self-concept*, which was a large effect in the 'low' group ($\eta_p^2 = .164$) and a medium effect in the total sample ($\eta_p^2 = .055$).

Discussion

This study analysed the impact of a Social and Emotional Learning Program on the self-concept of middle school students, namely on the dimensions of *social*, *emotional* and *academic self-concept*. Equally important was to clarify the question raised in literature regarding differential results by gender and if these type of programs have more potent results among students with lower competences levels (CPPRG, 2010; O'Mara et al., 2006) in the specific case of self-concept.

The results allow concluding that the first hypothesis is partially confirmed. Implementing the SEL program "Positive Attitude" improved *social* and *emotional self-concept* in middle-school students, but not *academic self-concept*.

It can be concluded that the students, who participated in the program, when compared with the students in the control groups, showed similar increases in both years of implementation, so the second hypothesis is confirmed as the positive results of program (increases in the intervention group over the control group) in the social and emotional dimensions of self-concept were stable during the 2 years of implementation analysed. Moreover, as the intervention was stably effective during the both years in increasing *social* and *emotional self-concept*, this increase was also translated to an increase in total self-concept. The effects sizes found show that the effect upon *social self-concept* was medium, while the impact upon *emotional self-concept* and *total self-concept* were small.

As for *academic self-concept* results showed that both groups decreased their levels of this variables albeit not significantly. The results from the present study are consistent with the assumptions made by Guay et al. (2003) that there is an ongoing analysis school

achievement during the school year that frequently leads to a decrease of *academic self-concept* throughout the school year. There were no significant results concerning *family self-concept*. It is important to note that the Program promoted an increase in *total self-concept* even when there were decreases in *academic self-concept* in both groups, which means that effect of the intervention was enough to affect *total self-concept*.

To analyse the impact of the program according to gender there is need to take into account the initial levels of self-concept, in which boys showed higher levels of *emotional self-concept* and girls yielded higher levels of *family self-concept*. These results are in agreement with other studies using the same instrument (Amezcua & Pichardo, 2000; Musitu et al., 2001), except that in the present study there were no differences found in *academic self-concept*. Even with higher levels of *emotional self-concept* only boys showed increases in this dimension from participation in the program, meaning that there is a need to adjust the program to better promote *emotional self-concept* among girls. Therefore, participation in the program increased the levels of *social self-concept* for both genders, *emotional self-concept* for boys, and also contributed to positively impact the levels of *total self-concept*, which showed a significant increase for both genders.

The results of the intervention among students in the lowest quartile of self-concept had higher effect sizes than those of the total sample, which mean that these students profited more from the intervention in *academic self-concept* and *social self-concept* when compared to the total sample. In *academic self-concept* there were significant increases for students in the intervention group in the lowest quartile, even though there no significant increases for the intervention groups over control groups as a whole for the total sample, while for *social self-concept* the effect size of the intervention was large when for the total sample it was medium. As such the results from this study support the conclusions of Haney and Durlak (1998) that not all participants in interventions for self-concept enhancement benefit equally from these interventions, and that the longer the distance children have to travel in self-concept and socio-emotional adjustment, the longer the distance they tend to cover. Students higher levels of self-concept did not benefit much directly from the program, however, although they may have also benefited from the program indirectly, as they are now dealing with classmates who have improved their levels of self-concept.

The self-concept enhancement was concentrated in the dimensions where these increases were expected to happen as there are no

activities in the program directly directed to the promotion of *family self-concept*. These differential results support the importance of addressing the multidimensionality of self-concept (Marsh & Hattie, 1996; O'Mara et al., 2006) and that this multidimensionality must be taken into account when creating programs for enhancing self-concept (Cava & Musitu, 2000; Coelho & Figueira, 2011).

The results also confirm the proposition made by Haney and Durlak (1998) that even programs not directly targeted at enhancing self-concept can effectively enhance it. As such, this study helps understanding the impact of a SEL program on the enhancement of several dimensions of self-concept and how personal characteristics such as gender and initial levels of self-concept influence program results.

Limitations of the study

This study lacked a measure of the physical dimension of self-concept. Even though the program is not supposed to impact *physical self-concept*, this would allow further analyse if the program is targeting specific dimensions of self-concept or if it is achieving a general result that then affects specific dimensions of self-concept.

Also, the validity of the results would be improved by using a scale with a wider answer format. In this sense, it would be important to use an presently available actualized version of the questionnaire, that is widely used due to its good reliability, validity and cross-cultural invariance tested in several empirical studies carried out in Portugal (García, Musitu, & Veiga, 2006), Spain (Fuentes et al., 2011a, 2011b), Chile (García, Musitu, Riquelme, & Riquelme, 2011) and the USA (García, Gracia, & Zeleznova, 2013).

Future directions

Future studies should focus on the time prevalence of the positive results identified in this study, especially among the students who show lower levels of self-concept. This would make it possible to analyse if there are cumulative results of the program when it is applied over several grades, as defended by Greenberg et al. (2003), in their suggestion that these programs should be longitudinal.

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Received date: 14-01-2014 Review date: 18-03-2014 Accepted date: 28-05-2014