

Improving social-emotional competencies in the secondary education classroom through the SEA program

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Abstract

Introduction. This paper presents an assessment of the impact of a social and emotional competencies development program, based on the SEA theoretical model (attention to and understanding emotions, emotional regulation and repair, and adaptive social expression of emotions), in adolescents and preadolescents.

Method. Students' homeroom teachers implemented the program in a public secondary school over one school year. The participants of this study were 156 young people from ages 11 to 14 years old, all of them students in the first year of the Spanish secondary education system. A quasi-experimental design, with pre/post-test measurements and a control group, was used to evaluate program effectiveness. The tests used for this assessment measured variables of participants' social-emotional competencies, empathy and social adjustment. In addition, a follow-up assessment was carried out 3 months after the end of program implementation.

Results. The study demonstrates a significant improvement in the social-emotional competencies of program participants, especially in the competencies most related to adaptive social expression of emotions. There were also significant improvements in empathy and social adjustment.

Discussion and conclusions. The possibility of enhancing social-emotional competencies through the application of a direct classroom intervention program during one school year was confirmed, and the SEA program becomes a candidate to achieve this goal.

Key words: Social and emotional learning, empathy, social adjustment, program assessment, adolescents.

Resumen

Introducción. En este trabajo se presenta la evaluación del impacto de un programa de desarrollo de las competencias emocionales en la base del modelo teórico SEA (atención y comprensión emocional, regulación y reparación emocional y expresión social adaptativa de las emociones) sobre tales competencias en jóvenes adolescentes y pre-adolescentes.

Método. El programa se implementó en un IES público durante un curso escolar por parte de los propios profesores-tutores de los alumnos. Los participantes de este estudio son 156 alumnos de 11 a 14 años estudiantes de 1º de E.S.O. en sus diferentes condiciones experimentales y control. Se ha utilizado un diseño cuasiexperimental pretest-postest con grupo control para evaluar la eficacia del programa. Las pruebas usadas para ello miden las competencias socioemocionales, la empatía y el ajuste social de los participantes. Además, se hace una medida de seguimiento 3 meses después de la finalización de la implementación del programa.

Resultados. La investigación demuestra una mejora significativa en las competencias socioemocionales de los participantes del programa, especialmente en las competencias más relacionadas con la expresión social adaptativa de las emociones. Además, se descubren mejoras también significativas en empatía y ajuste social.

Discusión y conclusión. Se corrobora la posibilidad de potenciar las competencias socioemocionales mediante la aplicación de un programa de intervención directa en el aula durante un curso escolar y el programa SEA se convierte en candidato para alcanzar este objetivo.

Palabras clave: Educación socioemocional, empatía, ajuste social, evaluación de programas, adolescentes.

Introduction

For many educators and experts in personal development, development of social-emotional competencies has become a key objective. The needs of present-day society justify efforts to build this group of skills (Bisquerra, 2003); they are not merely a useful tool, but a basic requirement to ensure students' adequate social adjustment in school (Rodríguez-Ledo & Ruíz-Aranda, 2017). Fortunately, there is an increasing number of educators that believe this and are actively working to develop their students' emotional intelligence (EI) or social-emotional intelligence (SEI) (CASEL, 2015). This increase in educational actions, research, publications and conferences related to this topic area enlightens our understanding of this field, both in theory and in practical program application.

Social-emotional intelligence, social adjustment and gains associated with their enhancement

In order to work in enhancing the development of SEI, it is important to operationalize the terms used. If we understand emotion as an internal event that energizes our behavior to either approach or avoid a context--depending on the positive or negative hedonic tone of the emotions (Ekman & Davidson, 1994)--and intelligence as the ability to adapt to the environment, then social-emotional intelligence would be defined as persons' ability to perceive, understand, regulate and express such emotional events in an adaptive manner. The construct of SEI, therefore, explains how emotions are more or less adeptly perceived, regulated and expressed.

This construct has been related to many variables, but one of these is especially crucial for educational contexts, where SEI has strong explanatory power: social adjustment at school and its outcome of personal well-being. Beginning with this outcome, the influence of SEI in persons' psychological well-being is well-known (Zeidner & Matthews, 2016). Specifically, it has been argued that students who score higher on SEI measures would be able to cope better with the stressors and daily demands of school and would therefore report greater perceived well-being than others with lesser social-emotional development (Bar-On, 2006; Akerjordet & Severinsson, 2007). The literature reveals that adolescents with better social-emotional skills show better emotional adjustment, fewer internalized problems, less anxiety and depression, as well as better coping strategies (Gomez-Baya, Mendoza, Paíno & Gaspar de Matos, 2017; Resurrección, Salguero & Ruiz-Aranda, 2014). Martín, Harillo and Mora (2008) also

found results that suggest a direct relationship between perceived EI and indicators of well-being, such as life satisfaction and happiness; they also found an inverse relationship between perceived EI and depression or state anxiety.

In addition to personal well-being, several studies have related SEI to a young person's adjustment to his/her immediate social context (Fernández-Berrocal & Ruiz-Aranda, 2008). Ciarrochi, Chan and Bajgar (2001) indicate that adolescents with high SEI are more able to establish and maintain interpersonal relations, and more satisfactory ones; Lopes, Salovey and Straus (2003) indicate that young people who manage their emotions better present social interactions that are greater in number and more positive in nature. On the other hand, Schutte, Malouff, Bobik et al. (2001) observed how students with low levels of SEI usually present greater levels of impulsivity and poorer interpersonal skills, all of which tend toward development of different antisocial behaviors resulting in poorer social adjustment. It is logical to think that a person with good SEI competencies would be able to recognize the emotions of others with some accuracy, and would probably know how to act accordingly, offering adequate emotional information (emotional expression), adapted to the social context of the moment. Recognition of others' emotions, in particular, has been studied with great interest in terms of empathy. This personal competency is known to include both emotional responses and vicarious experiences, in other words, the ability to differentiate between the affective states of others and to take both a cognitive and affective perspective with regard to others (Feshbach, 1978). The strong relationship between empathy and SEI has led to some SEI models including empathy as one more dimension (Goleman, 1998), while other models analyze it as a specific social-emotional component included in another general dimension (Mayer et al., 2000; Bar-On, 2006) or as a specific trait (Petrides & Furnham, 2000). In any case, empathy has been consistently related not only to SEI, but also to aspects of social adjustment such as stimulation of friendship; empathy has been shown to help in maintaining friendships, in improving the quality of family relationships, and in promoting mental health, prosocial behavior, collaboration and altruism (Sanz de Acebo et al., 2003).

If SEI is associated with key aspects of personal development like empathic skill, in addition to other aspects related to social adjustment, and so determines in part the student's well-being at school, it would be logical to think that there are interventions that achieve such gains when working with students on SEI, that is, interventions that enhance their social-emotional learning (SEL). Indeed, several SEL programs and interventions have appeared that

seek to develop social-emotional competencies in target groups, based on different models of SEI. These different programs and interventions are quite different both in form and content, even so there have been very positive results in many cases. In one interesting meta-analysis of 213 SEL programs for students between the ages 5 of 18, within their school framework, Durlak, Weissberg, Dymnicki, Taylor and Schellinger (2011) discovered significant improvements in the general level of SEI as well as in more adaptive attitudes, positive social behavior, reduction in behavior problems, less emotional anxiety and greater academic achievement. Greenberg et al. (2003) also carried out a meta-analysis and discovered that these types of programs serve not only as interventions for improvement, but also as protective factors that reduce behavior problems, and as foundations for healthy development. This protective effect of SEL programs is seen when interventions that seek to enhance SEI are related to reduced impact from problems that typically appear in adolescence: behavior issues, relationship issues, substance use, antisocial behaviors and even loss of self-esteem (Mariscal, Giménez-Dasí, Carriedo & Corral, 2009; Pasch et al., 2008). In this regard, training in SEI has been noted for its ability to prevent the appearance of violent behaviors, impulsivity, emotional maladjustment (Extremera & Fernández-Berrocal, 2003), and even future mental health problems (Humphrey et al., 2007).

Students' psychosocial adjustment and mental health have also been related to social-emotional development through classroom intervention programs. Durlak and Wells (1997) analyzed 177 primary prevention programs to prevent behavioral and social problems in youth under age 18, and found improvement in competencies like assertiveness, communication skills and self-confidence, as well as fewer internalizing problems (anxiety, depression, somatization, etc.) and fewer externalizing problems (hyperactivity, aggression, behavior problems, etc.). In the same regard, Wilson and Lipsey (2007) report improvement in internalizing problems after working on these competencies in young people. Specifically, their meta-analysis of 249 SEL programs from all levels of education reported that program outcomes take the form of effects on variables of social behavior--such as aggression, antisocial behavior and social skills--in addition to better psychosocial adjustment to the school. A newer meta-analysis, from Durlak, Weissberg, and Pachan (2010), discovered how SEL programs significantly improved behavioral adjustment indicators, such as fewer behavior problems, an increase in positive social behaviors, and less drug use.

Good practices in enhancing SEI

In order to design and implement an effective SEI enhancement program, there must be first a prior phase for obtaining commitment from all the participants, and for creating a joint action plan (Brackett et al., 2009). Following this, program administrators are trained in the theoretical model that the program is based on, and in specific techniques that form the basis of its implementation. Whether selected or designed, the program should fulfill what Durlak et al. (2011) refer to as SAFE (*sequenced, active, focused and explicit*). A sequenced program applies a planned set of activities for developing skills sequentially, such that certain skills are constructed as the foundation for the following skills. The program must also be active, using active forms of learning, like practicing behaviors or role plays, with feedback; the activities should be eminently practical, where the students are the main players. On the other hand, the program must be focused: organized around activities that are developing certain specific objectives, with sufficient time dedicated to their development. Likewise, the program as a whole must dedicate sufficient time to the development of the target social-emotional competencies, for example, over one or two academic years. Finally, it must be explicit, directed toward the development of specific social and emotional skills; SEI is enhanced based on a clear theoretical model, and students are aware at all times of the social-emotional competency they are working on. Programs that meet the SAFE criteria consistently report better outcomes than programs that do not (Durlak et al., 2011). In other words, SEI improvement programs that follow a specific application order, using active, constructive learning strategies, are focused on a clear, limited number of competencies, and that encourage the conscious, explicit effort of students, are the programs that may potentially lead to interesting, significant outcomes in comparison to programs that do not satisfy these requirements.

The final phase is program assessment, an essential element of an effective intervention, and one that seeks to improve program quality in future interventions. To the extent possible, the assessment should make use of tests that have been corroborated and validated in other studies.

SEA Program

Based on a study of social-emotional needs and a literature review in this area, the SEA program was designed for developing social-emotional competence (Celma-Pastor & Rodríguez-Ledo, 2017). This model is based on skill models (Bisquerra, 2003) and mixed models (Bar-On, 2006); in a simple, practical way, it joins the three groups of social-

emotional competencies that form the basis of SEI. With this practical objective, the homeroom teacher is to be aware at each moment of which specific competency is being worked on, and so ensure the program's effectiveness and efficiency. Regarding the program itself, an initial pilot format with ten 55-minute work sessions was applied during homeroom at a public secondary school in the city of Zaragoza. Afterward, it was supplemented and improved through the selection of new sessions and activities until a final version was achieved, consisting of eighteen 55-minute work sessions. The SEA Program included the prior phase and the assessment phase mentioned above, and met the SAFE criteria. It was based on the SEA social-emotional intelligence model (Celma-Pastor & Rodríguez-Ledo, 2017), where SEI is understood as a person's ability to perceive and understand his/her own emotional states and those of others, as well as regulate them and express them in a socially adaptive way. The model defines SEI as being formed by three groups of skills which are to be improved in the classroom. The first group, attention and understanding emotions, is one's disposition to pay attention to, understand and accept one's own emotions and frame of mind, as well as others'. The second, emotional regulation and repair, is defined as the ability to internally regulate our emotions in the face of different situations. The ability to repair and maintain a specific emotional state, or eliminate another state that may be negative, is a key skill of this dimension. Finally, the third group is adaptive social expression of emotions, meaning the ability to adjust our social behavior according to our present context, to align ourselves accordingly and to make use of all our interpersonal or social skills.

Objectives and hypothesis

The general objective of the program, therefore, is to enhance participants' development of these social-emotional competencies and hence their SEI in general. Our working hypothesis in the present study, therefore, was that SEA Program application over one school year would improve SEI competencies--competencies that were still in their nascent stages in the program participants.

Method

Participants

The study sample was made up of 156 adolescents between the ages of 11 and 14 years, distributed among six seventh-grade classrooms in a school of secondary education; the

school was located in a working-class neighborhood of the city of Zaragoza. Four of these classes were randomly assigned to the experimental condition (108 participants) and the other two classes to the control group (48 students). Regarding Gender, 86 were boys (55.1%) and 70 were girls (44.9%). Of the 108 experimental participants, 58 (53.7%) were male and 50 (46.3%) were female, while in the 48 control participants, 23 (58.3%) were male and 20 (41.7%) were female. Gender distribution between the experimental and control condition was statistically equivalent ($X^2= 0.592$ and $p > 0.05$). Socioeconomic and cultural level was medium. Fathers, mothers and legal guardians of the participants were informed of the research characteristics, in writing and at a meeting; they all gave their explicit consent for the study to be carried out. Anonymity of all participants' answers and scores was guaranteed and respected.

Instruments

Social-emotional competencies: *Cuestionario de Desarrollo Emocional para Secundaria* [Emotional Development Questionnaire for Secondary Education], EDQ-SEC (Álvarez et al., 2001). This self-report questionnaire contains 35 items which are answered according to one's level of agreement or disagreement, where 0=totally disagree and 10=totally agree. The questionnaire assesses social-emotional dimensions that were proposed in studies by the GROPE Research Group, and its mixed model of social-emotional competencies (Bisquerra & Pérez, 2007): 1) Emotional awareness: The ability to be aware of one's own emotions, including the skill of apprehending the emotional climate in a given context; 2) Emotional regulation: The ability to use emotions adequately and to have good coping strategies, an ability to self-generate positive emotions; 3) Emotional autonomy: characteristics related to emotional self-management, such as self-esteem, a positive attitude toward life, responsibility, ability to critically analyze social norms, the ability to seek help and resources, as in personal self-efficacy; 4) Social competencies: ability to maintain good relations with other people and master basic social skills, effective communication, respect, prosocial attitudes, assertiveness, etc.; 5) Competencies for life and well-being: The ability to adopt appropriate, responsible behavior for solving personal, family, professional and social problems, oriented toward improved well-being in personal and social life. In addition, a total score in social-emotional competency is obtained as the product of the means of the other variables. Test reliability for each of the dimensions ranges from $\alpha = 0.79$ to $\alpha = 0.82$ (Pérez-Escoda, 2016).

Social-emotional competencies: *Emotional Quotient Inventory: Youth Version EQi-YV*, Spanish version (Ferrándiz, Hernández, Bermejo, Ferrando & Sáinz, 2012). The Spanish version of the EQi-YV is a self-report questionnaire designed to measure EI in children and adolescents from ages 7 to 18 years, based on the original EQ test (Bar-On, 2006) and adapted to Spanish samples. This Likert-type scale has 60 items that address the five large dimensions of the Bar-On mixed model (Bar-On, 2006), and studies the following emotional and social characteristics of subjects: 1) Intrapersonal competency: ability to understand one's own emotions and communicate them to others; 2) Interpersonal competency: ability to understand and appreciate the emotions of others; 3) Managing emotions: ability to direct and control one's own emotions; 4) Adaptability: flexibility and effectiveness in adapting to one's social environment and resolving conflicts; 5) General frame of mind: ability to have a positive attitude toward life. It is a broad-ranging inventory that provides information about emotional and social competencies and makes it possible to outline a social, affective profile of the subject. Validation in a Spanish sample obtained reliabilities between $\alpha = 0.63$ (intrapersonal competency) and $\alpha = 0.80$ (frame of mind) for the five dimensions (Ferrándiz et al., 2012). This test was only administered at the posttest, because it had not yet been validated in Spanish samples when the pretest measure was taken.

Social adjustment and social skills: *Batería de socialización* [Socialization Battery], BAS3 (Silva & Martorell, 2001). The socialization battery BAS3 consists of 75 items in this self-applied version. It assesses five dimensions and produces a social behavior and social adjustment profile of the subject, namely: 1) Consideration for others: detects social sensitivity or concern for others, in particular for those who have problems and are rejected or left out; 2) Self-control in social relations: a clearly bipolar dimension that represents, in the positive sense, compliance with rules and social norms that facilitate mutual respect, and in the negative sense, suppression of aggressive behaviors, imposition, stubbornness and indiscipline; 3) Social withdrawal: detects both active and passive withdrawal from others, to the extreme of clear isolation; 4) Social Anxiety/Shyness: detects different manifestations of anxiety as well as shyness responses in social relations; 5) Leadership: detects influence, popularity, initiative, self-confidence and a spirit of service. This highly reliable test presents mean internal consistency of $\alpha = 0.75$ and test-retest stability of $\alpha = 0.57$ measured with Cronbach's alpha (Silva & Martorell, 2001).

Empathy: Index of Empathy for Children and Adolescents (IECA), Spanish version (Bryant, 1982; Mestre, Pérez-Delgado, Frías & Samper, 1999). This scale consists of 22 yes/no response items according to the subject's agreement or disagreement in 22 situations where personal empathy is put to test. Based on the adult scale by Mehrabian and Epstein (1972), it was adapted for a child and adolescent population (age 11 and older) by Bryant (1982). The scale produces a general empathy index; internal consistency of the original scale is 0.67 (Bryant, 1982). In the case of the Spanish sample, the scale presents test-retest reliability between $\alpha = 0.75$ and $\alpha = 0.77$, depending on the sample used in the Spanish research where it was obtained (Mestre et al., 1999). In this research study, the Cronbach alpha was $\alpha = 0.77$.

Procedure

A quasi-experimental pre/post-test design, with a control group, was used to evaluate effectiveness of the intervention program. The homeroom teachers themselves were the program implementers in the 4 class groups that made up the experimental group. The instruments were administered by the homeroom teachers of each class group, in the experimental condition and the control condition. Implementation of the SEA Program (Celma Pastor & Rodríguez Ledo, 2017) took 9 months, and was preceded by training for the homeroom teachers who applied the experimental condition. This training covered the importance of enhancing SEI in the classroom, the theoretical model on which the program is based, and specific application techniques for the different sessions, based on their specific activities. Furthermore, weekly follow-up was carried out through formal and informal meetings with these teachers, in order to verify correct application of the program and to offer help and advice regarding the specific activities.

In order to assess program effectiveness (independent variable), three specific dependent variables were studied: improvement in social-emotional competencies, improvement in empathy and improvement in social adjustment and social skills. In addition to the pre-test measure and post-test measure at the end of the intervention, the first dependent variable was also studied 3 months afterward, for the purpose of observing whether these improvements were maintained over time.

Data analyses

Due to the normal distribution of errors and the linear relationship of the dependent and independent variables, the data on emotional competence (pre/post-test and follow-up), empathy and the social adjustment measure were submitted to a general linear analysis. For each measure, the ANCOVA univariate model was applied, where the dependent variable was the post-test measure, the covariable was the pre-test measure, and the fixed factor was the experimental condition. In the case of the follow-up measure of social-emotional competency, since we did not have a pre-intervention measurement of this variable, we took as covariable the total measure of emotional competency on the EDQ-SEC test, since it may be considered the best indicator of emotional competency in the pre-test measurement. The statistics used to measure the effect through ANCOVA were Pillai's trace (F) and η^2p , which measures effect size, where $\eta^2p < 0.06$ is small, $\eta^2p > 0.06$ and < 0.14 medium, and $\eta^2p > 0.14$ large.

Results

Descriptive results

Table 1 shows the descriptive statistics of each variable measured in this study in its pre-test and post-test measurement for each of the experimental conditions.

Table 1. *Descriptive statistics*

		Pre-test		Post-test	
		Mean	SD	Mean	SD
Experimental Group	<i>Social-emotional competencies (EDQ-SEC)</i>				
	Emotional awareness	7.95	1.188	7.87	1.381
	Regulating emotions	5.12	1.533	5.31	1.479
	Emotional autonomy	6.09	1.543	5.96	1.509
	Social competency	6.14	1.605	6.15	1.601
	Competencies for life and well-being	7.39	1.510	7.04	1.455
	Total emotional competency	6.46	1.078	6.39	1.034
	<i>Social-emotional competencies (EQi-YV)</i>				
	Intrapersonal	---	---	15.29	3.128
	Interpersonal	---	---	39.75	4.667
	Coping with stress	---	---	32.71	5.765
	Adaptability	---	---	29.31	4.935
	General frame of mind	---	---	46.86	5.747
	Total social-emotional intelligence	---	---	163.92	14.970
	<i>Empathy (IECA)</i>				
	General empathy	15.93	3.656	16.29	3.929
	<i>Social adjustment and social skills (BAS3)</i>				
	Consideration of others	11.89	2.489	11.95	2.404
	Social self-control	10.26	3.432	9.70	3.492
	Social withdrawal	1.51	2.053	1.38	1.984

	Social anxiety/ Shyness	3.77	2.826	3.92	2.882
	Leadership	5.84	2.260	6.83	2.523
	<i>Social-emotional competencies (EDQ-SEC)</i>				
	Emotional awareness	7.83	1.391	7.55	1.287
	Regulating emotions	5.13	1.402	5.07	1.453
	Emotional autonomy	6.12	1.577	5.84	1.621
	Social competency	5.99	1.459	6.25	1.499
	Competencies for life and well-being	7.29	1.414	6.80	1.609
	Total emotional competency:	6.40	0.907	6.23	1.063
	<i>Social-emotional competencies (EQi-YV)</i>				
Control Group	Intrapersonal	---	---	15.03	3.219
	Interpersonal	---	---	36.62	4.487
	Coping with stress	---	---	30.78	5.350
	Adaptability	---	---	26.19	4.742
	General frame of mind	---	---	45.97	5.881
	Total social-emotional intelligence.	---	---	154.59	16.597
	Empathy				
	General empathy	15.50	3.307	14.87	3.955
	<i>Social adjustment and social skills (BAS3)</i>				
		Consideration of others	11.62	2.385	10.85
	Social self-control	9.83	2.985	8.89	3.571
	Social withdrawal	1.10	1.372	1.89	2.672
	Social anxiety/ Shyness	3.17	2.853	3.38	3.254
	Leadership	6.08	2.305	6.32	2.433
Note: N for the experimental group = 108 and N for the control group = 48					

Improvement outcomes from the program

The results obtained after applying the ANCOVA univariate general linear model are shown in Table 2. Here one can observe the pre/post-test change, presumably induced by the program, as measured by Pillai's trace (F), always with 1 degree of freedom, and effect size (η^2p) and statistical significance (p).

Table 2. General results from the general linear model

	F	η^2p	p
<i>Social-emotional competencies (EDQ-SEC)</i>			
Emotional awareness	0.985	0.007	0.323
Regulating emotions	1.563	0.011	0.213
Emotional autonomy	0.334	0.002	0.564
Social competency	0.371	0.003	0.544
Competencies for life and well-being	0.369	0.003	0.545
Total emotional competency	0.682	0.005	0.410
<i>Social-emotional competencies (EQi-YV)</i>			
Intrapersonal	0.597	0.005	0.441
Interpersonal	11.040	0.088	0.001
Coping with stress	2.934	0.025	0.089
Adaptability	10.022	0.080	0.002

General frame of mind	0.281	0.002	0.597
Total social-emotional intelligence	10.244	0.082	0.002
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<i>Empathy (IECA)</i>			
General empathy	4.070	0.027	0.045
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<i>Social adjustment and social skills (BAS3)</i>			
Consideration of others	7.158	0.046	0.008
Social self-control	1.537	0.010	0.217
Social withdrawal	4.371	0.028	0.038
Social anxiety/ Shyness	0.236	0.002	0.628
Leadership	2.726	0.018	0.101
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Note. N for the experimental group = 108 and N for the control group = 48			

As seen here, the results do not offer significant differences in any of the emotional competency variables measured on the EDQ-SEC test. In fact, the experimental participants report a certain decline in social-emotional competencies on the post-test measure, which may relate to the skill decline typical of early adolescence (Mariscal et al., 2009; Pasch et al., 2008). In this regard, the results obtained with the control group not only report a decline, but an even greater decline than in the experimental participants, perhaps reflecting that the intervention offers a protective effect, consistent with the literature (Extremera & Fernández-Berrocal, 2003; Greenberg et al., 2003; Humphrey et al., 2007). Beyond this result, which did not obtain significant scores, a more exhaustive study of the effect of the SEI intervention, as measured by the EQi-YV test of social-emotional competencies, does report significant differences in improvements in the experimental group, which were greater than in the control group. Specifically, improvement is observed in the variables interpersonal [$F(1,118) = 11.040$, $\eta^2p = 0.088$, $p < 0.01$], and adaptability [$F(1,118) = 10.022$, $\eta^2p = 0.080$, $p < 0.01$], and in the total dimension of social-emotional competency [$F(1,118) = 10.244$, $\eta^2p = 0.082$, $p < 0.01$], with medium effect sizes in all of these. Also in the empathy variable, measured with the IECA test, a significant difference is observed between experimental and control participants in the general empathy measure [$F(1,151) = 4.070$, $\eta^2p = 0.045$, $p < 0.05$], with a small effect size. Finally, in relation to social adjustment variables, measured with the BAS3, significant differences are observed on two of the dimensions: Consideration of others [$F(1,152) = 7.158$, $\eta^2p = 0.046$, $p < 0.01$] and Social withdrawal [$F(1,152) = 4.371$, $\eta^2p = 0.028$, $p < 0.05$], both of which have small effect sizes.

Discussion and Conclusions

The objective of the present study was to evaluate the impact of the first implementation of the SEA program for developing social-emotional competencies with young adoles-

cent students. Application of its eighteen, 55-minute sessions with 106 seventh-grade participants, led by their own homeroom teachers, was designed according to the SEA theoretical model (Celma-Pastor & Rodríguez-Ledo, 2017), which is the foundation for the program itself. This model of social-emotional competency development understands SEI as a person's ability to perceive and understand his/her own emotional states and those of others, as well as regulate them and express them in a socially adaptive way.

The impact on participants' SEI was assessed through two tests of social-emotional competencies, one pretest/posttest and another as a follow-up, both of which were based on mixed SEI models similar to our own. In addition to these, two other pretest-posttest measures were used to analyze improvement in empathy and the development of social skills and social adjustment. Results from these tests informed us that, in effect, application of the SEA Program resulted in improvements in the SEI competencies that are more related to social aspects of SEI, beyond what was reflected in the control group that did not use this program. Students improved their ability to express their emotions in a more adaptive way, and developed more interpersonal competencies, such as adaptability to the environment. They also improved in understanding the emotional states of others, as seen from improvements in empathy and consideration of others. Moreover, the experimental participants of the study reported the perception of having greater social-emotional competencies and total SEI. Additionally, the results seem to indicate that the SEA program can prevent the typical decline in social-emotional competencies found in adolescence (Mariscal et al., 2009; Pasch et al., 2008), something that is consistent with the literature in this field (Extremera & Fernández-Berrocal, 2003; Greenberg et al., 2003; Humphrey et al., 2007). Finally, the SEA program helps in creating students with better adjustment to their school and classroom, inasmuch as they initiate social behaviors with greater ease, as can be inferred from improvements in scores of social withdrawal.

The results constitute support for the program itself, as well as for its implementation by homeroom teachers in the classes where it is administered. Other studies have already verified that teacher-implemented programs for development of social-emotional competencies can be effective for developing their students' SEI (Durlak et al., 2011; Zins, Weissberg, Wang & Walberg, 2004). On the other hand, as indicated by Nelis, Quoidbach, Mikolajczak and Hansenne (2009), most programs that have been implemented do not have specific theoretical foundations, they lack clearly identified objectives, and do not use control groups to

assess gains produced by the program. Moreover, many of these programs do not meet the SAFE criteria (Durlak et al., 2011), which would increase the likelihood of program efficiency as well as effectiveness. The present study does meet these characteristics for design, implementation and assessment, though it is not exempt from areas for improvement.

One of these improvements relates to the effect sizes; while they reveal valuable gains in a single, relatively short program application, they are consistently medium or small, showing margin for improvement. Another limitation has to do with the use of self-report instruments, where the information collected is not exempt from subjectivity on the part of the participants. This limitation, however, is unavoidable, in that there are no objective measures of these variables for students in this age group, to substitute or complement application of self-reports. If such measures existed, they would involve much more time, possibly entering into conflict with the educational time needed with this age group. However, the design of such objective measures would improve the reliability of results, and we therefore recommend it, especially keeping their test implementation as short as possible. On the other hand, the protective effect found through the EDQ-SEC test should be re-verified, if possible, through the use of this test and other analogous measures of social-emotional competencies. Finally, the sample of 156 participants (108 experimental) leads us to consider the external validity of these results, in that they may potentially be extrapolated to youth in this age group across Spain. While the participants belong to regular groups, thus increasing their general representativity, we suggest that future research increase the number of participants in this program, as well as assess its possible impact in other groups with their own characteristics, such as students with ADHD or with different educational needs.

Beyond the specific improvements that are possible for future research, the main objective of all experts in education and developmental psychology should be to improve our educational system, because of its leading role in developing persons with a good set of competencies for life, including the social-emotional competencies. If we know that young people with more SEI foreseeably become adults with better professional adjustment, who report greater well-being (Zeidner & Matthews, 2016), and that training in SEI is as much a predictor of academic success as personality, and not much less than cognitive skills (Barchard, 2003), our obligation is to educate for personal and professional development, and so enhance their future success in both areas. In this process, the program presented here represents a successful proposal for developing SEI, constituting one more intervention along with many oth-

ers that seek the much-desired end of every educational system: to develop people who are competent in every sphere of life.

References

- Álvarez, M. (coord), Bisquerra, R., Filella, G., Fita, E., Martínez, F. & Pérez-Escoda, N. (2001): *Diseño y evaluación de programas de educación emocional*. [Program design and assessment in emotional education.] Barcelona: Praxis. ISSN: 1575-023X/1695-5714.
- Akerjordet, K. & Severinsson, E. (2007). Emotional intelligence: A review of the literature with specific focus on empirical and epistemological perspectives. *Journal of Clinical Nursing*, 16(8), 1405-1416. <https://doi.org/10.1111/j.1365-2702.2006.01749.x>.
- Barchard, K. A. (2003). Does emotional intelligence assist in the prediction of academic success? *Educational and Psychological Measurement*, 63(5), 840-858. <https://doi.org/10.1177/0013164403251333>.
- Bar-On, R. (2006). The Bar-On model of emotional-social intelligence (ESI). *Psicothema*, 18(Suppl), 13-25. ISSN 1886-144X (Electronic); 0214-9915 (Print).
- Bisquerra, R. (2003). Educación emocional y competencias básicas para la vida. [Emotional education and basic competencies for life.] *Revista de Investigación Educativa*, 21(1), 7-43.
- Bisquerra, R. & Pérez, N. (2007). Las competencias emocionales. [Emotional competencies.] *Educación XXI*, 10, 61-82. <https://doi.org/10.5944/educxx1>.
- Brackett, MA, Patti, J., Stern, R., Rivers, S.E., Elbertson, Chisholm, C. & Salovey, P. (2009). A sustainable, skill-based approach to building emotionally literate schools. In M. Hughes, H. L. Thompson & J. B. Terrell (Eds.), *Handbook for Developing Emotional and Social Intelligence: Best Practices, Case Studies, and Strategies* (pp.329-357). New Jersey: John Wiley & Sons. ISBN: 978-0-470-19088-3.
- Bryant, B. K. (1982). An Index of Empathy for Children and Adolescents. *Child Development*, 53(2), 413-425. <https://doi.org/10.2307/1128984>.
- CASEL (Collaborative for Academic, Social, and Emotional Learning). (2015). *CASEL Guide: Effective Social and Emotional Learning Programs, Middle and High School Edition*. Retrieved from <http://secondaryguide.casel.org/casel-secondary-guide.pdf>.

- Celma-Pastor, L. & Rodríguez-Ledo, C. (2017). *Educación Socioemocional para jóvenes en el Aula: Programa SEA*. [Social Emotional Learning for youth in the classroom: SEA Program.] Madrid: TEA Ediciones. ISBN: 978-84-16231-50-8.
- Ciarrochi, J., Chan, A. C. & Bajgar, J. (2001). Measuring emotional intelligence in adolescents. *Personality and Individual Differences*, 31(7), 1105-1119.
[https://doi.org/10.1016/S0191-8869\(00\)00207-5](https://doi.org/10.1016/S0191-8869(00)00207-5).
- Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American journal of community psychology*, 45(3-4), 294-309.
<https://doi.org/10.1007/s10464-010-9300-6>.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D. & Schellinger, K. B. (2011). The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School Based Universal Interventions. *Child Development*, 82(1), 405–432.
<https://doi.org/10.1111/j.1467-8624.2010.01564.x>.
- Durlak, J. A. & Wells, A. M. (1997). Primary prevention mental health programs for children and adolescents: A meta-analytic review. *American Journal of Community Psychology*, 25, 115-152. <https://doi.org/10.1023/A:1024654026646>.
- Ekman, P. & Davidson, R. (1994). *The nature of emotion: fundamental questions*. New York: Oxford University Press. ISBN: 9780195089448.
- Extremera, N. & Fernández-Berrocal, P. (2003). La inteligencia emocional en el aula como factor protector de conductas problema: violencia, impulsividad y desajuste emocional. [Emotional intelligence in the classroom as a protective factor against problem behaviors: violence, impulsivity, and emotional maladjustment.] *Actas I Congreso Hispanoamericano de Educación y Cultura de Paz*, 599–605. Editorial Universidad de Granada: Granada.
- Fernández-Berrocal, P. & Ruiz-Aranda, D. (2008). La inteligencia emocional en la educación. [Emotional intelligence in education.] *Revista de Investigación Psicoeducativa*, 6, 193–204. ISSN. 1696-2095.
- Ferrándiz, C., Hernández, D., Bermejo, R., Ferrando, M. & Sáinz, M. (2012). Social and Emotional Intelligence in Childhood and Adolescence: Spanish Validation of a Measurement Instrument. *Revista de Psicodidáctica*, 17(2), 309–338.
<https://doi.org/10.1387/Rev.Psicodidact.2814>

- Feshbach, N.D. (1978) Studies of empathic behavior in children. In B.A. Maher (Ed.), *Progress in experimental personality research* (pp.1-47). New York: Academic Press. ISBN: 978-0-12-541413-5.
- Gomez-Baya, D., Mendoza, R., Paíno, S. & Gaspar de Matos, M. (2017). Perceived emotional intelligence as a predictor of depressive symptoms during mid-adolescence: A two-year longitudinal study on gender differences. *Personality and Individual Differences*, 104. 303-312. <https://doi.org/10.1016/j.paid.2016.08.022>.
- Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H. & Elias, M. J. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American psychologist*, 58(6-7), 466-474. <https://doi.org/10.1037/0003-066X.58.6-7.466>.
- Humphrey, N., Curran, A., Morris, E., Farrel, P. & Woods, K. (2007). Emotional Intelligence and education: A critical review. *Educational Psychology*, 27(2), 235–254. <https://doi.org/10.1080/01443410601066735>.
- Lopes, P. N., Salovey, P. & Straus, R. (2003). Emotional intelligence, personality and the perceived quality of social relationships. *Personality and Individual Differences*, 35(3), 641–658. [https://doi.org/10.1016/S0191-8869\(02\)00242-8](https://doi.org/10.1016/S0191-8869(02)00242-8).
- Mariscal, S., Giménez-Dasí, M., Carriedo, N. & Corral, A. (2009). *El desarrollo psicológico a lo largo de la vida*. [Lifelong psychological development] UNED: Mc Graw Hill. ISBN: 9788448171285.
- Martín Jorge, M., Harillo García, D. & Mora Mérida, J. (2008). Relaciones entre inteligencia emocional y ajuste psicológico en una muestra de alumnos de enseñanza secundaria. [Relations between emotional intelligence and psychological adjustment in a sample of secondary education students.] *Ansiedad y Estrés*, 14(1), 31-44. ISSN: 1134-7937.
- Mayer, J., Salovey, P. & Caruso, D. (2000). Emotional intelligence as zeitgeist, as personality, and as a mental ability. In R. Bar-On, *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace*. (pp. 92-117). San Francisco: Jossey-Bass. ISBN: 978-0470907436.
- Mehrabian, A. y Epstein, N. A. (1972). A measure of emotional empathy. *Journal of Personality*, 40(4), 525-543. <https://doi.org/10.1111/j.1467-6494.1972.tb00078.x>.
- Mestre, V., Pérez-Delgado, E., Frías, D. & Samper, P. (1999). Instrumentos de evaluación de la empatía. [Instruments for empathy assessment.] In E. Pérez-Delgado & V. Mestre, *Psicología moral y crecimiento personal* (pp.181–190). Barcelona: Ariel. ISBN: 84-344-0883-X

- Nelis, D., Quoidbach, J., Mikolajczak, M., & Hansenne, M. (2009). Increasing emotional intelligence: (How) is it possible? *Personality and Individual Differences*, 47(1), 36-41. <https://doi.org/10.1016/j.paid.2009.01.046>
- Pasch, K. E., Nelson, M. C., Lytle, L. A., Moe, S. G. & Perry, C. L. (2008). Adoption of risk related factors through early adolescence: Associations with weight status and implications for causal mechanisms. *Journal of Adolescent Health*, 43, 387–393. <https://doi.org/10.1016/j.jadohealth.2008.02.009>.
- Pérez-Escoda, N. (2016). Cuestionarios del GROU para la evaluación de la competencia emocional (CDE). [GROU questionnaires for assessing emotional competency.] In Soler, J. L.; Aparicio, L.; Díaz, J.; Escolano, E.; Rodríguez, M.A. *Inteligencia emocional y bienestar II. Reflexiones, experiencias profesionales e investigaciones* (pp. 690-705). Zaragoza: Ediciones Universidad San Jorge. ISBN: 978-84-608-4847-9
- Petrides, K. & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*, 29, 313–320. [https://doi.org/10.1016/S0191-8869\(99\)00195-6](https://doi.org/10.1016/S0191-8869(99)00195-6).
- Resurrección, D., Salguero, J. & Ruiz-Aranda, D. (2014). Emotional intelligence and psychological maladjustment in adolescence: A systematic review. *Journal of Adolescence*, 37, 461-472. <https://doi.org/10.1016/j.adolescence.2014.03.012>.
- Rodríguez-Ledo, C. & Ruíz-Aranda, D. (2017). Inteligencia y educación socioemocional. [Intelligence and social emotional education.] In A. Cortés Pascual & A. Rodríguez Martínez (Coords.), *Una mirada psicosocioeducativa. Innovación colectiva para el desarrollo personal y profesión*. Anaya: In press.
- Sanz de Acebo, M. L., Ugarte, M. D., Cardelle-Elawar, M., Iriarte, M. D. & Sanz de Acebo, M. T. (2003). Enhancement of self-regulation, assertiveness, and empathy. *Learning and Instruction*, 13(4), 423-439. [https://doi.org/10.1016/S0959-4752\(02\)00026-9](https://doi.org/10.1016/S0959-4752(02)00026-9).
- Silva, F. & Martorell, C. (2001). *BAS-3: Batería de Socialización (Autoevaluación)*. [BAS-3: Socialization Batter (self-assessment)] Madrid: TEA. ISBN: 8471742640 9788471742643 8471746395 9788471746399.
- Schutte, N. S., Malouff, J., Bobik, C., Coston, T., Greeson, C., Jedlicka, C. et al. (2001). Emotional intelligence and interpersonal relations. *Journal of Social Psychology*, 141(4), 523-536. <https://doi.org/10.1080/00224540109600569>.
- Wilson, S. J. & Lipsey, M. W. (2007). School-based interventions for aggressive and disruptive behavior: Update of a meta-analysis. *American Journal of Preventive Medicine*, 33 (Suppl.2S), 130–143. <https://doi.org/10.1016/j.amepre.2007.04.011>.

Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (Eds.). (2004). *Building academic success on social and emotional learning: What does the research say?* New York: Teachers College Press. ISBN: 978-0807744390.

Zeidner, M. & Matthews, G. (2016). Ability emotional intelligence and mental health: Social support as a mediator. *Personality and Individual Differences*, 99. 196-199. <https://doi.org/10.1016/j.paid.2016.05.008>