

# PSYCHOEDUCATIONAL INSTRUMENTS FOR SOCIO-PEDAGOGICAL INTERVENTION: VALIDATION OF CRITERIA EMPLOYED IN THE SITUATIONAL TEST FOR SOCIO-EMOTIONAL COMPETENCE DEVELOPMENT AMONG YOUNG PEOPLE (DCSE-J)<sup>1</sup>

INSTRUMENTOS PSICOEDUCATIVOS PARA LA INTERVENCIÓN EN PEDAGOGÍA SOCIAL: VALIDACIÓN CRITERIAL DEL TEST SITUACIONAL DESARROLLO DE COMPETENCIAS SOCIOEMOCIONALES DE JÓVENES (DCSE-J)

INSTRUMENTOS PSICOEDUCACIONAIS DE INTERVENÇÃO NA PEDAGOGIA SOCIAL: VALIDAÇÃO DE CRITÉRIO DO TESTE SITUACIONAL DE DESENVOLVIMENTO DE COMPETÊNCIAS SOCIOEMOCIONAIS DE JOVENS (DCSE-J)

Aida URREA-MONCLÚS\*, Sara RODRÍGUEZ-PÉREZ\*, Josefina SALA-ROCA\*  
& Nair Elizabeth ZÁRATE-ALVA\*

\*Universidad Autónoma de Barcelona

Received date: 26.XI.2020

Reviewed date: 15.XII.2020

Accepted date: 23.XII.2020

## KEY WORDS:

situational test;  
socio-emotional  
competences;  
young people;  
criterion validity;  
psychoeducational  
instrument;  
social pedagogy

**ABSTRACT:** Socio-emotional competences are fundamentally important for the psychological, social and academic development of young people, and especially those in highly vulnerable contexts. It is essential that Social Pedagogy socio-educational interventions with these young people take these competences into consideration. However, there are no copyleft diagnostical instruments in this area. In this study, we present a validation of the criteria employed in the situational test for Socio-emotional Competence Development among Young People (DCSE-J), a copyleft instrument designed for 12- to 18-year-old boys and girls and adapted for use with both young people who live with their families and in care centres. A total of 409 secondary school students were asked to take the test and identify peers whose

<sup>1</sup> Project supported by the Spanish Ministry for Economy and Competitiveness and co-funded by FEDER (EDU2016-77284-R).

CONTACT WITH THE AUTHORS

AIDA URREA-MONCLÚS. E-mail: [Aida.urrea@uab.cat](mailto:Aida.urrea@uab.cat)

	<p>behaviour showed signs of these competences. The results showed that those students nominated most often by their peers also scored highest in the test. It was also observed that girls were nominated more often and had higher test scores. In addition, the results showed the multidimensional nature of the test items and the multilevel interrelationship of the competences, meaning that the mastery of more complex competences requires the mastery of more basic ones. The results demonstrated the criterion validity of the test and that the DCSE-J test is a valid psycho-educational evaluation instrument for measuring socio-emotional competences among young people. This, in turn, allows for specific pedagogical intervention that addresses the specific socio-emotional competences of the group.</p>
<p><b>PALABRAS CLAVE:</b>                  test situacional;                  competencias socioemocionales;                  jóvenes;                  validez criterial;                  instrumento psicoeducativo;                  pedagogía social</p>	<p><b>RESUMEN:</b> Las competencias socioemocionales son fundamentales para el desarrollo psicológico, social y académico de los jóvenes, y son claves para aquellos jóvenes que se encuentran en contextos de alta vulnerabilidad. Por ello, es importante que las intervenciones socioeducativas que se realizan desde la Pedagogía Social con estos jóvenes las tengan en consideración, sin embargo, no existen instrumentos diagnósticos copy-left en esta área. En este estudio se presenta la validación criterial del test situacional Desarrollo de Competencias Socioemocionales de Jóvenes (DCSE-J), un instrumento copy-left para chicos y chicas de 12 a 18 años adaptado para que pueda ser respondido independientemente de que estos vivan con sus familias o en centros de protección. Se solicitó a 409 alumnos de educación secundaria que contestaran al test e identificaran a los compañeros que realizaban conductas indicadoras de competencia. Los resultados corroboraron que los alumnos que fueron más nominados por los compañeros también puntuaron más en el test. Asimismo, se observó que las chicas fueron más nominadas y obtuvieron puntuaciones más altas en el test. Los resultados también señalaron la naturaleza multidimensional de los ítems del test y la interrelación multinivel de las competencias de forma que el dominio de las competencias más complejas requiere del dominio de otras más básicas. Los resultados demuestran la validez criterial del Test y apuntan que el Test DCSE-J es un instrumento de evaluación psicoeducativo válido para medir las competencias socioemocionales de los jóvenes que, a su vez, permite una intervención pedagógica específica para trabajar las competencias socioemocionales concretas del grupo.</p>
<p><b>PALAVRAS-CHAVE:</b>                  teste situacional;                  habilidades socioemocionais;                  jovens;                  validação de critério;                  instrumento psicoeducacional;                  pedagogia social</p>	<p><b>RESUMO:</b> As competências socioemocionais são fundamentais para o desenvolvimento psicológico, social e acadêmico dos jovens e são particularmente importantes para os jovens que se encontram em contextos de alta vulnerabilidade. Por esse motivo, é importante que as intervenções socioeducativas realizadas pela Pedagogia Social com esses jovens, tenham em consideração estas intervenções, no entanto, não existem instrumentos diagnósticos copy-left nesta área. Neste estudo apresenta-se a validação do critério do teste de situação Desenvolvimento de Competências Socioemocionais de Jovens (DCSE-J), um instrumento copy-left para crianças de ambos os sexos entre 12 e 18 anos adaptado para que possa ser respondido independentemente de viverem com suas famílias ou em casas de acolhimento residencial. Foi solicitado que 409 alunos do ensino secundário que respondessem à prova e identificassem os colegas que realizaram comportamentos indicativos de competência. Os resultados corroboraram que os alunos mais indicados pelos pares também pontuaram mais no teste. Da mesma forma, observou-se que as meninas foram mais enunciadas e obtiveram pontuações mais elevadas no teste. Os resultados também indicaram a natureza multidimensional dos itens do teste e a inter-relação multinível de competências, de modo que o domínio das competências mais complexas requerem do domínio de outras mais básicas. Os resultados demonstram a validade de critério do teste e apontam que o Teste DCSE-J é um instrumento de avaliação psicoeducacional válido para medir as competências socioemocionais de jovens, o que, por sua vez, permite uma intervenção pedagógica específica para trabalhar as competências socioemocionais específicas do grupo.</p>

## 1. Introduction

Socio-emotional competences facilitate resilience processes (Schneider *et al.*, 2013). This relationship is especially relevant in support programmes for children and adolescents who have experienced situations of abuse, neglect or abandonment, as is the case in socio-educational intervention programmes in care centres. Sala *et al.* (2009) found that having these competences predicted success in the transition to adult life of young people in care, although these highly vulnerable young people generally have lower competence levels than

their peers who are not in care (Oriol *et al.* 2014, Zarate *et al.* 2019), possibly as a result of a lack of adequate parental models and unsafe bonding experiences (Dozier & Rutter, 2008). Socio-educational programmes and psycho-educational assessment instruments are needed to help Social Pedagogy professionals design individualized interventions aimed at developing disadvantaged young people's socio-emotional competences. However, few free instruments for assessing these competences have been validated. In this study, we analyse the criterion validity of a copyleft instrument for assessing socio-emotional

competences among 12- to 18-year-old adolescents; it is an instrument that can be used in socio-educational programmes, both with adolescents in care and with those from disadvantaged or normal backgrounds.

Various instruments have been developed to measure emotional competences, many of which are very expensive and not without criticism (Pérez-González *et al.*, 2007). Self-reporting instruments with Likert scales, used in trait models, are criticized for the wide range of competences analysed and for difficulties in separating them from measurements of personality, biases and problems with the validity of measurements (Roberts *et al.*, 2010). Performance assessments, often used in ability models, may be less susceptible to biases such as social desirability (Mayer *et al.* 2011), but don't have clearly defined the context Golubovich *et al.* (2020).

Emotional competences are developed in social contexts and mostly used in those same contexts, which is why several authors have pointed out that the interrelationship of emotional and social competences should not be ignored (Monnier, 2015; Saarni, 2008). Saarni (1997) defined emotional competence as the demonstration of self-efficacy in emotion-eliciting social transactions, positing that not only was it learned in different development contexts (Saarni, 2000) but also that the level of mastery or execution could vary in different contexts (Saarni, 2008). Hence situational tests being viewed as promising tools for measuring socio-emotional competences.

Situational tests emerged in the field of personnel selection as an alternative to traditional self-reporting instruments because of their greater predictive validity. They are "low-fidelity" simulations - because they are done in writing - that confront the participants with relevant contextualized situations and require them to choose an answer from among the possible predefined responses. They are an attractive, versatile and valid type of test and have therefore attracted a lot of interest in recent years and have been adopted in other areas (Herde *et al.*, 2019; Lievens and Motowidlo, 2016).

Although it is possible to train for and cheat in situational tests, as is the case with other types of test (Lievens *et al.*, 2008), and their multidimensional characteristics lead to problems in the application of factor analysis techniques (Sorrel *et al.*, 2016), they do have several advantages over traditional tests. The main ones are: higher criterion and incremental validity than personality tests or cognitive tests; fewer biases with regards to minorities (Lievens *et al.*, 2008); and higher concurrent and predictive validity (McDaniel *et al.*,

2001; McDaniel *et al.*, 2007; Webster *et al.*, 2020). In addition, they are very attractive tools for the people taking them, which makes them easier to administer (Lievens, *et al.*, 2008).

Some of these advantages are the result of the inclusion of situational scenarios that help reduce the ambiguity that decontextualized response options may have in other types of tests (McDaniel *et al.*, 2016) by providing greater ecological validity. Lievens and Motowidlo (2016) stated that the predictive capacity of situational tests is based on the procedural knowledge of how to behave effectively in different situations. This knowledge is the result of the interrelation of socialization processes and personal characteristics. Furthermore, unlike self-reporting tests, the response in the situational test is contextualized within a specific context, which provides greater ecological validity, thereby making the tests very appropriate for the assessment of emotional intelligence (Lievens and Chan, 2017).

The Young People's Socio-emotional Competences Development (DCSE-J) situational test (Sala *et al.* 2020) is a psycho-educational instrument that allows the assessment of the level of development of these competences in adolescents and young people from 12 to 18 years of age. This test has been developed to provide a valid free instrument that can be used by Social Pedagogy in educational programmes with reduced budgets that are developed for young people in risk situations. The test is based on the concept of socio-emotional competences as those that allow the management of one's emotions and facilitate social interaction (Saarni, 2000). These competences are developed in the context of socialization in relation with the individual's temperament, similar to the evolution of procedural knowledge referred to by Lievens and Motowidlo (2016).

The test has six scales in total. Five of the scales measure the competences of understanding one's own emotions, understanding the emotions of others, emotional self-regulation, regulation of the emotions of others, and assertiveness. The test also includes a scale for self-esteem, because its impact is relevant, not only on well-being and emotional health, but also on interrelationships with peers.

The test takes place in different settings of an adolescent's daily life - school, friends and home - and presents situations that any teenager might face. No reference is made to family in these scenarios, so that any adolescent can relate to the situation, regardless of the context in which they live. The different items in the test are integrated into five stories, with a storyline that facilitates contextualization and the concentration of the

person taking the test, avoiding the fatigue associated with the mental effort of continuous changes of context. Each of the stories presents six problem situations, in which an answer must be chosen as the most probable of the five possible answers. The test was created from interviews with 117 adolescents and was validated by seven experts. Although the test was originally developed to be used on socio-educational programmes with young people in highly vulnerable situations, the validation studies were carried out with the general school population for ethical reasons. Following a pilot on a sample of 932 students to analyse the test structure, the temporal stability of the test was tested on a sample of 123 students. The factor analysis of the test structure revealed a bifactorial structure: emotional understanding and emotional regulation-assertiveness, with reliability indices of .76 and .65, respectively (Sala et al., 2021). Sorrel et al. (2016) have argued that factor analysis is not appropriate for demonstrating the structure of situational tests due to the multidimensionality that responses to problem situations require, so the scales on which the test was designed have also been included in this study.

## 2. Justification and objectives

The aim of this study is to test the criterion validity of the DCSE-J test based on peer evaluation. It was assumed that there are classroom behaviours that require the mastery of different socio-emotional competences, and that students could identify peers with a good command of these behaviours. The hypotheses of the study are that students who had been identified as demonstrating these behaviours by two or more peers would have better scores in the DCSE-J test, and that students with better socio-emotional competences would also more frequently be identified as showing these behaviours by more peers.

## 3. Methodology

### Instrument

To test criterion validity, a tailor-made questionnaire was created regarding behaviours that demonstrate a high level of mastery of socio-emotional competences. For each competence in the test, behaviours were selected where students showed a high level of competence that could be identified by their classmates. The questionnaire consisted of 12 items (Table 1), grouped according to the different scales of the test.

**Table 1: Relationship of behaviours with scales and factors from the DCSE-J test**

Behaviours showing a high level of competence	Scale	Factor
• They are not embarrassed to give their opinion in the classroom (p9)	Self-esteem	
• They defend their opinions or positions in a non-aggressive way (p4)	Assertiveness	Emotional regulation
• If a peer makes a request that they feel is unfair, they don't agree to it and explain why (p8)		
• They don't fight (p1)	Emotional self-regulation	Emotional regulation
• They receive criticism well (p2)		
• When frustrated, they know how to adapt quickly (p3)	Emotional regulation of others	Emotional regulation
• When peers have a problem, they try to get them to talk to each other (p5) • They give encouragement to peers when they need it (p10)		
• They say when they don't like something (p11) • When asked why they are happy or in a bad mood, they almost always know why (p12)	Understanding of own emotions	Emotional understanding
• They collaborate when group work is needed so that no one is left out (p6)	Understanding of others' emotions	
• They support and help peers when they need it (p7)		

## Sample

The DCSE-J test and the questionnaire were administered to 1<sup>st</sup> to 4<sup>th</sup>-year ESO (obligatory secondary education) students in three state secondary schools in Catalonia. Of the 409 initial participants in the research, 57 who gave inconsistent answers to the control questions were eliminated. The final sample comprised 352 students, of whom 169 (48 %) identified as boys, 180 (51.1 %) identified as girls and 3 identified as “other” (0.9 %). The sample ranged in age from 12 to 17 years old, with an average age of 13.58 (SD=1.2).

## Procedure

Three secondary schools were contacted through the Government of Catalonia’s Ministry of Education. A meeting was held with the management team of the three schools in which the aims of the study, procedure, data protection protocol and information they would receive from the test results were explained. They also received the same information in writing.

Once the school had signed the informed assent form, the instruments and procedure were explained to the teachers who would help with administration. Teaching activities were also provided so that teachers could work with students on the results of the test, with the aim of improving their socio-emotional skills.

Information was also sent to the students’ families and/or legal representatives. They were told about the research, provided with contact details in case they wanted to ask questions and asked for consent for their children’s participation in the study.

The children were also asked to participate as volunteers. In a classroom session, teachers presented the instruments to the students and explained that no identifying data would be collected. The students voluntarily decided whether they wanted to participate or not. They were told that if they did not want to, they would stay in the classroom and do other activities. However, all of the students did agree to participate. To protect their anonymity, the students used a code to answer the test and the questionnaire that only they and the teachers knew.

The instruments were administered via a digital platform that stores data directly on a secure server. Once the test was completed, the students were able to see the results of their test on the platform and obtain immediate feedback. They could also provide an e-mail address for the platform to automatically send the results to for later consultation (the platform doesn’t record

the e-mails). The teachers were given the overall results of the class or group, with the aim of helping them improve their teaching of socio-emotional competences.

The study procedure was submitted for evaluation to the Ethics in Animal and Human Experimentation Commission (CEEAH) at the Autonomous University of Barcelona, which issued a favourable report with the reference CEEAH 4699.

## Analysis

To test the hypothesis, the relationship between the DCSE-J test scores and peer-reported behaviours (nominations) was subjected to variance analysis. The relationship between the test scores and nominations and the students’ characteristics, such as age and gender, was also checked using correlation tests and variance analysis.

## 4. Results

### Differences by age

No significant correlation was observed between the age of the students and the scales and factors used in the DCSE-J test, or with the nominations (identification of students who showed the behaviours).

### Differences by gender

#### Differences in the scales

The ANOVA test identified significant differences between the scores of boys and girls on three test scales. Girls had significantly higher scores than boys in assertiveness ( $M = 103.2$  vs  $98$ ;  $p = .001$ ), as well as in understanding of others ( $M = 103.7$  vs  $99.2$ ;  $p = .003$ ) and regulation of others ( $M = 102.5$  vs  $97.8$ ;  $p = .002$ ). Girls also had significantly higher scores than boys on the two test factors: the regulation factor ( $M = 98.8$  vs  $95$ ;  $p = .004$ ) and the understanding factor ( $M = 90.4$  vs  $86.4$ ;  $p = .000$ ).

#### Differences in nominations

Girls also received more nominations from their class group in 8 of the 12 behaviours, as well as in the sum of total nominations: they do not fight ( $p1$  - self-regulation) ( $M = 6.9$  vs  $4.3$ ;  $p = .005$ ); they defend their opinions/positions in a non-aggressive way ( $p4$  - self-regulation) ( $M = 6.3$  vs  $4.3$ ;  $p = .004$ ); when faced with a problem between peers, they try to get them to talk ( $p5$  - regulation of others) ( $M = 5.8$  vs  $3.2$ ;  $p = .000$ ); they collaborate when

working in a group so that nobody is left out (p6 - understanding of others) (M = 5.9 vs 3.3; p = .000); they offer support and help when a peer needs it (p7 - understanding of others) (M = 7.3 vs 3.7; p = .000); if a peer makes a request that they think is not fair they do not agree to it and explain why (p8 - assertiveness) (M = 4.9 vs 3.7; p = .018); they encourage their peers when they need it (p10 - regulation of others) (M = 6.6 vs 3; p = .000) and when you ask them why they are happy or in a bad mood they almost always know why (p12 - self-understanding) (M = 4.4 vs 3.5; p = .034). Girls were also mentioned more than boys in the total nomination count (M = 67.5 vs 48.2; p = .000).

**Was the student with the highest score in the DCSE-J test the most frequently nominated?**

An analysis of variance was performed to verify whether the students who got higher scores on the different scales of the test (upper tercile) were perceived (nominated) by their peers as more likely to display the behaviours indicative of a high level of competence than those with lower scores (lower tercile). Since gender was related to test scores, as mentioned above, this variable was included as a co-variable.

**Table 2. Behavioural nomination scores in the DCSE-J test by tercile**

	Per- centile	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P Total
Regulation factor	1	4.7	3.7	4.3	4.1	3.6	4.0	4.3	4.4	5.9	3.8	5.1	3.6	51.5
	2	5.7	4.6	3.7	4.9	4.4	4.8	5.8	4.4	4.5	5.3	4.5	4.6	57.1
	3	6.6	6.3***	5.5	7.1**	5.6*	5.2	6.5*	4.3	5.2	5.4	4.2	3.8	65.7*
Understanding factor	1	4.3	4.2	3.9	4.4	4.0	4.2	4.8	3.9	5.2	4.2	4.6	4.0	52.0
	2	6.9	5.5	5.1	5.2	4.6	4.3	5.2	4.6	5.2	5.3	4.4	4.3	60.6
	3	5.7	4.8	4.6	6.4	4.9	5.4	6.6	4.5	5.3	5.0	4.7	3.7	61.5
Self-esteem	1	6.8	5.1	4.1	5.1	3.6	3.7	5.1	4.0	3.9	4.5	4.3	3.4	53.7
	2	5.6	4.7	4.7	5.1	5.0	4.8	5.2	4.2	5.0	5.2	4.8	4.1	58.6
	3	4.6	4.8	4.6	5.9	5.0*	5.3*	6.4	4.8	6.7**	4.8	4.7	4.4*	62.2
Assertiveness	1	4.2	4.4	4.0	4.2	4.1	4.4	4.6	4.5	5.6	4.3	5.0	3.9	53.3
	2	6.3	4.9	4.2	5.4	4.0	4.5	5.3	4.1	4.7	5.0	4.8	4.0	57.4
	3	6.4	5.3	5.2	6.3*	5.5	5.0	6.6	4.5	5.3	5.1	3.9	4.1	63.5
Self- understanding	1	4.4	4.8	3.9	4.9	4.3	4.2	5.6	4.6	5.5	4.7	5.3	4.2	56.4
	2	6.3	5.7	5.1	5.0	4.6	5.5	5.9	4.0	5.0	5.2	3.7	4.0	60.0
	3	6.3	4.0	4.4	6.2	4.7	4.1	5.2	4.5	5.0	4.7	4.8	3.8	57.9
Self- regulation	1	4.2	3.8	4.2	4.0	4.1	4.5	5.1	4.7	5.5	5.1	5.6	4.0	54.8
	2	5.9	4.4	3.7	5.7	4.3	4.1	5.0	4.4	5.0	4.0	4.1	3.7	54.4
	3	6.9*	6.4***	5.6*	6.3**	5.2	5.3	6.7*	4.0	5.1	5.6	4.1*	4.3	65.5*
Understanding of others	1	5.7	4.4	3.7	5.1	4.0	3.7	4.1	3.9	4.6	3.8	4.7	4.0	51.8
	2	5.8	5.3	5.1	5.2	4.6	4.8	6.0	4.2	5.1	5.0	3.8	4.1	58.9
	3	5.5	4.8	4.5	5.7	5.0	5.5	6.4	5.0	5.9	5.7	5.4	3.9	63.3
Regulation of others	1	5.4	3.7	3.7	4.1	3.9	3.5	4.4	3.9	5.8	3.8	5.0	3.8	51.0
	2	5.6	5.4	5.0	5.6	4.4	5.4	5.9	4.4	4.6	5.3	3.5	4.1	59.4
	3	6.0	5.6*	4.8	6.4*	5.3	5.1	6.4	4.7	5.1	5.3	5.2	4.1	64.1*

NOTE: The significant differences between the means of students who scored in the upper tercile compared to the lower tercile are shown as follows: \*p < .05, \*\*p < .01; \*\*\*p < .001.

The differences between students with scores in the upper and lower terciles (Table 2) indicated that students in the upper tercile of the emotional regulation factor were more likely to be nominated by their peers as receiving criticism well (p2 - regulation factor), defending their opinions/positions non-aggressively (p4 - regulation factor), promoting dialogue between peers when there is a problem (p5 - regulation factor) and offering them help when they need it (p7 - understanding factor). These students also received a higher total number of overall nominations from their peers.

Students with scores in the upper tercile of the self-esteem scale were most frequently nominated for not being embarrassed to give their opinion in public (p9 - self-esteem); knowing the reasons for their state of mind (p12 - self-understanding); collaborating so that no one is left out when it comes to group work (p6 - understanding others); and promoting dialogue between peers when there is a problem (p5 - regulating others).

Students with scores in the upper tercile on the assertiveness scale were more likely to be nominated for defending their opinions/positions in a non-aggressive manner (p4 - assertiveness).

Students scoring in the upper tercile on the emotional self-regulation scale were most highly rated for not fighting (p1 - self-regulation);

receiving criticism well (p2 - self-regulation); being able to adapt quickly when frustrated (p3 - self-regulation); verbally expressing what they dislike (p11 - self-understanding); defending their opinions/positions in a non-aggressive way (p4 - assertiveness); and supporting their peers when they need it (p7 - understanding of others). These students also received a higher overall total of nominations from their peers.

Students with scores in the upper tercile on the scale for regulating the emotions of others were most frequently nominated for defending their opinions/positions in a non-aggressive manner (p4 - assertiveness) and for receiving criticism well (p2 - self-regulation). These students also received a higher overall total of nominations from their peers.

### ***Do frequently nominated students have better socio-emotional competences than students who were not nominated?***

An analysis of variance (ANOVA) was performed by comparing the highest and lowest scores of behavioural nominations in the class or group (no nominations versus two or more nominations) and the scale results for the students' DCSE-J test (Table 3).

**Table 3. Scores on the scales in the DCSE-J test by behavioural nominations**

	Nominations	Regulation factor	Understanding factor	Self-esteem	Assertiveness	Self-understanding	Self-regulation	Understanding of others	Regulation of others
P1	0	95.2	87.5	100.3	99.1	100.5	96.0	100.9	99.4
	2 or more	99.7**	90.0*	98.4	103.0*	102.7	101.0**	102.1	101.8
P2	0	94.1	86.9	99.0	99.2	100.5	94.7	100.3	98.2
	2 or more	99.2**	89.8*	99.7	101.7	101.8	100.6**	102.9	102.0*
P3	0	94.9	86.6	96.6	100.0	98.4	96.1	100.0	97.9
	2 or more	98.3*	88.6	101.3**	101.7	100.7	99.7*	101.5	101.0
P4	0	92.9	86.5	98.9	96.8	98.4	95.0	100.3	97.0
	2 or more	99.7***	89.9**	99.9	102.9**	102.2*	100.1**	102.2	103.4***
P5	0	94.3	86.5	97.5	98.9	99.2	96.0	98.7	97.0
	2 or more	99.1**	89.7*	100.7	102.5	101.3	99.0	103.0*	103.1***
P6	0	95.9	87.2	97.5	100.6	99.2	97.8	99.8	97.8
	2 or more	98.4	89.4	101.2*	101.9	101.1	98.7	103.5*	101.6*

	Nominations	Regulation factor	Understanding factor	Self-esteem	Assertiveness	Self-understanding	Self-regulation	Understanding of others	Regulation of others
P7	0	94.7	86.8	98.6	99.4	100.3	96.1	98.9	97.8
	2 or more	99.6**	89.7*	101.3	103.3*	101.6	99.7*	102.8*	102.7**
P8	0	95.9	87.7	98.6	100.2	101.0	97.8	100.6	98.0
	2 or more	97.5	88.8	99.4	101.6	100.8	97.5	102.2	102.1*
P9	0	96.4	88.2	97.4	99.8	101.9	98.0	100.2	99.2
	2 or more	96.0	88.6	101.8*	99.8	100.5	97.6	103.4	99.5
P10	0	94.3	85.9	98.9	99.7	100.0	95.9	99.1	96.3
	2 or more	99.2**	90.2**	100.0	102.2	101.5	99.4*	104.2**	103.1***
P11	0	97.6	89.0	98.5	102.3	101.7	98.8	102.5	99.3
	2 or more	96.5	88.4	99.8	99.5	100.3	97.0	101.8	101.0
P12	0	95.6	88.0	97.5	100.5	101.5	96.4	99.9	98.4
	2 or more	97.2	88.0	100.2	100.6	101.2	98.4	101.1	100.2

NOTE. The significant differences between students' means on the scales of the DCSE-J test with reference to the highest and lowest number of nominations from their peers (no nominations versus two or more nominations) are shown as follows: \*p<.05, \*\*p<.01; \*\*\*p<.001.

The variance analysis confirmed the hypothesis that students who were identified by two or more classmates as not being embarrassed to speak in public (p9 - self-esteem) also scored higher on the self-esteem scale of the test.

With regards to assertiveness, the analysis partially confirmed the hypothesis. Students nominated for defending their opinions in a non-aggressive way (p4 - assertiveness) scored higher on the assertiveness scale and on the regulation factor. These students also obtained higher scores on the understanding factor and the self-understanding, self-regulation and regulation of others scales. However, no correlation was found between the behavioural nominations with regards to not agreeing to unfair requests and explaining why (p8 - assertiveness) with the assertiveness scale, although a correlation was found with the regulation of others scale.

In relation to self-understanding, the variance analysis did not confirm the hypothesis. Neither those students who were nominated by two or more classmates for verbally expressing when they do not like something (p11 - self-understanding) nor those who were nominated for almost always being able to express why they are happy or in a bad mood (p12 - self-understanding) scored higher on the self-understanding scale of the test.

As regards emotional self-regulation, the analysis confirmed the hypothesis that students who were identified by two or more peers as not fighting (p1 - self-regulation), those who receive criticism well (p2 - self-regulation) and those who are able to adapt quickly when frustrated (p3 - self-regulation) also scored higher on the self-esteem scale and on the regulation factor. Of these, the students nominated for not fighting also scored higher on the understanding factor and the students nominated for being good at taking criticism also scored higher on the understanding factor and the emotional regulation of others scale. Those students identified as being able to adapt quickly to frustration also scored higher on the self-esteem scale.

In relation to the emotional understanding of others, the analysis confirmed the hypothesis that students who were identified by two or more peers as students who collaborate so that no one is left out when it comes to group work (p6 - understanding of others) and those who offer support and help when peers need it (p7 - understanding of others) also scored higher on the emotional understanding of others and the emotional regulation of others scales. Those students nominated for supporting and helping their peers when needed also scored higher on the



understanding factor, the regulation factor and the self-regulation scale.

In relation to the emotional regulation of others, the analysis confirmed the hypothesis. Students who were identified by two or more peers as trying to get their peers to talk when there is a problem (p5 - regulation of others) and those who encourage peers when they need encouragement (p10 - regulation of others) also scored higher on the regulation of others scale and regulation factor. These students also scored higher on the emotional understanding of others scale and on the understanding factor in the test. In addition, students identified as encouraging their peers when needed also scored higher on the self-regulation scales.

## 5. Discussion and conclusions

The DCSE-J test (Sala *et al.*, 2020) is a pioneering instrument in the assessment of socio-emotional competences in 12- to 18-year-old adolescents using situational testing. As it is copyleft, it can be used in socio-educational programmes to design individualized interventions for highly vulnerable groups, which do not usually have high budgets. It is therefore of special interest in the field of social pedagogy. Sala *et al.*, (2021), validated its content and verified its temporal stability and internal structure. This study confirms the test's criterion validity, since students who are identified by their peers as displaying behaviours that represent socio-emotional competences obtain higher scores in the DCSE-J test. The results show that students with higher scores in the classroom display most identifying behaviours according to the expected factors and scales. However, this relationship could not be confirmed in the case of behaviours related to the scale of understanding one's own emotions. Identifying behaviours related to the understanding of one's own emotions (verbally expressing what one does not like, explaining the reason for one's affective state) require the expression of emotions, and this not only requires understanding one's own emotions, but also a willingness to share them, which can be influenced by an adolescent's introverted or extraverted character (Bono and Vey, 2007; Riggio and Riggio, 2002) and by self-esteem (Wu *et al.*, 2018), as seen in the results of the study. It is difficult to find behaviours that indicate emotional understanding, because this is an internal process that may not manifest itself and is therefore difficult to observe. However, the students nominated for self-regulatory behaviours, such as not fighting and accepting criticism well, also rank among the highest in the emotional understanding scale. It was also observed that the

identifying behaviours of emotional regulation of others not only correspond to higher levels of emotional regulation of others, but also to the understanding of their emotions. This is consistent with the concept of multilevel emotional intelligence in which emotional regulation is at higher levels, built on prior development of emotional awareness and understanding (Mayer and Salovey, 1997).

While students nominated by their peers for defending themselves in a non-aggressive way also scored higher on the assertiveness scale, those who were identified as not agreeing to unfair requests and explaining why, did not score higher on this scale, although they did score higher on the regulation of others scale. It is possible that when students nominated their peers for this behaviour, they paid special attention to the fact that they explain why (they reject unfair requests), which would be a behaviour clearly aimed at regulating the emotions of others. This would explain why the students nominated for this behaviour were not the ones who scored highest in assertiveness, but in emotional regulation of others.

The results of the study also highlight the multidimensional nature of the items in the DCSE-J situational test, as is generally the case in situational tests (Lievens, 2017), making it difficult for factor analysis to provide a solution that confirms the scales (Sorrel *et al.*, 2016). This is consistent with the fact that emotional intelligence is multidimensional (Lievens and Chan, 2017). Responding to environmental demands, resolving conflicts, interacting positively with colleagues, etc. requires more than one competence. The data show that only a few behaviours are related to only one of the scales, as was the case with not being embarrassed to speak in public (self-esteem), or not agreeing to unfair requests and explaining why (regulation of the emotions of others). Behaviours that are indicative of the emotional regulation of others also imply a good understanding of their emotions, and students with high scores in assertiveness and self-regulation stand out for defending themselves in a non-aggressive way.

The mastery of the most complex competences, such as emotional regulation, predicts peers' nomination of students most likely to display the set of behaviours that show the competences analysed. The results showed that students who were in the upper tercile of their group's scores on the self-regulation and the regulation of others scales received more nominations in total. These data are consistent with models which indicate that emotional intelligence is developed at different levels, based on a mastery of the lower levels, as described by Mayer and Salovey (1997). However, this relationship should be studied further

because, as we have pointed out, it is very difficult to measure emotional understanding from the observation of others. It might be useful to combine convergent validity with other instruments that also assess emotional understanding.

No age differences were observed in the study, although there were only small differences in the participants' ages (12-16 years). There was, however, a small difference according to the participants' gender. Girls scored higher than boys on both the DCSE-J test scales and in peer nominations for behaviour related to emotions. Girls scored higher on both the test factors, and on those scales closely linked to relationships with others: understanding others, regulating others and assertiveness. Previous studies agree with these significant gender differences, and attribute them to the different ways in which men and women are educated (Franco *et al.*, 2017; Kaytal and Awasthi, 2005; Sánchez-Núñez *et al.*, 2008). Mancini *et al.* (2020) and Meshkat and Nejati (2017) have argued that girls receive a more emotion-centred education, while boys are taught to suppress certain emotions, meaning that girls develop more competences related to empathy. However, other authors such as Fernández-Berrocal *et al.* (2012), point out that gender differences are related to other socio-demographic variables such as age or socio-economic level and that these differences diminish with age. Extremera *et al.* (2006) stated that studies that do not find differences between genders generally use self-reporting tests, which produce perception bias, with men perceiving themselves as more emotionally intelligent and women underestimating their perceived emotional capacities. In contrast, girls show better results in ability tests.

This study is not without its limitations. The students completed the tests guided by their own school teachers. Although the teachers were trained by the researchers, the test conditions may not be as homogeneous as if the tests had been administered by the same team that worked on the test and know it first hand. One of the main difficulties of the study was to find behaviours

indicating emotional understanding competences that could be observed. Behaviours linked to the understanding of emotions might have been influenced by many other factors that can influence someone's willingness to regulate or alleviate peers' distress, such as introversion or prosocial values. In future studies, these limitations should be addressed by extending the age range of the sample, closer monitoring of questionnaire administration, comparing and checking the results with other behaviours and taking into account the assessment of the teaching staff. Future studies will also need to address the convergent validity of the test.

In conclusion, this study provides evidence of the criterion validity of the DCSE-J test based on peer evaluation. The hypothesis is confirmed that the students most nominated by their peers for having behaviours related to socio-emotional competences also obtain high scores in the DCSE-J test.

The DCSE-J test is a valid psycho-educational diagnostic instrument for measuring the level of development of adolescents' socio-emotional competences and can be used by professionals in pedagogy and social education. The test has been designed not only as an instrument for evaluation but also for intervention. It can be used as a basis for educational work, where adolescents analyse the different situations and possible responses. Different guides have been developed for professionals and families (Soldevila, A., 2016; Secanilla, E., Rodríguez, M., 2016) to accompany the test. The test is available here <https://ddd.uab.cat/record/212951>.

## Acknowledgements

This study was supported by a grant from the Ministry of Education and cofinanced from FEDER funds (EDU2016-77284-R). We would like to thank the Department of Education of the Catalan Government and secondary schools for their participation in the study.

## References

- Bar-On, R. & Parker, J. (2000). *EQ-I: YV. Bar-On Emotional Quotient inventory: Youth version. Technical manual*. Multi Health Systems, Inc.
- Bono, J.E., & Vey, M.A. (2007). Personality and emotional performance: Extraversion, neuroticism, and self-monitoring. *Journal of Occupational Health Psychology*, 12(2), 177-192. <https://doi.org/10.1037/1076-8998.12.2.177>
- Dozier, M., & Rutter, M. (2008). *Challenges to the development of attachment relationships faced by young children in foster and adoptive care*. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of attachment: Theory, research, and clinical applications* (p. 698-717). The Guilford Press.

- Extremera, N., Fernández-Berrocal, P., & Salovey, P. (2006). Spanish version of the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). Version 2.0: reliabilities, age and gender differences. *Psicothema*, 18(Suppl), 42-48. Retrieved from <http://www.psicothema.com/psicothema.asp?ID=3274>
- Fernández-Berrocal, P., Cabello, R., Castillo, R., & Extremera, N. (2012). Gender differences in emotional intelligence: The mediating effect of age. *Behavioral Psychology / Psicología Conductual: Revista Internacional Clínica y de la Salud*, 20(1), 77-89.
- Franco, M.G., Beja, M., Candeias, A. & Santos, N. (2017). Emotion Understanding, Social Competence and School Achievement in Children from Primary School in Portugal. *Frontiers in Psychology*, 8, Article 1376. <https://doi.org/10.3389/fpsyg.2017.01376>
- Golubovich, J., Lake, C. J., Anguiano-Carrasco, C., & Seybert, J. (2020). Measuring achievement striving via a situational judgment test: the value of additional context. *Journal of Work and Organizational Psychology*, 36(2), 157-167.
- Herde, C.N., Lievens, F., Solberg, E.G., Harbaugh, J.L., Strong, M.H., & Burkholder, G.J. (2019). Situational judgment tests as measures of 21st century competences: Evidence across Europe and Latin America. *Journal of Work and Organizational Psychology*, 35, 65-74. <https://doi.org/10.5093/jwop2019a8>
- Lievens, F. (2017). Construct-driven SJTs: Toward an agenda for future research. *International Journal of Testing*, 17(3), 269-276. <https://doi.org/10.1080/15305058.2017.1309857>
- Lievens, F., & Chan, D. (2017). Practical Intelligence, Emotional Intelligence, and Social Intelligence. En J.L. Farr, N.T. Tippins (Eds.), *Handbook of Employee Selection* (pp.342-364). Routledge. Retrieved from [https://ink.library.smu.edu.sg/soss\\_research/550](https://ink.library.smu.edu.sg/soss_research/550)
- Lievens, F., & Motowidlo, S. J. (2016). Situational judgment tests: From measures of situational judgment to measures of general domain knowledge. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 9(1), 3-22. <https://doi.org/10.1017/iop.2015.71>
- Lievens, F., Peeters, H., & Schollaert, E. (2008). Situational judgment tests: A review of recent research. *Personnel Review*, 37(4), 426-441. <https://doi.org/10.1108/00483480810877598>
- Mancini, G., Passini, S. y Biolcati, R. (2020). The Influence of Trait Emotional Intelligence and Gender Interaction on Draw-A-Person Emotional Indicators during Childhood. *Child Indicators Research* 13, 1187-1201. <https://doi.org/10.1007/s12187-019-09690-y>
- Mayer, J.D. & Salovey, P. (1997). What is emotional intelligence?. En P. Salovey y D. Sluyter (Eds). *Emotional Development and Emotional Intelligence: Implications for Educators* (pp.3-31). Basic Books. <https://doi.org/10.1037/t05047-000>
- Mayer, J. D., Salovey, P., Caruso, D. R., & Cherkasskiy, L. (2011). Emotional intelligence. In R. J. Sternberg & S. B. Kaufman (Eds.), *The Cambridge Handbook of Intelligence*. (pp. 528-549). New York, NY: Cambridge University Press.
- McDaniel, M.A., Hartman, N.S., Whetzel, D.L., & Grubb, W.L. (2007). Situational judgment tests, response instructions, and validity: A meta-analysis. *Personnel Psychology*, 60(1), 63-91. <https://doi.org/10.1111/j.1744-6570.2007.00065.x>
- McDaniel, M.A., Morgeson, F.P., Finnegan, E.B., Campion, M.A., & Braverman, E.P. (2001). Use of situational judgment tests to predict job performance: A clarification of the literature. *Journal of Applied Psychology*, 86(4), 730-740. <https://doi.org/10.1037/0021-9010.86.4.730>
- McDaniel, M., List, S., & Kepes, S. (2016). The "Hot Mess" of Situational Judgment Test Construct Validity and Other Issues. *Industrial and Organizational Psychology*, 9(1), 47-51. <https://doi.org/10.1017/iop.2015.115>
- Meshkat, M., & Nejati, R. (2017). Does Emotional Intelligence Depend on Gender? A Study on Undergraduate English Majors of Three Iranian Universities. *SAGE Open*. <https://doi.org/10.1177/2158244017725796>
- Monnier, M. (2015). Difficulties in defining socio-emotional intelligence, competences and competences-a theoretical analysis and structural suggestion. *International journal for research in vocational education and training*, 2(1), 59-84. <https://doi.org/10.13152/ijrvet.2.1.4>
- Oriol, X., Sala-Roca, J., & Filella, G. (2014). Emotional competences of adolescents in residential care: Analysis of emotional difficulties for intervention. *Children and Youth Services Review*, 44, 334-340.
- Pérez-González, J.C., Petrides, K.V., & Furnham, A. (2007). La medida de la inteligencia emocional rasgo. En J.M. Mestre y P. Fernández-Berrocal (Coords.) *Manual de inteligencia emocional* (pp.81-98). Pirámide.
- Riggio, H.R. & Riggio, R.E. (2002). Emotional Expressiveness, Extraversion, and Neuroticism: A Meta-Analysis. *Journal of Nonverbal Behavior*, 26, 195-218. <https://doi.org/10.1023/A:1022117500440>
- Roberts, R.D., MacCann, C., Matthews, G., & Zeidner, M. (2010). Emotional intelligence: Toward a consensus of models and measures. *Social and Personality Psychology Compass*, 4(10), 821-840. <https://doi.org/10.1111/j.1751-9004.2010.00277.x>
- Saarni, C. (1997). Emotional Competence and Self-Regulation in Childhood. En P. Salovey y D. Sluyter (Eds.), *Emotional Development and Emotional Intelligence. Educational Implication* (pp.35-64). Basic Books.
- Saarni, C. (2000). Emotional competence: A developmental perspective. En R. Bar-On, J.D.A. Parker y D. Goleman (Eds.), *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace* (pp.68-91). Jossey-Bass.

- Saarni, C. (2008). The interface of emotional development with social context. en M. Lewis, J. Haviland-Jones, y L. Feldman Barrett (Eds.), *The handbook of emotions, Third edition* (pp.332-347). Guilford Press.
- Sala-Roca, J., Filella, G., Oriol, X., Ros, A., Secanilla, E., Rodríguez, M., Soldevila, A. (2016). *Test Situacional de Desarrollo de Competencias Socioemocionales (DCSE-J)*. Versión revisada por Josefina Sala, Anna Soldevila, Sara Rodríguez Pérez, Aida Urrea-Monclús y Nair Zárata en 2020. Universitat Autònoma de Barcelona. Retrieved from <https://ddd.uab.cat/record/212951>
- Sala-Roca, J., Rodríguez-Pérez, S., Doval-Dieguez, E. (2021). Design and validation of a Situational Judgment Test of Socioemotional Competence Development in Young People. In revision
- Sánchez-Núñez, M.T., Fernández-Berrocal, P., Montañés, J., & Latorre, J.M. (2008). Does emotional intelligence depend on gender? The socialization of emotional competences in men and women and its implications. *Electronic Journal of Research in Educational Psychology*, 6(2), 455-474.
- Schneider, T.R., Lyons, J.B., & Khazon, S. (2013). Emotional intelligence and resilience. *Personality and Individual Differences*, 55(8), 909-914. <https://doi.org/10.1016/j.paid.2013.07.460>
- Secanilla, E. & Rodríguez, M. (2016). Guia per al desenvolupament de competències socioemocionals per a joves : estratègies per a les famílies. Universitat Autònoma. Retrieved from <https://ddd.uab.cat/record/147585>
- Soldevila, A. (2016). Guia per al desenvolupament de competències socioemocionals per a joves: estratègies d'intervenció per a professionals. Universitat Autònoma. DDD: Retrieved from <https://ddd.uab.cat/record/147654>
- Sorrel, M.A., Olea, J., Abad, F.J., de la Torre, J., Aguado, D., & Lievens, F. (2016). Validity and Reliability of Situational Judgement Test Scores A New Approach Based on Cognitive Diagnosis Models. *Organizational Research Methods*, 19(3), 506-532. <https://doi.org/10.1177/1094428116630065>
- Webster, E.S., Paton, L.W., Crampton, P., & Tiffin, P.A. (2020). Situational judgement test validity for selection: a systematic review and meta-analysis. *Medical Education*, 54(10), 888-902. <https://doi.org/10.1111/medu.14201>
- Wu, Y., Lu, J., Chen, N., & Xiang, B. (2018). The influence of extraversion on emotional expression: A moderated mediation model. *Social Behavior and Personality: an international journal*, 46(4), 641-652. <https://doi.org/10.2224/sbp.7049>
- Zárata-Alva, N. E., & Sala-Roca, J. (2019). Socio-emotional skills of girls and young mothers in foster care. *Children and Youth Services Review*, 100, 50-56. <https://doi.org/10.1016/j.childyouth.2019.02.036>

## HOW TO CITE THE ARTICLE

Urrea-Monclús, A., Rodríguez-Pérez, S., Sala-Roca, J., & Zárata-Alva, N.: Instrumentos psicoeducativos para la intervención en pedagogía social: validación criterial del test situacional desarrollo de competencias socioemocionales de jóvenes (DCSE-J). *Pedagogía Social. Revista Interuniversitaria*, 37, 55-67. DOI: 10.7179/PSRI\_2021.03

## AUTHOR'S ADDRESS

**AIDA URREA-MONCLÚS.** E-mail: [Aida.urrea@uab.cat](mailto:Aida.urrea@uab.cat)

**SARA RODRÍGUEZ-PÉREZ.** E-mail: [rodriguezpsara@uniovi.es](mailto:rodriguezpsara@uniovi.es)

**JOSEFINA SALA-ROCA.** E-mail: [Fina.sala@uab.cat](mailto:Fina.sala@uab.cat)

**NAIR ELIZABETH ZÁRATE-ALVA.** E-mail: [NairElizabeth.Zarate@uab.cat](mailto:NairElizabeth.Zarate@uab.cat)

## ACADEMIC PROFILE

**AIDA URREA-MONCLÚS.** Profesora lectora (ayudante doctor) Serra Hunter del Departamento de Teoría de la Educación y Pedagogía Social de la Universidad Autónoma de Barcelona. Su investigación y docencia se centra en la promoción de los derechos de la infancia tanto en el sistema de protección a la infancia como en el sistema educativo. Actualmente, participa en investigaciones para favorecer la participación de jóvenes en el sistema de protección, especialmente en su proceso de transición a la vida independiente y en los procesos de reunificación familiar. Forma parte del Grupo IARS (Infancia y Adolescencia en Riesgo Social), del Grupo GRISIJ y de la Cátedra Educación y Adolescencia.

ORCID: <https://orcid.org/0000-0002-8661-9191> Twitter: @aida\_aum

**SARA RODRÍGUEZ PÉREZ.** Profesora ayudante doctor del Departamento de Ciencias de la Educación de la Universidad de Oviedo. Es maestra, pedagoga y sexóloga. Coordinó y desarrolló el proyecto Asexora (Asesoramiento Sexológico dirigido a población joven) en colaboración con el Consejo de la Juventud del Principado de Asturias. Ha participado en proyectos de investigación sobre intervención con familias en espacios formativos, influencia del género en las decisiones académicas, bienestar de jóvenes ex-tutelados, educación emocional y Formación Profesional Dual. Actualmente forma parte del grupo IARS.

ORCID: <https://orcid.org/0000-0001-6964-9156> Twitter: @SaraRgzPz

**JOSEFINA SALA ROCA.** Profesora Titular del Departamento de Teoría de la Educación y Pedagogía Social de la Universidad Autónoma de Barcelona. Coordina el Grupo de Investigación en Infancia y Adolescencia en Riesgo Social (IARS). El grupo IARS ha desarrollado diversos estudios sobre el desarrollo de competencias socioemocionales y de empleabilidad de niños, niñas y jóvenes. También, en colaboración con FEPA, FEDAIA y DGAIA entre otros, ha desarrollado estudios sobre los factores que inciden en el bienestar y desarrollo positivo de los jóvenes tutelados, así como de las dificultades y apoyos a su transición a la vida independiente. Las investigaciones desarrolladas se han publicado en diversos artículos e informes.

ORCID: <https://orcid.org/0000-0001-9829-5131> Twitter: @IARS\_uab

**NAIR ELIZABETH ZÁRATE ALVA.** Profesora Asociada del Departamento de Teoría de la Educación y Pedagogía Social de la Universidad Autónoma de Barcelona. Psicóloga con más de 15 años de experiencia en el ámbito clínico-social-educativo. Profesora e investigadora en la UAB y UB, siendo sus líneas de estudio los colectivos en riesgo social y la Inteligencia Emocional en el contexto Iberoamericano. Psicoterapeuta en LOAPSI, miembro fundadora de Yachay (Red de Investigador@s y Profesionales Peruan@s en Cataluña), y miembro activa de la Sección de Psicología Clínica, de la Salud y Psicoterapia del Colegio Oficial de Psicología de Cataluña (COPC) y Europsy.

ORCID: <https://orcid.org/0000-0001-7351-6970>

