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TRANSLATING AND VALIDATING SCALE POSITIVE AND NEGATIVE EXPERIENCES IN SPANISH ADOLESCENTS

Carlos Salavera (a)*, Pablo Usán (b), José L. Antoñanzas (c)
*Corresponding author

(a) Faculty of Education, University of Zaragoza. c/ Pedro Cerbuna, 12, Zaragoza (Spain), salavera@unizar.es
(b) Faculty of Social and Human Sciences, c/ Ciudad Escolar, s/n, Teruel (Spain), pusan@unizar.es
(c) Faculty of Education, c/ Pedro Cerbuna, 12, Zaragoza (Spain), jlantona@unizar.es

Abstract

The objective of this study was to adapt and validate the scale of positive and negative experiences (SPANE) with Spanish adolescents, and to evaluate its relation with different scales of Subjective Well-being. SPANE is a recently developed questionnaire about affective well-being that can be considered an alternative to the instruments commonly used to evaluate positive/negative affects. The transcultural adaption process included translation and back translation stages, a panel of judges evaluating translations, and running a pilot test before obtaining a final version. The sample was formed by adolescents recruited for the study (N=1,060, *Mean age*=16.23 yrs). The adolescent's version of this questionnaire showed good reliability, validity and internal consistency. It is an easy instrument to understand and is quick to complete, so it is considered useful for evaluating positive and negative experiences. The exploratory factorial analysis (EFA) clearly showed that both SPANE-P and SPANE-N presented 56.8% of accumulated variance (SPANE-P explained 31.30%, SPANE-N accounted for 24.88% of this variance for well-being), and both were capable of explaining the unique variance for well-being. These results evidence SPANE's validity with adolescents and support its use as a measuring instrument to evaluate experiences and predict well-being.

Keywords: Evaluation, negative experiences, positive experiences, scale, subjective well-being.

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1. Introduction

Affects have been defined according to two orthogonal dispositions, with positive affect referred to pleasurable commitment and reflects to what extent one feels enthusiastic, active and alert; and negative affect referred to unpleasant engagement, reflects the extent to which one feels angry, upset or afraid (Watson, Clark, & Tellegen, 1998). Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi, & Biswas-Diener (2009) developed a new instrument to assess positive and negative feelings: the Scale of Positive and Negative Experiences (SPANE). SPANE consists in 12 elements; of which six measure positive feelings: SPANE-Positive Experiences (SPANE-P); and the other six measure negative feelings: SPANE Negative Experiences (SPANE-N). The SPANE scale was designed for the general population.

2. Problem Statement

Someone with a high positive affect is used to experiencing feelings of satisfaction, enthusiasm, energy, friendship, unity, affirmation and confidence, and is related to extroversion and optimism. However, someone with high negative affect tends to experience lack of interest, boredom, sadness, guilt, shame and envy. These people show a temperamental sensitivity to negative stimuli: stressors and unfavorable environments (Diener et al, 2009). This scale is not available for the Spanish adolescent population, and it may be interesting to work with these constructs in these ages

3. Research Questions

The simplicity of this new scale of affective well-being and the speed with which it is administered led us to its translation and validation into Spanish to provide the Spanish-speaking scientific community with a useful tool for evaluating positive and negative experiences.

Our previous experience in validating other instruments with adolescent populations (Salavera, Urcola-Pardo, Usán, & Jarie, 2017) led us to evaluate the usefulness of this scale in a population of this age group. The authors' permission was requested and obtained for this purpose. It is well-known that subjective constructs of well-being begin to develop in adolescence (Peets & Hodges, 2018; Salavera, Usán & Jarie, 2018; Walther & Hilbert, 2015).

4. Purpose of the Study

In the present study, a prospective design was used to analyze the psychometric properties of the Spanish SPANE and to analyze the relationships of this scale with other constructs of Subjective Well-Being (Affects, Satisfaction with life, Self-esteem and Subjective happiness). This study has two basic hypotheses: 1) the SPANE scale allows Spanish adolescents' positive and negative experiences to be measured; 2) the SPANE scale correlates with other subjective well-being constructs, and forms part of them.

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5. Research Methods

5.1. Participants

Sampling was of the stratified type. The primary sample unit was education centres, while the secondary one was Secondary Education. The research sample was made up of 1,060 secondary education students: 526 males (49.62%) and 534 females (50.38%) from five public Secondary Education centres in the Spanish city of Zaragoza. Their mean age was 16.23 years that fell the 14-18-year olds range, and the standard deviation was 2.203. They all participated voluntarily; signed informed consent and the ethical considerations of the Declaration of Helsinki were respected and met the ethical research criteria applied to human beings.

5.2. Measurements

The Scale of Positive and Negative Experiences (Diener et al, 2009):

The scale contains 12 self-report items; six evaluate positive experiences, while the other six evaluate negative experiences. The elements are classified on a scale of 1 to 5, where 1 means "very rarely or never" and 5 represents "quite often or always". The positive summed score (SPANE-P) may vary from 6 to 30, and the negative scale (SPANE-N) has the same range. The two scores can be combined by subtracting the negative score from the positive score, and the resulting SPANE-Balance (SPANE-B) scores may vary from -24 to 24.

- *The PANAS Scale (*Watson, Clark, & Tellegen, 1988*).*The PANAS (Positive and Negative) Scale includes 20 items, of which 10 refer to positive affects (PA) and 10 to negative affects (NA) on two Likert-type scales. They all refer to the time the scale is answered (right now), and score from 0 (not at all emotional) to 5 (extremely emotional). In the research, this scale obtained a Cronbach's alpha of 0.89 for PA and one of 0.88 for negative affect.
- *The Satisfaction with Life Scale* (SWLS; Diener, Emmons, Larsen & Griffin, 1985). It consists in a series of five statements, with which people must indicate their level of agreement or disagreement on a 7-point Likert-type scale (from 1 = strongly disagree to 7 = strongly agree). Scores may range from 5 to 35 points, where the highest scores indicate greater satisfaction with life. In this research, this scale obtained a Cronbach's alpha of .86.
- Rosenberg's (1965) *Self-Esteem Scale.* It is made up of 10 Likert-type items whose contents centre on one's own feelings of respect and acceptance of oneself. Half the items are positively described, while the other half are negatively described. Answers are provided on a 4-point scale (from 1 = Totally agree to 4 = Totally disagree). This scale has good internal consistency and obtained a Cronbach's alpha of .87.
- *Subjective Happiness Scale* (Lyubomirsky & Lepper, 1999). It measures overall subjective happiness that evaluates a category of well-being as an overall psychological phenomenon by contemplating the definition of happiness from the self-response perspective. It comprises four items with Likert-type responses. Its reliability in the present study was α= .84.

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5.3. Procedure

To select the sample, collaboration was requested from education centers by telephoning them. Once they confirmed their participation, a list of the participating centers was drawn up. When each scale was handed out, the participants were explained the research objectives, and the importance of answering all the items was stressed.

The participants had 30 minutes to complete the above-mentioned scales and informed consent. Participants were reminded that any collected information would remain anonymous and confidential in all cases. The data collected in the present study were obtained in September and October 2017. For the adaptation of SPANE to Spanish the classical back translation procedure was followed (Muñiz, Elosua, & Hambleton, 2013).

5.4. Data analysis

The statistical analysis was done using the SPSS software package for Windows, version 22.0. Factorial analyses were done by reducing data. Confirmatory analyses were run with the AMOS program, v 24.0, with the study sample to verify if the factorial structure of the Spanish version matched that in the original version. In this study, a combination of EFA and CFA was performed.

6. Findings

The research objective was to validate the SPANE scale by Diener et al. (2009) with adolescents. After performing the translation processes (see Figure 1), the first step was to study the reliability of scales. To this end, statistics was obtained (Table 1) as this scale had not been adapted to Spanish, and the intention was to analyze the adaptation made for the present research. This analysis informed us about the number of elements (variables) included in the analysis, and also about the Cronbach's alpha reliability coefficient value. From the scale's reliability perspective, this coefficient can be classified as good with values of 0.857 for the positive scale and of 0.801 for the negative one. Values over 0.8 tend to be considered good and indicate good internal consistency among the scale's elements.

After this first step, the next step was to run the factorial analysis of the scale. To make comparisons, we opted to define the model's data fit as being good if the ratio between the Chi-square and the degrees of freedom did not exceed 3 (Hu & Bentler, 1999). In our research, scales were below 3, which indicated a good fit and demonstrated their internal validity.

The Principal Components Method with Varimax rotation was used for factorizing after verifying the reliability of the factorial analysis with the following criteria: the correlations matrix presented a large number of correlations (87.4%) that took a value over .30, and with a determinant that equaled .002. Bartlett's Test of Sphericity showed that the variables were not independent (Bartlett's test = 1548.25, $p <$ .001). The Kaiser-Meyer-Olkin (KMO) test value for sampling sample adequacy was .864, which indicated that the correlations between pairs of variables could be almost explained by the other variables. All the Measures of Sampling Adequacy (MSA) values were above .82. These values indicated that it was worth running a factorial analysis of the correlation's matrix. As see in Table 1, two factors were obtained with an eigenvalue above 1. The criterion of assigning an item to the factor that presented a load over .40 was adopted, which explained 56.18% of total variance.

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The internal consistency (Table 1) of the two subscales had a Cronbach's alpha over 0.80. Therefore, we can state that the items that made them up measuref the same construct and were highly correlated, which indicates that they evaluate a person's experiences in the same line.

Table 01. Exploratory factorial analysis and internal consistency of SPANE

	Factor						
	1	**2**	**Mean**	**SD**	**Item-test correlation**	**Alpha if eliminated**	**Scale**
SPANE-P							
Positive	0.718		3.75	0.95	0.754**	0.840	
Good	0.458		4.06	0.72	0.614**	0.812	
Pleasant	0.463		4.15	0.69	0.664**	0.852	**Mean = 4.02**
Happy	0.895		4.04	0.79	0.828**	0.814	**Alpha† = 0.857**
Joyful	0.824		4.04	0.80	0.814**	0.820	
Contented	0.885		4.08	0.77	0.855**	0.805	
SPANE-N							
Negative		0.451	2.54	1.07	0.759**	0.743	
Bad		0.784	1.99	0.85	0.645**	0.773	
Unpleasant		0.768	1.92	0.85	0.713**	0.753	**Mean = 2.32**
Sad		0.454	2.37	0.93	0.758**	0.743	**Alpha† = 0.801**
Afraid		0.448	2.08	1.01	0.665**	0.780	
Angry		0.634	2.33	0.92	0.643**	0.779	
Eigenvalues	5.41	1.34					
% of explained variance	31.30	24.88					
% of accumulated explained variance	31.30	56.18					

**Note: $p < 0.01$

Figure 1 illustrates the confirmatory factorial analysis (CFA) result of the model generated in the exploratory study using structural equations by the maximum likelihood method to confirm the model's suitability as it proved sustainable and was composed of the two identified factors and 12 indicators in all. The normalized regression coefficients were statistically significant ($p < 0.05$) with values above 0.4, which indicates that all the indicators satisfactorily saturated with their respective latent variables. Moreover, the proportion of variance was 0.57 for the first factor and 0.65 for the second, which were acceptable (> 0.5); i.e., more than 50% of their variances were associated with their respective latent variables. The covariance among factors was -0.72. As it did not exceed 0.8, it did not present collinearity problems, which also evidenced its discriminant validity.

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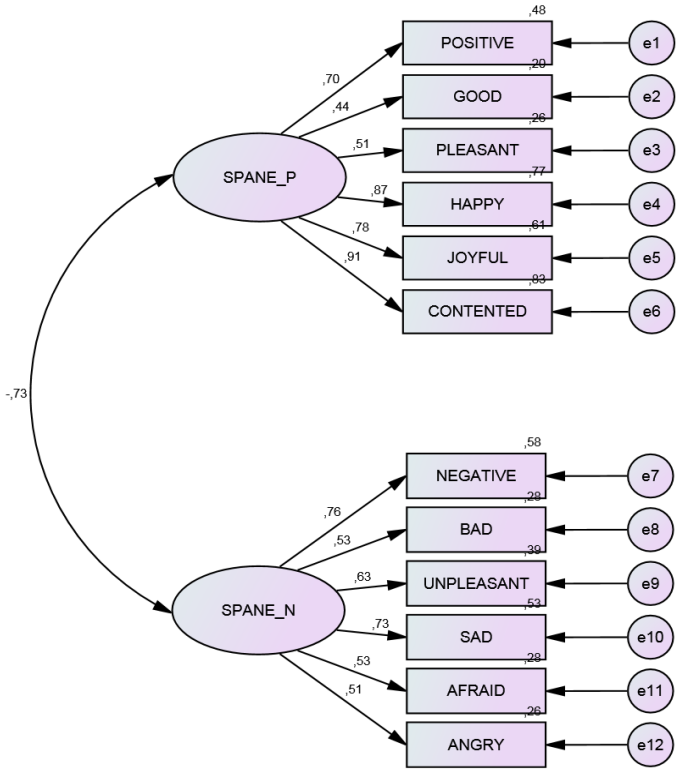

Figure 01. The standard estimate parameters of the CFA model

The different fit indices for the model's fit proved suitable. So we can state that the model proposed for the scale's factorial structure was sustainable: $\chi^2(53)=86.701$, $p < 0.001$; $\chi^2/gl = 1.635$; GFI = 0.97; CFI = 0.97; NFI = 0.94; TLI = 0.95; RMSEA = 0.052, 95%CI (0.048–0.063).

SPANE was analyzed for converging validity (Table 2) and was seen to be related in some way to the other scales that measure Subjective Well-being (self-esteem, satisfaction with life, subjective happiness and affects). The results revealed how all the SPANE subscales correlated well with the different scales. SPANE-P correlated positively with self-esteem, satisfaction with life, subjective happiness and positive affections, whereas it showed an inverse relationship with negative affections; i.e., a higher score on the SPANE-P scale, a lower score on the scale than measuring negative affects. Their correlations on the SPANE-N scale went in the opposite direction to that shown by SPANE-P. Thus it showed inverse relationships with self-esteem, satisfaction with life, subjective happiness and positive affects, but showed a direct relationship while with negative affects. The scores of the scale that measured the balance between positive and negative experiences (SPANE-B) went further along the SPANE-P scale. This could indicate the SPANE scale's suitability as an element of subjective well-being.

Table 02. Convergent validity of the whole sample

	SPANE-P	SPANE-N	SPANE-BALANCE
Self-esteem	.575**	-.582**	.629**
Satisfaction with life	.629**	-.480**	.604**
Happiness	.714**	-.606**	.722**
Positive affects	.559**	-.430**	.544**
Negative affects	-.476**	.664**	-.635**

**Note: $p < 0.01$

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7. Conclusion

This study validated the Scales of Positive and Negative Experiences (SPANE) with Spanish adolescents following a process of translation and protocolized adaptation, and then their psychometric properties were analyzed. An attempt was also made to evaluate the relationship of this scale with other constructs of subjective well-being.

This work presents not only the procedure followed to guarantee the scale's cultural and linguistic equivalence with its original version, but also an analysis that supports its internal consistency, validity and factorial structure. As regards its reliability, the obtained alpha coefficients indicated good internal consistency, as in previous works (Diener et al., 2009; Jovanovic, 2015). The model proposed for the factorial structure proved sustainable with two identified factors and 12 indicators in all. Therefore, the translated version of the SPANE scale gave satisfactory coefficients for all its subscales and its factorial structure. We therefore understand that these results favorably evidence the soundness of this measure's structure and indicate that the Spanish version of SPANE reliably replicates the original theoretical structure.

The results clearly revealed that both SPANE-P and SPANE-N presented optimum accumulated variance. The scale's validity was also evidenced in relation to other variables because, on the one hand, the SPANE subscales (SPANE-P and SPANE-N) scores showed good internal consistence among the scale elements, which was excellent from a reliability viewpoint; and, on the other hand, preliminary evidence was found for relations between SPANE and other subjective well-being measures (self-esteem, satisfaction with life, subjective happiness, positive and negative affects). Hence, we understand that this information makes the SPANE scale suitable for measuring the intended constructs, and that SPANE comes over as a short, easily applied scale that is simple to understand.

The Spanish version of the SPANE scale with adolescents provided satisfactory data and it adapted to the underlying theoretical model with good internal consistency and validity. Since positive and negative experiences were found in the subjective well-being construct (Diener *et al.*, 2009), it would be interesting to use SPANE in the future to measure these variables with more advanced studies, or to even continue to re-examine their properties. These results must be interpreted carefully given the study's limitations, which indicate that although the sample was statistically relevant, it should be extended to other population strata where a better association between these subjective well-being constructs could be found. It would be worthwhile conducting longitudinal studies that evaluate experiences and allow their evolution and their link with subjective well-being to be assessed over longer study periods.

The main conclusion drawn from the present research suggests that the SPANE scale can evaluate positive and negative experiences with adolescents, and it is a brief tool that is easy to administer. Despite the need for more similar research works, the findings herein indicate that SPANE is a useful tool for measuring adolescents' well-being. As future perspectives, it is worth emphasizing the need to implement specific education programs that work with constructs for well-being in the school given its importance for and implication in adolescents' development. Our research results encourage us to continue asking new questions that help us define new measurement tools and methodologies and find some answers that allow us to progress in the construction of the socio-affective development of adolescents.

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