anales de psicología / annals of psychology
2025, vol. 41, nº 1 (january), 29-40
https://doi.org/10.6018/analesps.603481

ISSN online: 1695-2294.
https://revistas.um.es/analesps

A validation study of the State Self-Esteem Scale-20 (SSES-20) and the State Self-Esteem Scale-6 (SSES-6) in a Spanish-speaking sample

Tamara Escrivá-Martínez[1,2,3], Guadalupe Molinari[4], Víctor Ciudad-Fernández[1,2*], Giulia Corno[5,6], and Rosa M. Baños[1,2,3]

[1]*Department of Personality, Evaluation and Psychological Treatment, Faculty of Psychology, University of Valencia, Valencia, Spain.*
[2]*Polibienestar Research Institute, University of Valencia, Valencia, Spain.*
[3]*CIBERObn Physiopathology of Obesity and Nutrition, Instituto de Salud Carlos III, Madrid, Spain.*
[4]*International University of Valencia, Valencia, Spain*
[5]*Groupe de Recherche Loricorps, Université du Québec à Trois-Rivières, Trois-Rivières, Canada.*
[6]*Centre de recherche de l'Institut universitaire en santé mentale de Montréal (CR-IUSMM), Montreal, Canada.*

Título: Un estudio de validación de la Escala de Autoestima Estado-20 (SSES-20) y la Escala de Autoestima Estado-6 (SSES-6) en una muestra de hablantes de español.

Resumen: La Escala de Autoestima Estado no se había estudiado en la población española. Nuestro objetivo fue evaluar la estructura factorial y consistencia interna de la Escala de Autoestima Estado (SSES-20 y SSES-6) en una muestra de hablantes de español. El segundo objetivo fue determinar su validez convergente y discriminante examinando su relación con variables como la autoestima rasgo, deseabilidad social, depresión y ansiedad. La muestra consistió en 713 españoles (79.4% mujeres; Edad Media = 25.32 años).

Los resultados sugieren que un modelo bifactor con un factor general y tres subdimensiones obtuvo un mejor ajuste para los datos del SSES-20. Para la versión SSES-6, un modelo jerárquico con tres factores de primer orden no correlacionados y un factor jerárquico común fue el que obtuvo mejor ajuste. Todas las dimensiones exhibieron una fiabilidad entre moderada y excelente. Todos los factores se correlacionaron positivamente con la autoestima rasgo y la deseabilidad social, mientras que se relacionaron inversamente con la depresión y la ansiedad estado. Finalmente, las dimensiones de autoestima de estado de rendimiento, apariencia y social del SSES-20 predijeron positivamente la depresión y la ansiedad estado usando modelos de regresión lineal. Ambas versiones españolas del SSES-20 y SSES-6 demostraron propiedades psicométricas adecuadas en esta muestra, sugiriendo una posible generalización a diversas poblaciones hispanas.

Palabras-clave: Autoestima. Autoestima estado. Propiedades psicométricas. Validación.

Abstract: The State Self-Esteem Scale has not been studied in the Spanish population yet. Our objective was to assess the factor structure and internal consistency of the State Self-Esteem Scale (SSES-20 and SSES-6) in a Spanish-speaking sample. The second objective was to determine its convergent and discriminant validity by examining its relationships with variables such as trait self-esteem, social desirability, depression, and anxiety. The sample consisted of 713 Spaniards (77.2% female; Mean Age = 25.32 years). Findings suggest that a bifactor model with a general factor and three subdimensions provided a better fit for SSES-20 data. For the SSES-6 version, a hierarchical model with three non-correlated first-order factors and a common hierarchical factor was found to be the best fit. All dimensions exhibited moderate to excellent reliability. All factors were positively linked to trait self-esteem and social desirability, while inversely related to depression and state anxiety. Finally, performance, appearance, and social state self-esteem dimensions from SSES-20 negatively predicted depression and state anxiety using linear regression models. Both Spanish versions, SSES-20 and SSES-6, demonstrated adequate psychometric properties within this sample, suggesting potential generalizability to diverse Spanish populations.

Keywords: Self-esteem. State self-esteem. Psychometric properties. Validation.

Introduction

Self-esteem has been one of the most studied psychological variables (Donnellan et al., 2015), yet there is no conceptual agreement as to its definition. It has been conceptualized as an individual's subjective evaluation of the worth of a person (Marsh & O'Mara, 2008). Higher self-esteem is related to higher positive affect, life satisfaction, and subjective happiness (Freire & Ferreira, 2020; Kurnaz, 2020), whereas low self-esteem constitutes a risk factor for depression, anxiety, and suicidal behavior (Jiang & Ngien, 2020; Liu et al., 2019; Moksnes & Reidunsdatter, 2019; Orth et al., 2014; Soto-Sanz, 2019).

Currently, there is an ongoing debate surrounding the temporal stability of self-esteem, with several studies questioning it (Hank & Baltes-Götz, 2019; Linton & Richard, 1996; Rentzsch et al., 2016). To evaluate the stability of this construct, various psychometric instruments have been developed (e.g., Self-esteem Stability Scale, Altmann & Roth, 2018). Traditionally, the focus has been on assessing general self-esteem, mainly evaluated through the Rosenberg Self-esteem scale (Rosenberg, 1965). However, more recently self-esteem has begun to be studied as a fluctuating construct over time, especially after different life transitions. For instance, Chung et al., (2014) have observed that self-esteem tends to change substantially during a semester in college years, from university to work (Reitz et al., 2020), and other studies have also found changes after marriage (Chen et al., 2016) and parenthood (van Scheppingen et al., 2018). Furthermore, according to Okada's (2010) meta-analytic study, the stability of self-esteem shows a significant and negative relationship with the level of self-esteem. Consequently, individuals with lower self-esteem are expected to exhibit greater fluctuations over time.

The relationship between trait self-esteem and state self-esteem has also sparked a discussion regarding their global versus domain-specific characteristics. While some researchers emphasize the assessment of domain-specific self-

*** Correspondence address [Dirección para correspondencia]:**
Víctor Ciudad-Fernández. Polibienestar Research Institute, University of Valencia, Valencia 46022, Spain. E-mail: victorcf.98@hotmail.com
(Recibido: 5-2-2024; revisado: 7-7-2024; aceptado: 8-7-2024)

esteem, others propose that global self-esteem forms the foundation for the establishment of domain-specific self-evaluations (Brown et al., 2001; Rentzsch et al., 2016). This hierarchical perspective implies that global self-esteem influences and shapes self-evaluations within specific domains, indicating a higher-order factor underlying the various aspects of self-esteem.

In this context, the State Self-Esteem Scale (SSES) developed by Heatherton & Polivy (1991), serves as a valuable tool for assessing both global state self-esteem and momentary fluctuations in self-esteem across performance, appearance, and social domains. This scale's psychometric properties have been extensively examined and tested in different populations (Al-Darmaki, 2015; Aslam, 2014; Brito et al., 2022; Chau et al., 2012; Heatherton & Polivy, 1991; Linton & Richard, 1996). However, recent studies have raised questions regarding the scale's underlying latent structure, prompting further investigation into its measurement properties. Previous research has supported a three-factor model, measuring appearance, performance, and social domains (Chau et al., 2012; Heatherton & Polivy, 1991), as well as a one-factor model in which those domains are treated as subfactors of a second-order factor reflecting the global state self-esteem dimension (Bagozzi & Heatherton, 1994). Recently, a bifactor model which captures the one and three subfactors structure has been proposed as a better fit (Brito et al., 2022; McCain et al., 2015). Bifactor models allow for each item to load onto both a general factor and specific factors. The general factor captures the variance that is shared across all items, whereas the specific factors account for the unique variance that is not explained by the general factor (Moore et al., 2020; Reise et al., 2007). These factor models have been widely used in psychometry measuring multidimensional constructs such as self-esteem or resilience (Hunsu et al., 2022; Jovanović, 2015).

In addition, a 6-item version of the SSES scale has been proposed using a hierarchical structure (Webster et al., 2022). In this structural model, factors are arranged in a hierarchy, with a general or global factor at the top and more specific subfactors or group factors beneath it (Moore et al., 2020). According to this model, the lower-order factors are affected by the higher-order factor, and the higher-order factor explains the shared variance among the lower-order factors. However, this short version with this specific structure of the SSES-6 has not been explored in other samples yet.

The current study

Given that SSES-20 and SSES-6 scales have yet to be validated in the Spanish population, the objective of this study is to further investigate the psychometric properties of the Spanish SSES. Specifically, this study aims to (i) test the factor structure and internal consistency of the SSES (long and short versions) in a Spanish-speaking sample; and (ii) assess the convergent and discriminant validity by examining its relationships with variables such as trait self-esteem, social desirability, depression and anxiety.

Methods

Participants

Data collection was made in two waves. In the first wave, 425 Spanish participants completed their sociodemographic data but only 410 also the instrument to be validated. In the second wave, another 396 Spanish participants were reached and 376 completed all questionnaires. This second wave included other scales to assess criterion validity. (i.e., trait self-esteem, depression, state anxiety and social desirability). The whole sample is composed mainly of women (77.2%) with a mean age of 25.32 years, ranging from 16 to 70. Most of the participants are single (49.1%) or in a relationship (40%). See Table 1 for details.

Table 1
Sociodemographic data descriptive statistics of total sample (n = 718)

Variables	*N (%) or M (SD)*
Sex	
Men	143 (19.9%)
Women	554 (77.2%)
Missing values	21 (2.9%)
Age	25.32 (9.56)
Civil status	
Single	343 (47.8%)
In a relationship	278 (38.7%)
Married	62 (8.6%)
Divorced	7 (1%)
Separated	3 (0.4%)
Widowed	4 (0.6%)
Missing values	21 (2.9%)

*Note. M and SD a*re used to represent mean and standard deviation, respectively.

Procedure

Participants from both waves were recruited through e-mail and social networks, and then they were able to access an online survey. The surveys were carried out using the Lime Survey web platform (encuestas.uv.es) and the objectives of the studies were explained to the participants. The study was approved by the University of Valencia Ethics Committee and performed following the ethical standards of the 1964 Declaration of Helsinki (procedure number: H1513854038939). All participants gave written informed consent before inclusion in the study.

Spanish translation of the SSES

Firstly, a native Spanish speaker, who was aware of the purpose of the study, translated the SSES items from English to Spanish. Secondly, a Spanish-English bilingual speaker who was not familiar with the questionnaire performed a back-translation from Spanish to English. The two English

versions were compared, and any discrepancies were resolved. Therefore, the Spanish version of the SSES was judged to be an accurate translation of the original English version. See the final Spanish version in Supplementary Information at the end of this article.

Measures

State Self-Esteem Scale (SSES; Heatherton & Polivy, 1991) is a 20-item instrument that assesses self-esteem at a given point in time. The scale is subdivided into 3 components of self-esteem: the performance subscale, which measures the extent to which individuals consider their performance worthy (e.g., I feel frustrated or rattled about my performance); the social subscale, which measures the evaluations people make about their relationships with others depending on the different roles in their lives (e.g., I am worried about what other people think of me); and the appearance subscale, which measures a person's concerns about appearance, attractiveness, and body image (e.g., I feel satisfied with the way my body looks right now). Items are answered using a 5-point Likert scale from 1 ("not at all") to 5 ("extremely"). The original questionnaire reported an excellent Cronbach's alpha for the total scale (α = .92) (Heatherton & Polivy, 1991). This scale was assessed in both waves of participants.

Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965) is a self-esteem scale that measures this construct as a trait. The scale is composed of 10 items that refer to self-respect and self-acceptance rated on a 4-point Likert-type scale, ranging from 1 (totally disagree) to 4 (totally agree). The original author reported internal consistency reliability ranging from .85 to .88 for college samples. In this study, the RSE Spanish version was used (Martín-Albo et al., 2007). The internal consistency coefficient found for the RSE Spanish version in the present study was excellent (α = .90; ω = .91).

Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001) is used as a measure of depression severity. The 9 items score from 0 ("not at all") to 3 ("nearly every day"). Cronbach's alpha of the original scale ranged from .86 to .89 (Kroenke et al., 2001). In this study, the Spanish PHQ-9 version was employed (Diez-Quevedo, 2001). The internal consistency coefficient found for the PHQ-9 in the present study was very good (α = .84; ω = .84).

Spielberger State Anxiety Inventory – Form Y (STAI-Y-s; Spielberger et al., 2008) consists of a brief self-report questionnaire designed to measure state (a temporary and fluctuating condition) anxiety. The scale is composed of 20 items that assess state anxiety at a particular point in time using a 4 Likert points scale ranging from 1 ("not at all") to 4 ("very much so"). This instrument has been shown as a reliable measure of state anxiety (*a* = .93). In this study, the Spanish version of the STAI-Y was used (Fonseca-Pedrero, 2012). The internal consistency coefficient found for the Spanish version of the state STAI-Y in the present study was excellent (α = .95; ω = .95).

Marlowe–Crowne Social Desirability Scale (MC–SDS; Crowne & Marlowe, 1960) is a 33-item self-report instrument which evaluates whether a person is concerned about social approval. Respondents are asked to indicate if each affirmation is true or false. Internal consistency of the original scale ranged from *a* = .75 to *a* = .85 (Borkenau & Ostendorf, 1992). The Spanish MS-SDS version has been used in the present study (Ferrando & Chico, 2000). The internal consistency coefficient found for the MC-SDS in the present study was moderate (α = .77; ω = .77).

Data analysis

Firstly, descriptive statistics, histograms, and box plots were obtained using R 4.1.3 and RStudio, both non-robust descriptive statistics (mean and standard deviation) and robust to non-normality (median and median absolute deviation) were included. Q-Q plots and Kolgomorov-Smirnov (KS) test for all instruments were also computed in order to explore the univariate normality assumption of data. Descriptive statistics, graphs, and KS tests were calculated using the "Psych" package (Revelle, 2022).

Then, construct validity of the Spanish SSES was estimated using Confirmatory Factor Analysis (CFA) conducted with EQS program, version 6.2. Model fit was evaluated using several criteria, specifically, the Satorra-Bentler Scaled Chi-Square test ($_{SB}\chi 2$), Comparative Fit Index (CFI), Standardized Root-Mean Squared Residuals (SRMR) and Root Mean Square Error of Approximation (RMSEA) with 90% CI. The following cutoff scores were used to determine a good fit: CFI above .90 (better if above .95), SRMR and RMSEA below .08 (Marsh et al., 2004). Internal consistency of the whole SSES-6, the SSES-20 and its subscales were assessed using Cronbach's (α) and Omega's reliability coefficients (ω). In addition, Spearman-Brown Coefficient for SSES-6 subscales was selected, since it is less biased than Cronbach's Alpha and Guttman's Lambda-2 when evaluating the reliability of a two items scale (Eisinga et al., 2013). Reliability was calculated using SPSS 28.0.

Furthermore, the discriminant and convergent validity of the Spanish SSES were also addressed. Zero-order correlations of the whole scale and its subscales with measures of trait self-esteem, depression, anxiety, and social desirability were selected. Since three extreme outliers were detected in PHQ, bivariate associations were calculated with and without them. Finally, we decided to exclude them for the final correlation analysis since they were overinfluencing our results (Pardo Merino, 2010). This plot was obtained using the "ggcorrplot" package in R (Kassambara et al., 2023). Lastly, we fitted two linear regression models using Performance, Social and Appearance subscales from the SSES-20 as independent variables. In the first model, the dependent variable was depression (PHQ), and in the second model, it was state anxiety (STAI). After fitting both linear models, all assumptions were checked, and we did not find evidence of serious problems with any of them. We did not remove outliers in

any regression model since the greater Cook's distance in both regression models was .15, (recommended range of acceptability from 0 to 1; Stevens, 1984). To get both linear regression tables and to explain the analysis "ApaTables" and "Report" packages were employed (Makowski et al., 2023; Stanley, 2021).

Results

Descriptive statistics

Descriptive statistics for all the variables included in the present study are presented in Table 2. The mean score on the SSES-20 scale is 76.9 (*SD* = 12.21). Regarding the three dimensions, participants show a high score in performance (*M* = 27.94; *SD* = 4.47) and social (*M* = 28.1; *SD* = 5.28), compared to appearance (*M* = 20.86; *SD* = 4.56). SSES-6 mean of the total score of the short version is 22.82 (*SD* = 4.26). Similarly, to the SSES-20 subscales, the performance (*M* = 8.03; *SD* = 1.78) and social (*M* = 7.73; *SD* = 1.89) dimensions are higher than the appearance subscale in the SSES-6 subscales (*M* = 7.07; *SD* = 1.79).

Confirmatory factor analysis

The factorability of the SSES items was examined using confirmatory factor analysis (CFA). The estimation method for all models was the Maximum Likelihood (ML) with robust correction. The robust correction was used to avoid the distributional problems of the data set since the data were not multivariate normally distributed (Mardia's normalized coefficient 43.56). First, a model containing a one global factor model was fit to the data (Model 1). Second, a model with three correlated first-order factors and a common superior factor was tested (Model 2). This model agrees with the original version of the questionnaire, a general second-order self-esteem fact, or and three first-order factors (Bagozzi & Heatherton, 1994; Heatherton, & Polivy, 1991). Third, a bifactor model including the one and three-factor models was analyzed (Model 3). This model allows testing the latent factors associated with the three dimensions of self-esteem as well as the latent general factor of global self-esteem. In this model, individual items can load both on the general factor and the specific factors (McCain et al., 2015). Finally, Models 4 and 5 test the one global factor and a hierarchical factor (three correlated first-order factors with a common superior factor) using the six-item version of the SSES recently proposed by Webster et al. (2022).

Table 2
Psychological variables descriptive statistics of total sample (n = 713 participants in the SSES variables and n = 376 in the others)

Variables	M	SD	Mdn	MAD
SSES-20	76.9	12.21	78	11.86
SSES-20 Performance	27.94	4.47	29	4.45
SSES-20 Social	28.1	5.28	29	5.93
SSES-20 Appearance	20.86	4.56	21	4.45
SSES-6	22.82	4.26	23	4.45
SSES-6 Performance	8.03	1.78	8	1.48
SSES-6 Social	7.73	1.89	8	1.48
SSES-6 Appearance	7.07	1.79	7	1.48
RSE	32.51	5.69	34	5.93
MCSDS	14.56	5.07	15	5.93
PHQ	6.32	4.63	5	2.97
STAI State	17.61	11.43	15	10.38

Note. M, SD, Mdn and MAD are used to represent mean, standard deviation, median and median absolute deviation, respectively. All Kolgomorov-Smirnov tests were conducted and were found to be statistically significant ($p < .001$) from univariate normality. SSES-20: State Self-Esteem Scale 20 items; SSES-20 Performance: State Self-Esteem Scale performance subscale 20 items; SSES 20-Appearance: State Self-Esteem Scale appearance subscale 20 items; SSES 20-Social: State Self-Esteem Scale social subscale 20 items; SSES-6: State Self-Esteem Scale 6 items; SSES-6 Performance: State Self-Esteem Scale performance subscale 6 items; SSES-6 Appearance: State Self-Esteem Scale appearance subscale 6 items; SSES-6 Social: State Self-Esteem Scale social subscale 6 items; RSE: Rosenberg Self-esteem Scale; MCSDS: Marlowe–Crowne Social Desirability Scale; PHQ: Patient Health Questionnaire; STAI State: Spielberger State Anxiety Inventory - Form Y.

Models 1 and 2 fit the data poorly. Fit indexes indicate that the bifactor model (i.e., Model 3) of the Spanish version of the SSES-20 was the best representation of our data, being all fit indices acceptable to good (Figure 1). In terms of the SSES-6, the hierarchical model had a better fit to the data compared to the one global factor solution (Figure 2). All fit indices are reported in Table 3.

Table 3
Confirmatory factor analysis fit indexes for the proposed models (n = 713)

	SBχ^2	df	*p*	RMSEA	90%CI LL UL	SRMR	CFI
Model 1: SSES-20	1908.787	170	< .001	.12	(.111, .125)	.093	.629
Model 2: SSES-20	1069.17	164	< .001	.088	(.083, .093)	.093	.807
Model 3: SSES-20	508.408	144	< .001	.060	(.054, .065)	.058	.922
Model 4: SSES-6	121.056	9	< .001	.132	(.111, .153)	.068	.855
Model 5: SSES-6	1.45	3	>.05	.001	(.000, .047)	.013	.998

Note. SBχ2 = Satorra-Bentler Scaled Chi-Square test; df = Degrees of Freedom; RMSEA = Root Mean Square Error of Approximation; LL and UL = Lower and Upper Limits; SRMR = Standardized Root Mean Square Residual; CFI = Comparative Fit Index; SSES-20 = State Self-Esteem Scale 20 items; SSES-6: State Self-Esteem Scale 6 items.

Figure 1
SSES-20 bifactor model structure

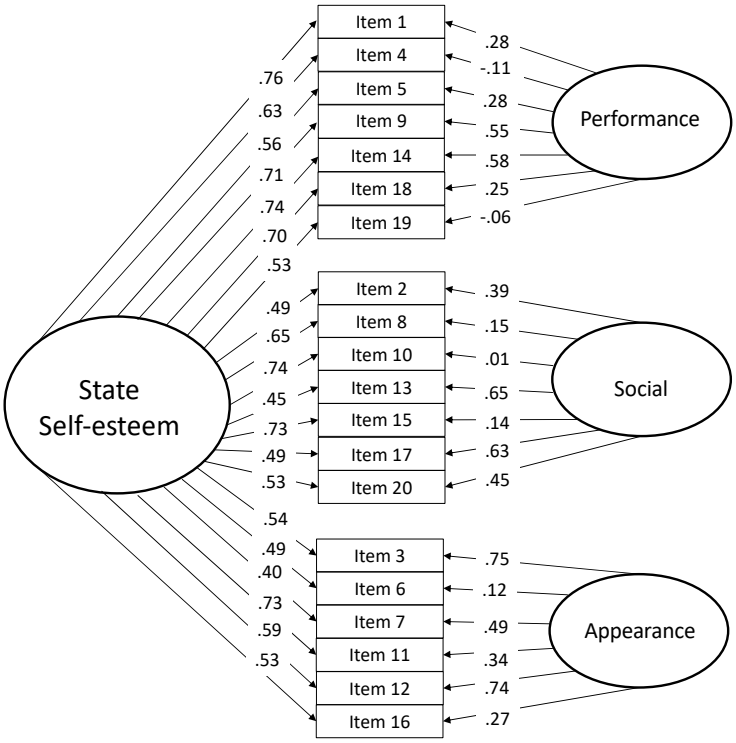
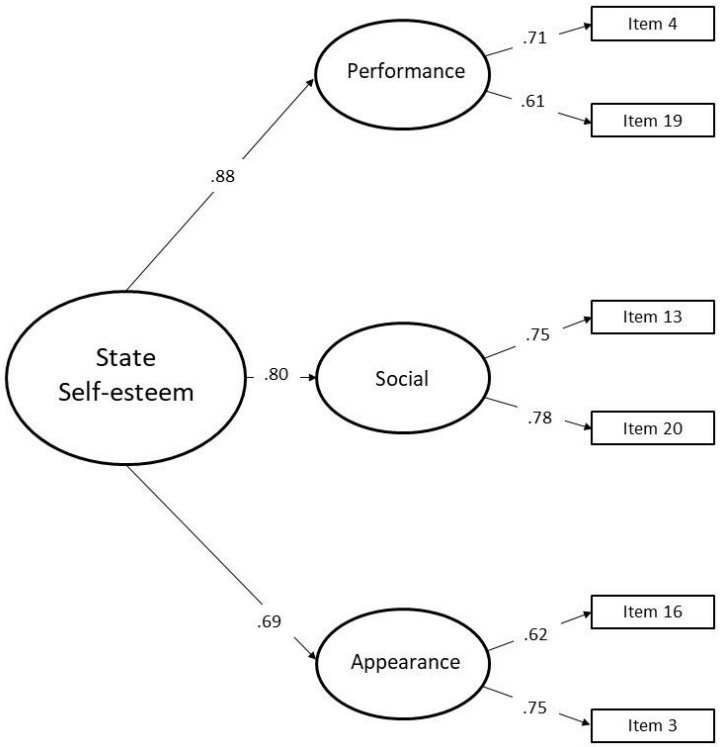


Figure 2
SSES-6 hierarchical model structure



Reliability

SSES-20 general dimension showed an excellent internal consistency (α = .91, ω = .91). Similarly, their respective subscales (Performance: α = .78, ω = .80; Social: α = .86, ω = .87; Appearance: α =.83, ω = .84) also showed a high reliability. Regarding SSES-6 the reliability was lower than the 20-item version (α = .76, ω = .75). Reliability decreased to a great extent in terms of the three subscales in the version of 6 items. Nonetheless, the Spearman-Brown coefficients indicate acceptable values for these two-item subscales (Performance = .61; Social = .74; Appearance = .64).

Criterion validity

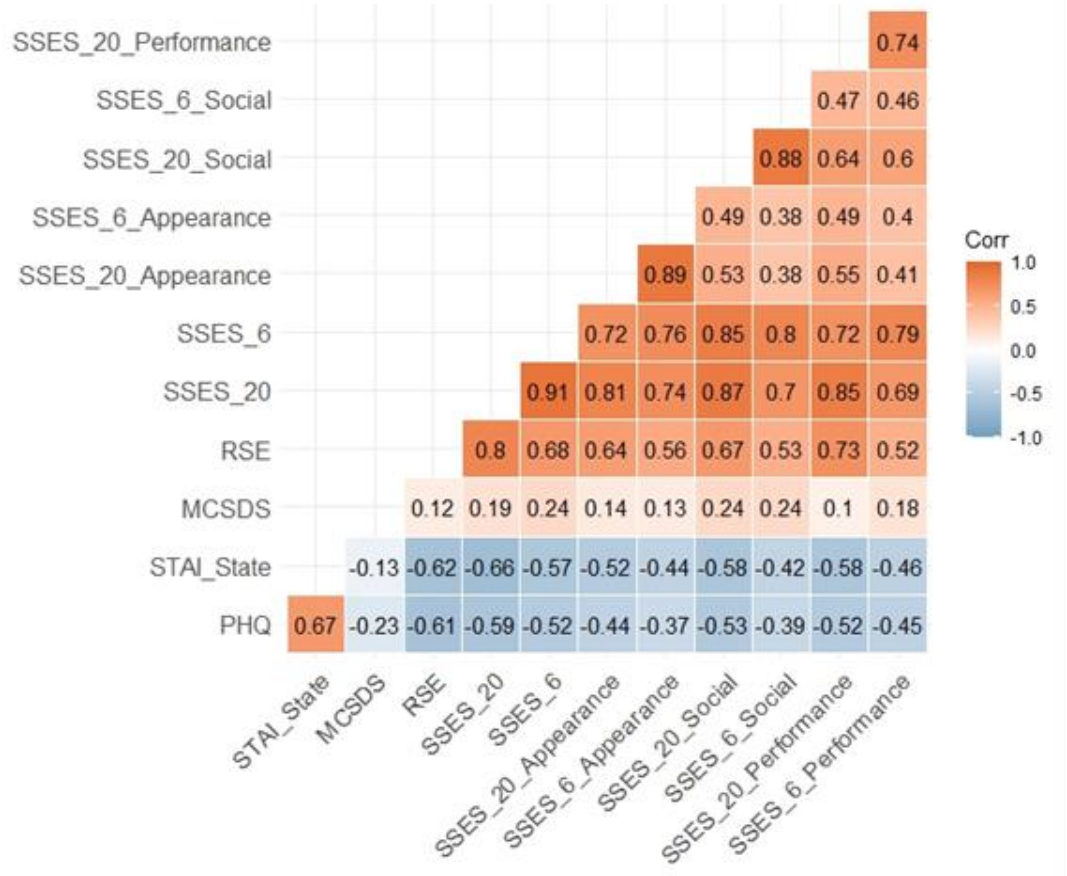
Figure 3 shows the zero-order correlations and scatterplots of the variables, along with the corresponding linear regression slopes. Correlation coefficients indicate high, positive, and significant relationships among all the measures and subscales of State Self-esteem. There are also strong and positive associations between Rosenberg's self-esteem scale with the proposed instrument (zero-order correlation coefficients all are greater than .4).

As expected, there are negative and highly significant correlations between all self-esteem measures with both depression and anxiety-state scores (zero-order correlation coefficients range from -.36 to -.65).

Regarding social desirability, results are more inconsistent. Although a positive and significant relationship is observed between most self-esteem scales and subscales with this construct, not all relationships are significant. Concretely, the relationship of social desirability with the SSES-20 Performance subscale is not significant ($p < .05$), although a trend can be observed on the scatterplot.

Figure 3

Zero-order correlations and scatterplots among SSES-20 and SSES-6 scales and subscales, and trait self-esteem, depression, anxiety, and social desirability (n = 376)



Note. *: Correlations significant at p < .05; **: Correlations significant at p < .01; ***: Correlation significant at p < .001. SSES_20: State Self-Esteem Scale 20 items; SSES_20_Performance: State Self-Esteem Scale performance subscale 20 items; SSES_20_Appearance: State Self-Esteem Scale appearance subscale 20 items; SSES_20_Social: State Self-Esteem Scale social subscale 20 items; SSES_6: State SelfEsteem Scale 6 items; SSES_6_Performance: State Self-Esteem Scale performance subscale 6 items; SSES_6_ Appearance: State Self-Esteem Scale appearance subscale 6 items; SSES_6_ Social: State Self-Esteem Scale social subscale 6 items; RSE: Rosenberg Self-esteem Scale; MCSDS: Marlowe–Crowne Social Desirability Scale; PHQ: Patient Health Questionnaire; STAI_State: Spielberger State Anxiety Inventory - Form Y.

Linear regression models

A linear model was fitted to predict PHQ using the three subscales of the SSES-20 (i.e., performance, social and appearance subscales) as independent variables. The statistical model explains a substantial proportion of variance (R^2 = .33; p < .001) compared to the null model. All variables negatively and significantly predict depression, but not in the same measure. Standardized coefficients of the performance (β = -.27) and social (β = -.25) subscales are higher than the appearance coefficient (β = -.16), thus sharing a higher proportion of variance with depression scores compared to the appearance subscale.
See Table 4 for details.

Table 4
Multiple linear regression predicting depression (PHQ) (n = 376)

Predictor	*b*	*Beta* 95% CI [LL, UL]	β	*β* 95% CI [LL, UL]	Fit
(Intercept)	23.30**	[20.78, 25.83]			R^2 = .334**
SSES-20 Performance	-.28**	[-.39, -.16]	-.27	[-.38, -.16]	95% CI [.26,.40]
SSES-20 Social	-.21**	[-.31, -.12]	-.25	[-.36, -.14]	
SSES-20 Appearance	-.16**	[-.26, -.06]	-.16	[-.26, -.06]	

Note. b represents unstandardized regression weights. *β* indicates the standardized regression weights. LL and UL indicate the lower and upper limits of a confidence interval, respectively. SSES-20 Performance: State Self-Esteem Scale performance subscale 20 items; SSES-20 Appearance: State Self-Esteem Scale appearance subscale 20 items; SSES-20 Social: State Self-Esteem Scale social subscale 20 items; PHQ: Patient Health Questionnaire. * indicates p < .05. ** indicates p < .01.

Then, a second multiple linear regression was fitted to predict state anxiety. This linear model accounted for a higher proportion of the variance of the state anxiety (R^2 = .42, p < .001) compared to the depression model (R^2 = .33; p < .001) both compared to their respective null models. Similarly, as in the depression model, all subscales negatively predicted state anxiety scores. In addition, these three independent variables showed similar standardized coefficients among themselves, thus sharing a similar proportion of variance among them with depression scores. See Table 5 for details.

Table 5
Multiple linear regression predicting state anxiety (STAI State) (n = 376)

Predictor	*b*	*Beta* 95% CI [LL, UL]	β	β 95% CI [LL, UL]	Fit
(Intercept)	65.93**	[59.85, 72.01]			R^2 = .419**
SSES-20 Performance	-.69**	[-.96, -.41]	-.26	[-.37, -.16]	95% CI [.34,.48]
SSES-20 Social	-.63**	[-.86, -.40]	-.29	[-.39, -.18]	
SSES-20 Appearance	-.54**	[-.78, -.30]	-.22	[-.31, -.12]	

Note. b represents unstandardized regression weights. β indicates the standardized regression weights. LL and UL indicate the lower and upper limits of a confidence interval, respectively. SSES-20 Performance: State Self-Esteem Scale performance subscale 20 items; SSES-20 Appearance: State Self-Esteem Scale appearance subscale 20 items; SSES-20 Social: State Self-Esteem Scale social subscale 20 items; STAI State: Spielberger State Anxiety Inventory - Form Y, state version. * indicates p < .05. ** indicates p < .01.

Discussion

The aim of this study was to extend previous research on the SSES in a Spanish sample and test different competing factorial structures in both long and short versions of this scale. We also aimed to explore the convergent and discriminant validity of both instruments.

Regarding the measurement model, 6 different psychometric models were selected based on previous literature: 4 for the SSES-20 and 2 for the SSES-6. Our results indicated that the bifactor model demonstrated the best fit for the SSES-20, while the hierarchical factor structure was the most suitable for the SSES-6. These findings align with previous research that has reported adequate fit indices when assessing the factorial structure of both scales (Brito et al., 2022; Webster et al., 2022). Nonetheless, it is important to note that there is still some disagreement in the literature regarding the optimal structure of the SSES. For instance, McCain et al. (2015) reported poor fit indices for both the bifactorial and hierarchical models in a European-American student sample. Hence, the debate around the structure of this scale seems to be still ongoing, with no clear consensus reached yet. One reason could be the limited number of psychometric studies specifically examining the adequacy of the bifactor and hierarchical models for the SSES-20, with many studies primarily focusing exclusively on exploratory factor analysis (e.g., Al-Darmaki et al., 2015; Chau et al., 2012; Linton & Marriott, 1996). Furthermore, it should be noted that bifactor models may have a tendency to overfit due to their high flexibility (Bonifay & Cai, 2017). Specifically, they might show a better fit to the data as the only major constraint imposed on the data is the group factor on which each item is loaded (Bornovalova et al., 2020). Essentially, the fact that this model absorbs as much item variance as possible into the general or group factors may be problematic when comparing different plausible factor solutions.

Internal consistency of SSES was also explored in the present study, and the results indicated excellent reliability for the SSES-20 general factor, and moderate reliability for its subscales, being even higher than in the original validation study (Heatherton & Polivy, 1991). However, reliability indicators were lower for SSES-6. Of particular concern were the Spearman-Brown coefficients for the Performance and Appearances subscales, both being lower than .65. It is worth mentioning that the use of scales that include only 2 items has been criticized by some authors (Eisinga et al., 2013) due to the greater the potential for measurement error and the limited ability to adequately capture the construct under study (Emons et al., 2007). Nevertheless, abbreviated scales such as the SSES-6 may have utility in laboratory settings, in which it is necessary to manipulate participants' self-esteem, or evaluate the fluctuations over short periods. For instance, SSES-6 has recently been used in the field of social media, to observe the influence of the use of these platforms on this construct (Alhoei, 2022; Alfasi, 2019; Redondo, 2022).

The present study has also found several constructs to be linearly associated with both SSES-20 and SSES-6. Trait self-esteem, as assessed through the Rosenberg self-esteem questionnaire, was strongly and positively associated with all scores and subscales of both instruments. These findings have been replicated in different validation studies (Linton & Marriott, 1996; Webster et al., 2022). In addition, the intensity of the correlations between the different subscales is similar to those reported in the original validation, with a relatively lower association observed between the appearance subscale of the SSES-20 and trait self-esteem (Heatherton & Polivy, 1991). However, this trend was not observed in the most recent validation of the SSES-6 (Webster et al., 2022).

Regarding social desirability, our results are mixed. Significant positive correlations were found with both state self-esteem scales and their subdimensions, but no with the performance dimension from the SSES-20. The association between social desirability and self-esteem has been replicated in several studies (Davenport et al., 2012; Riketta, 2004). In addition, a significant linear relationship with self-esteem, especially social self-esteem, was found in the original validation study of the SSES-20 (Heatherton & Polivy, 1991). This association could be explained by the tendency of individuals with high self-esteem to attribute socially desirable characteristics to themselves while denying socially undesirable traits (Mesmer-Magnus, 2006; Robins et al., 2001). However, it remains to be explained why there is not a significant correlation with the performance dimension in our study.

As for depression and anxiety, a strong inverse association with self-esteem was observed in our work. Rosenberg himself, in 1965, observed a clear inverse relationship between anxiety and the trait self-esteem scale, and similar associations have also been observed with state self-esteem (Suliman & Halabi, 2007). More recently, the meta-analysis of Sowislo & Orth (2013) with longitudinal studies have further supported the significant influence of self-esteem on depressive symptoms and anxiety. Notably, our study's regression coefficients were relatively higher than those found in the meta-analysis by Sowislo & Orth (2013), which reported $\beta = -.16$ for depression and $\beta = -.08$ for anxiety. This difference may be attributed due to the cross-sectional design of our research, which may have resulted in stronger association between the variables.

The inverse relationship established between anxiety and self-esteem could be explained by the anxiety-buffer hypothesis. This theory proposes that self-esteem, conceptualized as a feeling of self-worth, acts as a protective factor in response to psychological threats or stressors in life, thus mitigating the anxiety (Greenberg et al., 1992). Regarding the relationship between depression and self-esteem, there is much open debate (see Orth & Robins, 2013). One of the possible explanations is the vulnerability model, which postulates that cognitions of low self-esteem individuals (i.e., negative beliefs) play a fundamental role in the development of depression (Beck, 1967). However, alternative models such as the scar model have emerged, suggesting that low self-esteem is a consequence of psychopathology rather than being one of its causes (see Zeigler-Hill, 2011).

Regarding the two linear regression models, both show that the three subscales are significant predictors of both depression scores and state anxiety scores, reaffirming the findings from the correlation analyses. Particularly noteworthy is the lower proportion of shared variance of the appearance subscale in the depression model. These results align with the original validation, where a lower correlation coefficient was observed between the appearance subscale and the Beck Depression Inventory, a measure of depression (Beck & Steer, 1987). This discrepancy might be attributed to the social (e.g., "I am worried about whether I am considered a success or a failure") and performance (e.g., "I feel confident in my abilities") subscales items being more pertinent to depression compared to items from the appearance subscale (e.g., "I am satisfied with my appearance right now"). Despite the established relationship between low body dissatisfaction and depression (Silva et al., 2019), it is plausible that the Patient Health Questionnaire, used to evaluate depression (Kroenke et al., 2001), incorporates a higher number of items related to these two subscales than the appearance scale since appearance is not a central symptom in depression (American Psychiatric Association, 2022).

Strengths of the study

This paper presents several advantages for researchers. First, the SSES translation contributes to a greater understanding of the differences between self-esteem measures, providing a more effective solutionfor laboratory or field-work involving manipulations. Second, a significant advantage is the division of SSES into three subscales, which explore different components of self-esteem. The availability of measuring self-esteem linked to performance, social component, or appearance is an important tool for researchers

who want to formulate more specific hypotheses and test effects focused on particular aspects of self-esteem.

These results have practical implications. On one hand, the Spanish version of the SSES allows for scoring either as one global measure of self-esteem or as three separate dimensions of self-esteem. This flexibility gives researchers the opportunity to use it depending on the research objectives. On the other hand, the validation of the short version of the SSES is especially relevant for studies demanding brief assessments (e.g., ecological momentary assessments using experience sampling or longitudinal studies).

Limitations and future directions

Importantly, this study is not without its limitations. First, test-retest analyses were not conducted and therefore it is not possible to conclude about the stability of the scale in this population. Further studies need to establish the temporal stability in Spanish samples. Second, we used a web-delivered administration procedure, and it remains uncertain whether this might have influenced our findings. However, it is worth noting that online questionnaires have successfully been used in psychology research, demonstrating equivalent psychometric properties (Carlbring et al., 2007; Gordon & McNew, 2008). Lastly, the selection of the sample was incidental and was predominantly composed of college students, which can pose problems when making statistical inferences about the Spanish population. Thus, future work could address this problem by trying to replicate the measurement model using confirmatory factor analysis in different populations (e.g., elderly, adolescents or clinical samples).

Conclusions

In conclusion, the results of this study offer some evidence supporting the utility of the State Self-Esteem Scale for being employed in the Spanish population. It confirms that the SSES measures three distinct components within the state self-esteem construct. This contribution may have important theoretical but also practical implications in ongoing self-esteem research in Spanish settings. These results provide further evidence of the sound psychometric properties of the SSES consistent with those offered by Heatherton and Polivy (1991), thus establishing the SSES-20 as an adequate instrument for measuring fluctuations in state esteem. Finally, the psychometric structure of the 6-item version has also been studied, being a suitable option for studies in which is necessary to evaluate state self-esteem in a brief form. Overall, this study expands our understanding of self-esteem measurement and offers researchers a reliable tool for investigating state self-esteem dynamics in the Spanish population.

Complementary information

Acknowledgments.- VC-F is supported by his grant FPU21/00527 funded by the Ministry of Science and Innovation/State Research Agency/10.13039/501100011033 and by the European Social Fund - Investing in your future.
Funding.- This work was supported by CIBEROBN, an initiative of the ISCIII (ISC III CB06 03/0052).
Disclosure statement.- The authors report there are no competing interests to declare.

References

Alhoei, S. (2022). *The impact of beauty influencers on young women's self-esteem and facial satisfaction*. [Unpublished master's thesis]. Tilburg University).

Al-Darmaki, F., Ahammed, S., Hassane, S., Abdullah, A., Yaaqeib, S., & Dodeenm, H. (2015). Validation of Arabic State Self-Esteem and Satisfaction with Life Scales among Married Individuals from the United Arab Emirates. *International Journal of Humanities and Social Science*, *5*(10), 76-83.

Alfasi, Y. (2019). The grass is always greener on my Friends' profiles: The effect of Facebook social comparison on state self-esteem and depression. *Personality and Individual Differences*, *147*, 111-117. https://doi.org/10.1016/j.paid.2019.04.032

American Psychiatric Association. (2022). *Diagnostic and Statistical Manual of Mental Disorders*. American Psychiatric Association Publishing. https://doi.org/10.1176/appi.books.9780890425787

Aslam, S., & Aftab, S. (2014). Urdu Adaptation and Validation of State Self-Esteem Scale. *Pakistan Journal of Psychology*, *45*(2), 59–80.

Bagozzi, R. P., & Heatherton, T. F. (1994). A general approach to representing multifaceted personality constructs: Application to state self-esteem. *Structural Equation Modeling: A Multidisciplinary Journal*, *1*(1), 35-67. https://doi.org/10.1080/10705519409539961

Beck, A. T. (1967). *Depression: Clinical, experimental and theoretical aspects*. New York: Harper & Row.

Beck A. T., & Steer, R. A. (1987). *Manual for the Beck Depression Inventory*. San Antonio, Tex: Psychological Corporation.

Borkenau, P., & Ostendorf, F. (1992). Social desirability scales as moderator and suppressor varables. *European Journal of Personality*, *6*(3), 199-214. https://doi.org/10.1002/per.2410060303

Bornovalova, M. A., Choate, A. M., Fatimah, H., Petersen, K. J., & Wiernik, B. M. (2020). Appropriate use of bifactor analysis in psychopathology research: Appreciating benefits and limitations. *Biological psychiatry*, 88(1), 18-27. https://doi.org/10.1016/j.biopsych.2020.01.013

Bonifay, W., & Cai, L. (2017). On the complexity of item response theory models. *Multivariate behavioral research*, 52(4), 465-484. https://doi.org/10.1080/00273171.2017.1309262

Brito, T. R. D. S., Pereira, C. R., Santos, F. Á. D., & Nery, N. N. D. F. (2022). Measuring the General and Specific Domains of Self-Esteem: The Short-form of the State Self-Esteem Scale. *Psychological Reports*, 003329412210779. https://doi.org/10.1177/00332941221077909

Brown, J. D., Dutton, K. A., & Cook, K. E. (2001). From the top down: Self-esteem and self-evaluation. *Cognition and Emotion*, *15*(5), 615-631. https://doi.org/10.1080/02699930126063

Carlbring, P., Brunt, S., Bohman, S., Austin, D., Richards, J., Öst, L.-G., & Andersson, G. (2007). Internet vs. paper and pencil administration of questionnaires commonly used in panic/agoraphobia research. *Computers in Human Behavior*, *23*(3), 1421-1434. https://doi.org/10.1016/j.chb.2005.05.002

Chau, J. P., Thompson, D. R., Chang, A. M., & Woo, J. (2012). Psychometric properties of the Chinese version of State Self-Esteem Scale: an analysis of data from a cross-sectional survey of patients in the first four months after stroke. *Journal of Clinical Nursing*, *21*(21-22), 3268-3275. https://doi.org/10.1111/j.1365-2702.2011.03724.x

Chen, E. Y. J., Enright, R. D., & Tung, E. Y. L. (2016). The influence of family unions and parenthood transitions on self-development. *Journal of Family Psychology*, *30*(3), 341-352. https://doi.org/10.1037/fam0000154

Chung, J. M., Robins, R. W., Trzesniewski, K. H., Noftle, E. E., Roberts, B. W., & Widaman, K. F. (2014). Continuity and change in self-esteem during emerging adulthood. *Journal of Personality and Social Psychology*, *106*(3), 469–483. https://doi.org/10.1037/a0035135

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, *24*(4), 349–354. https://doi.org/10.1037/h0047358

Davenport, K., Houston, J. E., & Griffiths, M. D. (2012). Excessive Eating and Compulsive Buying Behaviours in Women: An Empirical Pilot Study Examining Reward Sensitivity, Anxiety, Impulsivity, Self-Esteem and Social Desirability. *International Journal of Mental Health and Addiction*, *10*(4), 474–489. https://doi.org/10.1007/s11469-011-9332-7

Stanley, D. (2021). apaTables: Create American Psychological Association (APA) Style Tables. R package version 2.0.8. https://CRAN.R-project.org/package=apaTables

Diez-Quevedo, C., Rangil, T., Sánchez-Planell, L., Kroenke, K., & Spitzer, R. L. (2001). Validation and Utility of the Patient Health Questionnaire in Diagnosing Mental Disorders in 1003 General Hospital Spanish Inpatients. *Psychosomatic Medicine*, *63*(4), 679–686. https://doi.org/10.1097/00006 842-200107000-00021

Donnellan, M. B., Trzesniewski, K. H., & Robins, R. W. (2015). Measures of Self-Esteem. In *Measures of Personality and Social Psychological Constructs* (pp. 131–157). Elsevier. https://doi.org/10.1016/B978-0-12-386915-9.00006-1

Eisinga, R., Grotenhuis, M. T., & Pelzer, B. (2013). The reliability of a two-item scale: Pearson, Cronbach, or Spearman-Brown? *International Journal of Public Health*, *58*(4), 637–642. https://doi.org/10.1007/s00038-012-0416-3

Emons, W. H. M., Sijtsma, K., & Meijer, R. R. (2007). On the consistency of individual classification using short scales. *Psychological Methods*, *12*(1), 105–120. https://doi.org/10.1037/1082-989X.12.1.105

Ferrando, P. & Chico, E. (2000). Adaptación y análisis psicométrico de la escala de deseabilidad social de Marlowe y Crowne. [Adaptation and Psychometric Analysis of the Marlowe-Crowne Social Desirability Scale]. *Psicothema*, *12*(3), 383–389.

Fonseca-Pedrero, E., Paino, M., Sierra-Baigrie, S., Lemos-Giráldez, S. & Muñiz, J. (2012). Propiedades psicométricas del "Cuestionario de ansiedad estado-rasgo" (STAI) en universitarios. [Psychometric Properties of the 'State-Trait Anxiety Inventory' (STAI) in University Students]. *Behavioral Psychology/Psicología Conductual*, *20*(3), 547–561.

Freire, T., & Ferreira, G. (2020). Do I Need to Be Positive to Be Happy? Considering the Role of Self-Esteem, Life Satisfaction, and Psychological Distress in Portuguese Adolescents' Subjective Happiness. *Psychological Reports*, *123*(4), 1064–1082. https://doi.org/10.1177/0033294119846064

Gordon, J. S., & McNew, R. (2008). Developing the Online Survey. *Nursing Clinics of North America*, *43*(4), 605–619. https://doi.org/10.1016/j.cnur.2008.06.011

Greenberg, J., Solomon, S., Pyszczynski, T., Rosenblatt, A., Burling, J., Lyon, D., Simon, L., & Pinel, E. (1992). Why do people need self-esteem? Converging evidence that self-esteem serves an anxiety-buffering function. *Journal of Personality and Social Psychology*, *63*(6), 913–922. https://doi.org/10.1037/0022-3514.63.6.913

Hank, P., & Baltes-Götz, B. (2019). The stability of self-esteem variability: A real-time assessment. *Journal of Research in Personality*, *79*, 143–150. https://doi.org/10.1016/j.jrp.2019.03.004

Heatherton, T. F., & Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social Psychology*, *60*(6), 895–910. https://doi.org/10.1037/0022-3514.60.6.895

Hunsu, N. J., Kehinde, O. J., Oje, A. V., & Yli-Piipari, S. (2022). Single Versus Multiple Resilience Factors: An Investigation of the Dimensionality of the Academic Resilience Scale. *Journal of Psychoeducational Assessment*, *40*(3), 346–359. https://doi.org/10.1177/07342829211056391

Jiang, S., & Ngien, A. (2020). The Effects of Instagram Use, Social Comparison, and Self-Esteem on Social Anxiety: A Survey Study in Singapore. *Social Media + Society*, *6*(2), 205630512091248. https://doi.org/10.1177/2056305120912488

Jovanović, V. (2015). Structural validity of the Mental Health Continuum-Short Form: The bifactor model of emotional, social and psychological well-being. *Personality and Individual Differences*, *75*, 154–159. https://doi.org/10.1016/j.paid.2014.11.026

Kassambara, A. (2023). *ggcorrplot: Visualization of a correlation matrix using ggplot2* (Version 0.1.3) [R package]. https://github.com/kassambara/ggcorrplot.

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9. *Journal of General Internal Medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Kurnaz, M. F., Teke, E. & Günaydin, H. A. (2020). Relationship between self-esteem and life satisfaction: A meta-analysis study. *Research on Education and Psychology*, *4*(2), 236–253.

Linton, K. E., & Richard, G. M. (1996). Self-esteem in adolescents: Validation of the state self-esteem scale. *Personality and Individual Differences*, *21*(1), 85-90. https://doi.org/10.1016/0191-8869(96)83741-X

Liu, Y., Zhang, N., Bao, G., Huang, Y., Ji, B., Wu, Y., Liu, C., & Li, G. (2019). Predictors of depressive symptoms in college students: A systematic review and meta-analysis of cohort studies. *Journal of Affective Disorders*, *244*, 196–208. https://doi.org/10.1016/j.jad.2018.10.084

Makowski, D., Lüdecke, D., Patil I., & Thériault, R. (2023). "Automated Results Reporting as a Practical Tool to Improve Reproducibility and Methodological Best Practices Adoption." CRAN. https://easystats.github.io/report/.

Marsh, H. W., Hau, K.-T., & Wen, Z. (2004). In Search of Golden Rules: Comment on Hypothesis-Testing Approaches to Setting Cutoff Values for Fit Indexes and Dangers in Overgeneralizing Hu and Bentler's (1999) Findings. *Structural Equation Modeling: A Multidisciplinary Journal*, *11*(3), 320–341. https://doi.org/10.1207/s15328007sem1103_2

Marsh, H. W., & O'Mara, A. (2008). Reciprocal Effects Between Academic Self-Concept, Self-Esteem, Achievement, and Attainment Over Seven Adolescent Years: Unidimensional and Multidimensional Perspectives of Self-Concept. *Personality and Social Psychology Bulletin*, *34*(4), 542–552. https://doi.org/10.1177/0146167207312313

Martín-Albo, J., Núñez, J. L., Navarro, J. G., & Grijalvo, F. (2007). The Rosenberg Self-Esteem Scale: Translation and Validation in University Students. *The Spanish Journal of Psychology*, *10*(2), 458–467. https://doi.org/10.1017/S1138741600006727

McCain, J. L., Jonason, P. K., Foster, J. D., & Campbell, W. K. (2015). The bifactor structure and the "dark nomological network" of the State Self-Esteem Scale. *Personality and Individual Differences*, *72*, 1–6. https://doi.org/10.1016/j.paid.2014.08.006

Mesmer-Magnus, J., Viswesvaran, C., Deshpande, S. & Joseph, J. (2006). Social desirability: the role of over-claiming, self-esteem, and emotional intelligence. *Psychology Science*, *48*(3), 336–356.

Moksnes, U. K., & Reidunsdatter, R. J. (2019). Self-esteem and mental health in adolescents – level and stability during a school year. *Norsk Epidemiologi*, *28,* 1–2. https://doi.org/10.5324/nje.v28i1-2.3052

Moore, T. M., Kaczkurkin, A. N., Durham, E. L., Jeong, H. J., McDowell, M. G., Dupont, R. M., Applegate, B., Tackett, J. L., Cardenas-Iniguez, C., Kardan, O., Akcelik, G. N., Stier, A. J., Rosenberg, M. D., Hedeker, D., Berman, M. G., & Lahey, B. B. (2020). Criterion validity and relationships between alternative hierarchical dimensional models of general and specific psychopathology. *Journal of Abnormal Psychology*, *129*(7), 677–688. https://doi.org/10.1037/abn0000601

Okada, R. (2010). A meta-analytic review of the relation between self-esteem level and self-esteem instability. *Personality and Individual Differences*, *48*(2), 243–246. https://doi.org/10.1016/j.paid.2009.10.012

Orth, U., & Robins, R. W. (2013). Understanding the Link Between Low Self-Esteem and Depression. *Current Directions in Psychological Science*, *22*(6), 455–460. https://doi.org/10.1177/0963721413492763

Orth, U., Robins, R. W., Widaman, K. F., & Conger, R. D. (2014). Is low self-esteem a risk factor for depression? Findings from a longitudinal study of Mexican-origin youth. *Developmental Psychology*, *50*(2), 622–633. https://doi.org/10.1037/a0033817

Pardo Merino, A., & Ruiz Díaz, M. A. (2010). *Análisis de datos en ciencias sociales y de la salud II*. [Data analyses in social and health sciences II]. Síntesis.

Redondo, L. (2022). *Social Media Content and its Effect on Women's Self-Esteem and Body Satisfaction*. [Unpublished master's thesis]. Brandon University.

Reise, S. P., Morizot, J., & Hays, R. D. (2007). The role of the bifactor model in resolving dimensionality issues in health outcomes measures. *Qual-*

ity of Life Research, *16*, 19–31. https://doi.org/10.1007/s11136-007-9183-7

Reitz, A. K., Shrout, P. E., Denissen, J. J. A., Dufner, M., & Bolger, N. (2020). Self-esteem change during the transition from university to work. *Journal of Personality*, *88*(4), 689–702. https://doi.org/10.1111/jopy.12519

Rentzsch, K., Wenzler, M. P., & Schütz, A. (2016). The structure of multidimensional self-esteem across age and gender. *Personality and Individual Differences*, *88*, 139–147. https://doi.org/10.1016/J.PAID.2015.09.012

Revelle, W. (2022) psych: Procedures for Personality and Psychological Research, Northwestern University, Evanston, Illinois, USA, https://CRAN.R-project.org/package=psych

Riketta, M. (2004). Does social desirability inflate the correlation between self-esteem and anxiety. *Psychological Reports*, *94*, 1232–1234.

Robins, R. W., Tracy, J. L., Trzesniewski, K., Potter, J., & Gosling, S. D. (2001). Personality Correlates of Self-Esteem. *Journal of Research in Personality*, *35*(4), 463–482. https://doi.org/10.1006/jrpe.2001.2324

Rosenberg, M. (1965). *Society and the Adolescent Self-Image*. Princeton, New Jersey: Princeton University Press. https://doi.org/10.1515/9781400876136

Heatherton, M. B. (1978). An adult version of the Coopersmith Self-esteem Inventory: Test-retest reliability and social desirability. *Psychological Reports*, *43*, 1189–1190.

Silva, L. P. R. da, Tucan, A. R. de O., Rodrigues, E. L., Del Ré, P. V., Sanches, P. M. A., & Bresan, D. (2019). Dissatisfaction about body image and associated factors: a study of young undergraduate students. *Einstein (São Paulo)*, *17*(4). https://doi.org/10.31744/einstein_journal/2019AO4642

Soto-Sanz, V., Piqueras, J. A., Rodríguez-Marín, J., Pérez-Vázquez, M. T., Rodríguez-Jiménez, T., Castellví, P., Miranda-Mendizábal, A., Pares-Badell, O., Almenara, J., Blasco, M. J., Cebria, A., Gabilondo, A., Gili, M., Roca, M., Lagares, C., & Alonso, J. (2019). Self-esteem and suicidal behaviour in youth: A meta-analysis of longitudinal studies. *Psicothema*, *31*(3), 246–254.

Sowislo, J. F., & Orth, U. (2013). Does low self-esteem predict depression and anxiety? A meta-analysis of longitudinal studies. *Psychological Bulletin*, *139*(1), 213–240. https://doi.org/10.1037/a0028931

Spielberger, C. D., Gorsuch, R. L. & Lushene, R. E. (2008). *STAI. Cuestionario de ansiedad estado-rasgo* (7ª ed. rev.). [*STAI: State-Trait Anxiety Inventory (7th Revised Edition)*]. Madrid: TEA.

Stevens, J. P. (1984). Outliers and influential data points in regression analysis. *Psychological Bulletin*, *95*(2), 334–344. https://doi.org/10.1037/0033-2909.95.2.334

Suliman, W. A., & Halabi, J. (2007). Critical thinking, self-esteem, and state anxiety of nursing students. *Nurse Education Today*, *27*(2), 162–168. https://doi.org/10.1016/j.nedt.2006.04.008

van Scheppingen, M. A., Denissen, Jaap. J. A., Chung, J. M., Tambs, K., & Bleidorn, W. (2018). Self-esteem and relationship satisfaction during the transition to motherhood. *Journal of Personality and Social Psychology*, *114*(6), 973–991. https://doi.org/10.1037/pspp0000156

Webster, G. D., Howell, J. L., & Shepperd, J. A. (2022). Self-Esteem in 60 Seconds: The Six-Item State Self-Esteem Scale (SSES-6). *Assessment*, *29*(2), 152–168. https://doi.org/10.1177/1073191120958059

Zeigler-Hill, V. (2011). The Connections Between Self-Esteem and Psychopathology. *Journal of Contemporary Psychotherapy*, *41*(3), 157–164. https://doi.org/10.1007/s10879-010-9167-8

Supplementary material

Spanish version of State Self-Esteem Scale-20

El siguiente cuestionario está diseñado para medir lo que estás pensando en este momento. No hay respuestas correctas para ninguna afirmación. La mejor respuesta es aquello que tú sientes verdaderamente en este momento. Asegúrate de contestar todos los ítems, incluso cuando no estés seguro/a de la mejor respuesta. De nuevo, contesta las siguientes preguntas pensando en cómo te sientes en este momento.

Usa la siguiente escala para indicar lo que es verdad para ti en este momento: 1= Nada en absoluto
2 = Un poco
3 = Algo
4 = Mucho
5 = Extremadamente

1. Siento confianza en mis capacidades.
2. Estoy preocupado/a por si soy considerado/a un éxito o un fracaso.
3. Me siento satisfecho/a con la apariencia de mi cuerpo ahora mismo.
4. Me siento frustrado/a o inquieto/a con mi desempeño.
5. Siento que me cuesta entender las cosas que leo.
6. Siento que los demás me respetan y admiran.
7. Me siento insatisfecho/a con mi peso.
8. Me siento cohibido/a.
9. Me siento tan inteligente como los demás.
10. Me siento disgustado/a conmigo mismo/a.
11. Me siento bien conmigo mismo/a.
12. Estoy satisfecho/a con mi apariencia ahora mismo.
13. Estoy preocupado/a por lo que otras personas piensan de mí.
14. Me siento seguro/a de entender las cosas.
15. Me siento inferior a los demás en este momento.
16. No me siento atractivo/a.
17. Me siento preocupado/a por la impresión que estoy dando.
18. Siento que tengo menos habilidades académicas que los demás ahora mismo.
19. Siento que no estoy haciendo un buen trabajo.
20. Estoy preocupado/a por hacer el ridículo.

Inverse item

2, 4, 5, 7, 8, 10, 13, 15, 16, 17, 18, 19, 20

Sum scores from all items and keep scale as a continuous measure of state self-esteem.

Interpretation

PERFORMANCE: 1, 4, 5, 9, 14, 18, 19
SOCIAL: 2, 8, 10, 13, 15, 17, 20
APPEARANCE: 3, 6, 7, 11, 12, 16 GENERAL SELF-ESTEEM: TOTAL

Spanish version of State Self-Esteem Scale-6.

INTERPRETATION:
PERFORMANCE: 4,19.
SOCIAL: 13, 20.
APPEREANCE: 3, 16.
GENERAL SELF-ESTEEM: 4, 19, 13, 20, 3, 16.