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Resilience Scale-25 Spanish version: Validation and assessment in eating disorders

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ABSTRACT

Objectives: To validate into Spanish the Wagnild and Young Resilience Scale — 25 (RS-25), assess and compare the scores on the scale among women from the general population, eating disorder (ED) patients and recovered ED patients.
Method: This is a cross-sectional study. ED participants were invited to participate by their respective therapists. The sample from the general population was gathered via an open online survey. Participants (*N* general population = 279; *N* ED patients = 124; and *N* recovered ED patients = 45) completed the RS-25, the World Health Organization Quality of Life Scale-BREF and the Hospital Anxiety and Depression Scale. Mean age of participants ranged from 28.87 to 30.42 years old. Statistical analysis included a multi-group confirmatory factor analysis and ANOVA.
Results: The two-factor model of the RS-25 produced excellent fit indexes. Measurement invariance across samples was generally supported. The ANOVA found statistically significant differences in the RS-25 mean scores between the ED patients (*Mean* = 103.13, *SD* = 31.32) and the recovered ED participants (*Mean* = 138.42, *SD* = 22.26) and between the ED patients and the general population participants (*Mean* = 136.63, *SD* = 19.56).
Discussion: The Spanish version of the RS-25 is a psychometrically sound measurement tool in samples of ED patients. Resilience is lower in people diagnosed with ED than in recovered individuals and the general population.

1. Introduction

Resilience-related factors are considered both protective factors and promotion factors against mental disorders. There is little scientific literature on protective factors against eating disorders (EDs), especially compared to the number of studies that have addressed risk factors, such as low self-esteem and high perfectionism (Gual et al., 2002; Steiner et al., 2003). According to the definition from the American Psychological Association (2010) "Resilience is the process of adapting well in the face of … significant sources of stress — such as … serious health problems"; resilience can be developed in the face of a mental illness and prevent further deterioration or even promote recovery.

Wagnild and Young (1993) developed the Resilience Scale (RS-25) with the aim of generating a tool to measure the degree of resilience, which is defined as "a positive personality characteristic that enhances adaptation" (p. 167). This scale has been rated favourably in review studies of scales of resilience and is the most frequently used scale to assess resilience (Ahern, Kiehl, Sole, & Byers, 2006). The RS-25 has been validated in Spanish three times (Heilemann, Lee, & Kury, 2003; Rodríguez et al., 2009; Ruiz-Parraga, Lopez-Martinez, & Gomez-Perez, 2012). However, none of these Spanish versions were successful in reproducing the bi-factorial structure of the original RS-25 and retaining the 25 items (Wagnild & Young, 1993).

Therefore, this study's aims are two-fold. The first objective is to adapt the RS-25 into Castilian Spanish after making improvements in

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the semantic equivalence of some of the items. Because resilience is associated with numerous desirable outcomes, including physical health (Black & Ford-Gilboe, 2004) and emotional health (Limonero, Tomás-Sábado, Fernández-Castro, Gómez-Romero, & Ardilla-Herrero, 2012), we hypothesise that the resilience scores will be positively and significantly correlated with a greater quality of life and inversely and significantly correlated with anxiety and depression. The second aim of this study is to compare the mean resilience scores between the groups (the general population sample, the patients currently suffering from an ED and the participants who have recovered from an ED). We hypothesise that people who have recovered from an ED will present higher resilience scores than the participants who are currently suffering from an ED.

2. Methods

2.1. Participants

ED patients were recruited by psychiatrics of four mental health centres. The inclusion criteria were female gender and a diagnosis of an ED. A total of 124 patients (response rate = 74.3%) participated. Current DSM-IV diagnoses were: 33.9% Anorexia Nervosa (AN), 24.2% Bulimia Nervosa (BN), 20.2% Eating Disorders Not Otherwise Specified (EDNOS), 4% Binge Eating Disorder (BED), and 10.5% AN and BN. The average age was 30.09 years (SD = 9.69). The average age of onset of the ED was 19.45 years (SD = 6.75). The average duration of illness was 10.33 years (SD = 8.89), and the patients had been treated for an average of 5.74 years (SD = 6.04).

Patients who had recovered from an ED were recruited in the same places. These patients had been free of ED symptoms for at least one year. A total of 46 women who had recovered from an ED completed the survey (response rate = 73%). Previous DSM-IV diagnoses: 62.2% AN, 22.2% BN, 2.2% EDNOS, and 11.1% AN and BN. Their average age was 30.42 years (SD = 7.65). Their average age at the onset of their ED was 16.82 years (SD = 3.3). The average number of years they suffered from the ED was 9.10 (SD = 6.02), and they had received treatment for 6.12 years on average (SD = 5.16). At the time of the study, an average of 7.92 years had elapsed since their discharge (SD = 5.87).

Participants from the general population were female, older than 18 years old, and had no history of an ED. A total of 279 people from the general population participated (response rate = 82%), with an average age of 28.87 years (SD = 8.31).

2.2. Materials

The Spanish version of the Resilience Scale (RS-25; Wagnild & Young, 1993) was applied to measure the degree of resilience. It measures two main factors: 'personal competence' (17 items) and 'acceptance of self and life' (8 items). The response scale ranges from 1 ('totally disagree') to 7 ('totally agree'). Dr. Wagnild participated actively in the process of the Spanish adaptation of RS-25 for this study, which was based on previous Spanish versions (Heilemann et al., 2003; Ruiz-Parraga et al., 2012). The linguistic validation process included a translation and backtranslation method as recommended by Acquadro, Conway, Girourdet, and Mear (2004).

The Spanish version of World Health Organization Quality of Life — BREF (Skevington, Lotfy, & O'Connell, 2004; see Espinoza, Osorio, Torrejón, Lucas-Carrasco, & Bunout, 2011 for the Spanish version) was used to evaluate the participants' general quality of life. The WHOQOL-BREF is composed of 26 items that measure the following domains: physical health, psychological health, social relationships and environment. Cronbach α = .82, .91, .77, and .81 for physical health, psychological health, environment, and social relationships, respectively.

The Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) is a 14-item instrument: seven of the items measure depression, and the other seven items measure anxiety. The Spanish version (Quintana et al., 2003) was used in this study. Cronbach α: .86 for depression and .87 for anxiety.

2.3. Statistical analyses

The factor structure of the RS-25 was examined by performing a confirmatory factor analysis with LISREL 8.8 (Jöreskog & Sörbom, 2006). The models were tested using weighted least-squares estimation (WLS). The goodness of fit was evaluated using the comparative fit index (CFI), the non-normative fit index (NNFI) and the root mean square error of approximation (RMSEA). Generally, CFI and NNFI values of .90 or higher reflect a good fit. In addition, RMSEA values lower than .06 indicate an excellent fit, and values between .06 and .08 indicate an acceptable fit. First, the model was estimated separately for the general population sample and the ED patient sample. Next, the invariance of the structure of the RS-25 across the general population sample and the ED patients was examined by performing a multi-group confirmatory factor analysis (Byrne, 2008).

3. Results

The two-factor structure proposed by Wagnild and Young (1993) produced excellent fit indexes in the general population sample and in the ED patient sample: $\chi^2(274, n = 279) = 506$, RMSEA = .054 (90% confidence interval, CI: .048; 0.063), NNFI = .95, CFI = .95 for the general sample; and $\chi^2(274, n = 124) = 288$, RMSEA = .021 (90% CI: 0; .042), NNFI = 1, CFI = 1 for the ED sample. Table 1 displays the factor loadings for both of the samples. We also estimated an alternative one-dimension model that was not satisfactory.

To assess the invariance of the measurement model across the general population sample and the ED patient sample, the following

Table 1
Demographic characteristics of the samples.

Sample		n	%
ED patients			
Sex	Female	118	95.9
Diagnoses	AN	42	33.9
	BN	30	24.2
	EDNOS	25	20.2
	BED	5	4
	AN and BN	13	10.5
	Comorbidity with other diagnoses	25	20.2
Current pharmacological treatment	Every day	55	44.4
	Occasionally	10	8.1
	Never	58	46.8
Recovered patients			
Sex	Female	43	93.5
Diagnoses*	AN	29	62.2
	BN	10	22.2
	EDNOS	1	2.2
	AN and BN	5	11.1
	Comorbidity with other disorders	16	34.8
Current pharmacological treatment	Every day	6	13
	Occasionally	3	6.5
	Never	37	80.4
General sample			
Sex	Female	270	96.8
	Male	3	1.1
Current pharmacological treatment	Every day	8	2.9
	Occasionally	10	3.6
	Never	255	91.4

Note. Even though being female was one of the inclusion criteria, some male participants were invited and consented to participate. *The psychiatrists used the criteria of the DSM-IV to establish diagnoses: AN = Anorexia Nervosa; BN = Bulimia Nervosa; EDNOS = Eating Disorders Not Otherwise Specified; AN and BN = AN episodes shifting to BN episodes, or vice versa.