



Adaptation and Psychometric Properties in Spanish of the Herth Hope Index in People Who have Attempted Suicide

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Abstract

Suicide is a major global public health problem. The most predictive behavior of completed suicide is prior suicide attempt. However, studies focused on risk factors have to date proved unsuccessful in reducing death by suicide rates. To adapt a hope assessment tool to a Spanish clinical population having carried out a suicide attempt, to evaluate whether hope modulates the resilience level following discharge from the emergency department. The sample comprised 682 people (62.4% female) aged between 18 and 77 years ($M = 39$; $SD = 19.1$) with previous suicide attempts who were administered the Herth Hope Index, the Beck Hopelessness Scale, and the 14-item Resilience Scale. The HHI in Spanish (IEH) showed a high internal consistency ($\alpha = .97$), a two-dimensional structure that explains 73% of the variance with high goodness-of-fit indices ($GFI = .91$; $CFI = .89$; $RMSEA = .08$), and divergent validity of $-.77$ with hopelessness. Significant hope-related differences by resilience level were also observed. Hope modulates resilience to suicide attempts and a new scale adapted to the Spanish clinical population is offered. This short tool is easy to use in emergency department settings and predicts the level of potential vulnerability to more serious future repeated attempts.

Keywords Suicide · Hope · Resilience · Emergency department · Hopelessness · Assessment

Introduction

Suicide is a major global public health problem [1]. Studies focused on assessing suicide risk factors have failed to bring down death by suicide rates [2] [3]. It would appear that a past suicide attempt is a strong predictor of a more serious repeated attempt or completed suicide [4]. However, following a suicide attempt, there are people who carry out more harmful future repeated attempts or who

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succeed at the first attempt, while there are others who increase their resilience level [5]. This has opened up new lines of research centred on protective factors related to suicide attempt. Hope is a notable protective factor among those that modulate resilience to suicide attempt [6]. However, currently there are no hope assessment tools tailored to this clinical population which can be easily implemented in clinical settings; the most frequently used instruments, whose primary focus is on the risk itself, include the Beck Hopelessness Scale [7]. This measure of hopelessness has been validated and adapted to a clinical population in Peru [8] and in Colombia [9], yet there is no knowledge of a previously adapted version of this psychometric test [7] for this population at risk in Spain [10]. This reality may explain why clinical interest still lies in risk factors such as hopelessness and not in protective factors like hope when it comes to assessing vulnerability to suicide behavior.

The Herth Hope Index (HHI, 1992) [11] seems to be a viable instrument for measuring hope as a protective factor. However, cross-cultural adaptations of the HHI scale in clinical and non-clinical samples have presented different factorial structures, for example: one-dimensional structures in Italy [12] and two-dimensional ones in Sweden [13], the Netherlands [14], and Norway [15]. Research studies using the HHI emphasize the advantage of adopting this test as a global measure of hope within a clinical context [14], but by adapting this scale to a specific clinical subpopulation and the specific cultural context. The HHI has been translated for the general Spanish population-IEH [16], although its psychometric properties have not been assessed. There are, however, preliminary studies which have reported its favorable clinical applicability for people who have attempted suicide [17].

On this basis, we sought to adapt a hope assessment tool to a Spanish clinical population having made a suicide attempt, to assess whether hope modulates the resilience level following discharge from the emergency department. We also sought to analyze the psychometric properties of the Beck Hopelessness Scale [7] in this Spanish clinical population.

Method

Participants

The sample comprised 682 people (62.4% female) aged between 18 and 77 years ($M = 39$; $SD = 19.1$) with previous suicide attempts. All participants signed an informed consent form which outlined the details of the study: the inclusion criteria, the administered tests, and the pursued objectives—in accordance with Personal Data Protection Law 15/1999 (“LOPD” in Spanish). The sociodemographic and clinical characteristics of the sample are shown in Table 1.

Measures

Herth Hope Index-HHI [11] We used the Spanish translated version for the general population-IEH [16]. This scale measures hope in adults using 12 Likert-type items (1 = completely disagree; 4 = completely agree), covering three factors as in the original English version: (a) temporality and future; (b) positive readiness and expectancy; and (c) interconnectedness. The original study found the scale to have adequate psychometric properties ($\alpha = .97$; test-retest = .91) and a three-dimensional structure following the hope model [18].

Beck Hopelessness Scale-BHS [7] We used Aguilar et al.’s [19] translated version for the clinical population with psychosis, which measures negative attitudes about the future

Table 1 Description of the sample's sociodemographic and clinical data

	n(%)	Test statistic	<i>p</i>
Sex			
Female	426(62.4)	12.14	.02*
Male	256(37.6)		
Age			
18–27 years	86(12.6)	4.78	.54 ^{ns}
28–37 years	96(14.1)		
38–47 years	158(23.1)		
48–57 years	130(19.1)		
5–67 years	117(17.2)		
68–77 years	95(13.9)		
Civil Status			
Single	216(31.6)	2.98	.97 ^{ns}
Married	185(27.1)		
Separated / divorced	151(22.2)		
Civil partnership	91(13.4)		
Widowed	39(5.7)		
Previous pathology			
Mood disorders	113(16.5)	17.22	.001**
Anxiety disorders	120(17.6)		
Psychotic disorders	64(7.7)		
Personality disorders	53(13.4)		
Control disorders / Addictions	106(15.5)		
Physical disorders	75(11.0)		
No previous diagnosis	125(18.3)		
Employment status			
Unemployed	430(63.1)	14.1	.001**
Employed	252(36.9)		
TOTAL	682		

* $p < .05$; ** $p < .01$; ns = not significant

(hopelessness). This 20-item ‘true’ or ‘false’ format questionnaire assesses three factors: feelings about the future, loss of motivation, and future expectations.

Resilience Scale-RS-14 [20] We used the Spanish adapted version by Sánchez-Teruel and Robles-Bello [21]. This scale assesses the degree of personal resilience an individual exhibits in adverse situations. The original 14-item instrument in English [20] measures two factors: (a) personal competence across 11 items (self-confidence, autonomy, determination, resourcefulness, and perseverance); and (b) self-acceptance and accepting life across three items (adaptability, balance, flexibility, and a stable outlook on life). The Likert-type responses range from 1 to 7 (1 = completely disagree; 7 = completely agree). The translation and adaptation into Spanish identified only one factor which was described as resilience. Internal consistency was .69 and criterion validity was .87 for the Anglo sample, whereas it was .79 for the Spanish undergraduate sample.

Results

The IEH showed a high internal consistency ($\alpha = .97$), a two-dimensional structure that explains 73% of the variance with high goodness-of-fit indices (GFI = .91; CFI = .89), and high divergent validity with hopelessness ($r = -.93$) (see Table 2). The psychometric properties of the BHS showed a high internal consistency ($\alpha = .98$), a two-dimensional structure (Future

Table 2 Psychometric properties of the IEH and BHS

	α	r	S ²	BHS	χ^2	df	p	GFI	CFI	RMSEA (95% CI)
IEH	.97	.89	73%	-.82	621,35	132	.00	.91	.89	.08
Future	.83	.79	42%	-.77						
Hope	.92	.81	66%	-.80						
BHS	.98	-.93	69%	–	422,45	167	.00	.98	.86	.09
Future (feelings)	.91	-.94	42%	–						
Loss (motivation)	.89	-.80	31%	–						

IEH = *Herth Hope Index* in Spanish; BHS = *Beck Hopelessness Scale*; r = correlation with RS-14; S² = explained variance; χ^2 = chi-squared; df = degree of freedom; p = significance level; GFI = gamma index; CFI = comparative fit index; RMSEA = root mean square error of approximation

and Loss), and an adequate fit (GFI = .98; CFI = .86) in this clinical sample. Significant differences in resilience level (RS-14) by level of hope were also observed (Fig. 1).

Discussion

The study aim was to adapt a hope assessment tool to a Spanish clinical population having carried out a suicide attempt, to evaluate whether hope modulates the resilience level following discharge from the emergency department. We also sought to analyze the psychometric properties of the Beck Hopelessness Scale in this Spanish clinical population [7].

The most recently published data in Europe on completed suicide reveal significant differences among member states, with north European countries being the most affected and Mediterranean countries the least affected [22]. However, suicide rates have fallen significantly over the last 13 years in Germany, Austria, Denmark, France, Greece, the Netherlands, Portugal, Sweden, and the United Kingdom, whereas death by suicide rates have increased in the Republic of Ireland [23] and Spain [24]. In the case of Spain, the rising linear trend for death by suicide observed in recent years is worrying [4]. Currently, the data available in Spain conclude that suicide is the first external cause of death, well above homicide (315) and road traffic accidents (1807) (3569 people have committed suicide; 2662 males and 907 females) [24]. However, the limited healthcare interventions addressing risk factors in this

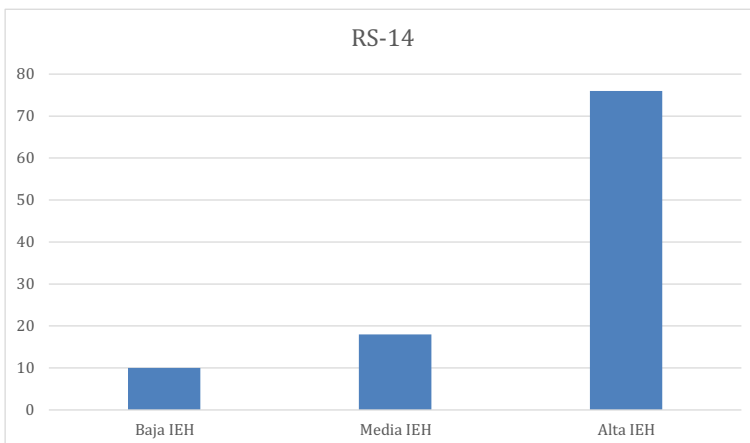


Fig. 1 Level of resilience (RS-14) according to the HHI in Spanish

country have done little to reduce death by suicide rates [4]. Yet as earlier studies have reported [5] [6], new avenues are opening up for predicting completed suicide which focus more on prior behaviors such as suicide attempt as well as protective factors including hope which modulate resilience. Nonetheless, this alerts us to the pressing need to create culturally adapted, quick and easy tools and protocols that help predict future repeated suicide attempts, and which guarantee clinical applicability [10].

This study supports the hypothesis corresponding to the effect of the hope–hopelessness suicide continuum raised in earlier studies [25]. Hopelessness is an emotional state of risk which determines the realization of a suicide attempt, mainly because the hopelessness process generates a feeling of losing control over what is happening in one's life. The individual is driven to a state of complete helplessness, which likely fuels a growing need to put an end to the situation via a suicide attempt, as proposed in previous studies [17]. What this study contributes is the confirmation that hope is a protective predictor variable for suicide attempt because it helps the individual to change their situation when faced with difficulties, planning alternative routes when the usual ones prove ineffective. From this perspective, hope as an opportunity for achieving more favorable future outcomes could explain the modulation of the gravity of suicide and, specifically, the future factor, which shows an increased protective effect against suicide attempt.

Hope modulates resilience to suicide attempt, and a new scale adapted to the Spanish clinical population is offered. This represents a short and easy tool to implement in hospital emergency departments and clinical and psychosocial services. It allows us to assess the level of future vulnerability to repeated suicide attempt in people who had attempted suicide previously, without focusing on the risk factors.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee (include name of committee + reference number) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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