BRIEF COMMUNICATION

Psychometric properties of the Spanish form of the schedule for meaning in life evaluation (SMiLE)

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Abstract

Objective The objective of this study was to validate the Spanish version of the SMiLE (Schedule for Meaning in Life Evaluation). The SMiLE is a respondent-generated instrument: respondents are first asked to list three to seven areas, which provide meaning to their lives, and then to rate their current satisfaction with the listed areas, as well as the individual importance of each one. Indices of total weighting (IoW), total satisfaction (IoS), and total weighted satisfaction (IoWS) are calculated.

Methods Two hundred and fifty University students responded to the Spanish version of the SMiLE, as well as to instruments for measuring self-esteem, quality of life, depression, and anxiety.

Results The Cronbach alphas ($\alpha = 0.61$ for IoS and $\alpha = 0.41$ for IoW) and test–retest correlations were comparable to those found in the initial validation of the instrument (IoS: $r = 0.55$; IoW: $r = 0.61$). The SMiLE showed positive correlations with self-esteem ($r = 0.28$, $P < 0.05$ for IoS) and the mental dimension of the quality of life scale ($r = 0.31$, $P < 0.05$ for IoS), while negative correlations were observed with depression ($r = -0.23$, $P < 0.01$) and anxiety ($r = -0.17$, $P < 0.05$).

Conclusions The results support the validity of the Spanish version of the SMiLE as an instrument for assessing meaning in life.

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Abbreviations

DAI-R	Death anxiety inventory-revised
IoS	Index of satisfaction
IoW	Index of weighting
IoWS	Index of weighted satisfaction or total SMiLE index
KUAS	Kuwait University anxiety scale
MD	Mental dimension
MiL	Meaning in life
PD	Physical dimension
SD	Standard deviation
SDS	Self-rating depression scale
SEIQoL-DW	Schedule for the evaluation of individual quality of life-direct weighting
SF-12 health survey	Short form-12 health survey
SMiLE	Schedule for meaning in life evaluation
RSES	Rosenberg self-esteem scale

Introduction

The concept of *meaning in life* (MiL) was introduced to the field of clinical psychology by Victor Frankl [1], who argued that the search for meaning provides the primary drive in the pursuit of answers to the questions raised by our existence.

Recently, Fegg et al. [2] designed and validated a schedule for evaluating MiL. They considered that the very nature of the concept to be measured (i.e. personal and individual) meant that an idiographic instrument (focusing on a single individual's experience) would be the most suitable. Drawing on the methodology used by O'Boyle et al. [3], they developed the *Schedule for Meaning in Life Evaluation* (SMiLE) [2], a self-administered instrument that enables MiL to be quantified at the same time as conducting a qualitative analysis of the concept on an individual level, since it is the respondent who defines the areas that give meaning to his/her life [2, 4].

MiL is relevant to healthy populations [2, 4, 5], but has also aroused interest among clinicians working in palliative care [2, 5, 6] and with neurodegenerative disorders [7]. As MiL is a central feature of certain psychotherapeutic interventions [8, 9], the SMiLE may be useful for evaluating them.

The present study aimed to develop a Spanish form of the SMiLE and to study its psychometric properties. In order to determine the instrument's convergent and discriminant validity, subjects completed the schedule alongside measures of depression, general anxiety, death anxiety, quality of life, and self-esteem. It was hypothesized that a lack of MiL would manifest in the form of tedium, despair and the absence of life goals, whereas a meaningful existence would be associated with a positive view of one's life and a satisfactory degree of self-realization [10].

Method

Sample

A sample of 250 undergraduates was recruited from the nursing and dentistry courses offered by two Spanish Universities. Of these, 213 students [59 men, mean age 24.7 ($SD = 7.0$) years; 154 women, mean age 24.0 ($SD = 6.2$)] returned properly completed questionnaires.

Instruments

The students responded to the following self-administered instruments during class time between March and April 2008.

Spanish form of the SMiLE [2]: This instrument comprises three steps. Respondents must first indicate three to

seven areas that give meaning to their lives, thereby generating a list of areas. They are then asked to rate, on a numerical scale from −3 (very unsatisfied) to +3 (very satisfied), the degree of satisfaction or dissatisfaction felt at that time with each of these areas. Finally, respondents rate, on a scale from 0 (not important) to 7 (extremely important), the importance of each area with respect to the overall meaning of their lives. Once the three steps have been completed, a formula [2] can be applied to calculate the Index of Satisfaction (IoS), which indicates the mean satisfaction rating across the stated areas (range 0–100, with higher scores reflecting greater satisfaction), and the Index of Weighting (IoW), which expresses the mean importance ascribed by the respondent to each of the chosen areas. IoW scores range between 20 (not important) and 100 (extremely important). One can then calculate the Index of Weighted Satisfaction (IoWS, total SMiLE index), which combines the weighting and satisfaction scores into a single value, thereby providing an overall estimate of MiL (range 0–100, with higher scores reflecting greater MiL).

Spanish form of the Rosenberg Self-esteem Scale (RSES) [11]: This consists of ten items scored on a four-point Likert scale (from strongly disagree to strongly agree). Possible total scores range from 10 to 40, with 40 indicating the highest level of self-esteem.

Zung Self-Rating Depression Scale (SDS) [12] *Spanish form* [13]: The twenty items of this self-report instrument are scored on a four-point Likert scale, ranging from 1 (rarely/never) to 4 (almost all of the time or always). Possible total scores range from 20 to 80, with 80 indicating the highest level of depression.

Death Anxiety Inventory—Revised (DAI-R) [14, 15]: Originally validated in Spanish, the DAI-R comprises seventeen items scored on a five-point Likert scale. Possible total scores range between 17 and 85, with higher scores indicating greater death anxiety.

Kuwait University Anxiety Scale (KUAS) [16], *Spanish form* [17]: The KUAS comprises twenty items scored on a Likert scale from 1 to 4. Possible total scores range between 20 and 80, with higher scores reflecting greater anxiety.

Spanish form of the SF-12 Health Survey [18], as developed by Alonso et al. [19]: A brief version of the SF-36 Health Survey [20], the SF-12 comprises twelve items and provides scores regarding both mental and physical health. Possible total scores range between 0 and 100, with higher scores indicating better health.

Procedure

All subjects who responded to the questionnaires did so voluntarily and were informed by the researchers that all the data gathered would remain anonymous and

confidential. In order to match test and retest data, subjects assigned a code known only to them to their responses. The Spanish form of the SMiLE was obtained through a standard back-translation procedure involving bilingual subjects [21].

In order to assess the temporal stability of the SMiLE, it was re-administered to a random sub-sample of 58 students from both universities, with a test–retest interval of 1 month. The procedure was the same at each test administration, and 52 valid responses were obtained. A qualitative analysis was then performed of the areas defined in the first step of the SMiLE during the first administration of the questionnaire, comparing these with the responses given at retest. In addition, a statistical correlation analysis was performed regarding the number of areas chosen by respondents during the initial administration and at retest. The same procedure was applied to the indices of satisfaction, weighting, and weighted satisfaction.

Results

The first step involved calculating the index of satisfaction (IoS), the index of weighting (IoW), and the index of weighted satisfaction (IoWS) for the whole sample ($n = 213$). Table 1 shows the test–retest results for the sub-sample of 52 respondents.

The analysis of internal consistency yielded a Cronbach's alpha of 0.61 for the IoS and 0.41 for the IoW ($n = 213$). The mean number of areas defined in the first step of the SMiLE was 4.99 ($SD = 1.59$) at test and 4.92 ($SD = 1.5$) at retest. The test–retest correlation for the number of areas chosen was 0.81 ($P < 0.01$).

The convergent validity of the SMiLE was assessed using the RSES and the mental dimension of the SF-12 (MD/SF-12), it being hypothesized that a strong sense of MiL would be associated with a positive view of life and quality of life. With respect to both the RSES and the MD/SF-12, the coefficients were positive and significant for the indices of satisfaction and weighted satisfaction (see Table 2).

Discriminant validity was estimated by comparing scores on the SMiLE indices with those on the KUAS, the

Table 1 Means and standard deviations for the index of satisfaction (IoS), the index of weighting (IoW), and the index of weighted satisfaction (IoWS) obtained at test and retest ($n = 52$), showing the Spearman's rho coefficients and significance level (P)

	Test	Retest	Rho	Sig.
IoS	82.72 ± 14.28	80.33 ± 15.40	0.55	$P < 0.01$
IoW	84.09 ± 9.5	83.49 ± 9.96	0.61	$P < 0.01$
IoWS	83.81 ± 13.62	81.43 ± 14.29	0.48	$P < 0.01$

Table 2 Spearman's rho coefficients between the SMiLE indices of satisfaction (IoS), weighting (IoW), and weighted satisfaction (IoWS) and the measures of self-esteem (RSES), quality of life (MD/SF-12), anxiety (KUAS), depression (SDS), death anxiety (DAI-R), and quality of life (PD/SF-12)

	RSES	MD/SF-12	KUAS	SDS	DAI-R	PD/SF-12
IoS	0.28*	0.31*	−0.23**	−0.17*	−0.19**	−0.14*
IoWS	0.30*	0.31*	−0.22**	−0.16*	−0.18**	−0.15*

* $P < 0.05$, ** $P < 0.01$

Table 3 Frequency (%) with which each area was chosen at test (T1) and retest (T2)

Areas	T1 (%)	T2 (%)
Family	99.5	100
Friends	80.75	73.07
Work/studying	76.05	88.46
Well-being	59.62	46.15
Partner	55.39	50
Health	30.04	38.46
Leisure time	28.16	21.15
Hedonism	14.55	5.76
Religiosity	14.08	21.15
Finances	10.32	17.3
Animals/nature	7.51	3.84
Altruism	6.57	5.76
Home/garden	2.34	0

SDS, the DAI-R, and the physical dimension of the SF-12 (PD/SF-12). Table 2 shows a negative correlation between both IoS and IoWS and the above-mentioned scales.

The areas defined by subjects during the first step of the SMiLE were grouped into the same thirteen categories reported in the instrument's original validation [4]. Table 3 shows the frequency with which each of the areas was chosen at test and retest. It can be seen that the two percentages are markedly similar.

Discussion

The analysis of internal consistency, estimated by means of Cronbach alpha, yielded values of 0.61 and 0.41 for the responses regarding satisfaction and importance, respectively. These coefficients, which would be considered as very low in the case of nomothetic scales, are perfectly acceptable in respondent-generated instruments such as the SMiLE [22–24], and they are also very similar to the values obtained in the reliability study of the original version (0.71 and 0.49, respectively) [2].

As hypothesized, the results confirm that the indices of satisfaction (IoS) and weighted satisfaction (IoWS) were

positively and significantly correlated with self-esteem (RSES) and the mental dimension of the quality of life measure (MD/SF-12), while showing a negative correlation with depression (SDS), anxiety (KUAS), and death anxiety (DAI-R). This provides evidence of the instrument's convergent and discriminant validity. Further research is required regarding the negative correlation found between both IoS and IoWS and the physical dimension of quality of life (PD/SF-12).

The Spanish form of the SMiLE maintained the length, format, and scoring system of the original instrument. Furthermore, the MiL areas chosen by respondents were classified into the same thirteen categories used in the German, English, and French versions. Although this categorization is purely conventional, it is regarded as useful for classifying those aspects that people consider give meaning to their lives. It should be noted that the Spanish form, like the German and English versions [2], was developed in a sample of health science undergraduates, whereas the French version was validated in a group of palliative care and cancer patients [5].

One limitation of the present study is that findings based on a sample formed exclusively by university students cannot be extrapolated to other populations. Further research is therefore required to study the instrument's properties in both the general population and clinical samples, either palliative care patients or those with chronic or degenerative disease.

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