

Reliability and Validity of the Shortened Hungarian Version of the Existence Scale

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The aim of the current study was to present the adaptation process of the Hungarian version of the Existence Scale (ES) and to demonstrate the psychometric properties of a shortened version (ES-S). The design of the 8-item ES-S was based on the data of 166 Hungarian young adults who completed the full version of the ES (study 1). In the next step reliability and validity of the ES-S were examined with the participation of 392 respondents (study 2). For the construct validity analysis, the Purpose in Life Test, the Satisfaction with Life Scale and a shortened version of the Beck Depression Inventory were used. Both internal reliability and convergent / divergent validity of the ES-S were found to be adequate.

Key words: *Existential fulfilment, Existence Scale, shortened version, reliability and validity*

Reliabilität und Validität der Gekürzten Ungarischen Version der Existenz-Skala

Der Zweck dieser Studie war die ungarische Adaptation der Existenz-Skala (ESK) und die psychometrischen Eigenschaften einer gekürzten Version (ESK-K) zu demonstrieren. Die 8-item ESK-K wurde nach den Daten von 166 ungarischen jungen Erwachsene ausgearbeitet, die die volle Version der ESK ausgefüllt haben (Studie 1). In dem nächsten Schritt wurden die Reliabilität und Validität der ESK-K mit der Hilfe von 392 Teilnehmern untersucht (Studie 2). Für die Analyse der Konstruktvalidität waren der Purpose in Life Test, die Satisfaction with Life Scale und eine gekürzte Version des Beck Depression Inventory benutzt worden. Sowohl die Reliabilität als auch die Konvergente und Divergente Validität der ESK-K erwiesen sich als genügend.

Schlüsselwörter: *Sinnerfüllung, Existenz Skala, gekürzte Version, Reliabilität und Validität*

1. Introduction

In recent years the construct of meaning in life has received considerable attention and legitimacy, perhaps in conjunction with the growing emphasis on positive psychology (Piko 2004). The first to introduce this construct to the social sciences was Viktor Frankl, who developed an existential personality theory. Frankl (1959) considered the will to meaning as a fundamental drive of human beings and therefore he argued that failure to achieve a sense of meaning in life results in a so-called existential vacuum.

Since the introduction of the construct of meaning in life, a lot of efforts have been devoted to the measurement of personal meaning. Most research concerning meaning in life has used the Purpose in Life Test (Crumbaugh, Maholick 1964) and the Life Regard Index (Battista, Almond 1973), while somewhat less often used are the Life Attitude Profile (Reker, Peacock 1981) and its revised version (Reker, 1992).

Endeavours to operationalize meaning in life have resulted in a large number of further measuring instruments, each reflecting a somewhat different theoretical orientation of the researcher.

The 46-item Existence Scale (ES; Längle, Orgler, Kundi 2000; Längle, Orgler, Kundi 2003) with a 6-point rating scale (from „absolutely“ to „not at all“) is an instrument specifically designed to evaluate the noetic dimension of human being and it is based on an exploration of the personal and existential realities of human beings. The ES measures the four basic elements of existence: perception, recognition of values, competence for decision-making, and responsibility, i.e. it is an assessment instrument of the personal abilities that can be labelled as personal competencies for existence (Längle, Orgler, Kundi 2003).

Since its publication, several empirical investigations have been conducted with the Existence Scale. The ES related significantly to other measures of meaning in life, e.g. to the

Purpose in Life Test (Längle, Orgler, Kundi 2003) and to the Logo Test (Konkolý Thege 2005; Längle, Orgler, Kundi 2000). Meaning fulfilment measured by the ES was positively connected to satisfaction with intimate relationships (Harries 2004), general life satisfaction (Harries 2004; Hefti 2002), self-esteem (Scherler, Lajunen, Gülgöz 1998), a certain kind of religiousness (Robu 2006) and mental health (Wurst, Maslo 1996; Kundi, Wurst, Längle 2003). Furthermore, scores on the ES were associated negatively with neuroticism (Längle, Orgler, Kundi 2003; Scherler, Lajunen, Gülgöz 1998), symptoms of burnout (Nindl, Längle, Gamsjäger, Sauer 2003; Tomic, Evers, Brouwers 2004), eating disorders (De Landaboure et al 2001) and depression (De Landaboure et al 2001; Hefti 2002; Längle, Orgler, Kundi 2003).

2. Hungarian adaptation and the shortening process

The original, German language version of the Existence Scale was translated into Hungarian by two independent translators. After preparing a common version by the two translators, it was translated *back* into German by a third, independent, bilingual translator. The resulting text was compared with the original items and was accepted as appropriate by the first author of the original test.

The 46-item ES is a relatively long questionnaire, which can be a serious disadvantage especially when administering complex test batteries. Since the very high inner reliability of the test (Cronbach’s alpha >.90 of both the original and the Hungarian versions) allows us to reduce the number of items, an abbreviated form of the instrument was developed. During the shortening process, several aspects were taken into consideration. Two items with very good corrected item-total correlation were chosen from all the four subscales. We also intended to include reverse coded items in the shortened version and avoid content similarity between the items from the same subscale.

3. Study 1

3.1 Sample and measures

Altogether, 166 Hungarian young adults from the capital and from another bigger town (Szeged) completed the 46-item Hungarian version of the ES and answered sociodemographic questions. Respondents were collected by the „snowball“ method. 68 males (41%) and 98 (59%) females made up the sample, and mean age of the participants was 24.8 years (ranging from 18-32, SD=3.1). Most of the respondents (83.1%) were student or had already finished university, 9% finished grammar school, while 7.9% finished trade school or a specialized secondary school.

3.2 Results

Table 1 shows descriptive statistics for the ES and its abbreviated version (ES-S). Internal reliability of the subscales and the full ES was adequate and Cronbach’s alpha values were in accordance with those of the original German language

N=166	Min.	Max.	M	SD	Alpha
ES ST (14-84)	43	84	71.4	8.5	.77
ES-S ST (2-12)	4	12	10.4	1.8	
ES F (11-66)	27	62	49.0	8.3	.74
ES-S F (2-12)	2	12	8.1	2.5	
ES SD (8-48)	17	47	34.8	6.8	.73
ES-S SD (2-12)	3	12	9.7	2.2	
ES R (13-78)	25	75	54.6	10.5	.79
ES-S R (2-12)	2	12	8.5	2.4	
ES Total (46-276)	118	256	209.8	29.4	.92
ES-S Total (8-48)	15	48	36.8	6.9	.78

Note. ES=Existence Scale; ES-S=Shortened Version of the ES; ST=Self-Transcendence Subscale, F=Freedom Subscale, SD=Self-Distance Subscale, R=Responsibility Subscale

Tab. 1: Descriptive statistics for the Existence Scale and its shortened version

version (Längle, Orgler, Kundi 2003). Internal consistency of the ES-S was also satisfactory (Cronbach’s alpha =.78).

Table 2 describes further psychometric properties of the ES-S. Pearson-correlation coefficient between the full and the shortened version of the Existence Scale was very high (r=0.91; p<.001). Principal component analyses confirmed the unidimensionality of both the full and the abbreviated versions (Figure 1 next page).

Original item number and subscale	Corrected item-total correlation in ES	Corrected item-total correlation in ES-S	Correlation between items of the subscale	Correlation of the original and the shortened subscale	Correlation of the ES and the ES-S																						
2. (ST)❖	.37	.36	.25***	.72***	.91***																						
13. (ST)	.63	.56				18. (F)	.58	.56	.31***	.74***	26. (F)❖	.45	.43	19. (SD)	.57	.47	.32***	.82***	43. (SD)	.57	.52	30. (R)	.59	.52	.33***	.72***	39. (R)
18. (F)	.58	.56	.31***	.74***																							
26. (F)❖	.45	.43				19. (SD)	.57	.47	.32***	.82***	43. (SD)	.57	.52	30. (R)	.59	.52	.33***	.72***	39. (R)	.53	.48						
19. (SD)	.57	.47	.32***	.82***																							
43. (SD)	.57	.52				30. (R)	.59	.52	.33***	.72***	39. (R)	.53	.48														
30. (R)	.59	.52	.33***	.72***																							
39. (R)	.53	.48																									

ST=Self-Transcendence, F=Freedom, SD=Self-Distance, R=Responsibility, ❖=inverse item
***p<.001

Tab. 2: Psychometric properties of the Shortened Version of the Existence Scale (ES-S)

Contrary to the German language version (Längle, Orgler, Kundi 2003), scores on both the ES and on the ES-S showed gender differences: females had significantly higher scores than males (Table 3 next page). However, according to the effect sizes (Cohen’s d), the difference was only moderate. No significant differences were found in scores on the ES and ES-S in regard to age and education, also in contradiction with the findings of Längle, Orgler, and Kundi (2003). Net monthly income was also not related significantly to existential fulfilment measured by the ES and the ES-S.

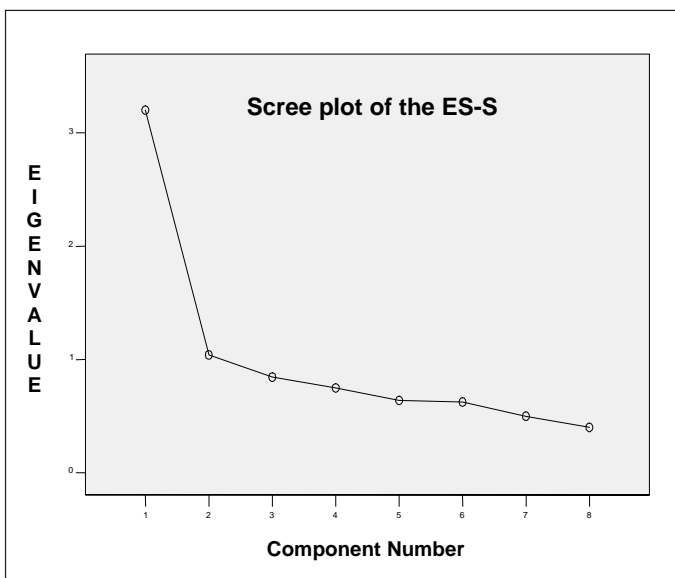
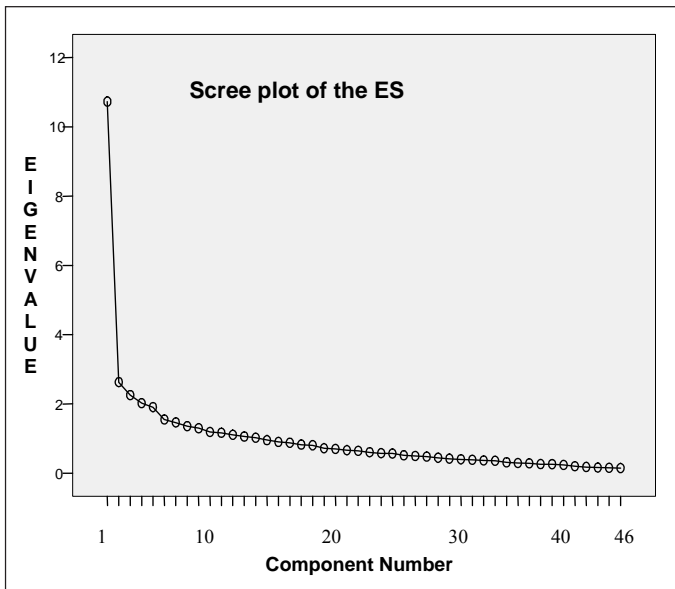


Fig. 1: Scree plots of the principal component analyses of the ES and ES-S

		N	M	SD	Cohen's d	t	Sign.
ES (46-276)	Males	68	203.0	29.9	.40	-2.55	.01
	Females	98	214.6	28.2			
ES_S (8-48)	Males	68	35.2	7.2	.41	-2.61	.01
	Females	98	38.0	6.5			

Tab. 3: Gender differences in scores on the ES and the ES-S

Since it was possible that the above mentioned gender differences were influenced by the overrepresentation of the well-educated persons among females, two further analyses were conducted. First, Pearson chi-square test was used to determine if there were more women among respondents with college or university degree than among the less educated participants: the association was not significant (Chi square=0.00 p=.988). Second, links between gender and existential

fulfilment were analyzed stratified by educational level. The difference between males and females in ES and ES-S scores was still significant among the most educated respondents (t=2.29; p=0.024; and t=2.32; p=0.027 respectively), but for the less educated participants no significant gender differences were found. However, in the latter cases sample sizes were so small that these results should be ignored. To sum it up, in our first sample, gender differences in ES / ES-S scores could not be traced back to inequalities in educational level between males and females.

4. Study 2

4.1 Sample

The second sample consisted of 392 Hungarian respondents, of whom 46.9% were males and 53.1 % females. Mean age was 32.3 years (SD=14 years, ranging from 18 to 89 years). Average years of education was 14.9 (SD=2.9, ranging from 7 to 29 years). 53.3% of the respondents had net monthly income lower than 90 000 HUF¹ and 40.1% had higher than that, while 6.6% of them refused to answer this latter question.

4.2 Measures

For testing the convergent and divergent validity of the abbreviated version of the Existence Scale, three inventories were used besides the sociodemographic questions and the 8-item ES-S (Cronbach's alpha was .74 in this sample).

The 20-item Purpose in Life Test (PIL; Crumbaugh, Maholick 1964) with a 7-point rating scale is the most often used instrument to assess the degree to which individuals experience a sense of meaning and purpose in their life. Psychometric properties of the Hungarian version were found to be appropriate (Konkolý Thege, Martos 2006). In the present study the internal consistency of the measure was excellent (Cronbach's alpha=.90).

Depressive symptomatology was assessed by the 9-item Hungarian version of the Beck Depression Inventory (BDI-S; Rózsa, Szádóczy, Füredi 2001), which is a reliable measure for screening depressive symptom severity. The Hungarian version of this instrument with a 4-point Likert-scale has been validated both in the general population and on clinical samples. In this study, the internal reliability for this scale was good (Cronbach's alpha=.79).

Finally, well-being was measured by the Hungarian version of the 5-item Satisfaction with Life Scale (SWLS; Diener et al, 1985). This scale has a 7-point rating scale and it is a widely used and well validated measure of life satisfaction representing the cognitive aspect of subjective well-being. In this sample internal consistency of this measure was very good (Cronbach's alpha=.89).

¹ 90 000 Hungarian Forint (approx. 360 EUR) is somewhat higher than the average net monthly income (82 948 HUF) in the previous year and region (central Hungary) of the data collection (Hungarian Central Statistical Office 2006).

4.3 Results

Concerning gender and age, no significant differences were found in scores on the Shortened Version of the Existence Scale. However, years of education and income associated positively and significantly ($p < .001$ and $p = .024$ respectively) but weakly ($r = .19$ and Cohen's $d = .24$ respectively) with scores on the ES-S.

Descriptive statistics and intercorrelations of our variables can be seen in Table 4. Results showed that scores on the ES-S are highly correlated with the other measure of meaning in life (PIL), while the strength of the relationship between the ES-S and the scale measuring well-being and life satisfaction (SWLS) was moderate. Meeting our expectations, the ES-S was also in a moderate but negative relationship with the instrument measuring depressive symptoms (BDI-S).

	M	SD	PIL	BDI-S	SWLS
ES-S (8-48)	37.1	6.4	.76***	-.62***	.56***
PIL (20-140)	103.6	16.6		-.64***	.69***
BDI-S (9-27)	13.5	3.8			-.45***
SWLS (5-35)	23.3	6.5			

Note. ES-S=Shortened Version of the Existence Scale; PIL=Purpose in Life Test; BDI-S=shortened version of the Beck Depression Inventory; SWLS=Satisfaction with Life Scale; *** $p < .001$

Tab. 4: Descriptive statistics and intercorrelations of the variables

5. Interpretation of the results

Results of the first study show that both the full and the shortened Hungarian versions of the Existence Scale are reliable, unidimensional measures with excellent internal consistency. Furthermore, these findings prove that the brief version (ES-S) can be used as a psychometrically adequate alternative of the ES, if it is not suitable to use the full 46-item version. The inconsistency concerning the relationship of ES scores with age and educational level, found between the original Austrian (Längle, Orgler, Kundi 2003) and the Hungarian results, possibly can be traced back to the fact that most participants in our first, relatively small convenience sample were well-educated young adults. This hypothesis is supported by evidence from the second study, where age and educational distribution was more balanced: the ES-S showed very similar properties to the original Austrian full version regarding gender and educational differences.

Results of the second study confirmed the convergent and divergent validity of the ES-S. Similarly to our results, scores on the SWLS were correlated moderately ($r = .52$; $p < .01$) with the ES in the study of Harries (2004). This author used the 46-item English language version of the Existence Scale, thus the agreement between her and our data proves the adequacy of both the Hungarian adaptation of the instruments (ES, SWLS) and the satisfactoriness of the shortening process (ES-S). Relationship between scores on the PIL and the ES has also been investigated (Längle, Orgler,

Kundi 2003); however, it was considerably weaker ($r = .49$) than presented in this study. The current results do not allow to determine whether the discrepancy between the two studies comes from cultural differences or some kind of insufficiency in the Hungarian or the German adaptation of the PIL. Finally, the direction and the moderate strength of the connection between the ES-S and the BDI-S correspond to other results concerning the relationship between meaning in life and depressive symptoms (e.g., Crumbaugh, Maholick, 1964; Konkoly Thege, Martos, 2006; Längle, Orgler, Kundi, 2003).

In summary, the findings of the present investigations indicate that the 8-item Shortened Version of the Existence Scale (ES-S) is a valid and reliable instrument for assessing existential fulfilment.

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Appendix: The Shortened Version of the Existence Scale (ES-S)

Kérjük, értékelje az alábbi skálán, hogy milyen mértékben vonatkozik Önre a mindenkori állítás, eltekintve a rövidtávú, időszakos ingadozásoktól (Please mark the circle on the scale which is closed to how you generally feel, apart from occasional, brief fluctuations):					
Nem igaz (not at all)	Nem igaz, bizonyos megszorításokkal (no, hardly)	Inkább nem igaz, mint igen (not really)	Inkább igaz, mint nem (moderately)	Igaz, bizonyos megszorításokkal (mostly)	Igaz (absolutely)
1.	A feladataim személyes elkötelezettséget jelentenek számomra (I feel personally addressed by my tasks).				
2.	Azt hiszem, hogy az életem úgy, ahogy élem, semmire sem jó (The way I live now is good for nothing).				
3.	Sok mindent csak azért teszek, mert azt tennem <i>kell</i> , nem pedig azért, mert azt tenni <i>akarom</i> . (I do a lot because I <i>have</i> to, not because I <i>want</i> to).				
4.	Ha problémák bukkannak fel, gyakran elvesztem a fejemet (I am easily confused when problems arise).				
5.	Belsőleg szabadnak érzem magam (I feel inwardly free).				
6.	Sok dolgot csinállok anélkül, hogy valóban kiismerném magam bennük (I do a lot of things without really knowing enough about them).				
7.	Sok mindent teszek, amit tulajdonképpen egyáltalán nem is akarok megtenni (I do a lot that I really don't want to do).				
8.	Környezetemet egyhangúnak találom (I find the world I live in boring).				