

DEVELOPMENT AND PSYCHOMETRIC EVALUATION OF A REVISED MEASURE OF MEANING IN LIFE: THE LOGO-TEST-R

Barna KONKOLY THEGE^{1,2}, Tamás MARTOS^{1,3}, Yaacov G. BACHNER², Talma KUSHNIR²

¹Institute of Behavioral Sciences, Semmelweis University
Nagyvárad tér 4., XX. em., H-1089 Budapest, Hungary
E-mail: konkoly.thege.barna@gmail.com

²Department of Sociology of Health, Ben-Gurion University of the Negev
P.O.B. 653, 84105 Be'er Sheva, Israel

³Institute of Mental Health, Semmelweis University
Nagyvárad tér 4., XX. em., H-1089 Budapest, Hungary

Abstract: Meaning in life is a core construct in quality of life research and has received substantial attention in the past decades. As a consequence, several instruments were developed to assess this construct. The first meaning in life scale designed and standardized in Europe was the Logo-Test (Lukas, 1971). Although this test has been widely used across Europe, the psychometric properties of the instrument proved to be poor in several investigations. The aim of the present study, therefore, was to develop a revised version, based on international data, and to evaluate its psychometric characteristics. The internal consistency and factor structure of the 14-item revised version (Logo-Test-R) were examined in a sample of 852 Hungarians. The internal reliability of the test was adequate ($\alpha = .75$). The validity of the Logo-Test-R was evaluated in a sub-sample of 391 individuals by examining its relationship with financial state, scores in two other measures of meaning in life and further instruments assessing other quality of life indicators such as general life satisfaction, depressive symptomatology, and life goal orientation. The direction and strength of the observed connections was in accordance with expectations, thus demonstrating good construct validity of the Logo-Test-R.

Key words: meaning in life, quality of life, Logo-Test, reliability, validity

INTRODUCTION

In conjunction with the growing emphasis on quality of life and positive psycholo-

gy, the construct of meaning in life has received increasing attention and recognition in the past decades. The first to introduce this construct to the social sciences was Viktor Frankl, who considered the will to meaning as a fundamental drive of human beings (Frankl, 1947/2006). This author contends (Frankl, 1946/1960) that people are capable of discovering meaning in their lives through the actualization of different values that can be creative (occupation, any kind of active deeds that create something valuable), experiential (appreciation of anything that the person values: art, nature, humor, love

Acknowledgments: The authors wish to thank to Krisztina Szentléleki for her valuable help in collecting the data. We are also very grateful to Dr. María Angeles Noblejas de la Flor for putting her Spanish data at our disposal. This study was supported by scholarship (2005) of the Viktor Frankl Foundation of the City of Vienna given to the first author and by the Hungarian National Science Foundation (OTKA T042574).

Correspondence concerning this article should be addressed to Barna Konkoly Thege (Hungary).

of others) or attitudinal (facing uncontrollable factors such as illness or death with dignity).

Since the introduction of the construct considerable efforts have been devoted to the empirical evaluation of meaning in life. According to the accumulated research data, meaning in life should be considered as an essential part of positive quality of life and mental health. For instance, persons having a strong sense of purpose and meaning in life proved to be more satisfied with their lives, feel more control and engagement in their work, and have less negative affect (Steger, 2009). In contrast, persons who fail to satisfy the need for meaning in life tend to experience an inner emptiness - labeled by Frankl as 'existential vacuum or existential frustration' - that increases the occurrence of mood disorders (Zika, Chamberlain, 1992) as well as the probability of suicidal ideation (Edwards, Holden, 2001; Harlow, Newcomb, Bentler, 1986). In addition, a higher level of meaning in life is to be seen as a protective factor against different addictive behaviors including the use of both legal (Guttman, Cohen, 1993; Konkoly Thege et al., 2009; Marsh, Smith, Piek, 2003) and illegal substances (Newcomb, Harlowe, 1986; Nicholson et al., 1994). The construct of life meaning has been linked to the Big Five personality traits as well: neuroticism, extraversion, openness, agreeableness, and conscientiousness are all connected to meaning in life (Halama, 2005; Längle, Orgler, Kundi, 2003; Schnell, Becker, 2006) indicating that this construct is an important link between personality and quality of life indicators.

One of the first instruments developed to assess meaning in life was the Logo-Test, designed and standardized in Austria by Lukas (1971, 1986). Unlike the most often

used Purpose in Life Test (PIL; Crumbaugh, Maholick, 1964) or other instruments published later (e.g., Life Attitude Profile by Reker, 1992; Meaning in Life Questionnaire [MLQ] of Steger, Frazier, Oishi, and Kaler, 2006), the Logo-Test does not attempt to directly assess the level of life meaning of a person by explicit statements about meaningfulness (i.e., 'I understand my life's meaning' from the MLQ) or a lack of it (e.g., 'My personal existence is utterly meaningless, without purpose' from the PIL). Rather, the Logo-Test includes factors contributing to the feeling of meaningfulness ('sources of meaning in life') and symptoms resulting from a weak sense of meaning in life ('symptoms of existential frustration'). This is because the instrument aims to have both research and therapeutic applicability: apart from the general sense of meaning in life of a person, the Logo-Test also attempts to provide preliminary information about specific topics to work on in a potential therapeutic process.

The original German-language version of the Logo-Test (e.g., Arimond, Kammer, 1993; Bühler, Land, 2004; Peschel, 1988; Schmitz, Hauke, 1994) or parts of it (Gebler, Märcker, 2007) have been employed in several studies being conducted in German-speaking countries. In addition, the scale was translated into at least 15 languages and was used in several countries worldwide including, for example, Chile (Bascur, Vacca, Guevara, 2003), the Czech Republic (Balcar, 1995), Hungary (Konkoly Thege, 2006), Mexico (Tena, Rage, Virseda, 1999), Nigeria (Asagba, 2006), Slovakia (Klčovánská, Masníčková, 1998), Spain (Noblejas de la Flor, 2000), Sweden (Stanich, Örtengren, 1990), and the United States (Preble, 1987). However, internal consistency of the instrument was found to be poor (alpha

values between .51 and .65) in several investigations (Asagba, 2006; Bascur, Vacca, Guevara, 2003; Konkoly Thege, 2006; Noblejas de la Flor, 2000). In other studies, including the manual of the Logo-Test itself (Lukas, 1986), there were no alpha coefficients displayed to express the internal reliability of the instrument (e.g., Klčovánská, Masničáková, 1998; Noblejas de la Flor, 1997; Stanich, Örtengren, 1990; Tena, Rage, Virseda, 1999), which may also reflect inadequate reliability. Principal component analyses showed that the 20-item scale had six or seven dimensions and the eigenvalues of the components did not differ substantially from each other (Konkoly Thege, 2006; Noblejas de la Flor, 2000).

Although Guttman (1996) declares in his overview of the psychological measures assessing meaning in life that the Logo-Test is an exceptionally good instrument, reviewing the previous research using the Logo-Test led us to the conclusion that, in spite of its unquestionable advantages, its psychometric properties need to be improved. The purpose of the present study, therefore, was to present the development of a revised version (Logo-Test-R) and to demonstrate preliminary findings concerning its psychometric characteristics.

In order to evaluate the validity of our instrument, several hypotheses were posed:

1) We assumed that scores on the Logo-Test-R would be strongly associated with the other two measures of meaning in life employed in this study, namely the Purpose in Life Test (Crumbaugh, Maholick, 1964) and the Shortened Version (Konkoly Thege, Martos, 2008) of the Existence Scale (Länge et al., 2003).

2) Since the holocaust survivor Frankl did not believe that the sources of meaning in life were connected to economic condi-

tions (Frankl, 1946/1960), we hypothesized that scores on the Logo-Test-R would be unrelated to financial status.

3) We anticipated a moderately positive relationship between the construct of general life satisfaction and scores on the Logo-Test-R. This assumption was based both on the Franklian concepts - which hold that finding meaning in our daily experiences and deeds leads to better quality of life - and on empirical data (e.g., Konkoly Thege, Martos, 2008; Steger et al., 2006).

4) We also assumed that persons who follow values transcending their own well-being - categorized as intrinsic aspirations in the theory of Kasser and Ryan (1996) - would reach higher scores on the Logo-Test-R compared with those striving rather for such values as wealth, fame, popularity and physical attractiveness - labeled as extrinsic aspirations. This hypothesis was based on the assumption of logotherapy, according to which perceiving life as meaningful derives from actualizing values beyond ourselves (cf. self-transcendence). Based on previous studies using other meaning in life measures (Konkoly Thege, Martos 2006; Konkoly Thege et al., 2008), we expected a moderately strong relationship between the Logo-Test-R scores and both the personal significance of intrinsic aspirations and their relative dominance over extrinsic aspirations. According to the previous research, we expected only a weak association between life meaning and the personal importance of extrinsic aspirations.

5) Since the connection between the feeling of meaninglessness and depression is postulated in Frankl's theory itself and has already been confirmed by previous empirical data (e.g., Crumbaugh, 1964, 1968; Steger et al., 2006; Zika, Chamberlain, 1992), it was also hypothesized that

Logo-Test-R scores would negatively and moderately strongly relate to depressive symptom severity.

METHODS

Preparation of the Revised Version of the Logo-Test (Logo-Test-R)

The original Logo-Test of Lukas (1971, 1986) contains three parts. The first one (items 1-9) is designed to muster sources of life meaning (e.g., interpersonal relationships, occupational satisfaction), while the second part (items 10-16) aims to assess the symptoms and consequences of meaninglessness (e.g., anger, regression), that is, the severity of existential frustration. Both parts employ a 3-point rating scale (Part I: yes / no / neutral; Part II: very often / once in a while / never). The third part consists of two further units. Two questions (items 17 and 18) attempt to assess the flexibility of the person in setting and changing life goals, while the second unit is an essay on one's life to which two scores have to be given by the scorer. The first score (ranging from 0 to 4) should mirror general meaning fulfillment (item 19), while the second value (ranging from 0 to 2) should reflect the degree to which the person can relate constructively to the conditions and events of his or her life (item 20).

In preparing the Logo-Test-R, we intended to preserve the original structure of the scale as much as possible; therefore, only three substantial modifications were made, based on the raw data collected in earlier studies conducted in Hungary (Konkolj Thege, 2006) and Spain (Noblejas de la Flor, 2000):

1) Two items (1 and 14) were omitted because of their extremely low corrected item-total correlation coefficients (r values

between $-.10$ and $.21$ with an average of $.05$).

2) The entire third part (items 17-20) was also excluded because this section seemed to be quite time consuming and difficult to score in accordance with the directions of the manual (correlations between the scores for the essay part given by three independent scorers ranged from $.23$ to $.71$). In addition, these items also showed weak item-total correlations (r values between $.03$ and $.39$ with an average of $.19$).

3) The direction of the scoring was reversed so that higher scores indicate a higher level of meaning fulfillment, and the three-point rating scale was widened into a five-point one (Items 1-8: not at all characteristic / rather not characteristic / neutral / more or less characteristic / very characteristic; Items 9-14: never / rarely / once a while / often / very often). According to previous respondents' suggestions, minor stylistic changes have also been made to improve clarity. For the English language version of the Logo-Test-R, see Appendix. The Hungarian version is available on request from the correspondence author.

Sample and Procedure

Altogether, 852 Hungarians participated in our survey. Reliability and factor structure of the Logo-Test-R were evaluated in the total sample, while validity of the instrument was examined in a subsample of 391 persons (groups 3 and 4, see below). The basic demographic characteristics of the sample are summarized in Table 1.

Participants were recruited in several of the following ways:

1) Approximately 18% of the respondents ($N = 150$) were asked to participate

Table 1. Basic demographic characteristics of the sample

	Total sample (N = 852)	Subsample for the evaluation of validity (N = 391)
Gender		
Male	328 (38.5)	184 (47.1)
Female	524 (61.5)	207 (52.9)
Age	35.6 (15.1)	32.4 (14.0)
Education		
Basic	96 (11.4)	21 (5.5)
Middle	373 (44.3)	245 (63.1)
High	373 (44.3)	122 (31.4)
Logo-Test-R	56.2 (6.6)	55.7 (7.0)

Note: Continuous variables are reported as mean (standard deviation) and categorical variables as N (percentage).

via e-mail using the snowball method. They completed a web-based version of the Logo-Test-R.

2) About 36% of the participants (N = 311) were recruited in Hungarian high schools and companies.

3) Forty percent of the respondents (N = 341) were recruited by graduate psychology students of the Pázmány Péter University (Piliscsaba, Hungary). As a part of a methodology course, students were asked to seek volunteers in their surroundings to participate but they themselves were not involved in the study.

4) Finally, 6% of the participants (N = 50) were involved by a voluntary organization founded to help late adolescents and young adults with unfavorable psychosocial backgrounds.

In all four cases, participation in the investigation was anonymous and entirely voluntary. All questionnaires were administered in Hungarian in the spring of 2006.

Measures

Participants were asked to respond to basic demographic questions concerning gender, age, and educational level. In the subsample, where the validity analyses were conducted, monthly family income per head was also assessed by a question with five available categories, ranging from 'less than 30,000 HUF' to 'more than 120,000 HUF'.¹

Besides the Logo-Test-R [see section *Preparation of the Revised Version of the Logo-Test (Logo-Test-R)*], meaning in life was also assessed by its most frequently used measuring instrument, the Purpose in Life Test (PIL; Crumbaugh, Maholick, 1964) and by the Shortened Version (ES-S; Konkoly Thege, Martos, 2008) of

¹ HUF = Hungarian Forint; 1 EUR = approx. 250-300 HUF.

the Existence Scale (Längle et al., 2003). The structure of the 11 normal and the 9 reverse-coded PIL-items follows the pattern of a seven-point rating scale as follows: 'In life I have: (1) no goals or aims at all / (7) very clear goals and aims' and 'If I should die today, I would feel that my life has been: (7) very worthwhile / (1) completely worthless'. This instrument proved to have adequate reliability, as well as good convergent and divergent validity among many populations, and the psychometric properties of the Hungarian adaptation were also found to be satisfactory (Konkolj Thege, Martos, 2006). In the present study, internal consistency of this measure was excellent (Cronbach's alpha = .90). The 8-item ES-S has a six-point rating scale ranging from (1) 'not at all' to (6) 'absolutely'. Internal consistency of this measure was adequate in this study (Cronbach's alpha = .74).

To assess general life satisfaction, the five-item Satisfaction with Life Scale was used (Diener et al., 1985). This scale has a seven-point rating scale ranging from (1) 'strongly disagree' to (7) 'strongly agree' and 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).

Depressive symptomatology was assessed by the nine-item shortened version (Rózsa, Szádóczky, Füredi, 2001) of the Beck Depression Inventory (Beck et al., 1961), which is a reliable measure for screening depressive symptom severity. The Hungarian version of this instrument has a four-point rating scale ranging from (1) 'not at all true' to (4) 'exactly true' and has been validated both in the general population and on clinical samples (Rózsa et al., 2001). In this study, internal reliabil-

ity for this scale was satisfactory (Cronbach's alpha = .79).

Life goals were evaluated by the shortened Hungarian version (Martos, Szabó, Rózsa, 2006) of the Aspiration Index (Kasser, Ryan, 1996). Six items assessed the personal importance of extrinsic aspirations (wealth, fame and attractiveness), while another six items measured the importance of intrinsic aspirations (psychological growth, relatedness to others and community contribution). Both subscales of the instrument used five-point rating scales ranging from (1) 'not important at all' to (5) 'very important' and demonstrated adequate internal consistency reliabilities in our sample: Cronbach's alpha was .76 for the items measuring intrinsic aspirations and .79 for items concerning extrinsic aspirations. Life goal orientation was expressed by an index score computed by subtracting the ratings of the extrinsic aspirations from those of the intrinsic aspirations so that a higher score indicated a stronger polarization toward commitment to intrinsic values.

Statistical Analyses

Confirmatory factor analyses were conducted by AMOS 6.0, while all other statistical procedures were carried out using the SPSS 13.0 software. In order to evaluate the factor structure of the Logo-Test-R, two confirmatory factor analytic models were tested. Model 1 was a single factor model with one meaning in life factor responsible for all 14 item responses. Model 2 was a higher-order model with two first-order factors ('sources of meaning in life' and 'symptoms of existential frustration') and one second-order factor ('meaning in life').

The normality of the continuous variables was tested by the Shapiro-Wilk *W*-statistic

tics. Because of the non-normal distribution of our continuous variables, relationships among them were analyzed using nonparametric methods. The Mann-Whitney test and the Kruskal-Wallis test were applied to evaluate the relations between categorical and continuous variables, while Spearman correlation coefficients were calculated to estimate the strength of the associations between two continuous variables. Cohen's *d* value was calculated to express effect-size.

RESULTS

Descriptive Statistics, Reliability and Factor Structure

Mean score of the Logo-Test-R in the total sample was 56.2 (ranging from 26 to 70) with a standard deviation of 6.6. The frequency distribution of the total scores was somewhat deviated from the normal distribution (Shapiro-Wilk $W = .95$; $p <$

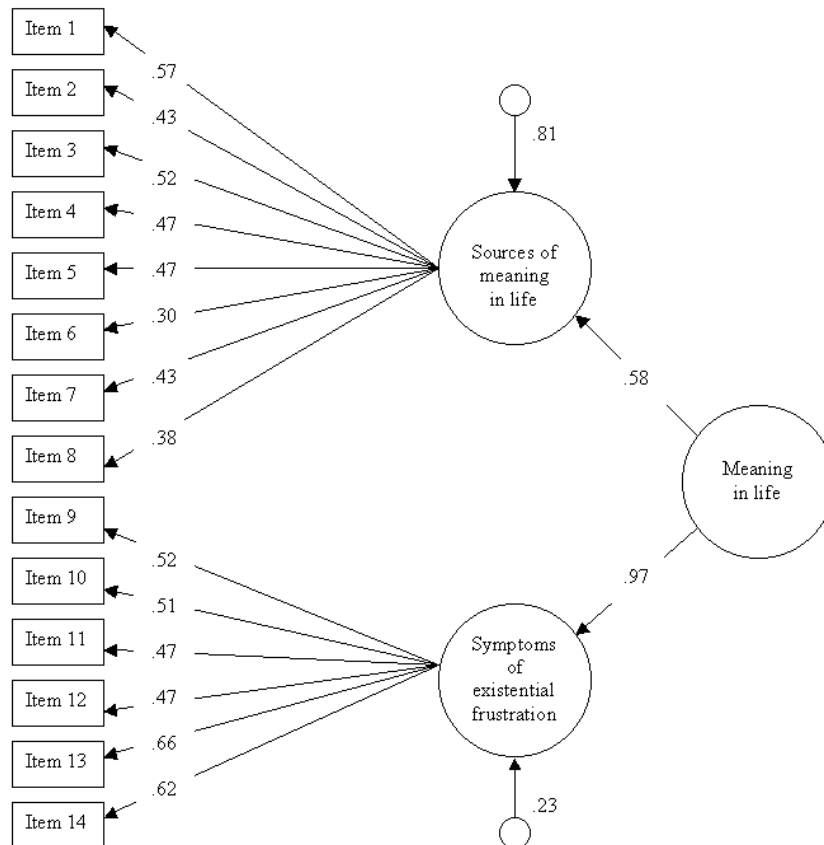


Figure 1. Confirmatory factor analytic model of responses to the revised version of the Logo-Test (higher-order solution)

.001) with a skewness value of -.88 and a kurtosis of 1.09. Corrected item-total correlations of the items ranged from .24 to .51 with an average value of .37 (SD = .07). Internal consistency of the scale proved to be adequate (Cronbach's alpha = .75). The confirmatory factor analytic investigations revealed that the one-factor solution (Model 1) of the Logo-Test-R should be absolutely rejected (CMIN/DF = 6.599; CFI = .745; RMSEA = .081). Although the higher-order solution (Model 2) showed better goodness-of-fit indices (CMIN/DF = 3.883; CFI = .870; RMSEA = .058), the indicators fluctuated around the limit of acceptability even in the case of this model. Figure 1 presents standardized estimates of the better fitting higher-order solution.

Gender and age did not relate significantly to scores on the Logo-Test-R ($Z = -1.39$, $p = .166$; $r_{\text{Spearman}} = 0.04$, $p = .234$ respectively). Since in some investigations meaning in life proved to have a non-linear relationship with age (Längle et al., 2003; Lukas, 1986), we also analyzed this association using age as a categorical variable (<25 yrs: $N = 311$; 25-45 yrs: $N = 258$; >45 yrs: $N = 267$) but the results remained the same ($\chi^2 = 3.12$; $p = .210$). However, educational level showed a positive relationship with meaning in life scores measured by the Logo-Test-R ($\chi^2 = 38.6$, $p < .001$). Effect sizes of the differences between the groups based on educational level ranged from .13 to .53, expressed by Cohen's d value.

Construct Validity

The Logo-Test-R correlated strongly with the Purpose in Life Test ($r = 0.76$, $p < .001$) and related somewhat more weakly but still quite robustly to the Shortened Version of the Existence Scale ($r = 0.66$,

$p < .001$). What is more, scores on the Logo-Test-R were independent of a person's financial state ($\chi^2 = 5.21$, $p = .267$). In addition, meaning in life measured by the Logo-Test-R associated moderately and positively with general life satisfaction ($r = 0.58$, $p < .001$), personal importance of intrinsic aspirations ($r = 0.39$, $p < .001$), and more intrinsic value orientation ($r = 0.33$, $p < .001$). Scores on the Logo-Test-R related negatively but only weakly with the personal importance of extrinsic aspirations ($r = -0.12$, $p = .015$). Finally, meaning in life measured by the Logo-Test-R associated moderately and negatively with depressive symptom severity ($r = -0.60$, $p < .001$).

DISCUSSION

The aim of the present study was to develop a revised version of the Logo-Test of Lukas (1971, 1986) and to present preliminary data concerning its reliability and validity. In contrast to the published data on the original version, the revised version of the Logo-Test proved to have adequate internal consistency and a more acceptable factor structure (two first-order factors instead of the six or seven components observed in the original version). However, the slightly poor goodness-of-fit indices of our confirmatory factor analytic models may indicate that the factor structure of even the revised version of the Logo-Test does not perfectly match the theoretical framework developed by the author of the original test. Future studies should clarify whether these findings derive from any special characteristics of our sample (e.g., the high rate of well-educated young adults) or from an inappropriate item composition.

With regard to construct validity, Logo-Test-R scores were found to relate strongly

with the other two measures of life meaning, supporting the adequate validity of the instrument. The strength of the association was, to some extent, stronger in the case of the Purpose in Life Test (PIL) compared with the Shortened Version of the Existence Scale (ES-S), which can be traced back to the fact that the PIL aims to evaluate exactly the same construct as the Logo-Test-R, while the ES-S intends to assess not only the person's perceived level of meaning in life but also some of the personality processes (e.g., reality perception, decision-making abilities) needed to lead a meaningful life (Kundi, Wurst, Längle, 2003; Längle et al., 2003).

The absence of a significant relationship between financial state and scores on the Logo-Test-R observed in this study can also be interpreted as supporting the construct validity of this life meaning measure, although Frankl's hypothesis concerning the unrelatedness of meaning in life and financial state has hardly been investigated and was not always supported by the empirical data (Crumbaugh, 1968; Konkolý Thege, 2006; Konkolý Thege, Martos, 2006, 2008). The results also confirmed our third hypothesis with regard to the expected moderate positive connection between general life satisfaction and meaning in life assessed by the Logo-Test-R, which provides further evidence for the convergent validity of the instrument.

Our fourth assumption was also supported by the data, since scores on the Logo-Test-R related moderately strongly to the importance of intrinsic aspirations and to the relative dominance of intrinsic values over extrinsic aspirations. In addition, the connection observed between meaning in life, measured by the Logo-Test-R, and the importance of extrinsic values was only weak, which corresponds to a general tendency. According to this

trend, personal importance of extrinsic values has substantially weaker relationships with the indicators of quality of life when compared with the importance of intrinsic aspirations or with the ratio of intrinsic and extrinsic aspirations (cf. Martos et al., 2006).

The findings concerning depressive symptom severity also confirmed our hypothesis, since both the inverse direction and the moderate strength of its association with the Logo-Test-R scores were in line with our expectations, giving empirical support to the discriminant validity of our scale. It is worth noting that the strength of the relationship between the Logo-Test-R scores and depressive symptomatology did not reach *r*-values high enough to indicate that the test is, rather, an indirect measure of depression, as was the case in many studies using the Purpose in Life Test (e.g., Dyck, 1987).

Although we can conclude that according to the present data the revised version of the Logo-Test can be used with confidence to measure the meaning in life construct, the present findings must be interpreted in light of several limitations. The sampling in this examination should be considered as convenient and, in the validity analyses, relatively small. What is also of note, although our instrument was developed based on Spanish and Hungarian data, is that the psychometric evaluation of the revised version was conducted on samples from one single country in a language that is spoken by relatively few people in the world. Therefore, this study should be seen as an exploratory investigation and future studies from other countries should examine the generalizability of the present findings.

A further limitation of our - and to the best of our knowledge, every other - study concerning the psychometric evaluation of

a meaning in life measure is that only other paper-pencil tests (and projective methods not specifically intended for assessing meaningfulness) were employed as external criterion in the validity analyses. However, unless no measure of this construct passes a validity analysis using, for instance, verbal interviews as external criterion - with special regard to life meaning and conducted by trained logotherapists - it is difficult to rule out the possibility that the given instrument fails to measure the essence of the meaning in life concept. In other words, it is possible that some or all of the meaning in life scales developed up to now rather assess a similar construct or a mixture of some related constructs (suicide ideation, locus of control, positive mood, fear of death, optimism, depression etc.) as suggested by the high number of components (e.g., Konkoly Thege, 2006; Noblejas de la Flor, 2000; Reker, Cousins, 1979) or by the factorial confusion (e.g., Dyck, 1987) found in several investigations on life meaning measures. Therefore, further studies should place even more emphasis on conceptualizing and testing the external validity of the psychological instruments aiming to measure meaning in life.

Received January 12, 2009

REFERENCES

- ARIMOND, J.P., KAMMER, D., 1993, Existentielle Frustration, Wertangleichung und Depressivität als Prädiktoren von Therapieverlaufsbeurteilung und Therapieabbruch bei stationärer Alkoholismusbehandlung. *Zeitschrift für Klinische Psychologie*, 22, 3, 276-290.
- ASAGBA, R.B., 2006, Reliability and validity of Logotest among Nigerian population. *African Journal for the Psychological Study of Social Issues*, 9, 1, 120-132.
- BALCAR, K., 1995, Standardizace dotazníku "Logo-test" na vzorku studujících českých vysokých škol. *Československá Psychologie*, 39, 5, 400-405.
- BASCUR, C.Y., VACCA, M.O., GUEVARA, R.C., 2003, Estandarización preliminar del Logo-test para el adulto mayor. *Terapia Psicológica*, 21, 1, 39-53.
- BECK, A.T., WARD, C.H., MENDELSON, M., MOCK, J., ERBAUGH, J., 1961, An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561-571.
- BÜHLER, K.-E., LAND, T., 2004, Burnout and personality in extreme nursing: An empirical study. *Schweizer Archiv für Neurologie und Psychiatrie*, 155, 35-42.
- CRUMBAUGH, J.C., 1968, Cross validation of Purpose-in-Life test based on Frankl's concepts. *Journal of Individual Psychology*, 24, 1, 74-81.
- CRUMBAUGH, J.C., MAHOLICK, L.T., 1964, An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology*, 20, 200-207.
- DIENER, E., EMMONS, R.A., LARSEN, R.J., GRIFFIN, S., 1985, The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 1, 71-75.
- DYCK, M.J., 1987, Assessing logotherapeutic constructs: Conceptual and psychometric status of the Purpose in Life and Seeking of Noetic Goals tests. *Clinical Psychology Review*, 7, 4, 439-447.
- EDWARDS, M.J., HOLDEN, R.R., 2001, Coping, meaning in life, and suicidal manifestations: Examining gender differences. *Journal of Clinical Psychology*, 57, 12, 1517-1534.
- FRANKL, V.E., 1960, *The doctor and the soul: From psychotherapy to logotherapy*. Trans. by R. Winston, C. Winston, 1st ed., New York: Alfred A. Knopf (Original work published 1946).
- FRANKL, V.E., 2006, *Man's search for meaning*. Trans. by I. Lasch, 5th ed., Boston: Bacon Press (Original work published 1947).
- GEBLER, F.A., MÄRCKER, A., 2007, Expressive writing and existential writing as coping with traumatic experiences - A randomized controlled pilot study. *Trauma & Gewalt*, 1, 4, 264-272.
- GUTTMANN, D., 1996, Research in the service of logotherapy. *Journal des Viktor-Frankl-Instituts*, 4, 1, 15-36.
- GUTTMANN, D., COHEN, B., 1993, Excessive behaviors and meaning-in-life among the active elderly in Israel. *Journal des Viktor-Frankl-Instituts*, 1, 2, 38-55.
- HALAMA, P., 2005, Relationship between meaning in life and the big five personality traits in young adults and the elderly. *Studia Psychologica*, 47, 3, 167-178.
- HARLOW, L.L., NEWCOMB, M.D., BENTLER, P.M., 1986, Depression, self-derogation, substance use, and suicide ideation: Lack of purpose in life as a

- mediational factor. *Journal of Clinical Psychology*, 42, 1, 5-21.
- KASSER, T., RYAN, R.M., 1996, Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin*, 22, 3, 280-287.
- KLČOVANSKÁ, E., MASNIČÁKOVÁ, M., 1998, Experiencing of existential meaningfulness of Slovak university students. *Studia Psychologica*, 40, 4, 271-276.
- KONKOLÝ THEGE, B., 2006, Die Beziehung zwischen existenzieller Frustration und gesundheitsschädlichem Verhalten. *Existenzanalyse*, 23, 1, 68-72.
- KONKOLÝ THEGE, B., MARTOS, T., 2006, Az Életcél-kérdőív magyar változatának jellemzői. *Mentálhigiéné és Pszichoszomatika*, 7, 3, 153-170.
- KONKOLÝ THEGE, B., MARTOS, T., 2008, Reliability and validity of the Shortened Hungarian Version of the Existence Scale. *Existenzanalyse*, 25, 1, 19-23.
- KONKOLÝ THEGE, B., BACHNER, Y.G., KUSHNIR, T., KOPP, M.S., 2009, Relationship between meaning in life and smoking status: Results of a national representative survey. *Addictive Behaviors*, 34, 1, 117-120.
- KONKOLÝ THEGE, B., MARTOS, T., SKRABSKI, Á., KOPP, M., 2008, A Rövidített Stressz és Megküzdés Kérdőív élet értelmességét mérő alskálájának (BSCI-LM) pszichometriai jellemzői. *Mentálhigiéné és Pszichoszomatika*, 9, 3, 243-261.
- KUNDI, M., WURST, E., LÄNGLE, A., 2003, Existential analytical aspects of mental health. *European Psychotherapy*, 4, 1, 87-96.
- LÄNGLE, A., ORGLER, C., KUNDI, M., 2003, The Existence Scale: A new approach to assess the ability to find personal meaning in life and to reach existential fulfillment. *European Psychotherapy*, 4, 1, 135-151.
- LUKAS, E.S., 1971, Logotherapie als Persönlichkeitstheorie. Dissertation. Universität Wien.
- LUKAS, E.S., 1986, Logo-Test. Test zur Messung von "innerer Sinnerfüllung" und "existenzieller Frustration". Handanweisung, Wien, Deuticke.
- MARSH, A., SMITH, L., PIEK, J., SAUNDERS, B., 2003, The Purpose in Life Scale: Psychometric properties for social drinkers and drinkers in alcohol treatment. *Educational and Psychological Measurement*, 63, 5, 859-871.
- MARTOS, T., SZABÓ, G., RÓZSA, S., 2006, Az Aspirációs Index rövidített változatának pszichometriai jellemzői hazai mintán. *Mentálhigiéné és Pszichoszomatika*, 7, 3, 171-191.
- NEWCOMB, M.D., HARLOW, L.L., 1986, Life events and substance use among adolescents: Mediating effects of perceived loss of control and meaninglessness in life. *Journal of Personality and Social Psychology*, 51, 3, 564-577.
- NICHOLSON, T., HIGGINS, W., TURNER, P., JAMES, S., STICKLE, F., PRUITT, T., 1994, The relation between meaning in life and the occurrence of drug abuse: A retrospective study. *Psychology of Addictive Behaviors*, 8, 1, 24-28.
- NOBLEJAS DE LA FLOR, M.A., 1997, Meaning levels and drug-abuse therapy: An empirical study. *International Forum for Logotherapy*, 20, 1, 46-51.
- NOBLEJAS DE LA FLOR, M.A., 2000, Fiabilidad de los tests PIL y Logotest. *NOUS: Boletín de Logoterapia y Análisis Existencial*, 4, 81-90.
- PESCHEL, H.W., 1988, Zur Sinnproblematik des Alkoholikers: Eine Fragebogenuntersuchung mit dem Logo-Test bei männlichen Alkoholikern. *Suchtgefahren*, 34, 2, 115-119.
- PREBLE, J.B., 1987, The Logo-Test: Norming extensions. Dissertation. University of Nevada, Reno, USA.
- REKER, G.T., 1992, *Manual of the Life Attitude Profile-Revised*. Peterborough, ON: Student Psychologists Press.
- REKER, G.T., COUSINS, J.B., 1979, Factor structure, construct validity and reliability of the Seeking of Noetic Goals (SONG) and Purpose in Life (PIL) tests. *Journal of Clinical Psychology*, 35, 1, 85-91.
- RÓZSA, S., SZÁDÓCZKY, E., FÜREDI J., 2001, A Beck Depresszió Kérdőív rövidített változatának jellemzői a hazai mintán. *Psychiatria Hungarica*, 16, 4, 379-397.
- SCHMITZ, E., HAUKE, G., 1994, Burnout und Sinnverlust. *Integrative Therapie*, 20, 3, 235-253.
- SCHNELL, T., BECKER, P., 2006, Personality and meaning in life. *Personality and Individual Differences*, 41, 1, 117-129.
- STANICH, J., OERTENGREN, I., 1990, The Logotest in Sweden. *International Forum for Logotherapy*, 13, 1, 54-60.
- STEGER, M.F., 2009, Meaning in life. In: S.J. Lopez (Ed.), *Handbook of positive psychology* (2nd edition) (pp. 679-687), Oxford: Oxford University Press.
- STEGER, M.F., FRAZIER, P., OISHI, S., KALER, M., 2006, The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, 53, 1, 80-93.
- TENA, A., RAGE, E., VIRSEDA, J.A., 1999, Sentido de vida en jóvenes universitarios: Estudio descriptivo. *Psicología Contemporánea*, 6, 2, 76-83.
- ZIKA, S., CHAMBERLAIN, K., 1992, On the relation between meaning in life and psychological well-being. *British Journal of Psychology*, 83, 1, 133-145.

APPENDIX

English language translation of the revised version of the Logo-Test
[based on the English language version of the original Logo-Test (Preble, 1987)]

<i>Please indicate the degree to which each of the following statements is characteristic of you.</i>	Not characteristic at all	Rather not characteristic	Neutral	More or less characteristic	Very characteristic
1. I have certain ideas on what I would want to be like, and in what areas I would like to be successful; and I try to realize these ideas as best I can.	1	2	3	4	5
2. I feel happy within my family, and I think I can help my family members feel the same.	1	2	3	4	5
3. I find fulfillment in the work I am engaged in or for which I am preparing myself.	1	2	3	4	5
4. I find pleasure in my human relationships and in the activities related to them.	1	2	3	4	5
5. There is a special activity that particularly interests me, about which I always want to learn more, and on which I work whenever I have the time.	1	2	3	4	5
6. I find pleasure in experiences of certain kinds - arts, wonder of nature, etc. - and do not want to miss out on them.	1	2	3	4	5
7. I believe in a religious or societal task, or one connected with human progress, and place myself at its disposal.	1	2	3	4	5
8. When suffering, worry or sickness arises in my life, I make great efforts to improve the situation.	1	2	3	4	5

Appendix continues

Appendix (continued)

<i>How often have you had the following experiences lately?</i>	Never	Rarely	Once in a while	Often	Very often
9. The feeling of helpless anger because you thought that all you had done so far was in vain?	1	2	3	4	5
10. The wish to be a child again, and to be able to start all over again?	1	2	3	4	5
11. The observation that you try to present your life to yourself or others as being richer in content than it really is?	1	2	3	4	5
12. Reluctance to burden yourself with deep and possibly uncomfortable thoughts about your activities and deeds?	1	2	3	4	5
13. The mood of anxiety which overcomes you without any particular reason, and which causes an agonizing loss of interest in everything that comes up?	1	2	3	4	5
14. The thought that at the moment of death you would have to say to yourself, your life had not been worth living?	1	2	3	4	5

VÝVOJ A PSYCHOMETRICKÉ HODNOTENIE
UPRAVENEJ MIERY ZMYSLU ŽIVOTA: LOGO-TEST-R

B. Konkoly Thege, T. Martos, Y. G. Bachner, T. Kushnir

Súhrn: Zmysel života je ústredným pojmom výskumu kvality života a v posledných desaťročiach sa mu venovala veľká pozornosť. To viedlo k vytvoreniu niekoľkých metodík na jeho hodnotenie. Prvou škálou zmyslu života, ktorá bola zostavená a štandardizovaná v Európe, bol Logo-Test (Lukas, 1971). Napriek veľkej popularite testu v Európe, viaceré výskumy ukázali psychometrickú nedostatočnosť tejto metodiky, a preto cieľom nášho výskumu bolo vytvoriť upravenú verziu metodiky, založenú na medzinárodných údajoch a vyhodnotiť jej psychometrické vlastnosti. Vnútornú konzistenciu a faktorovú štruktúru 14-položkovej upravenej verzie (Logo-Test-R) sme overovali na vzorke 852 Maďarov. Vnútorná reliabilita testu bola adekvátna ($\alpha = .75$). Validitu metodiky Logo-Test-R sme overovali na výbere 391 ľudí skúmaním jej vzťahu s finančnou situáciou, výsledkami z dvoch iných mier zmyslu života a ďalších nástrojov hodnotenia indikátorov kvality života, ako sú všeobecná spokojnosť so životom, depresívna symptomatológia a orientácia na životný cieľ. Smer a sila pozorovaných vzťahov sa zhodovala s očakávaniami, a tým potvrdila dobrú konštruktívnu validitu metodiky Logo-Test-R.