



PSYCHOMETRIC INFORMATION ON LONELINESS. PSYCHOLOGICAL ASPECTS FROM WESTERN ROMANIA

Mihai Marian *

University of Oradea, Romania

Abstract

In this article we evaluated the psychometric properties of The Differential Loneliness Scale. Using data from prior studies on college students, analyses of reliability, validity, and factor structure of this new version of The Differential Loneliness Scale were conducted. Results indicated that the measure was highly reliable, both in terms of internal consistency and test-retest reliability over a 4 weeks period. Convergent validity for the scale was indicated by significant correlations with other measures of loneliness. Construct validity was supported by significant relations with measures of the adequacy of the individual's interpersonal relationships, and by correlations between loneliness and measures of health. Implications of these results for future measurement research on loneliness are discussed.

Keywords: loneliness, fidelity and validity D.L.S.

Introduction

Conceptualization, theory and empirical investigation of the feeling of loneliness advanced during the last years being frequently underlined generally within the population but also in the case of students. Besides that, related to loneliness different predictors such as marital status (and familial relationships), depression and self esteem were evaluated.

Correspondence concerning this paper should be addressed to:

* Ph.D., University of Oradea, Faculty of Socio-Humanistic Sciences, Psychology Department, St. Universitatii, no. 3, Oradea, Bihor, 410087, Romania. E-mail: mmarian@uoradea.ro

Cramer and Barry (1999, p. 492) indicated that most researchers considered loneliness as one entity; in such an unidimensional conceptualization of loneliness it is viewed as an unitary phenomenon that can be assessed by a single global measuring instrument and it supposes that loneliness is in a certain measure beyond causes and circumstances. In an alternative manner other researchers saw loneliness (Myers, 1987; Brehm & Kassin, 1990) as being a phenomenon with many aspects and as a consequence they built instruments to promote this multidimensional point of view, claiming in the same time that loneliness cannot be evaluated by one global measuring. Schmidt and Sermat (1983) claimed the differentiation of loneliness in different hypothetical typologies. For example, the loneliness of a (recent) widow is not equivalent with the loneliness of the recently married persons in their honey moon with regards to family or friends. Loneliness can be considered as being of emotional or social nature. Social loneliness involves inadequate social nets; the origin of emotional loneliness is made clear in the absence of a private attachment relationship.

Many scales for measuring loneliness were designed for reflecting either the unidimensional conceptualization or the multidimensional one. In designing The Differential Loneliness Scale (D.L.S.), Schmidt and Semart (1983) were relying more on the conceptual model and less on the empiric one, identifying areas and dimensions of relationships where solitude could be experienced. D.L.S. measures the extent to which a person is satisfied or unsatisfied by each of the four specific social relationships called romantic or sexual, friends, relations with family and relations with the extended group or community.

The UCLA Loneliness Scale (Russell, 1996; Russell, Cutrona, de la Mora, & Wallace, 1997) is an instrument frequently used and (apparently) preferred by researchers and psychology clinicians. The UCLA Loneliness Scale was constructed on the basis that loneliness is unidimensional, however in our research we are interested in revealing important aspects of the psycho-social factors involved in depression, cancer or in psychotherapy. For these reasons we chose to use the D.L.S. scale to assess loneliness.

Schmidt and Sermat (1983) measured the loneliness of teenagers and adults, thus we considered that the D.L.S. can be administered to individuals over the age of 16 or 17 years; also it can be administered individually or in group setting.

The Differential Loneliness Scale (D.L.S.) (Cramer & Barry, 1999; Luanaigh, & Lawlor, 2008) is an instrument that is frequently used by researchers mainly in the field of social psychology, health psychology and psychotherapy. The scale measures loneliness in four types of relationships (Schmidt & Semart, 1983): sexual/romantic, friends, family and extended group relations.

Objective

In our study we proposed to adapt the D.L.S. on the Romanian population and also to establish the methodological parameters necessary for validation.

Method

Participants

In the validation study of the D.L.S. 114 participants were included (63; 55,3% from rural region and 51; 44,7% from urban area). The sample was heterogeneous from the point of view of education. The participants were between 18 and 56 years of age (with an average age of 29,49; $\sigma = 8,40$). We point out that 55 of the participants were men (48,2%; $m = 31,07$ years ; $\sigma = 9,87$) and 59 of them were women (51,8% ; $m = 28,01$ years; $\sigma = 6,49$).

In the second stage of the study there were 104 participants who formed the sample for the study of the stability of the D.L.S. results. The participants were aged between 18 and 39 with an average age of 27,66 and $\sigma = 6,44$. There were 46 men (44,2%; $m = 27,58$ years; $\sigma = 6,87$) and 58 women (55,8%; $m = 27,72$ years; $\sigma = 6,14$).

Procedure

The participants filled in the Differential Loneliness Scale (D.L.S.; Schmidt & Sermat, 1983), Recent Life Experiences Scale (S.R.L.E.; Kohn & Macdonald, 1992; Oprea, Marian, Filimon, & Banciu, 2011), and Life Orientation Scale (L.O.T.; Scheier & Carver, 1985) in one single testing session. The second examination session (T_2) was implemented 4 weeks after the first one; there were other scales administered in parallel with no relevance for D.L.S. validation study.

In order to establish the internal consistency we analyzed the results of the entire sample (114 participants). In order to establish the temporal stability coefficient (test - retest) and also the validity of the D.L.S. we analyzed only the results of the 104 participants who were involved in the in both sessions. The sample of participants filled out the scales in small groups without a time limit and full anonymity was assured.

Results

A (preliminary) analysis of the information was conducted in order to surprise the differences between men and women for the D.L.S. subscales. No statistically significant differences were observed (the *t* test for independent samples by gender of the participants was used) and as a consequence the averages and the standard diversion were calculated for the entire sample (N=114).

In table 1 we present the averages and the standard deviations for the subscales and the total score of the D.L.S. The values are compatible with those obtained by Schmidt and Sermat (1983).

Table 1. Number of items, means and standard deviations for the D.L.S. subscales and total score.

Measure	No. of items	N	m	σ	Minimum	Maximum
Romantic/sexual relationships	5	114	2,67	2,13	0	5
Friendships	5	114	2,48	1,74	0	5
Relationships with family	5	114	1,82	1,92	0	5
Relationships with larger groups	5	114	1,91	1,08	1	5
D.L.S. total	20	114	8,89	5,83	1	19

Internal consistency

Schmidt and Sermat (1983) reported for the D.L.S. α Cronbach coefficients between .89 and .92 without clarifying the fidelity of the subscales.

In our study, after adjusting the D.L.S. items, we discovered that the subscales present good fidelity (data are presented in table 2). The correlation between the items and the D.L.S. total score (between .39 and .70) is significant

at $p < .01$ indicating the utility for maintaining the items proposed by the authors.

Table 2. Fidelity of the Differential Loneliness Scale (D.L.S.)

Measure	N	Cronbach's α	Test – retest (N=104)
Romantic/sexual relationships	114	.90	.91**
Friendships	114	.75	.87**
Relationships with family	114	.86	.89**
Relationships with larger groups	114	.52	.48**
D.L.S. total	114	.91	.88**

Note: ** $p < .01$

The Fidelity of the D.L.S. was estimated by using the α Cronbach coefficient; in the case of the total score for the D.L.S. a coefficient of .91 was obtained (20 items). This value indicates a very good internal consistency, in table 2 we also present the internal consistency of the four subscales with values ranging between .52 (relations with the extended group) and .90 (sexual relations / romantic). The obtained results are mainly due to the participants' capacity to discriminate between the four evaluated areas of loneliness. Still, in the case of the relationships with the extended group or solitude subscale, it seems that it does not have a great relevance for the evaluated participants; we observed great fidelity in the case of the sexual/romantic relations and family subscales, which are the most relevant areas for the participants' lives.

Table 3. Inter correlational matrix of the D.L.S. subscales.

Measure	Romantic / sexual relationships	Friendship	Relationships with family	Relationships with larger groups	D.L.S. total
Romantic / sexual relationships	-	.55**	.66**	.61**	.86**
Friendships	.55**	-	.61**	.59**	.81**
Relationships with family	.66**	.61**	-	.65**	.87**
Relationships with larger groups	.61	.59**	.65**	-	.80**
D.L.S. total	.86**	.81**	.87**	.80**	-

Note: ** $p < .01$

In table 3 we observe that in the case of the four subscales, the inter correlations are at the same levels with those of the fidelity coefficients, suggesting that there is no clear difference between them.

Temporal stability coefficients (test – retest)

The results of the examinations in test and retest phase (table 2) indicate a good stability over time of the D.L.S. subscales, the value being significant at a step $p < .01$. The calculated correlation coefficient between the two administrations (T_1 and T_2) is situated between .48 and .91, which indicates the stability of the results over a period of time. T test (for paired samples) indicates there are no statistically significant differences between the two examinations and as a consequence, at a following re-evaluation after 4 weeks, the results are relatively constant.

Validity

The D.L.S. authors claim that the instrument has good construct validity and that the D.L.S. subscales correlate with the Marlow-Crowne Social Desirability Scale.

In the studies published by Schmidt and Sermat (1983) and by Cramer and Barry (1999) there are arguments to support the idea that the instrument is able to reveal temporal variations of loneliness. The previously mentioned authors claim that the D.L.S. is sensitive of manipulations in trying to temporally modify the perception of loneliness.

In order to examine the discrimination capacity of the D.L.S. we used our sample of participants who filled out the some additional scales: *Life Orientation Test* (L.O.T.; Scheier & Carver, 1985) and *Recent Life Experiences Scale* (S.R.L.E.; Kohn & Macdonald, 1992, Oprea & al., 2011).

Table 4. Inter correlational matrix of the D.L.S. subscales with the S.R.L.E., and the L.O.T.

Measure	S.R.L.E.	Optimism	Pessimism
Romantic/sexual relationships	.20*	-.44**	.23*
Friendships	.17	-.54**	.14
Relationships with family	.28**	-.39**	.14
Relationships with larger groups	.38**	-.31**	.16
D.L.S. total	.28**	-.51**	.21*

Note: * $p < .05$; ** $p < .01$

The obtained data support the discrimination validity of the D.L.S.; also the test for the comparison of averages between genders was not statistically significant, consequently further subsequent comparisons were not required for this criterion.

In table 4 we observe that the D.L.S. subscales and the total score have been highly correlated with the S.R.L.E. and Optimism; however, this was true only in the case of the global score and the “relations with the partner sexual/romantic” subscale; also, an association with Pessimism was observed. The examination of the subscales (table 4.) demonstrates that the factor “relationships with friends” of the D.L.S. is highly associated (negatively) with Optimism and with the S.R.L.E. and also Pessimism, the other obtained values are insignificant.

Marian and Filimon (2011) claimed the existence of loneliness effects and of stable assignments for negative events on depression and the predictive ability of negative attributional style and of loneliness in the beginning the subsequent development of depressive semeiology. The data obtained indicated that loneliness can contribute to the activation of depression in combination with negative and stable causal assignments. The research also made clear the fact that causal assignments (disadaptive attributional style) have an influence on the feeling of loneliness.

The loneliness felt by the participants over a longer time period may be a cause of shyness, personality factors, repulsion anxiety or lack of social competences. These explanations involve an internal and stable attribution for that situation. As a consequence, by blaming themselves and considering that loneliness is due to internal and stable features, people can become discouraged and motivated to avoid social interactions.

At a theoretical level loneliness is considered to be an important aspect in depression and somatic-psychical diseases (for example: Beck, 1976; Peterson, Mayer, & Seligman, 1993; Luanagh, & Lawlor, 2008; Marian, 2011).

Although a great number of studies concerned mood disorders it is important to note that the D.L.S. was also used in the case of other constructs. As a consequence, the short form of the D.L.S. used by us can be viewed as an instrument with enormous potential for application in studies and practice.

References

- Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. New York: Meridian.
- Brehm, S., & Kassir, S. (1990). *Social Psychology*. Boston: Houghton Mifflin.
- Cramer, M. K., & Barry, J. E. (1999). Conceptualization and measures of loneliness: a comparison of subscales. *Personality and Individual Differences*, 27(3), 491-502.
- Kohn, P. M., & Macdonald, J. E. (1992). The Survey of Life Experiences: A decontaminated hassles scale for adults. *Journal of Behavioral Medicine*, 15(2), 221-236.
- Luanaiha, C. O., & Lawlor, B. A. (2008). Loneliness and the health of older people. *International Journal of Geriatric Psychiatry*, 23, 1213-1221.
- Marian, M. (2011). The attributional style of adults studied by the experimental induction of negative mood. *Journal of Psychological and Educational Research*, 19(2), 96-116.
- Marian, M., & Filimon, L. (2011). The investigation of negative causal attributions and their relation with the social support for the cancer patients: A test of the helplessness theory. *International Journal of Education and Psychology in the Community*, 1(1), 88-105.
- Myers, D. G. (1987). *Social Psychology* (2nd. Ed.). New York: McGraw-Hill.
- Oprea, I., Marian, M., Filimon, L., & Banciu, V. (2011). Recent life experiences: psychometric data in the case of west area of Romania. *International Journal of Education and Psychology in the Community*, 1(2), 61-78.
- Peterson, C., Mayer, F. S., & Seligman, E. M. P. (1993). *Learned Helplessness. A Theory for the Age of Personal Control*. New York: Oxford University Press.
- Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): reliability, validity, and factor structure. *Journal of Personality Assessment*, 66, 20-40.
- Russell, D. W., Cutrona, C. E., de la Mora, A., & Wallace, R. B. (1997). Loneliness and nursing home admission among the rural elderly. *Psychology and Aging*, 12, 574-589.

- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectance. *Health Psychology, 4*, 219-247.
- Schmidt, N., & Sermat, V. (1983). Measuring loneliness in different relationships. *Journal of Personality and Social Psychology, 44*, 1038-1047.

Received September 29, 2011
Revision received December 14, 2011
Accepted January 07, 2012