TRANSLATION AND CROSS LANGUAGE VALIDATION OF UCLA LONELINESS SCALE AMONG ADULTS

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ABSTRACT: *The present research was undertaken to translate and validate the University of California Los Angeles (UCLA) Loneliness scale from target language (English) to source language (Urdu). UCLA Loneliness scale was developed by Russell (1996) [1]. It has 20 uni-dimensional self reported items with 4 point likert type response format ranged from 0 = I never feel this way, and 3 = I often feel this way. It measures the mild, moderate and severe level of loneliness. Results showed high level of Cronbach's alpha reliability coefficient α = 0.91, test retest reliability ranged from r = .70 to r = .90 (p <.01), item total correlation varying from r =. 44 to r = .68 (p <.01) and factor loading ranged from .36 to .67. Construct validity of the Urdu UCLA Loneliness scale secured the same one-dimensional factor structure of the English UCLA Loneliness scale by retaining 20 items. It showed that the Urdu UCLA Loneliness scale is reliable and valid tool to measure the loneliness in Pakistani cultural context. Implications of the study were also discussed.*

Keywords: Loneliness, forward-back translation, Urdu, Pakistan

INTRODUCTION

Loneliness is a multifaceted emotional response to isolation and lack of companionship. It is duration varying from short term to a long period of time. Most of the individuals have the painful experience of loneliness to some extent. It includes apprehensive feelings about a deficiency of connectedness with immediate family members, friends, peer groups, loved ones, children, or successful careers [2, 3]. It is subjective feeling which can be occurring even when the other members of the society are present around. People can be alone without being lonely. It influences the cognition, emotion and behavior of an individual. Researchers [4, 5, 6] found the significant positive relationship between depression and loneliness. They have found lonely people as being unhappy, pessimist, critical, dissatisfied and depressed. According to them the lonely people experience anxiousness, restlessness, tension, anger, hostility, boredom, suicidal ideation and even trying to commit the suicide in extreme cases.

Researchers [7] found that lonely people suffered from mood fluctuation between high and low motivational arousal. Lonely people are highly self focused, self conscious and less assertive in their social interaction. They have sleep disturbances, appetite problems, attention difficulties, nausea and headaches. Relationship was found between schizoid characteristics and loneliness [8]. It was estimated that in the United States out of 60 million people there were 20% of people feel lonely. Same condition was reported in America that there were 12 % of individuals who found no one to whom to discuss important matters of life. Its intensity increased with the passage of time [10].

Loneliness is an emerging disorder in Pakistan as rapid changes emerged due to the modernization. There are multiple causes of loneliness such as excessive use of technology, advancement in social and print media, excessive usage of cell phone, availability of night packages offered by telecommunication companies, freedom of expression, converting from collectivistic culture to individualistic culture, joint family system to nuclear family system, emigration from rural area to urban societies/ other countries. Change in role models from religious leaders to superman, bat man, doraemon and countless other names added in the life of children. These role models change the familial patterns and parenting role. All these changes increase the personal space and change the overall fabric of the society and increase the risk factor of loneliness. Therefore, there is a need to measure the level of loneliness that required the reliable and valid tool in National language (Urdu). University of California Los Angeles (UCLA) Loneliness scale is available to measure the level of loneliness but it is developed in English language therefore, it is decided to translate and validate this scale form English language to Urdu language according to Pakistani cultural context.

Objectives

1)   To translate and validate the UCLA Loneliness Scale from English language to Urdu language.
2)   To established the psychometric properties of the Urdu UCLA Loneliness scale.

METHOD

Objectives of the present study were achieved in three stages. In stage I, translation of the UCLA Loneliness scale was carried out by using forward-back translation method [11]. In stage II, internal consistency of the scale was determined by applying test-retests reliability, Cronbach's alpha reliability, item-total correlation and factor loading. In stage III, factor structure of the Urdu UCLA Loneliness scale was established.

UCLA Loneliness Scale

UCLA Loneliness scale was developed by Russell (1996). It has 20 uni-dimensional self reported items with 4 point likert type response format ranging from 0 = *I never feel this way* to 3 = *I often feel this way*. It measures the mild, moderate and severs level of loneliness. Score ranges from 15-20 and measures the average level of loneliness; individuals within the scores of 21-30, struggles with social interactions and experiencing frequent torment of loneliness. Scores ranging from 31- 40 indicate severe level of loneliness. Cronbach's alpha reliability coefficient of the English and Urdu UCLA Loneliness scale was achieved as $\alpha = .92$ and $\alpha = .90$ respectively.

Sample

Convenient sampling technique was employing for the selection of sample. Total eight set of sample was used ($n = 2$ cultural evaluator experts, $n = 8$ forward-back translation, $n = 5$ committee members, $n = 2$ Urdu language experts, $n = 10$ test try out, $n = 30$ pilot study, $n = 60$ (n=30 Urdu version & n = 30 English version) cross language validation & $n = 200$ confirmatory factor analysis) were selected with equal distribution of gender (50 % men and 50 %women). Age ranges of the participants was from 19 to 60 ($M = 22.63$, $SD = 4.15$). Education of the respondents was varying from BSc (Hons) to M.Phil.

Stage 1: Forward-back Translations of UCLA Loneliness Scale and Committee Approach

Forward Translations

Standard procedure was used to translate the UCLA Loneliness scale from target language (English) to source language (Urdu). For forward translation five bilingual experts ($n = 3$ lecturer of English department and $n = 2$ PhD students of Psychology department from Government College University, Lahore) were approached. It was requested to them to translate the UCLA Loneliness scale from English language to Urdu language without sacrificing the original meaning of the items. They were experienced professionals of Urdu translations and having optimal level of English and Urdu reading, writing and speaking.

Committee Approach

 Committee approach was used to check the compatibility between the English language and the Urdu translation of the UCLA Loneliness scale. It was comprised of $n = 5$ bilingual experts ($n= 3$ men & $n=2$ women). They assured the translation accuracy, improve the grammatical mistakes, check the optimal level of reading and corrected the exact usage of technical terms, so that majority of population would be able to understand the exact meaning of the items. Five forward translations were compared by following the criteria of 1) cultural context, 2) conceptual meanings and 3) removing any inappropriate words from the items. At the end, two Urdu language experts were improved the grammatical mistakes and sentence structure of the Urdu UCLA Loneliness scale.

 Back Translations

Three back translations were carried out to identify the inconsistency within the target and source language. Three bilingual experts, who did M. Phil in English from the Government College University, Lahore were requested to back translate the questionnaire without exposing them to the original scale. After three back translations the same committee members compared the original and back translated questionnaire on the basis of pre defined rules such as 1) cultural context, 2) conceptual meanings and 3) removing any additional words from the items. The test try out of Urdu UCLA Loneliness scale was finalized after correcting the discrepancies of conceptual meanings. The translated questionnaire was exposed to the two Urdu language experts (MA in Urdu, GC University Lahore). They

corrected the grammatical mistakes, cultural appropriateness and difficulty level of reading. The Urdu version of the questionnaire was tested among the target population to find out any problems in the item. The results of, the committee revisions and students discussion, during test try out was incorporated form the final Urdu scale.

Stage 3: Pretesting

Once finalizing the Urdu UCLA loneliness scale, test try out was conducted on 10 adults to identify the problematic and difficult items. After modification and improvement of the items Urdu scale was ready to conduct the pilot study on the target population. Pilot study was conducted on $n = 30$ participants. Cross language validation was carried out on $n = 100$ participants. Both Urdu and English version of the loneliness scale were administered on students of GC University Lahore with the equal distribution of gender *(50%* men *& 50%* women). Age ranges of the participants varying from 20 to 30 years ($M =21.03$, $SD =1.35$). The education of participants was varying from BSc. (Hons) to M. Phil.

Procedure

After seeking permission from the relevant department, students were approached in their class rooms and written consent was taken. Data were collected in paper pencil form. Anonymity and confidentiality of the information was insured. It was requested to mark every item without overlooking any item and report the difficulty level of every item. This procedure took average 15 to 20 minutes. At the end of data collection, the participants were thanked for their volunteer cooperation.

RESULTS

Results of test try out showed that 98 % of students found the questionnaire easy while 2% found the item number 13 difficult to understand which was entertained in the pilot study. Findings of pilot study revealed that 100 % students found it easy to mark and understand. Cronbach's alpha coefficients was achieved $\alpha = .89$ for Urdu version which indicates the high level of internal consistency.

Part 3: Validation of the Loneliness Scale

Cross language validation of the scale was determined by administering the original English scale and Urdu translated scale on $n = 60$ participants ($n = 25$ participants for each group). Item to item and item total correlation was conducted and Confirmatory Factor Analysis was employed.

Table 1 indicate that there is highly significant positive relationship ($r = .90$, $p<.001$) between Urdu-Urdu condition of UCLA Loneliness Scale.

Table 2 shows the significant level of Chronbach's Alpha coefficients of the Urdu UCLA Loneliness scale which is significantly high $\alpha = .90$.

Table 3 shows that the UCLA Loneliness scale is an internally consistent measure of loneliness as every item has significant positive relationship with total scores of UCLA Loneliness scale. A highly significant positive correlation contributes to the measurement of loneliness.

Stage II: Determine the Internal Consistency of the Urdu UCLA Loneliness Scale

Table 1: Cross Language Validation of Urdu and English version of the UCLA Loneliness Scale (N =60)

Scale	N	UE (n =15)	EU (n =15)	UU (n =15)	EE (n =15)
Loneliness	60	.70**	.76**	.90***	.88**

Note. UE = Urdu-English, EU = English- Urdu, UU = Urdu-Urdu, EE = English-English.
***$p <$.001, **$p <$.001.

Table 2:: Mean, Standard Deviation and Chronbach's Alpha Coefficients of the Urdu UCLA Loneliness (N=200)

Variables	Total items	Minimum Scores	Maximum Scores	M	SD	α
UCL Loneliness Scale	20	00	77	17.40	11.70	.91

Table 3: Item total correlation of Urdu UCLA Loneliness Scale (N = 200)

Item Number	1stItem total correlation	Item Number	1stItem total correlation
1	.45**	11	.58**
2	.57**	12	.44**
3	.46**	13	.52**
4	.49**	14	.52**
5	.55**	15	.56**
6	.39**	16	.68**
7	.53**	17	.58**
8	.50**	18	.52**
9	.44**	19	.59**
10	.62**	20	.65**

**$p <$.01

Table 4: Factor loadings of confirmatory factor analysis for Urdu UCLA Loneliness Scale (N =200)

Loneliness Item number	Factor Loading	Item Number	Factor Loading	Item Number	Factor Loading
1	.43	8	.40	15	.55
2	.61	9	.470	16	.56
3	.43	10	.67	17	.67
4	.53	11	.65	18	.56
5	.57	12	.30	19	.54
6	.36	13	.50	20	.63
7	.58	14	.65		

Note. λ = standardized regression weight.

Table 5: Chi-square, degree of freedom and stepwise model fit indices of UCLA Loneliness Scale (N =200)

Scale	χ^2	df	p	GFI	CFI	RMSEA
UCLA Loneliness Scale Model (20 items)	246.966	168	.001	.889	.919	.049

Note. GFI-goodness-of-fit index, CFI-Comparative Fit Index, RMSEA-Root Mean Square Error of approximation
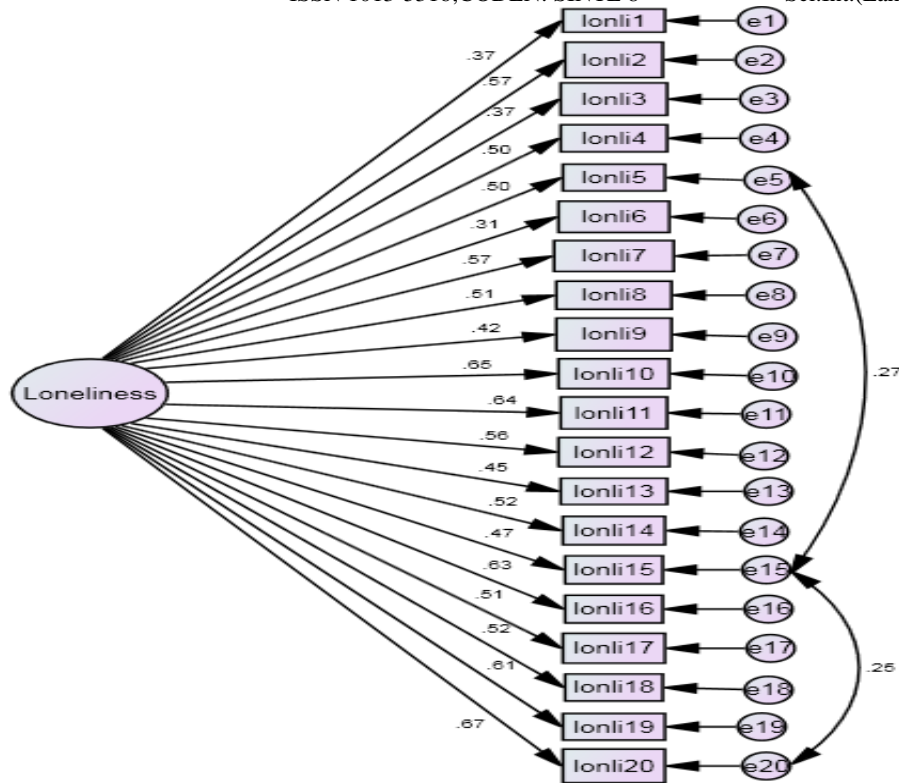
Figure 1: Confirmatory Factor Analysis of Urdu Version of Loneliness Scale (200)

The technique of Confirmatory Factor Analysis was used to determine the uni-dimensional factor structure of the Urdu version of UCLA Loneliness scale. It was used to determine the factorial structure of Urdu UCLA Loneliness scale. The following criteria of multiple fit indices of CFA was used, chi-square (χ^2), root mean square error of approximation (RMSEA), comparative fit index (CFI), nonnormed fit index (NNFI), normed fit index (NFI) and goodness-of-fit index (GFI; Cole, 1987; Sumer, 2000). AMOS software by IBM has been used to investigate the proposed objectives of the current study. Findings revealed that RMSEA (root mean square error of approximation) was .049, GFI (goodness-of-fit index) was .889, NFI (normed fit index) was .788, CFI (comparative fit index) was .919, and χ^2 (246.966, $n = 200$) =, $p < .001$ (Kline, 2004). Findings showed that after evaluating these coefficients the fit index have an appropriate level which directed the relationship between the observable variables and the factors of the model. It represented the original factorial structure of the Urdu version of UCLA Loneliness scale (see Figure 1). Given the fit statistics that were calculated by the CFA, it considered that the previously determined one-factor structure of the scale was consistent with the data collected. The final Urdu translated version of UCLA Loneliness scale retained the original factor structured which consisted of 20 items (see figure 1for detail).

DISCUSSION
The objective of the current study was to translate and validate the University of California Los Angeles (UCLA) Loneliness Scale from English Language to Urdu Language by using forward-back translation method. Psychometric

properties of the Urdu translated version of UCLA Loneliness scale was remained consistent with the original version of this scale which is developed by Russell (1996). Findings of the cross language validation, Chronbach's alpha reliability coefficients, inter-item total correlation, factor loading and solution of confirmatory factor analysis (CFA) revealed high level of internal consistency.

Reliability coefficient that is cater sufficient for a Likert type scale is required to approximate as closely as possible [12]. Thus, the reliability of the UCLA Loneliness scale translated version can be considered as high. The results from the Confirmatory Factor Analysis (CFA) showed that the Urdu version of UCLA Loneliness scale retained the original factor structure. It shows that the Urdu UCLA Loneliness scale is appropriate to assess the level of loneliness in Pakistani cultural.

Ranges of Loneliness scale revealed that out of 200 participants 128 individual shows mild loneliness, 40 having moderate level of loneliness and 32 suffered from severe loneliness. There is an alarming situation for the fabric of collectivistic society. It can be a result to lack of friendly relationships during different stages of life from childhood to old age [13]. Through out the life span, human being's social relationships begins, modifies, changes and sometimes end through death, break up, divorce and separation [14].

Researchers [15] described two underlying features of loneliness. 1) loneliness is a reaction to discrepancy between want and available levels of social contacts .2) cognitive attribution effect the experience of loneliness. Therefore, the precipitating (actual) and predisposing (genetic or

personality) factors determine the type and severity level of loneliness. A lack of social skills may make it complicated to develop and maintain the satisfying relationships. It might be affected by the cultural and situational factors such as basic conflict between individualistic and collectivistic values of competition. As collectivistic approach taught the dependency and self sacrificing behaviors while individualistic culture encouraged the independence and self gain [16].

In the present study, validity and reliability of the Urdu UCLA Loneliness Scale was determined. CAF retained the original factor structure of the Urdu UCLA Loneliness scale as directed by theoriginal author (Russell, 1996). Results showed the high level of internal consistency in terms of factor loading, inter-item total correlation and Cronbach's alpha reliability coefficient. Results showed the factor loadings for the Loneliness Scale were .30 to r = .71. It also shows highly significant positive inter-item total correlation ranges from r = .394 to r = .658. While, the Cronbach's alpha reliability coefficient of the Urdu UCLA Loneliness scale was α = .90 in our study, which was consistent with the reliability coefficient α = .92 obtained Russell (1996). According to researchers reliability coefficient for a Likert type scale approximately should be high [17]. Thus, the reliability of the Loneliness scale in our Urdu translated version of Loneliness scale can be considered high. The results from the Confirmatory Factor Analysis (CFA) retained the original factor structure of the Urdu UCLA Loneliness scale. The Loneliness scale appears to have adequate psychometric properties to assess the loneliness in Pakistani cultural context.

Limitations & Strength

Participants of the present study were BSc (Hons) students this may effect the generalizability of the results. However, it is important to be reported that the UCLA Loneliness scale is a reliable and valid questionnaire when it was used with Pakistani Population.

CONCLUSION

Research evidence about the psychometric properties of Urdu translated version of UCLA Loneliness scale showed consistency with the original scale. It means that the factorial structure of Urdu translated version of Loneliness scale is valid and reliable measure to assess the loneliness among the adults of Pakistan. The scale can be used for research purpose, mental health professionals and sociologists if they want to work in this capacity.

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