ORIGINAL ARTICLE

LONELINESS SCALE FOR INSTITUTIONALIZED OLDER ADULTS: A PRELIMINARY FINDING

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Submitted: June 25, 2021
Accepted: July 02, 2022

ABSTRACT

OBJECTIVE
To assess the phenomenon of loneliness, a culturally relevant tool was developed.

STUDY DESIGN
Cross-sectional Design

PLACE & DURATION OF STUDY
The data were collected from November 2019 to January 2020 from the Old age institutions of Lahore.

SUBJECTS AND METHODS
In the first phase of the study, 16 older adults were interviewed to generate a pool of 37-items reflecting the phenomenon of loneliness as experienced by them. All the responses were gathered, and the vague items were discarded. The developed tool was then validated through experts for their significance and relevance to the target population. Further, the tool was administered to 100 older adults selected through purposive sampling within the age range of 65 to 90 years. Depression, Anxiety and Stress Scale was also administered for concurrent validity.

RESULTS
Exploratory factor analysis yielded three factor solution, namely "Aloofness", "Depressive Symptoms" and "Anxiety". Results showed that the developed scale was highly consistent (α=.93).

CONCLUSION
This study has yielded a self-report measure of loneliness for institutionalized older adults with sound psychometric properties.

KEYWORDS
Loneliness, Institutionalized older adults, Aloofness, Depression, Anxiety

INTRODUCTION

With the advancement in technology and health care services, the population of elderly is growing tremendously, which is one of the biggest challenges of the twenty-first century.[1] According to a survey conducted in Pakistan, a 9.3% increase in the elderly population is expected by 2030, making the population to reach a count of 23.76 million.[2] Increased longevity is surely a triumph for society but also an enormous challenge for the economy. It puts a significant burden in terms of finances on the government for the provision of social and health care services.[3] Hence, it is imperative for the health care providers to address the needs of the elderly to improve their well-being, at community level, so that their problems can be prevented or delayed.[4]

Ageing is a biological phenomenon that is beyond human control. As people enter old age, they experience changes in physical, social and mental health.[5] Loneliness is a subjective, negative feeling related to the person's own experience of deficient social relations and is the third leading cause of depression.[6] Loneliness is also known to have detrimental effect on the physical and mental health of elderly and is a significant predictor of mortality risk in old age.[7] The model of loneliness in older adults has also been established by assessing the predictive factors causing loneliness in old age. Widowhood, less frequent contacts with family, retirement, lifestyle changes, childlessness, deteriorated health, mobility, death of friends and relatives increases the risk of loneliness.[8,9,10]

Experiencing loneliness is an important phenomenon which is more prevalent when older adults are subjected to live in old age homes.[11] Pakistan is a socially knitted society where elders are given utmost respect and are usually the head of the family. But the norms are fading as a large proportion of older adults end up living in old age homes.[6] This change could be because of several cultural, social and economic factors including unemployment, entrance of women in the workforce, urbanization, insensitive behavior of children, busy lifestyles, technological demands which had a detrimental impact on the family life in our country.[11,12] Joint family system was one of the most significant family structures in Pakistan where elderly were given immense love, care, respect and admiration from children. Recently, a decline in the traditional family system has been observed with an increase in nuclear family systems, whose negative consequences are mostly faced by the elderly.[13]

This study is an attempt to develop an indigenous loneliness scale by exploring the phenomenology of loneliness among older adults in our culture. Most often loneliness is considered synonymous with depression as measured by different depression and anxiety related scales, which includes a few symptoms of aloofness and isolation but it does not give a complete picture of the phenomenon of loneliness. Currently, there is no indigenous tool available to assess loneliness among institutionalized older adults. It is well-established that psychological constructs have different relevance in different cultures as they are influenced by the values, religion, morals and ethics of that culture.[14] It is posited that using Western constructs creates a bias and that the investigators neglected key information in non-Western cultures.[15] In collectivistic cultures, like ours, the elderly used to enjoy the prime status in families and were involved in all the decision-making tasks which fulfilled their need for recognition.[5] In a collectivistic country like Pakistan, we enjoy close bonding at each stage of life, and have shared values marked with give-and-take relationships, however when we reach old age, elderly are more concerned with getting support rather than giving, therefore people stop tolerating them and they could end in old age homes.[3] Moreover, the fragile pension distribution system[16] renders elderly financially weak, and they must spend their last years of lives in old age institutions.

SUBJECTS AND METHODS

This cross-sectional study was carried out from November 2019 to January 2020.The institutional ethical committee approved the study. The participants were recruited from both government and private old age institutes of Lahore after taking informed consent. In the first phase of study, 18 older adults within the age range of 65-90 years were asked to explain the phenomenon of loneliness as they experience it. The responses of all the participants were recorded. The content analysis was carried out to explore the culturally specific facets of loneliness. A careful screening of the responses was carried out to exclude ambiguous and repetitive items.

Content analysis revealed 41 items which were converted into a self-report measure with 4-point Likert type scale; 0 (never), 1 (sometimes), 2 (often) and 3 (most of the time). For expert validation, opinion was sought from 5 qualified clinical psychologists. The items receiving a 70% agreement were kept and a list of 37 items was generated after expert opinion. In the tryout phase, Loneliness Scale was administered on 16 male and female elderly, which showed that the scale was understandable with no ambiguity.

In the study, a sample of 100 older adults was contacted through a purposive sampling technique with equal gender representation. The age range of the sample was 65-90 years, with the mean age of 73.64 (SD=6.91) for males and 72.84 (SD = 5.95) for females. The educational level ranged from uneducated to post graduate and were married (11%) and the rest of 85%were unmarried (25%), divorced (13%), separated (10%) or widowed (41%). The measures used included demographic sheet, Loneliness Scale consisting of 37-items, and Depression Anxiety and Stress Scale (DASS-21) comprising 21-items which is designed to assess the emotional and psychological manifestation of depression, anxiety and stress with high internal consistency. The data were collected from old age homes in Lahore after assuring confidentiality and their right to withdraw from the study. Although, the sample was very unique due to which the sample size was small as most of the old age institutions did not permit to collect data. Mostly data was collected from a government old age home. Most of the private institutions didn't allow. Moreover, sometimes the participants didn't agree to give data due to which forms were discarded.

RESULTS

Factor Structure of Loneliness Scale

For factor analysis, Principal Component Analysis with Varimax Rotation by extracting 4 factor solution for 37 items scale. The factors were identified with a criterion where Eigen value greater than one was set with a factor loading of .30. Results showed that most of the items were dubious and hence the factor loading was increased to .40. Bartlett's Test was significant and KMO value was .97. Three items were dropped as their loading was less than .40. Scree Plot revealed a three-factor solution with minimum dubious items and interpretable factor structure. These factors were named as aloofness, depressive symptoms and anxiety.

Factor loadings from the Component Factor Analysis shown in Table 1 together with the Cronbach's alpha of each factor. Cronbach's values showed a high construct validity of the Loneliness Scale. Factor I of “aloofness” comprised of 16-items referred to an unpleasant emotional state in which the person feels cut off from others even when surrounded by people. Factor II denoted as “depressive symptoms” referred to a condition where a person feels sad and alienates self from all pleasurable activities, and the person becomes trapped in the past with other physical, emotional and cognitive symptoms. It has 11 items. Factor III, anxiety, refers to a persistent and overwhelming negative emotion that manifests itself as fear, excessive nervousness, and anticipation regarding what is about to come. This factor has 7 items.

Table 1

Factor Loadings, Eigen Values and Variance Explained by 3 Factors of LS with Varimax Rotation (n=100)

S.No.	Item No.	F1	F2	F3
1	1	**.54**	.42	.27
2	2	**.76**	.33	.05
3	4	**.80**	.10	.17
4	7	**.62**	.17	.29
5	9	**.67**	.33	.20
6	10	**.52**	.43	.25
7	11	**.59**	.32	.24
8	12	**.73**	.13	.17
9	14	**.49**	.32	.24
10	15	**.78**	.10	.16
11	17	**.82**	.17	.17
12	19	**.59**	.18	.00
13	30	**.61**	.38	.29
14	34	**.41**	.17	.17
15	36	**.50**	.40	.43
16	37	**.52**	.39	.50
17	5	.15	**.62**	.15
18	6	.22	**.70**	.00
19	13	.31	**.50**	.00
20	16	.40	**.52**	.41
21	20	.08	**.47**	.12
22	22	.50	**.47**	.42
23	23	.27	**.61**	.06
24	25	.25	**.68**	.36
25	26	.27	**.62**	.27
26	31	.10	**.56**	.53
27	33	.41	**.51**	.39
28	3	.48	.42	**.68**
29	8	.17	.05	**.54**
30	18	.12	.31	**.63**
31	21	.22	.16	**.49**
32	27	.31	.11	**.57**
33	28	.23	.27	**.60**
34	35	.16	.42	**.52**
Eigen Values		16.54	2.21	1.63
% of variance		44.71	5.99	4.43
Cumulative variance		44.71	50.71	55.14
Cronbach's Alpha		.94	.79	.79

Note. Factor loadings > .40 are bold faced.

Table 2

Psychometric Properties of LS:

Mean, Standard Deviations and Inter-correlations between Loneliness Scale and Depression, Anxiety and Stress Scale (n=100)

Factors	1	2	3	4	5	6	7	8	M	SD
1. LS_Alf	.....	.68***	.64***	.92***	.81***	.47***	.76***	..76***	27.11	12.15
2. LS_D		.....	.63***	.89***	.69***	.54***	.77***	.74***	16.84	8.48
3. LS_A			.....	.79***	.70***	.73***	.77***	.82***	12.09	4.22
4. LS_T				....	.84***	.61***	.87***	.87***	56.04	20.34
5. DASS_D					....	.64***	.82***	.93***	10.60	4.46
6. DASS_A						...	.67***	.85***	7.09	3.59
7. DASS_S							....	.92***	10.81	3.73
8. DASS_T								.....	28.42	10.74

Note. LS_Alf= Aloofness; LS_D=Depressive Symptoms; LS_A=Anxiety; LS_T=Total of Loneliness Scale; DASS_D=Depression subscale; DASS_A=Anxiety subscale; DASS_S=Stress subscale; DASS_T= Total of DASS scale

Table 2 revealed a high positive correlation between Loneliness Scale and DASS which shows that older adults who feel lonely experiences high mental health issues. Table 2 shows a high concurrent validity. The split half reliability of the scale was .94. It shows that the tool is reliable because, when divided into two halves, its internal consistency is still high. Similarly, the factor aloofness of Loneliness Scale consisted of 16 items with split half co-efficient of.93. The factor depressive symptoms of Loneliness Scale consisted of 11 items with split half co-efficient of .76 and the factor anxiety of Loneliness Scale consisted of 7 items with split half co-efficient of .81.

Test-re-test reliability was established as 10% sample was retested after a one-week interval. Results revealed that the test-re-test reliability of LS was high. The total of loneliness scale at pretesting is significantly positively related with aloofness, depressive symptoms, anxiety subscales and total of loneliness scale at retest level (r=.96, r=.96, r=.89, r=.89). Similarly, aloofness subscale was significantly positively related with depressive symptoms, anxiety subscale and total of loneliness scale at retesting level (r=.86, r=.84, r=.96) respectively. Depressive symptoms subscale was also found to be significantly positively related with anxiety subscale and total of loneliness scale at retest level (r=.83; r=.95).

DISCUSSION

Any psychological construct may have different significance in different culture. Culture has a significant impact on the expression of the emotional and psychological state of a person. Hence, in order to understand the essence and manifestation of loneliness in institutionalized older adults in our culture, a phenomenological approach was used to collect key information regarding the construct in question. A questionnaire was generated with three factors: Aloofness, Depressive symptoms, and Anxiety. Literature also supports these factors that people who are lonely tend to have more depressive symptoms, are more anxious and are not socially active[14].The most prominent factor was Aloofness, which was found to be consistent with the literature, which represents a state of being isolated, withdrawn, absence of belongingness and social disconnectedness[15, 16].This factor structure also has cultural relevance as old age is a phase when older adults demand respect, obedience and nurturance from children and significant others. Being compelled to live in an institute alone day after day, has a detrimental effect on their mental health and hence, they spiral down into a state of helplessness and isolation. Similarly, factor of depression is found to be closely associated with the loneliness and it is very difficult to separate the manifestation of two constructs[17]. Indigenous literature suggests that old age is associated with depression and isolation even in community living older adults[18]. Living in an institution multiplies the negative emotional states of the elderly as they perceive themselves worthless, wish for death and feel regretful when thinking about their past.[16,19] The third factor comprised of anxiety like neurotic symptoms also

explains the manifestation of loneliness in our culture. It was also obvious in the literature that lonely individuals tend to be impulsive, restless, over-reactive towards problems and fearful.[18]

CONCLUSION

This preliminary study shows mental health issues,the need and validation of culturally specific need of valid scale in a larger population comprising all culture of Pakistan to asses' loneliness of older residing in old age institutions has developed a reliable and valid scale with 3 factors (aloofness, depressive symptoms and anxiety) to assess the culture specific experiences of loneliness in older adults living in old age institutes showing high mental health issues in the said population.

Disclaimer: None

Conflict of interests: None to declare

Funding disclosure: None to declare

REFERENCES

1. Lunenfeld B, Stratton P. The clinical consequences of an ageing world and preventive strategies. Best Pract Res ClinObstetGynaecol 2013; 27(5): 643-59.
2. Ashiq U, Asad AZ. The rising old age problems in Pakistan. Journal of Research Society of Pakistan 2017; 54(2): 325-333.
3. Abdullah, S. (February, 18 2021). Ageing in Pakistan: A Curse or Blessing? PIDE Blog. https://pide.org.pk/blog/ageing-in-pakistan-a-curse-or-blessing/
4. Alam A, Ibrar M, Khan P. Socio-economic and psychological problems of the senior citizens of Pakistan. Peshawar Journal of Psychology and Behavioral Sciences. 2016; 2(2): 249-262
5. Gull, F, Dawood S. Religiosity and subjective well-being amongst institutionalized elderly in Pakistan. Health Promotion Perspectives. 2013; 3(1): 124-8.
6. Singh A, Misra N. Loneliness, depression and sociability in old age. Indus Psychiatry J. 2009; 18(1): 51–55.
7. Valtorta N, Hanratty B. Loneliness, isolation and the health of older adults: do we need a new research agenda? JRSocMed. 2012; 105(12): 518–522.
8. Arslantaş H, Adana F, AbacigilErgin, F, Kayar D, Acar G. Loneliness in elderly people, associated factors and its correlation with quality of life: A field study from Western Turkey. Iranian Journal of Public Health. 2015; 44(1): 43–50.
9. Yanguas J, Pinazo-Henandis S, Tarazona-Santabalbina FJ. The complexity of loneliness. Acta bio-medica: AteneiParmensis. 2018; 89(2): 302–314.
10. Franssen T, Stijnen M, Hamers F, Schneider F. Age differences in demographic, social and health-related factors associated with loneliness across the adult life span (19–65 years): a cross-sectional study in the Netherlands. BMC Public Health. 2020; 20: 1118
11. Cassum LA, Cash K, Qidwai W, Vetejee S. Exploring the experiences of the older adults who are brought to live in shelter homes in Karachi, Pakistan: a qualitative study. BMC Geriatr. 2020; 20: 8
12. Qidwai W, Ali Khushk I, Farooq F, Hafiz MY, Nanji K. Old age homes: are they acceptable to Pakistani geriatric population? Results of a survey of elderly outpatients visiting teaching hospitals in Karachi, Pakistan: Old age homes. PJPH 2018; 8(2):107-11.
13. Ayla K, Kanwal S. Levels of loneliness and family structure among geriatrics. J Forensic Psychol. 2018; 3(1): 2-5.
14. Lee J, Cagle JG. Evaluating the factor structure and measurement properties of a scale to assess loneliness among older adults. Society for Social Work and Research 2017; 7(3): 121-126.
15. Durak M, Durak ES. Psychometric qualities of the UCLA loneliness scale-Version 3 as applied in a Turkish culture. Educational Gerontology 2010; 36(10-11): 988-1007.
16. Akbar A. Problems and challenges faced by elder people in oldage homes: a qualitative analysis. Academic Research International. 2021;12(2):43-51.
17. Santiago LM, Mattos IE. Depressive symptoms in institutionalized older adults. Rev SaudePublica 2014;48(2): 216-244.
18. Bhammani MA, Karim MS, Khan MM. Depression in the elderly in Karachi, Pakistan: a cross sectional study. BMC Psychiatry 2013; 3: 181-185.
19. Perissinotto CM, Cenzer IS, Covinsky KE. Loneliness in older persons: A predictor of functional decline and death. Arch Intern Med 2015;172(14): 1078-1083.

Undertaking

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