

Research Paper

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Niharika Borgohain¹, Shalini Roychaudhary², Tausifa Ahmed Hussain^{3*}

ABSTRACT

Loneliness is a critical public health concern among older adults, linked to adverse psychological and physical outcomes. The UCLA Loneliness Scale (Version 3) is a widely used self-report tool for assessing subjective loneliness. This study aimed to adapt the scale for older adults in Assam, India, ensuring linguistic and cultural relevance. A systematic translation process was employed, including forward translation to Assamese, back-translation to English, and expert validation for conceptual equivalence. The adapted 20-item scale was administered to 75 older adults (mean age = 69.62 years) from community and institutional settings. Reliability analysis showed good internal consistency (Cronbach's $\alpha = .817$), and item-total correlations indicated strong internal validity. Inter-item correlations and covariances confirmed cohesive measurement of loneliness while maintaining content diversity. The adapted scale is reliable, culturally appropriate, and suitable for assessing loneliness in Assamese-speaking older adults, supporting research, clinical practice, and community interventions.

Keywords: Loneliness, Older Adults, UCLA Loneliness Scale Version 3, Assamese Translation, Psychometric Validation, Cultural Adaptation

Loneliness has emerged as a significant public health concern, particularly among older adults, due to its strong association with adverse psychological and physical health outcomes. Rather than just the lack of social interaction, it is regarded as a subjective state resulting from a perceived disparity between wanted and real social interactions (Perlman & Peplau, 1981).

Among all age groups, older adults are especially vulnerable to loneliness due to age-related transitions such as retirement, bereavement, declining health, and reduced social networks. According to Socioemotional Selectivity Theory, as individuals age, they tend to prioritize emotionally meaningful relationships over a broader social network, placing greater emphasis on the quality rather than the quantity of social interactions (Carstensen, 1992). While this selective social engagement can enhance emotional well-being, it may also

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Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

increase susceptibility to loneliness when close relationships are lost or unmet emotional needs persist.

Loneliness in later life has been consistently linked to a range of adverse outcomes, including depression, anxiety, cognitive decline, and increased mortality risk (Hawkley & Cacioppo, 2010). In the Indian context, these risks are further intensified by rapid socio-cultural changes such as urbanization, migration, and the transition from joint to nuclear family systems, which have weakened traditional support structures for older adults. Consequently, accurate assessment of loneliness has become essential for both research and intervention.

In light of these developments, proper loneliness assessment has become essential for research and intervention. Although standardized tools like the UCLA Loneliness Scale are extensively used in many cultures, considerable customization is necessary for their usability in a variety of sociocultural contexts. Loneliness is experienced and reported differently depending on cultural norms, language, and emotional expression. This highlights the need for culturally sensitive and contextually relevant measuring techniques, particularly for older adult groups (Russell, 1996).

REVIEW OF LITERATURE

In contrast to objective social isolation, loneliness is commonly understood as a subjective experience resulting from a perceived lack of social connections (Perlman & Peplau, 1981). A large portion of the study on the psychological experience of loneliness has been guided by this conceptual distinction. Since loneliness is linked to negative consequences like depression, cognitive decline, and higher mortality, it has become more widely acknowledged as a major concern among older persons in recent years. The demand for trustworthy and culturally relevant instruments to measure loneliness has grown as the world's population ages, notably in India.

The UCLA Loneliness Scale, which was created by Russell (1996), and its shorter versions, such as the UCLA-20, UCLA-8, and UCLA-6, have shown strong psychometric properties across a variety of populations. Studies carried out in Western contexts have consistently reported high internal consistency and good construct validity of these scales among older adults (Neto, 2014; Velarde-Mayol et al., 2016). For example, Neto (2014) found that the UCLA-6 showed satisfactory reliability and a unidimensional structure in elderly populations, and Velarde-Mayol et al. (2016) validated the scale's use in geriatric assessments. However, despite its widespread use and strong psychometric support, concerns remain regarding the cultural appropriateness of the UCLA Loneliness Scale, particularly in non-Western settings.

Despite its widespread use, the applicability of the UCLA Loneliness Scale in non-Western contexts requires careful cultural adaptation. Social standards, familial structures, and emotional expression all have a cultural impact on the concept of loneliness. The sensation and manifestation of loneliness may be different from Western conceptions in collectivistic civilizations like India, where familial connectedness is valued. Consequently, cultural adaptation is required to guarantee conceptual equivalency and validity; a straightforward verbal translation of the scale would not be adequate. Hawkley and Cacioppo (2010) emphasized the multifaceted impacts of loneliness, connecting it to both physiological and psychological repercussions. According to Victor et al. (2005), loneliness in older

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Individuals is frequently linked to life transitions like retirement, bereavement, deteriorating health, and decreased mobility. Both social and emotional loneliness are exacerbated by these changes. Experiences of loneliness are greatly influenced by cultural background. Disruptions in social duties and expectations can exacerbate feelings of loneliness in collectivist societies, where identity is strongly linked to family and community (Liu & Rook, 2013). If their expectations of emotional intimacy are not fulfilled, older folks may feel lonely even when they are around other people. A crucial step in ensuring cultural authenticity is scale adaptation. According to Beaton et al. (2000), cross-cultural adaptation entails cultural change and psychometric property validation in addition to language translation. Measurement instruments may not accurately capture the desired constructions if they are not properly adapted.

There is still a dearth of studies on measuring loneliness in India. The UCLA Loneliness Scale has been widely used in previous research without conducting thorough psychometric validation, and the majority of these studies have concentrated on younger groups rather than older persons (Suri & Garg, 2020). However, new research has started to fill this gap. For instance, Deol et al. (2022) emphasized the significance of context-specific validation while highlighting the necessity for quick and clinically effective assessments designed for older persons. Similar to this, new data from rural Indian settings indicates that the UCLA-8 scale has acceptable reliability and can capture the social and emotional aspects of loneliness; however, differences in its factor structure show that responses are influenced by cultural (Kanougiya et al., 2025).

Research on loneliness still has a lot of gaps, especially in North-East India, despite recent advancements. The application of current findings to this culturally varied population is limited by the dearth of region-specific validation studies that concentrate on older individuals. The distinctive sociocultural systems of the North-East, such as matrilineal and community-based living arrangements, may have a different impact on how loneliness is experienced and expressed than in other regions of India. Nevertheless, current assessment tools typically ignore these environmental effects. The linguistic diversity of the area also presents difficulties because the majority of loneliness scales are used without sufficient local language modification, which may have an impact on older persons' comprehension and validity.

Therefore, the present study seeks to address this gap by conducting the initial adaptation of a loneliness scale for older adults, aiming to improve its cultural relevance, clarity, and applicability in the Indian context.

Objectives

- To adapt an existing loneliness scale for use among older adults in the Indian context.
- To examine the internal consistency of the adapted scale using reliability analysis.
- To assess the internal validity of the scale through item-total correlations.
- To evaluate the content validity of the adapted scale through expert review.
- To ensure the linguistic clarity and cultural appropriateness of scale items for older adults.

METHODOLOGY

Research Design & Sample:

This study used a cross-sectional correlational design to adapt and preliminarily evaluate a loneliness scale among older adults in Dibrugarh, Assam, collecting data at one point in time to understand and ensure linguistic (Assamese language) and content appropriateness of the instrument, along with assessing its internal consistency and internal validity.

Participants (Inclusion Criteria)

The study included older adults aged 60 years and above, with a sample of 75. Participants were selected using a purposive sampling technique from community settings, from two types of institutional settings, one home/own resident and the other from old age homes to ensure diversity in socio-demographic backgrounds.

Instruments

The UCLA Loneliness Scale (Version 3), developed by Russell, Peplau, and Ferguson (1978) and later revised by Russell (1996), is a widely used self-report measure assessing subjective feelings of loneliness and social isolation. The revised version contains 20 items rated on a Likert scale, demonstrating high internal consistency (Cronbach's $\alpha \approx .89-.94$) and good construct validity across diverse populations. It has been extensively validated, showing strong convergent and discriminant validity, making it suitable for research in psychological and gerontological contexts.

Translation and Adaptation Procedure

The adaptation process followed a systematic translation procedure. Initially, the original scale was translated into the Assamese language by two bilingual experts familiar with both languages and cultural context. From these two individual translated versions a single translated version was created. This was followed by a back-translation into the original (English) language by other two independent experts to ensure semantic equivalence.

Discrepancies between the original and back-translated versions were reviewed and resolved to maintain conceptual accuracy. The translated version was then subjected to expert validation by two subject-matter experts in psychology. They evaluated the items for clarity, cultural relevance, and appropriateness for the target population. Necessary modifications were made based on their feedback.

Tools/Measures:

- **UCLA Loneliness Scale (Version 3):** is a 20-item self-report measure that assesses an individual's subjective feelings of loneliness and social isolation, with responses rated on a 4-point scale ranging from "Never" to "Often."

Data Analysis & Procedure:

Data collection was done following standard administration processes and maintaining ethical considerations. Data analysis was accomplished using the following steps: After finalizing the adapted version of the scale, it was administered to the participants. Informed consent was obtained prior to data collection, and participants were assured of confidentiality and voluntary participation.

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Descriptive Statistics: Calculated for demographic variables (age, gender) and the total scores on the ULCA. Measures of central tendency (mean, median) and dispersion (standard deviation, range) were included.

Reliability: Internal Consistency Reliability was Assessed using Cronbach's alpha coefficient to determine the overall reliability of the scale.

Internal Validity (Pearson Correlation): To determine the internal validity, item total correlation has been evaluated, to examine the relationship between the total score of ULCA and sum total of scores item-wise, except adding that particular item score each time by forming sub scales, to establish internal validity. The strength and significance of the correlation were evaluated. Examined through item-total correlation analysis to examine the consistency of individual items with the overall scale score

Statistical Software:

All analyses were performed using SPSS, version 27.

RESULTS

The analysis revealed very high correlations between the total score and item-excluded scores, indicating that removing any single item does not significantly affect the overall score. This suggests that all items contribute consistently and meaningfully to the measurement of the construct. The uniformly strong correlations reflect excellent internal consistency and stability across items, with no indication of weak or poorly performing items. Additionally, the consistency across all items suggests that the scale functions cohesively as a unified measure.

Demographic Characteristics of the Sample

The study sample comprised total of 75 older adults, aged between, with a mean age of 69.62 years (SD = 6.075 years), which indicates a moderate spread, meaning most participants' ages are fairly close to the average with some variation. The most frequent age was 75 years, it suggests that most participants fall within a similar age range, with a slight concentration in the older group. The relatively small standard deviation in age suggests a homogenous sample in terms of age. The sample was slightly skewed towards male participants, with 39 individuals identifying as male (52.0%), and 36 individuals identifying as female (48.0%). Descriptive statistics for age and gender are presented in Table 1 & 2, which includes means, standard deviations, and frequencies.

The variation in age is moderate, indicating some diversity but not extreme differences. In terms of gender, the group is almost evenly split, showing a slight predominance of males. Overall, the sample reflects a fairly balanced and consistent group of older adults.

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

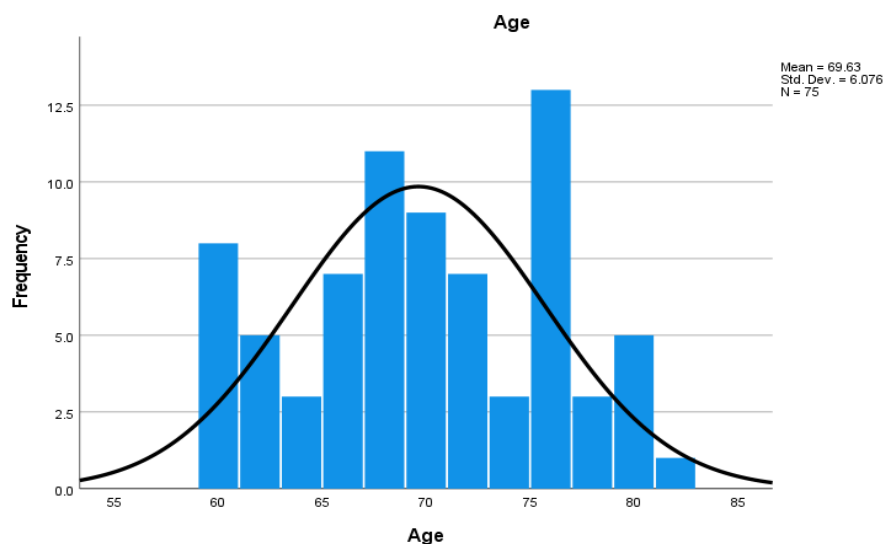
Table 1 & 2: Descriptive Statistics for Demographic Variables (Age and Gender)

Statistics					
Age					
N	Valid	75			
	Missing	0			
Mean		69.63			
Median		70.00			
Mode		75			
Std. Deviation		6.076			
Variance		36.913			
Minimum		60			
Maximum		82			
Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	36	48.0	48.0	48.0
	Male	39	52.0	52.0	100.0
	Total	75	100.0	100.0	

The distribution of ages in the sample is visually represented in a histogram (Figure 1), which also shows the overlay of a normal curve. The ULCA_T scores would likely form a roughly bell-shaped distribution, as the mean, median, and mode are very close, indicating symmetry. Most scores would cluster around the mid-range (around 42–45), with fewer participants at the lower (24) and higher (69) ends. The moderate standard deviation suggests the bars would be fairly spread out but still concentrated near the center, showing a normal distribution with some variability and no extreme skewness.

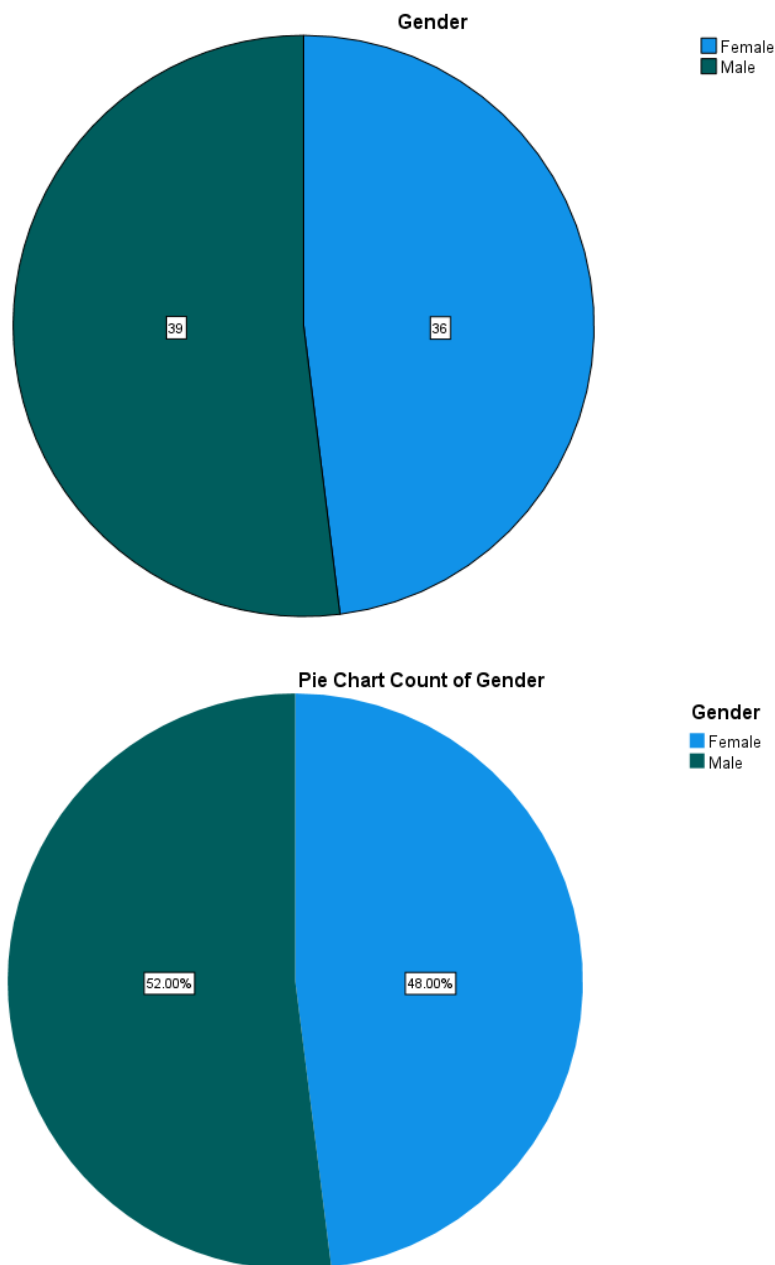
A pie chart representing the distribution of gender in the sample is shown in Figure 2, which visually demonstrates the proportion of female and male participants in the sample.

Figure 1: Histogram of Participant Age with Normal Curve Overlay



Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Figure 2: Pie Charts Representing the Distribution of Gender in the Sample: one with the no. of participants and the other with percentage of participants in each category



Preliminary Analysis of ULCA Total Scores

Prior to testing the study's primary hypothesis, we assessed the distributional properties of the descriptive statistics for ULCA_T show that all 75 participants had complete data with no missing values. The mean score of 43.95 is very close to the median (44.00) and mode (42.00), suggesting that the data is approximately normally distributed with no major skewness, although the presence of multiple modes indicates slight clustering of responses. The standard deviation of 9.03 reflects a moderate level of variability, meaning that while many scores are around the average, there are noticeable individual differences. The range of 45 (from 24 to 69) further indicates a wide spread of scores, showing that participants varied considerably in their levels of loneliness. Overall, the data appears balanced with moderate dispersion and is suitable for further statistical analysis.

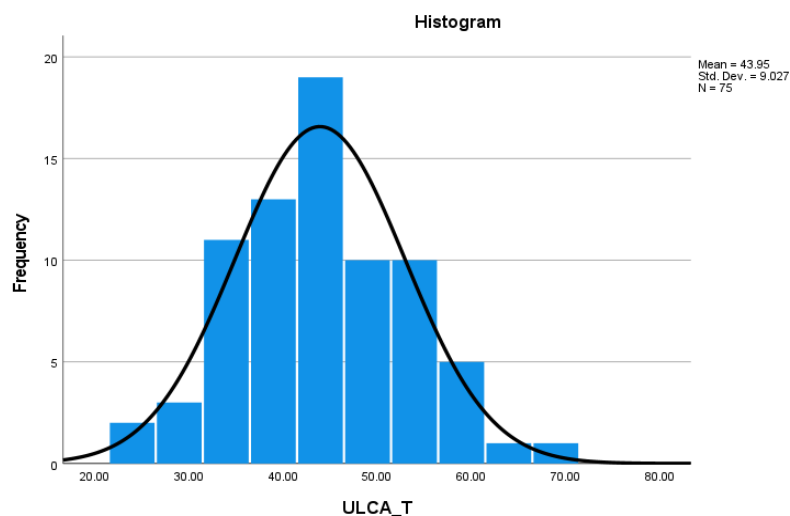
Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Table 2: Descriptive Statistics for ULCA Total Scores (including means, medians, standard deviations)

Statistics		
ULCA_T		
N	Valid	75
	Missing	0
Mean		43.9467
Median		44.0000
Mode		42.00 ^a
Std. Deviation		9.02683
Variance		81.484
Range		45.00
Minimum		24.00
Maximum		69.00

a. Multiple modes exist. The smallest value is shown

Figure 3: Histogram of Participant ULCA_T scores with Normal Curve Overlay



Reliability Analysis

In the present study, a total of 75 cases were included for analysis, with no missing or excluded data. The case processing summary indicates that 100% of the data was valid, and listwise deletion did not result in the removal of any cases. This suggests that the dataset was complete, thereby ensuring that all statistical analyses were conducted on the full sample, which enhances the reliability and robustness of the findings.

Case Processing Summary

		N	%
Cases	Valid	75	100.0
	Excluded ^a	0	.0
	Total	75	100.0

a. Listwise deletion based on all variables in the procedure.

The reliability analysis shows that the scale has good internal consistency, with a Cronbach's Alpha of 0.817. In psychological research, an alpha value above 0.70 is

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

generally considered acceptable, and values above 0.80 indicate good reliability. This means that the 20 items in the scale are consistently measuring the same underlying construct.

Additionally, the Cronbach's Alpha based on standardized items is also 0.817, which suggests that differences in item variances are minimal and do not significantly affect the reliability estimate. Overall, the 20-item scale can be considered reliable and suitable for further analysis, with a strong level of internal consistency among its items.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.817	.817	20

The item statistics indicate the average level and variability of responses for each of the 20 items measuring loneliness/social connectedness in the sample (N = 75). Overall, the mean scores range from 1.81 to 2.60, suggesting that participants generally report moderate levels of these experiences. Items such as *“feeling outgoing and friendly”* (M = 1.81) and *“being in tune with others”* (M = 1.84) have lower mean values, indicating these positive social experiences are reported less frequently. In contrast, higher mean scores are seen in items like *“feeling left out”* (M = 2.60), *“feeling isolated”* (M = 2.56), and *“feeling shy”* (M = 2.53), suggesting that feelings related to social disconnection and loneliness are relatively more common among participants.

The standard deviations (SD \approx 0.85 to 1.10) indicate a moderate spread of responses, meaning there is some variability in how individuals experience these feelings, but responses are not highly dispersed. Items like *“part of a group of friends”* (SD = 1.102) and *“in tune with others”* (SD = 1.053) show slightly higher variability, suggesting differing social experiences across participants. Overall, the pattern reflects a sample with noticeable but not extreme loneliness, where both connectedness and isolation coexist, with a slight tilt toward experiences of social disconnection.

Item Statistics

	Mean	Std. Deviation	N
1. How often do you feel that you are "in tune" with the people around you?	1.84	1.053	75
2. How often do you feel that you lack companionship?	2.48	.906	75
3. How often do you feel that there is no one you can turn to?	2.04	1.006	75
4. How often do you feel alone?	2.41	.902	75
5. How often do you feel part of a group of friends?	1.95	1.102	75
6. How often do you feel that you have a lot in common with the people around you?	1.92	1.010	75
7. How often do you feel that you are no longer close to anyone?	2.07	.920	75
8. How often do you feel that your interests and ideas are not shared by those around you?	2.36	.895	75
9. How often do you feel outgoing and friendly?	1.81	.940	75
10. How often do you feel close to people?	1.96	.922	75
11. How often do you feel left out?	2.60	1.013	75
12. How often do you feel that your relationships with others are not meaningful?	2.29	.927	75
13. How often do you feel that no one really knows you well?	2.52	.978	75

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Item Statistics	Mean	Std. Deviation	N
14. How often do you feel isolated from others?	2.56	.889	75
15. How often do you feel you can find companionship when you want it?	1.87	.875	75
16. How often do you feel that there are people who really understand you?	2.09	.989	75
17. How often do you feel shy?	2.53	.859	75
18. How often do you feel that people are around you but not with you?	2.36	.910	75
19. How often do you feel that there are people you can talk to?	2.16	.973	75
20. How often do you feel that there are people you can turn to?	2.12	.999	75

Inter-item Correlation Matrix of ULCA

The inter-item correlation matrix provides insight into how consistently the 20 items measure the same underlying construct (loneliness/social connectedness). Overall, the correlations range from weak to moderately strong, indicating a generally acceptable level of internal consistency without excessive redundancy.

A clear pattern emerges where conceptually similar items show stronger positive correlations. For example, items reflecting *social closeness and belonging* such as Item 5 (feeling part of a group), Item 6 (having things in common), Item 9 (feeling outgoing), and Item 10 (feeling close to people) are moderately to strongly interrelated (e.g., $r = .628$ between Items 5 and 6, $r = .615$ between Items 9 and 10). Similarly, items capturing *emotional isolation*—such as Item 12 (relationships not meaningful), Item 13 (no one knows you well), and Item 14 (feeling isolated) also show strong inter-correlations ($r = .680$ between Items 12 and 13, $r = .624$ between Items 13 and 14). This indicates good content coherence within subdimensions of loneliness.

At the same time, several negative correlations are observed between positively worded and negatively worded items (e.g., Item 11 “feeling left out” with Items 5, 9, and 10; Item 15 “finding companionship” with Item 11). These inverse relationships are expected and desirable, as they reflect that items are measuring opposite ends of the same construct. However, most negative correlations are low to moderate, suggesting that reverse-worded items are functioning appropriately without distorting the scale.

Importantly, the majority of correlations fall within the optimal range of .15 to .50, indicating that items are related but not redundant. Only a few correlations exceed .60 (e.g., Items 12-13, 13-14, 9-10), which may suggest some item overlap, but not to a problematic extent. Very low correlations (near zero), such as those involving Item 3 (“no one to turn to”), suggest that some items may be relatively independent or tapping slightly distinct aspects of loneliness.

In summary, the matrix suggests that the scale demonstrates good internal structure, with meaningful clustering of related items and appropriate variation across items. There is no evidence of extreme multicollinearity, and the mix of moderate positive and negative correlations supports the construct validity of the measure.

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Inter-item Covariance Matrix

The inter-item covariance matrix reflects how pairs of items vary together in their original metric, offering insight into the internal consistency of the scale. The diagonal values (approximately .739 to 1.213) represent the variance of each item, indicating that all items show adequate variability and are not overly homogeneous or restricted in responses.

Overall, most covariances are positive and moderate in magnitude, suggesting that the items tend to vary together and are measuring a common construct loneliness and social connectedness. Notably, higher covariances are observed among conceptually related items. For example, Item 5 (feeling part of a group) and Item 6 (having things in common) show a strong covariance (.698), while Item 10 (feeling close to people) and Item 16 (feeling understood) also demonstrate a high covariance (.612). Similarly, items reflecting *emotional disconnection*—such as Items 12, 13, and 14 are strongly related (e.g., .616 between Items 12 and 13, .543 between Items 13 and 14), indicating coherent clustering within this domain. The presence of negative covariances (e.g., Item 11 “feeling left out” with Items 5, 9, and 10; Item 15 “finding companionship” with Item 11) is theoretically meaningful. These values reflect the inverse relationship between positively and negatively worded items, confirming that the scale captures opposite ends of the same construct rather than unrelated dimensions.

Some covariances are very low or near zero (e.g., certain pairings involving Item 3 or Item 8), suggesting that these items may tap more specific or slightly distinct aspects of loneliness. However, since this pattern is limited and not widespread, it does not substantially weaken the overall internal structure.

In summary, the covariance matrix indicates a well-structured and reliable scale, with sufficient item variability, meaningful positive associations among related items, and expected negative relationships across opposing constructs. The pattern supports internal consistency while maintaining diversity of item content, which is desirable in psychological measurement.

Summary of Reliability:

The Summary Item Statistics for Inter-Item Covariances indicate that the scale has moderate internal consistency, with a mean covariance of .166, suggesting items generally measure the same construct. The presence of negative covariances (-.273) reflects expected inverse relationships between positively and negatively worded items, supporting conceptual balance. The maximum covariance (.698) shows some strong item relationships without redundancy, while the wide range (.971) indicates the scale captures multiple aspects of loneliness. The low variance (.032) suggests consistency across item relationships. Overall, the scale appears reliable, well-balanced, and multidimensional.

Internal Validity: Correlation Analysis of Total Score and Item-excluded total scores of each item

Here, ULCA_1excl_t to ULCA_20excl_t represents the total score calculated after excluding the respective item number from the scale.

The results show that the total score (ULCA_T) is very strongly related to all the item-excluded totals, with correlation values ranging from .994 to .997, and all of them statistically significant. The strongest relationship is seen with ULCA_14excl_t ($r = .997$), while many others like ULCA_2excl_t, ULCA_4excl_t, ULCA_7excl_t, ULCA_10excl_t,

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

ULCA_12excl_t, ULCA_13excl_t, ULCA_15excl_t, ULCA_16excl_t, and ULCA_17excl_t also show very high correlations (around .996). Even the lowest ones, such as ULCA_1excl_t, ULCA_3excl_t, ULCA_5excl_t, and ULCA_11excl_t (around .994), are still extremely strong. In simple terms, this means that the total score remains almost the same even if any one item is removed.

Overall, this indicates that the scale is adequately consistent and reliable, with all items working together to measure the same concept. No single item seems to have a major impact on the total score, which is a good sign for stability. At the same time, the correlations are so high that it suggests some items might be very similar to each other, possibly repeating the same idea in slightly different ways. So, while the scale is strong and dependable, it could potentially be shortened without losing much information.

Table 3: Internal Validity: Pearson Correlation Matrices Between ULCA Total Scores & and Item-excluded total scores of each item, including correlation coefficient (r)

Correlations

		ULCA T	ULCA_1excl_t
ULCA_T	Pearson Correlation	1	.994**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_1excl_t	Pearson Correlation	.994**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA T	ULCA_2excl_t
ULCA_T	Pearson Correlation	1	.996**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_2excl_t	Pearson Correlation	.996**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA_T	ULCA_3excl_t
ULCA_T	Pearson Correlation	1	.994**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_3excl_t	Pearson Correlation	.994**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Correlations

		ULCA T	ULCA 4excl t
ULCA_T	Pearson Correlation	1	.996**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_4excl_t	Pearson Correlation	.996**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA_T	ULCA_5excl_t
ULCA_T	Pearson Correlation	1	.994**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_5excl_t	Pearson Correlation	.994**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA T	ULCA 6excl t
ULCA_T	Pearson Correlation	1	.995**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_6excl_t	Pearson Correlation	.995**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA T	ULCA 7excl t
ULCA_T	Pearson Correlation	1	.996**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_7excl_t	Pearson Correlation	.996**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Correlations

		ULCA_T	ULCA_8excl_t
ULCA_T	Pearson Correlation	1	.995**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_8excl_t	Pearson Correlation	.995**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA_T	ULCA_9excl_t
ULCA_T	Pearson Correlation	1	.995**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_9excl_t	Pearson Correlation	.995**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA_T	ULCA_10excl_t
ULCA_T	Pearson Correlation	1	.996**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_10excl_t	Pearson Correlation	.996**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA_T	ULCA_11excl_t
ULCA_T	Pearson Correlation	1	.994**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_11excl_t	Pearson Correlation	.994**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Correlations

		ULCA_T	ULCA_12excl_t
ULCA_T	Pearson Correlation	1	.996**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_12excl_t	Pearson Correlation	.996**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA_T	ULCA_13excl_t
ULCA_T	Pearson Correlation	1	.996**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_13excl_t	Pearson Correlation	.996**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA_T	ULCA_14excl_t
ULCA_T	Pearson Correlation	1	.997**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_14excl_t	Pearson Correlation	.997**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA_T	ULCA_15excl_t
ULCA_T	Pearson Correlation	1	.996**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_15excl_t	Pearson Correlation	.996**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Correlations

		ULCA T	ULCA 16excl t
ULCA_T	Pearson Correlation	1	.996**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_16excl_t	Pearson Correlation	.996**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA T	ULCA 17excl t
ULCA_T	Pearson Correlation	1	.996**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_17excl_t	Pearson Correlation	.996**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA_T	ULCA_18excl_t
ULCA_T	Pearson Correlation	1	.995**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_18excl_t	Pearson Correlation	.995**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

		ULCA T	ULCA 19excl t
ULCA_T	Pearson Correlation	1	.995**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_19excl_t	Pearson Correlation	.995**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

Correlations

		ULCA T	ULCA 20excl t
ULCA_T	Pearson Correlation	1	.995**
	Sig. (2-tailed)		.000
	N	75	75
ULCA_20excl_t	Pearson Correlation	.995**	1
	Sig. (2-tailed)	.000	
	N	75	75

** . Correlation is significant at the 0.01 level (2-tailed).

Internal validity of the scale was assessed using item total correlation, which evaluates the degree to which individual items correlate with the total score. Higher correlations indicate that the items are measuring the same underlying construct.

Summary of Findings

Overall, the scale demonstrates strong reliability and internal validity, with all items effectively capturing the same underlying construct. The absence of low correlations indicates that each item aligns well with the total score, supporting the scale's structural integrity. At the same time, the very high correlations suggest some degree of overlap among items, implying that certain items may be measuring very similar aspects. Despite this, the scale remains robust, consistent, and suitable for further analysis and interpretation.

DISCUSSION & INTERPRETATION

The findings indicate that the loneliness scale demonstrates strong internal consistency and coherence, with all items contributing meaningfully to the overall construct. The moderate to high inter-item correlations and covariances suggest that the scale captures a common underlying dimension of loneliness/social connectedness, while still allowing for some diversity in item content. The presence of both positive and negative relationships reflects the inclusion of positively and negatively worded items, enhancing the conceptual balance of the scale.

The very high correlations between total and item-excluded scores further confirm that the scale is highly stable, with no single item exerting undue influence on the overall score. However, these extremely high correlations may also indicate some redundancy among items, suggesting that certain questions may be tapping very similar aspects of loneliness. Overall, the scale appears psychometrically sound, capturing both emotional and social dimensions of loneliness in a reliable and consistent manner.

Implications & Applications

These results support the use of the scale as a reliable and effective tool for assessing loneliness among older adults. It can be applied in clinical and counseling settings to identify individuals experiencing social isolation and guide appropriate interventions. In research settings, the scale can be used to explore associations between loneliness and variables such as mental health, life satisfaction, and social support.

The linguistic adaptation of the scale into Assamese further extends its applicability. The process involved forward translation from English to Assamese, followed by back-

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

translation into English to ensure accuracy, conceptual equivalence, and cultural appropriateness. This adaptation allows researchers and practitioners to reliably assess loneliness in Assamese-speaking populations, ensuring that cultural and language nuances do not compromise the validity of responses.

Furthermore, the scale can be useful in community and policy-level interventions, helping evaluate programs aimed at improving social connectedness among the elderly. Its strong reliability also makes it suitable for longitudinal research, where changes in loneliness over time are assessed.

Limitations & Future Research Directions

Despite its strengths, the study has certain limitations. The sample is restricted to 75 older adults, which may limit the generalizability of the findings to broader or more diverse populations. The extremely high inter-item and item-total correlations suggest potential item redundancy, indicating that the scale could be refined or shortened in future research without compromising reliability.

Future studies should consider conducting factor analysis to examine the dimensionality of the scale and identify underlying factors. Expanding the sample to include different age groups and cultural contexts would enhance external validity. Additionally, further validation studies focusing on construct, convergent, and discriminant validity are recommended to strengthen the overall psychometric properties of the scale.

CONCLUSION

In conclusion, the scale demonstrates strong reliability, internal consistency, and structural integrity, making it a robust tool for measuring loneliness and social connectedness. All items contribute effectively to the overall construct, with no evidence of weak or inconsistent items. Although some redundancy may be present, it does not significantly detract from the scale's effectiveness.

Importantly, the scale has been successfully adapted into the Assamese language using a rigorous translation process. This involved forward translation from English to Assamese, followed by back-translation into English to ensure accuracy, conceptual equivalence, and cultural appropriateness. This systematic adaptation enhances the scale's linguistic validity and expands its practical applicability for Assamese-speaking populations.

Overall, the scale can be considered a reliable, valid, and culturally adaptable instrument, suitable for both research and practical applications in assessing loneliness.

REFERENCES

- Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*, 25(24), 3186–3191. <https://doi.org/10.1097/00007632-200012150-00014>
- Bhatia, S. P. (2014). Loneliness among elderly people. *International Journal of Indian Psychology*, 2(1), 28–33.
- Carstensen, L. L. (1992). Social and emotional patterns in adulthood: Support for socioemotional selectivity theory. *Psychology and Aging*, 7(3), 331–338. <https://doi.org/10.1037/0882-7974.7.3.331>

Adaptation of a Loneliness Scale among Older Adults in Assam: A Psychometric Study on Translation

- Deol, E. S., Yamashita, K., Elliott, S., Malmstrom, T. K., & Morley, J. E. (2022). Validation of the ALONE Scale: A clinical measure of loneliness. *The Journal of Nutrition, Health & Aging*, 26(5), 421–424.
- Grover, S., Avasthi, A., Sahoo, S., Lakdawala, B., Dan, A., Nebhinani, N., & Subramanyam, A. (2018). Relationship of loneliness and social connectedness with depression in elderly: A multicentric study under the aegis of the Indian Association for Geriatric Mental Health. *Journal of Geriatric Mental Health*, 5(2), 99–106.
- Hawkley, L. C., & Cacioppo, J. T. (2010). Loneliness matters: A theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine*, 40(2), 218–227. <https://doi.org/10.1007/s12160-010-9210-8>
- Kanougiya, S., Dhanush, M., Dharani, R., Baskarpandi, S., Surendhar, A., Vishali, B., Swetha, R., & Oviya, V. (2025). Psychometric evaluation of the UCLA-8 loneliness scale among older adults in rural India. *BMC Geriatrics*.
- Liu, B. S., & Rook, K. S. (2013). Emotional and social loneliness in later life: Associations with social relationships and health. *Journal of Social and Personal Relationships*, 30(6), 813–832. <https://doi.org/10.1177/0265407512462289>
- Neto, F. (2014). Psychometric analysis of the short-form UCLA Loneliness Scale (ULS-6) in older adults. *European Journal of Ageing*, 11(4), 313–319.
- Perlman, D., & Peplau, L. A. (1981). Toward a social psychology of loneliness. In R. Gilmour & S. Duck (Eds.), *Personal relationships in disorder* (pp. 31–56). Academic Press.
- Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, 66(1), 20–40. https://doi.org/10.1207/s15327752jpa6601_2
- Russell, D., Peplau, L. A., & Ferguson, M. L. (1978). Developing a measure of loneliness. *Journal of Personality Assessment*, 42(3), 290–294. https://doi.org/10.1207/s15327752jpa4203_11
- Singh, A., & Misra, N. (2009). Loneliness, depression and sociability in old age. *Industrial Psychiatry Journal*, 18(1), 51–55. <https://doi.org/10.4103/0972-6748.57861>
- Suri, S., & Garg, S. (2020). Psychometric properties of the UCLA Loneliness Scale (Version 3) in the Indian context.
- Velarde-Mayol, C., Fragua-Gil, S., & García-de-Cecilia, J. M. (2016). Validation of the UCLA loneliness scale in an elderly population that live alone. *Semergen*, 42(3), 177–183.
- Victor, C. R., Scambler, S., Bowling, A., & Bond, J. (2005). The prevalence of, and risk factors for, loneliness in later life: A survey of older people in Great Britain. *Ageing & Society*, 25(3), 357–375. <https://doi.org/10.1017/S0144686X04003332>

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Conflict of Interest

The author(s) declared no conflict of interest.

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