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Translation and Adaptation of Attitudes to Ageing Questionnaire (AAQ-24) in Urdu

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Abstract

The present study aimed to translate and validate the Attitudes to Ageing Questionnaire into Urdu. Following the adaptation process, the validity and reliability of AAQ-Urdu were analyzed by a cross-sectional survey design and a sample size of (N = 304) older adults ranging in age from 60-80 years (Male = 161, Female = 143). Participants were selected through a convenience sampling technique (152 from family settings and 152 from old age homes). The study utilized the following instruments: Attitudes to Ageing Questionnaire (AAQ-24) and the World Health Organization Quality of Life (WHOQOL) BREF Urdu Version. The scale showed good reliability i.e. alpha value of 0.89 for total score; concerning subscales, the reliabilities were 0.84 for psychosocial loss, 0.74 for psychological growth, and 0.83 for physical change. Furthermore, a strong positive correlation (r = .76) was found between AAQ-24 Urdu and WHOQOL-BREF Urdu, indicating good convergent validity. Exploratory factor analysis revealed a three-factor structure for the Urdu translated AAQ. These findings confirmed that the AAQ-Urdu is a valid and reliable tool for measuring attitude towards ageing among the older population in Pakistan.

Keywords: attitudes to ageing questionnaire, Urdu adaptation, psychometric properties, reliability, older adults.

Introduction

The global older adults population has been steadily increasing, with a 3% annual growth rate reported worldwide (He et al., 2016). In Pakistan, age over 60 years is regarded as old age, and the elderly population is almost 7% of the country's total population (Zainab et al., 2021). Ageing is a multidimensional process which involves positive as well as negative experiences (Perwaiz & Khan, 2022). The advantages of growing old include wisdom, experience and understanding of the world, whereas physical decline, social isolation and age-related stereotyping are the major challenges that people usually face as they grow older (Perwaiz & Khan, 2022). These age-related attitudes (either positive or negative) are influenced by individual experiences. Furthermore, the internalized cultural and societal stereotypes faced by older adults about their aging can also impact the way older people perceive their own aging. Attitudes toward ageing can be defined as perceptions, feelings, and beliefs that people hold about their own ageing process (Kalfoss, 2017). In the last few years, there has been a growing interest in measuring older adults' attitudes towards aging. Empirical evidence indicates that

older people's attitudes toward ageing act as a key factor in shaping their health-related behaviors (Robertson et al., 2016). The negative perceptions of aging have consistently found to be harmful for the cognitive ability as well as the health outcomes of elderly people (Brothers et al., 2021; Weiss, 2018; Zhang et al., 2017). On the other hand, positive attitudes foster resilience, self-efficacy and well-being (Tovel et al., 2019). Therefore, investigating the attitudes toward aging among older people provides a deeper understanding of their perceptions, emotions, and expectations regarding old age, which can help in assessing their mental health and overall well-being (Löckenhoff et al., 2009). Further, it may also help policymakers to address their needs and promote active aging by improving their overall quality of life (Yun & Lachman, 2006). However, to our knowledge, no standardized indigenous tool has been developed to measure the attitudes towards ageing among Pakistani older adults. Moreover, due to the unavailability of a standardized tool, the research on attitudes toward aging and self-perceptions of aging in Pakistan is also limited (Ahmed & Chaudhry, 2015; Hussain et al., 2020). Existing literature in Pakistan has focused on adolescents' attitudes toward old people and the ageing process (Perwaiz & Khan, 2022). In addition, some studies have explored the causes of cultural stereotypes associated with the elderly population (Ahmed & Chaudhry, 2015), the effects of age-related stereotypes on the lifestyles of old people (Sharif et al., 2022), and attitudes of clinical physical therapists towards ageism (Noor et al., 2022), perspective, and understanding of old age among young adults (Malik, 2016). However, there is only a handful of empirical studies that measured the elderly individual's self-perception of ageing (Rashid et al., 2014) using a qualitative approach. Conversely, quantitative studies also have unique significance with reference to the generalizability of findings to a wider population (Bryman, 2017). However, quantitative studies usually require a reliable, valid and standardized tool for better generalizability of the findings (Ahmad et al., 2019). The Attitudes to Ageing Questionnaire (AAQ) is a widely recognized instrument to assess the perceptions of ageing among old people (Laidlaw et al., 2007). Before the construction of this scale, there existed several different tools for measuring subjective perception of ageing, for example the Philadelphia Geriatric Morale Scale (Lawton, 1975), The Image of Ageing Scale (Levy et al., 2004), has been globally used to examine older people's attitudes toward ageing. But these scales appeared to be inadequate in offering a comprehensive and flexible measurement of perceptions about ageing in later life (Laidlaw et al., 2007). Therefore, the AAQ is a more recent and appropriate tool to measure this construct. The AAQ-24 has 24 items covering three distinct subscales, which measure both gains and losses of old age. The scale measures the psychological experiences of old people by two domains collectively, i.e. psychological growth (PG) domain and the psychosocial loss (PL) domain (Laidlaw et al., 2007). The positive experiences of later life including, positive social interactions, acceptance and coping are measured through the psychological growth domain. While PL focuses on the losses and negative aspects of old age which includes, reduced autonomy, social exclusion, and depression. The third domain i.e. Physical changes (PC) domain, measures the physical functioning, vitality, and the exercise level of old people (Laidlaw et al., 2007). There are different translated versions of the scale which have been validated and used within diverse cultural contexts like, French, Brazilian, Portuguese and Farsi speaking populations (Marquet et al., 2016) Although the scale is widely accepted, a validated Urdu version of AAQ was not previously available, limiting its applicability in Pakistan. To fill this significant gap, our study aimed to translate and culturally adapt the Attitudes to Ageing Questionnaire into Urdu language. Existing literature has highlighted the need and importance of cultural adaptation of the items of the scales in the translation process to ensure that the items are culturally suitable and comprehensible to the study population (Gjersing et al., 2010).

Method

Sample

A cross-sectional survey design was employed to collect data for this research. The sample was chosen through the convenient sampling method. The sample size of the present study was (n =304) elderly individuals (Family setting = 152, old age home = 152) with age range 60-80 years (Male = 161, Female = 143). The current study includes old age homes situated in two major cities of Punjab Province i.e. Multan (Aafiat Old age home, Edhi foundation Multan) and Lahore (Heaven old age home, Happy Homes, Bait ul Zaeef, Aafiat old age home Lahore). Further, older adults living within family setup were recruited through social networks, including family, friends, and acquaintances from different cities (Multan, Bahawalpur, Lahore, and Islamabad).

Instruments

The following instruments were used to collect data.

World Health Organization's Quality of Life Scale (WHOQOL-BREF) Urdu

The WHOQOL questionnaire is a well-established instrument that is designed to assess the subjective quality of life. The scale has a brief version consisting of 26-items with four domains (World Health Organization [WHO], 1996). The Urdu version of the WHOQOL scale, developed by Lodhi et al. (2017), was used in this study. The Urdu translated WHOQOL-BREF has demonstrated good psychometric properties i.e. ($\alpha = 0.86$) for overall items of the scale, with Cronbach's alpha value of 0.78, 0.75 and 0.73 for physical domain, psychological domain and environmental domain respectively (Lodhi et al., 2017).

Attitudes to Ageing Questionnaire (AAQ-24)

The AAQ-24 was constructed in 2007 (Laidlaw et al., 2007) and has good psychometric properties. It is a widely used instrument for measuring attitudes toward ageing among old population. The scale contains three domains items (Psychosocial loss, psychological growth, and physical changes) and 24-items. A higher score in the Psychological growth domain and physical change domain suggests a more positives attitude towards ageing. The psychosocial loss domain comprises negatively phrased items, which means that a higher score indicates a negative attitude towards ageing. The Cronbach's alpha coefficient for AAQ is 0.86 (Laidlaw et al., 2007).

Translation Procedure

The World Health Organization (2009) translation and adaptation process was followed as recommended by the scale's original author (Laidlaw, personal communication, October 28, 2023). The English version of AAQ-24 was translated into Urdu by two independent bilingual translators. A synthesized version was generated by resolving discrepancies. Two other bilingual experts then back-translated it, and both translated versions were reviewed by an expert panel (3 members). The scale was also reviewed by the original author identified discrepancies in five items, leading to revisions in two. A pre-test with 30 elderly participants confirmed clarity, requiring no further changes. The final Urdu version (AAQ-Urdu) was then administered to 304 older adults for validation.

Data Collection

Prior to data collection, necessary permissions were obtained from the administrative authorities of all the old-age homes. Data collection proceeded after receiving approval from the Ethical review Board Committee at the Department of Applied Psychology, The Women University Multan. The APA standards for informed consent, confidentiality, anonymity, and participant withdrawal rights were strictly followed.

Results

Psychometric Properties of AAQ-Urdu

After translation, we evaluated the psychometric properties of the scale through different methods, such as (a) Content Validity (b) Convergent Validity, and (c) Internal Consistency Reliability (Cronbach's Alpha).

Content Validity

To ensure the content validity of the scale, a panel of six experts reviewed the items and provided ratings based on the relevance and appropriateness of the items to measure the attitudes toward ageing. Each of the experts rated the items on a 4-points likert scale; (1) *"Not Relevant"* to (4) *"Highly relevant"* (Lynn, 1986; Waltz & Bausell, 1981). The item-level content validity index (I-CVIs) was calculated for each item. Three items were found to have I-CVIs value less than 0.83 (Lynn, 1986) and these were revised according to the suggestions given by panelists. Further, the S-CVI value was calculated, and found to be above the recommended value of 0.80 (Lynn, 1986).

Convergent Validity

Table 1 *Correlation Coefficient of the Study Variables (N = 304)*

Variables	1	2	3	4	5	6	7	8	9
1.ATA	-								
2.PG	.741**	-							
3.PL	.814**	.383**	-						
4. PC	.841**	.489**	.508**	-					
5.QOL	.759**	.618**	.554**	.660**	-				
6.PH	.667**	.407**	.532**	.644**	.826**	-			
7.PsyH	.680**	.571**	.520**	.553**	.844**	.629**	-		
8. SR	.513**	.495**	.378**	.381**	.649**	.379**	.526**	-	
9. EH	.478**	.505**	.267**	.408**	.767**	.416**	.506**	.442**	-

Note. *$p < 0.05$, **$p = 0.01$; $N = 304$, ATA= Attitude towards Ageing; PG= Psychological Growth; PL= Psychosocial Loss; PC= Physical Change; QOL= Quality of Life; PH = Physical Health Domain; PsyH = Psychological Health Domain; SR = Social Relationships; EH = Environmental Health.

To check the convergent validity of attitudes to ageing questionnaire Urdu version, Pearson Bivariate Correlation was computed with WHOQOL-BREF Urdu version. This approach aligns with existing research that similarly used the WHOQOL-BREF to establish the convergent validity of the AAQ in other languages, given the overlapping constructs of QOL and attitudes towards aging (Lucas-Carrasco et al., 2013; Rejeh et al., 2017). It is apparent from the data presented in Table 1 that the AAQ-24 Urdu version was strongly correlated with WHOQOL-BREF Urdu ($r = .76$). Furthermore, the dimensions of both instruments also showed strong correlations with each other (Table 1).

Internal Consistency

Table 2 *Alpha Reliability of Attitudes to Ageing Questionnaire (N=304)*

Scales	*M*	*SD*	Range	α
Attitudes to Ageing Questionnaire	76.4	17.1	24-120	.89
Psychosocial Loss	24.1	7.81	8-40	.84
Psychological Growth	27.5	6.02	8-40	.74
Physical Change	24.7	7.44	8-40	.83

The AAQ-URDU demonstrated good Cronbach's alpha reliability i.e 0.89 for total score; Cronbach's alpha reliability for subscales was 0.84 for psychosocial loss, 0.74 for psychological growth, and 0.83 for physical change (Table 2).

Exploratory Factor Structure (EFA)

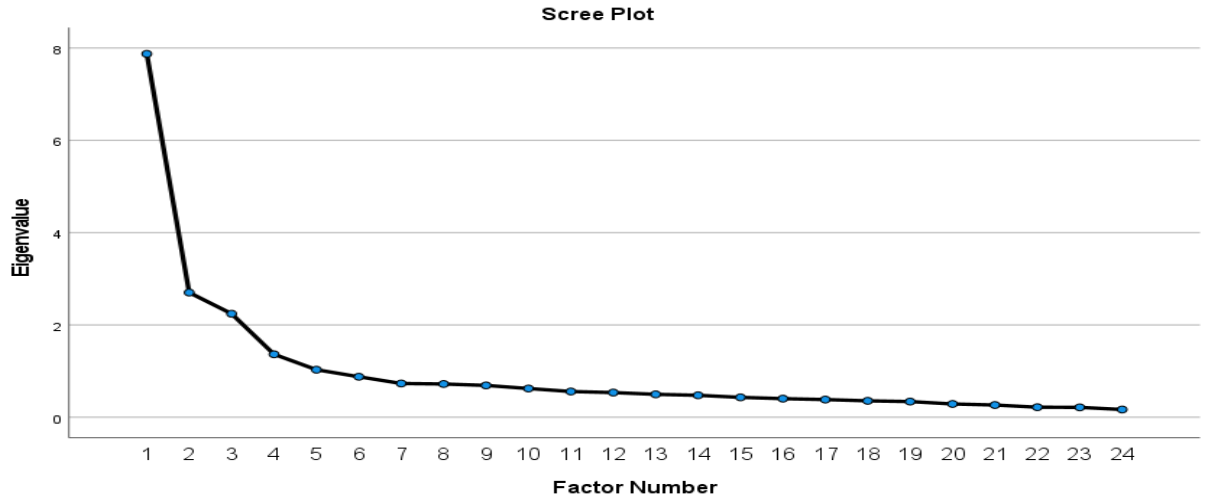
Table 3 *Factor loadings of Urdu translated Attitude to Ageing Questionnaire (AAQ-24)*

AAQ Items	Factors Loadings		
	1	2	3
Factor 1: Psychological Loss (PL) ®			
Item: 3	0.70		
Item: 6	0.72		
Item: 9	0.60		
Item: 12	0.71		
Item: 15	0.81		
Item: 17	0.82		
Item: 20	0.83		
Item: 22	0.76		
Factor 2: Physical Change (PC)			
Item: 7		0.65	
Item: 8		0.63	
Item: 11		0.79	
Item: 13		0.60	
Item: 14		0.71	
Item: 16		0.65	
Item: 23		0.73	
Item: 24		0.71	
Factor 3: Psychological Growth (PG)			
Item: 1			0.70
Item: 2			0.64
Item: 4			0.66
Item: 5			0.70
Item: 10			0.62
Item: 18			0.65
Item: 19			0.70
Item: 21			0.74

Note. N = 304, AAQ = Attitudes to Ageing Questionnaire.

The data was analyzed using principal component analysis, using oblique rotation. Three components were found to have eigenvalue greater than 1.0 as shown in the scree plot (Figure 1). The KMO value (KMO = 0.88) was greater than the suggested value which is 0.60. Moreover, the Bartlett test of Sphericity showed a statistically significant result ($p < 0.001$). Further, table 3 indicates that all the items loaded (≥ 0.40) which is the acceptable range for factor loadings (Tabachnick et al., 2013; Vermeulen & Sonubi, 2015).

Figure 1 The scree plot for sample (N = 304)



The above Figure shows a significant decline in eigenvalue after the third factor, indicating three-factor structure which aligns with the theoretical structure of the original AAQ. Cattell's (1966) also suggested the "elbow" criteria to retain the underling factors i.e the best possible number of factors to sustain is marked at the point where the line in scree plot considerably loses slope (Cattell, 1966). Although, after three major factor the (eigenvalue > 1) further extended but the remaining factors did not contribute significantly to the construct and were excluded. This decision was supported by the theoretical framework. (Costello & Osborne, 2005; Fabrigar & Wegener, 2012). Moreover, the number of factors are often overestimated by Kaiser's criterion (Eigenvalue >1) while, the scree plot and theory gives more conceptually robust solution (Hayton et al., 2004).

Discussion

The purpose of this study was to translate and validate the attitudes to ageing questionnaire into Urdu, to adapt it a culturally relevant and valid tool for measuring the attitudes of old people toward their ageing in Pakistan. The current study also examined the psychometric properties of the AAQ-Urdu in terms of content validity, convergent validity, and internal consistency. Moreover, EFA was also conducted to explore the underlying factor structure of Urdu version of AAQ. The Urdu version of AAQ measures one's subjective experience of ageing. The findings of our study confirmed that Urdu translated AAQ is a valid and reliable tool to be used on a larger sample. The Urdu translated scale showed good internal consistency, the alpha coefficient of the overall scale is ($\alpha = 0.89$), which aligns with the findings of existing studies conducted in different countries (Kalfoss et al., 2010; Marquet et al., 2016). Further, Cronbach's alpha reliability for subscales was (0.84) for psychosocial loss, (0.74) for psychological growth, and

(0.83) for physical change. The findings are comparable to the original English version (α = 0.86) of the scale as well as other translated versions of the Scale in different versions, including the Farsi version (α = 0.90) (Rejeh et al., 2017), Turkey (α = 0.86) (Top et al., 2013) and Canada (α = 0.86) (Erhan et al., 2011). Moreover, the AAQ-Urdu demonstrated a strong correlation with the WHOQOL-BREF Urdu version (r = .76), which is similar to the score acquired in the Farsi scale (r = .70). Further, these findings are in line with the studies conducted in other countries (Kalfoss et al., 2010; Top et al., 2012; Top et al., 2013) demonstrating a strong positive correlation between AAQ and QOL. Moreover, the Urdu version of AAQ identified three underlying factors consistent with that of the original scale (Laidlaw et al., 2007). Similarly, this three factor structure of the Urdu AAQ is consistent with other translated versions in various countries e.g., Spain, French, Brazil (Lucas-Carrasco et al., 2013), as well as the Farsi version (Rejeh et al., 2017).

Implications

The Attitude to Ageing Questionnaire (AAQ-24) Urdu will allow the researchers and practitioners to explore the older adult's perceptions and attitudes towards their ageing with a culturally relevant and appropriate instrument which was not previously available in Pakistan. In addition, the Urdu translated AAQ can be helpful for the development of targeted interventions and programs focusing to improving the quality of life among Pakistani older adults.

Limitations and Recommendations

The present study translated the AAQ-24 into Urdu language and measured its psychometric properties such as, Convergent validity, Cronbach Alpha reliability, and Exploratory Factor structure. For future research, it is recommended that researchers may conduct Confirmatory Factor Analysis (CFA) to further validate the scale's factorial structure and strengthen its psychometric properties. Moreover, the total number of participants for the current study was small (N=304 older adults), and the majority of the participants were from Punjab province recruited using a convenience sampling method. Future research should be conducted with a diverse and larger sample of older adults.

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