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Development & Validation of a Quality-of-Life Scale (QOLS)

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ABSTRACT

This study aimed to develop and validate an indigenous Urdu-language Quality of Life Scale (QOLS-Urdu) tailored to the sociocultural context of Pakistan. Employing a mixed-methods, multi-phased research design, the scale was constructed through qualitative item generation from literature review, interviews, and expert consultations, followed by pilot testing, exploratory and confirmatory factor analyses (EFA and CFA), and validity assessment. The initial item pool was refined to 16 culturally relevant items rated on a 7-point Likert scale. A purposive sample of 200 Urdu-speaking adults from urban and semi-urban areas of Rawalpindi and Islamabad participated in the factor analyses phases. EFA results indicated a robust unidimensional factor structure with 13 retained items showing factor loadings above .40 and excellent internal consistency (Cronbach's α = .89). CFA confirmed the model's construct validity, yielding good fit indices (GFI = 0.92, CFI = 0.90, RMSEA = 0.07). For convergent and discriminant validity, a separate sample of 50 participants completed the QOLS-Urdu alongside the WHOQOL-BREF and Psychological Well-Being Scale (PWB). The QOLS-Urdu showed strong positive correlation with WHOQOL-BREF ($r = .80$, $p < .05$) and a significant negative correlation with PWB ($r = –.52$, $p < .01$), supporting its validity. These findings demonstrate that the QOLS-Urdu is a psychometrically sound, culturally grounded instrument capable of reliably assessing quality of life in Urdu-speaking Pakistani populations. This scale fills a critical gap in culturally sensitive well-being measurement and offers utility for clinical assessment, public health evaluation, and psychosocial research within Pakistan's unique cultural framework.

Keywords: *Quality of Life, Scale Development, Cultural Adaptation, Psychometric Validation, Urdu-speaking Population.*

INTRODUCTION

Quality of life Scale (QOLS) is a multidimensional construct that reflects an individual's perception of well-being in the context of their cultural environment, personal goals, societal expectations, and access to resources (WHOQOL Group, 1995). It encompasses material well-being, health, emotional stability, interpersonal relationships, and opportunities for personal growth and social contribution (Burckhardt & Anderson, 2003). As such, the concept of QOLS is deeply embedded in sociocultural values, and its

assessment must be sensitive to the cultural norms and linguistic realities of the population in which it is applied.

In South Asian cultures, and particularly in Pakistan, quality of life is closely intertwined with collectivist values, religious beliefs, family structure, and social obligations. Concepts such as *"izzat"* (honor), *"sabr"* (patience), *"qana'at"* (contentment), and *"shukar"* (gratitude) are deeply rooted in indigenous frameworks of psychological well-being. These values shape how individuals interpret satisfaction, success, and hardship. For instance, the popular proverb *"jis ke paas sabr hai, us ke paas sab kuch hai"* ("one who has patience, has everything") reflects a cultural emphasis on emotional endurance over material gain, which is often missing from Western QOL models.

Similarly, the proverb *"ghar ki murgi daal barabar"* (literally, "a chicken at home is equivalent to lentils") speaks to the undervaluation of immediate blessings and relationships—a dynamic often reflected in dissatisfaction within close interpersonal domains, a central element in quality-of-life-scale assessments. These idiomatic expressions capture psychological and emotional realities that are rarely addressed in tools developed in Western contexts, underscoring the importance of culturally adapted instruments.

Despite the centrality of these themes in Pakistani life, the assessment of QOLS in this context has been limited by the lack of psychometrically validated tools in Urdu. The majority of existing scales are either translated without cultural adaptation or designed to measure pathology, such as depression, anxiety, or trauma (Naeem et al., 2008; Husain et al., 2000). There is a scarcity of validated tools that assess well-being or positive psychological constructs in Urdu, which restricts both clinical application and public health evaluation.

Indigenous psychology in Pakistan has increasingly emphasized the need to move beyond Western models and incorporate local perspectives, worldviews, and idioms into psychological assessments. Researchers such as Ansari (2005) and Malik (2011) have called for the development of tools that are grounded in *indigenously relevant constructs* such as familial interdependence, spiritual coping, and social harmony. For instance, Ansari's framework on culturally embedded cognition in Pakistani populations identifies honor, humility, and emotional restraint as key elements in personal and relational functioning.

Recent empirical research highlights the relevance of these indigenous constructs to QOLS. A study by Riaz and Batool (2017) found that perceived family support and spiritual well-being were stronger predictors of life satisfaction in Pakistani women than financial income or education. Another study by Khan and Jamil (2018) demonstrated that *QOLS among Pakistani university students* was more strongly associated with religious involvement and familial cohesion than with academic performance or career ambition. These findings affirm that QOL, while globally defined, must be locally understood and assessed.

To address this gap, the present study was conducted to develop and validate an indigenous Urdu-language Quality of Life Scale (QOLS-Urdu) that reflects the lived experiences, cultural idioms, and societal norms of people in Pakistan. Unlike previously adapted measures, this scale was developed from scratch using a mixed-methods approach**,** including qualitative interviews and thematic analysis to derive contextually relevant items. The goal was to create a psychometrically sound and culturally resonant tool that would offer a reliable assessment of QOL across diverse Pakistani populations.

Following the guidelines by Burisch (1984) for scale development, and modeled on successful examples like the SBS-WI (Submissive Behavior Scale for Women with Infertility), the present study employed a five-phase structure. This included item generation from interviews, expert evaluation, pilot testing, factor analysis (EFA and CFA), and validation through convergent and discriminant assessments. The

development of the QOLS-Urdu marks a significant step toward indigenizing psychological assessment in Pakistan, contributing to both academic scholarship and practical applications in mental health, public health, and social services.

This study is grounded in the World Health Organization's Quality of Life (WHOQOL) framework, which conceptualizes quality of life as an individual's perception of their position in life, in the context of culture and value systems. The framework encompasses key domains of physical health, psychological state, social relationships, and environmental context. To ensure cross-cultural validity and psychometric robustness, the study also incorporates the Cross-Cultural Theory of Measurement Equivalence (Hambleton & Patsula, 1998), guiding the adaptation and validation process of the QOL scale into Urdu. The scale development is further supported by Classical Test Theory for the assessment of reliability and validity indicators.

In doing so, the study contributes not only a reliable instrument for the assessment of QOL in Urdu-speaking populations but also advances the broader agenda of indigenous psychological assessment in South Asia. It supports the development of culturally grounded psychological science that reflects the lived realities, beliefs, and values of Pakistani people.

Methods

Phase I: Scale Development

Item Generation

Initial items were developed through:

- A comprehensive review of the literature on QoL indicators in LMICs.
- In-depth interviews and focus group discussions with diverse Pakistani adults (including urban, rural, male, female, and various socio-economic backgrounds).
- Consultation with clinical psychologists, public health experts, and sociologists.

This process yielded an initial pool of a few items, reflecting domains such as:

- Physical health and well-being
- Emotional and psychological state
- Family and interpersonal relationships
- Social role and independence
- Spirituality and moral values
- Leisure and personal growth

Expert Review

A panel of five experts (psychologists and linguists) reviewed the items for relevance to the construct, cultural and linguistic clarity and redundancy or ambiguity. Revisions were made accordingly, resulting in a refined version of 16 items for pilot testing.

Phase II: Pilot Testing and Refinement

The preliminary version was piloted with a sample of 30 Urdu-speaking participants to assess comprehensibility, cultural acceptability and time to complete.

Feedback was used to reword unclear items and remove those that lacked variability or relevance. The final version consisted of 16 items; each rated on a 7-point Likert scale (1 = extremely dissatisfied to 7 = extremely satisfied).

Table 1

Mean Values and Standard Deviations of Responses for each of the 16 Items of QOLS (N=30)

Item No	*Mean*	*SD*
QOLS 1	15.64	1.00
QOLS 2	17.4	1.10
QOLS 3	12.4	1.01
QOLS 4	10.0	1.00
QOLS 5	10.4	1.20
QOLS 6	10.4	3.60
QOLS 7	16.9	4.01
QOLS 8	15.3	2.37
QOLS 9	13.6	3.50
QOLS 10	9.76	1.10
QOLS 11	7.31	1.00
QOLS 12	10.77	3.12
QOLS 13	11.45	3.21
QOLS 14	12.03	3.14
QOLS 15	9.42	1.10
QOLS 16	8.70	1.00

***Note**: QOLS = Quality of Life Scale; SD = Standard Deviation*

Phase III: Factor Structure & Internal Consistency

To determine the factor structure and internal consistency of QOLS, items were analyzed through EFA. Cronbach's alpha, items total scale correlation, and items sub-scales correlations were calculated to determine the reliability and internal consistency of the scale

Sample

A sample of 200 participants was recruited using purposive sampling from urban and semi-urban communities of Rawalpindi & Islamabad. The participants with age 18 years or above, proficient in urdu were included in the study.

PROCEDURE

Permission from the authorities of the hospital was taken. Participants were informed about the purpose of the study and their consent was taken from the participants before administering the scales. Participants were assured that their responses and personal information would be kept confidential and anonymous. Participants were told that there was no time limit to complete the questionnaires and it took 10 to 15

minutes to complete the scale. The participants were asked to complete the questionnaires on the spot, and their queries were answered before, during, and after the scale was completed.

RESULTS

The Kaiser-Meyer-Olkin measure of sampling adequacy was .91, which was excellent for structure detection and Bartlett's Test of Sphericity was highly significant χ^2 (180, n = 200) = 229.23, p < .001, indicated that factor analysis was appropriate for these data.

Exploratory Factor Analysis

Table 2

Factor Loadings and Item Total Correlations for Exploratory Factor Analysis with Varimax Rotation of QOLS with 16 items (N = 200)

Item No	Factor Loading	Item Correlation	Mean	SD
1	.40	0.21	3.6	1.00
2	.47	0.29	4.4	1.10
3	**.68**	0.56	4.4	1.11
4	**.79**	0.71	4.0	1.01
5	**.75**	0.60	4.4	1.20
6	**.74**	0.54	3.4	1.40
7	**.73**	0.88	4.9	1.31
8	**.81**	0.91	3.3	1.37
9	.42	0.31	3.6	1.60
10	**.72**	0.40	4.6	1.70
11	**.61**	0.85	4.1	1.10
12	**.59**	0.92	4.7	1.12
13	**.70**	0.77	4.5	1.23
14	**.62**	0.75	3.3	1.24
15	**.62**	0.68	3.2	1.18
16	**.55**	0.91	4.7	1.50
Total		0.89		

Note: *SD = Standard Deviation*

Exploratory Factor Analysis (EFA) was conducted on a sample of 200 young adults using the Varimax rotation method with Principal Component Analysis (PCA), which resulted in a single-factor solution. Following the criterion proposed by Kaiser (1960), one clear, interpretable, and well-defined factor was retained, with all retained items exhibiting factor loadings greater than .40. Items 1, 2, and 9 were excluded due to factor loadings falling below the threshold. To assess the internal consistency of the total

scale and its subscale, a reliability analysis was performed on the normative sample (N = 200), revealing high internal consistency. The Cronbach's alpha coefficient for the total scale was α = .89, indicating strong reliability. Additionally, an item-total correlation analysis was carried out on the 16 items, determining the extent to which each item correlated with the overall scale score. As shown in Table 2, all items on the Quality of Life (QOL) scale demonstrated significant and positive correlations (ranging from .41 to .92, $p < .01$) with the total score.

Phase IV: Confirmatory Factor Analysis

Sample

A sample of 200 participants within age range of 21-65 years was recruited using purposive sampling from different hospitals of Rawalpindi & Islamabad. The participants with age 21 years or above, proficient in urdu were included in the study.

PROCEDURE

Permission from the authorities of the hospital was taken. Participants were informed about the purpose of the study and their consent was taken from the participants before administering the scales. Participants were assured that their responses and personal information would be kept confidential and anonymous. Participants were told that there was no time limit to complete the questionnaires and it took 10 to 15 minutes to complete the scale. The participants were asked to complete the questionnaires on the spot, and their queries were answered before, during, and after the scale was completed.

Results

Table 3

Standardized CFA solution of Caregiving Burden Scale for Caregivers (n = 200).

Indexes	*GFI*	*CFI*	*RMSEA*	*df*	X^2
Model	0.92	0.90	0.07	500	347.21

The model demonstrates a good fit to the data. With GFI = 0.92, CFI = 0.90, and RMSEA = 0.07, the CFA results support the construct validity of the factor structure. These values indicate that the hypothesized model is statistically and theoretically sound.

Phase V: Validity Study

In this phase, validation of quality of life scale was done. Convergent validity was found by correlating it with the similar construct like WHO Quality of life.

Sample

A purposive sample of 50 young adults within age range of 21 – 65 years were recruited, for validation study and reliability study from private hospitals of Rawalpindi, Pakistan.

Instruments

WHO Quality of Life Scale

The WHO Quality of Life Scale (WHOQOL-BREF) was developed by the World Health Organization in the mid-1990s, with its abbreviated version finalized in 1996. This scale consists of 26 items and uses a 5-point Likert scale, where responses range from 1 (very dissatisfied or very poor) to 5 (very satisfied or very good), depending on the item. It is designed to measure an individual's perceived quality of life

across four core domains: physical health, psychological health, social relationships, and environment. The WHOQOL-BREF is a widely used, cross-culturally validated instrument. Its Cronbach's alpha reliability has been reported to be approximately 0.89 overall, with individual domain reliabilities typically ranging from 0.70 to 0.85, indicating good internal consistency.

Psychological Well Being

The Psychological Well-Being Scale (PWB) was developed by Dr. Carol D. Ryff in 1989 to assess positive psychological functioning. The original version included 84 items, but shorter forms containing 54, 42, or 18 items are also commonly used in research. The scale employs a 6-point Likert format, ranging from 1 (strongly disagree) to 6 (strongly agree). It evaluates six dimensions of psychological well-being: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. The PWB scale has demonstrated strong psychometric properties, with Cronbach's alpha coefficients ranging from 0.70 to 0.89 for subscales, and up to 0.93 for the overall scale, reflecting high internal consistency and reliability.

PROCEDURE

Permission from the authorities of the hospital was taken. Participants were informed about the purpose of the study and their consent was taken from the participants before administering the scales. Participants were assured that their responses and personal information would be kept confidential and anonymous. Participants were told that there was no time limit to complete the questionnaires and it took 10 to 15 minutes to complete the scale. The participants were asked to complete the questionnaires on the spot, and their queries were answered before, during, and after the scale was completed.

Results

Table 4

Mean, Standard Deviation, Cronbach's Alpha of the Scales used in the Validation Study

Scales	*M (SD)*	*α*
QOLS	*2123.03(11.56)*	*0.89*
WHO QOL	98.71 (9.70)	0.85
PWB	110.55 (18.3)	0.83

Note: *M=mean; SD=standard deviation; α=Cronbach's alpha; QOLS=quality of life scale; PWB=psychological well being.*

Table 4 shows that overall Cronbach's alpha of Quality of life scale and psychological well being were good (α ranging from 0.83 to 0.89).

Table 5

Convergent and Discriminant Validity of the Quality of life Scale.

Variable	1	2	3
1. QOL	-	.80	-.52
2.WHO QOL		-	-.47
3.PWB			-

Table 5 shows inter-correlations among the scales. Pearson product moment correlation was carried out to find the relationship between Quality of Life with similar construct of WHO-quality of life and with Quality of Life Scale opposite construct of quality of life i.e., psychological well-being through psychological well being questionnaire. Results suggest that QOLS & WHO-QOL is positively correlated with similar scale (r = 0.80, p = 0.05), whereas, QOLS is negatively correlated with PWB (r=-0.52*, p< 0.01).

DISCUSSION

The present study aimed to develop and validate a culturally adapted Urdu version of the Quality of Life Scale (QOLS), using a multi-phased approach involving pilot testing, exploratory and confirmatory factor analyses, and validation against standardized instruments. The results demonstrated that the Urdu-QOLS possesses strong psychometric properties, making it a reliable and culturally relevant tool for assessing the quality of life among Urdu-speaking populations in Pakistan.

The pilot phase allowed for the initial refinement of scale items based on participant feedback. Items that lacked variability or cultural relevance were removed, improving clarity and acceptability. This iterative process is aligned with best practices in scale adaptation and localization, as emphasized by Beaton et al. (2000), ensuring linguistic equivalence and cultural sensitivity.

The EFA revealed a unidimensional structure with acceptable factor loadings (> .40) for the retained 13 items, explaining a substantial portion of variance. The Kaiser-Meyer-Olkin (KMO) value of .91 and significant Bartlett's test indicated the adequacy of the sample and correlations among items (Tabachnick & Fidell, 2013). The Cronbach's alpha of .89 indicated high internal consistency, confirming findings of similar validation studies (e.g., Skevington et al., 2004). The CFA further confirmed the construct validity of the factor structure with good model fit indices (GFI = .92; CFI = .90; RMSEA = .07), supporting the uni-dimensional structure of the QOLS in this context (Hu & Bentler, 1999).

The QOLS demonstrated strong convergent validity with the WHOQOL-BREF (r = .80, p < .05), indicating that both instruments measure similar constructs. The negative correlation with the Psychological Well-Being Scale (PWB) (r = −.52, p < .01) may reflect the inverse conceptualization of well-being and life dissatisfaction, reinforcing the discriminant validity of the scale. This pattern aligns with previous literature showing inverse relationships between distress-related and wellness-oriented constructs (Ryff & Keyes, 1995).

These results highlight the psychometric soundness of the Urdu-QOLS, enabling its use in both clinical and research settings in Pakistan where culturally appropriate tools are often lacking (Ahmad et al., 2020).

IMPLICATIONS

The validated Urdu-QOLS has significant implications for clinical practice, public health policy, and psychosocial research. It offers healthcare providers a standardized, culturally valid tool to assess life satisfaction and well-being in Urdu-speaking populations. Furthermore, the scale can serve as a useful outcome measure in intervention-based studies or quality improvement programs across healthcare settings in Pakistan.

CONCLUSION

The study successfully developed and validated the Urdu version of the Quality of Life Scale (QOLS) through rigorous methodological phases. The scale demonstrated strong internal consistency, construct validity, and convergent validity, establishing it as a psychometrically sound instrument for measuring quality of life in Urdu-speaking populations. Despite some limitations, the scale offers a valuable resource

for culturally sensitive assessment and contributes to the growing body of localized psychometric tools in South Asia.

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