Psychometric Properties of an Arabic Translation of the older people’s quality of life-brief (OPQOL-brief) scale.

Marwa Ibrahem Mahfouz Khalil
Souheil Hallit
souheil.hallit@usek.edu.lb

School of Medicine and Medical Sciences, Holy Spirit University of Kaslik (USEK), P.O. Box 446, Jounieh, Lebanon https://orcid.org/0000-0001-6918-5689

Feten Fekih-Romdhane
feten.fekih@gmail.com

Tunis El Manar University, Faculty of Medicine of Tunis, Tunis, Tunisia. https://orcid.org/0000-0002-2569-8017

Zeinab Bitar
Reem Said Shaala
Enas Fouad Sayed Mousa
Reem Farag Mahrous Menessy
Mayar Elnakeeb

Research Article

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Abstract

Background: This investigation was undertaken to scrutinize the psychometric qualities of the Arabic Older People's Quality of Life-Brief (OPQOL-brief) scale.

Method: A suitable sample of 539 Arabic-speaking older Egyptians—of whom 50.3% were female and 60.7% were aged 65-75 years—were included in the cross-sectional examination.

Results: Confirmatory factor analysis validated the goodness-of-fit, which shows that the scale's items accurately measure the desired attributes. The reliability assessments revealed a high degree of internal consistency in the overall score, with Cronbach's alpha and McDonald's omega values of .92. Male and female participants did not significantly differ in the measurement features, as indicated by gender invariance tests. The study of concurrent validity demonstrated a strong positive correlation (r=.60, p<.001) between the Arabic OPQOL-brief scale and resilience scores.

Conclusion: This research closes a gap in the literature by demonstrating the psychometric qualities of the Arabic OPQOL-brief scale, which is a crucial tool for measuring the quality of life in this group. The results strengthen the validity and reliability of the scale as a means of evaluating the quality of life of older individuals who speak Arabic, hence increasing its suitability for application in a variety of research and therapeutic contexts.

Introduction

The global populace is currently witnessing an upsurge in the number of older adults, with an estimated increase from 703 million people aged 65 and above to 1.5 billion by the year 2050 (United Nations 2020). This demographic shift raises significant concerns for global health and carries important implications for societies, presenting both challenges and opportunities for countries aiming to achieve the Sustainable Development Goals (SDGs) (Jeemon et al. 2018). Egypt is experiencing an increase in its older population, mirroring the global trend. As per the population estimates on the 1st of July 2022, it can be observed that about 6.9 million individuals, which accounts for 6.6% of the aggregate population, are categorized as older persons (Busby et al. 2021).

The question of quantifying and improving the standard of living for the ageing populace, which has captured international attention, is due to the escalating number of that special demographic with elevated expectations for leading a fulfilling life, and increasingly seeking higher standards in both healthcare and social assistance (Siette et al. 2021). The policy of the Egyptian government, which was documented during the First National Strategy for Human Rights (NHRS), launched in September 2021, is dedicated to promoting the autonomy of older adults and their dynamic role in society, thus augmenting the quality of their later years. This reinforces the importance of adopting a multifaceted perspective of QoL, which necessitates deviating from single-domain approaches that concentrate solely on specific aspects of life to one that also incorporates the viewpoints of the population concerned (Supreme Standing Committee for Human Rights 2021).
The notion of QOL, as proposed by the World Health Organization (WHO), pertains to an individual's opinion of their social standing. This view is dependent on their goals, norms, expectations, and worries, in addition to the cultural and value systems of their surroundings (World Health Organization [WHO] 1997). A multitude of research studies has brought to light a number of crucial factors that can affect the ageing populace's QOL, including physical health, mental well-being, psychological health, enough security and financial resources, access to healthcare services physical environment and housing conditions, personal characteristics and individual traits, and coping strategies (Halvorsrud et al. 2012; Phyo et al. 2022; Sinaga et al. 2022; Geigl et al. 2023; Wijesiri et al. 2023). Additionally, factors such as, life transitions such as relocation, caregiver support, intergenerational relationships, access to information and technology, and end-of-life care and palliative support have also been documented to exert an influence on the QOL of older adults (Aggarwal et al. 2020; Zhang et al. 2022; Chowdhury et al. 2023; Whear et al. 2023). Conversely, negative cultural beliefs and attitudes towards ageing, ageism and discrimination, as well as societal perceptions of older adults, can lead to a lower QOL (Chang et al. 2020; Sun et al. 2022). Moreover, the absence of creation of safe, accessible, and age-friendly environments can result in poor QOL (Malone and Dadswell 2018).

It is then paramount to prioritize the assessment of the QOL of the older population to promote person-centered care, enhance ageing outcomes, and advocate and stand up for their rights (Hong et al. 2023). Regular monitoring of the QOL of older adults allows longitudinal tracking of their well-being over time, providing valuable information for healthcare professionals and caregivers who play an essential role in their care and support (Adami et al. 2021). Numerous assessment tools have been engendered and authenticated across diverse communities and clinical settings to evaluate the QOL of the older population. Nevertheless, there is currently no widely accepted benchmark for evaluating this crucial concept in this special demographic. To comprehensively conduct an integrated evaluation, it is imperative to take into account their unique physical and mental abilities, educational background, and health literacy. These factors substantially differ from those of younger individuals, necessitating additional considerations for a thorough assessment (Brazier et al. 1996; Hickey et al. 2005).

Standardized questionnaires are frequently used at later age to evaluate health-related quality of life. The frequently employed questionnaires for this purpose are SF-36 and SF-12 (Ware and Sherbourne 1992; Ware et al. 1996; Turner-Bowker and Hogue 2014) and EQ-5D (the EQ-5D-3L and EQ-5D-5L) (Group 1990; Janssen et al. 2013; EuroQol Research Foundation 2018, 2019). Instruments have been created to take into consideration the many aspects of QOL for older individuals owing to the intricate and multifaceted nature of this concept., such as the SEIQoL-DW (Browne et al. 1997), the LEIPAD (De Leo et al. 1998), the CASP-19 (Hyde et al. 2003), the WHOQOL-BREF (The WHOQOL Group 1998; Skevington et al. 2004) with its WHOQOL-OLD module (Power et al. 2005; World Health Organization [WHO] 2006), the EQOLI (Paschoal et al. 2007), The OQoL-7 scale (Wilkinson and Marmot 2003; Kelley-Gillespie 2009; Henchoz et al. 2015), EQOLI (Paschoal et al. 2007), and WHOQOL-AGE (Fang et al. 2012; Caballero et al. 2013; Leonardi et al. 2014). Attaining a comprehensive evaluation of the QOL can be accomplished by way of an amalgamated rating. This approach is particularly pertinent when the objective is to measure QoL as a cohesive entity, rather than in isolated domains (Sloan et al. 2002).
The need for more translation and validation of recent scales has increased due to the continuous changes in the QOL. There is an ongoing discussion pertaining to the applicability of QOL domains, which were deemed significant two to three decades ago, in contemporary societies. This deliberation centers on whether the QoL domains remain relevant in today's modern societies, given the changes that have occurred in social, economic, and technological spheres over the past few decades. Primarily developed in Western countries, the scales may not fully capture the cultural and social aspects of QOL in different regions (Caballero et al. 2013; Santos et al. 2018). Various QoL scales have been validated in Arabic (SF-36 (El Osta et al. 2019), SF-12 (Haddad et al. 2021), WHOQOL BREF (Ohaeri and Awadalla 2009), Quality of life index (Halabi 2006), and QOL Alzheimer’s’ geriatric population (Shata et al. 2015), or with chronic illnesses (Huijer et al. 2013; AlAjmi and Al-Ghamdi 2021; Othman et al. 2023)). With only 13 items, it can be completed relatively quickly by older adults, reducing respondent burden and increasing response rates. The scale takes into account a number of variables, including environmental influences, social ties, emotional stability, and physical health. It has been used in numerous research projects and has been shown to be valid and dependable in a variety of cultural contexts. Its brief format makes it ideal for large-scale surveys that have limited time (Bowling and Stenner 2010). To ensure its usability in many cultural and linguistic situations, the scale has been verified and translated into multiple languages, including Persian (Feizi and Heidari 2020), Turkish (Caliskan et al. 2019), Norwegian (Haugan et al. 2020), Spanish (Perogil-Barragán et al. 2023), and Czech (Bužgová et al. 2022).

Validating the OPQOL-brief scale in Arabic involves assessing its psychometric properties, ensuring the scale is consistent and accurate, and determining what it is meant to measure. The potential impact of this research is significant as it intends to address a crucial void in the area of quality-of-life evaluation for older Arabic-speaking adults. Currently, well-adapted and validated measurement models are scarce in this population, hindering accuracy. This would have substantial implications for research, healthcare, and policymaking, as it would facilitate targeted interventions to improve the well-being of this population. Moreover, by exploring the reliability, gender invariance, factor structure, and concurrent validity of the questionnaire, the objective of the current investigation is to furnish a comprehensive evaluation of its measurement qualities. This depth of analysis enhances the robustness and credibility of the findings, further increasing the potential impact of the research. The main purpose is then focus on assessing the psychometric characteristics of a concise Arabic version of OPQOL-brief questionnaire in Arabic-speaking older adults. It has been hypothesized that (1) the Arabic OPQOL-brief will exhibit acceptable and satisfactory psychometric properties including reliability, factor structure, concurrent validity, and gender invariance, when administered to Arabic-speaking older adults, (2) the Arabic OPQOL-brief will correlate positively with resilience.

**Methods**

**Study design**

This scientific investigation employed a descriptive correlational design with a cross-sectional approach, aiming to investigate a sample of older individuals of an age of 60 years or more, who were of Egyptian
citizenship and proficient in the Arabic language. The sample size comprised 539 participants, encompassing both males and females. Prior to their participation, informed consent was procured from each participant, coupled with the assurance that they were not afflicted with any cognitive, communication or neurodegenerative impairments. Other exclusion criteria were restricted to participants with visual impediments that could potentially impede the completion of the questionnaires, such as severe retinopathy, glaucoma, or cataracts, as well as those exhibiting mental incapacity, and acute illnesses necessitating admission to an inpatient setting. Participants were recruited through face-to-face interviews at one-day clinics affiliated with General Alexandria Main University Hospital and via an online survey distributed through platforms for social media like Facebook, Messenger, and WhatsApp. Before becoming enrolled, written permissions were obtained from official authorities and heads of the one-day clinics. Participants were provided with an introductory paragraph explaining the study's objectives and the confidentiality and anonymity of their answers. The participants were requested to provide informed consent digitally and subsequently complete the online form if they met the study's inclusion criteria. The survey was conducted between August and October 2023, and participants completed it voluntarily. The data were collected through a Google Form link.

Measures

The Older People's Quality of Life-brief (OPQOL-brief) Questionnaire

This Questionnaire is a self-report measure that has been developed for the purpose of evaluating the QOL in the ageing population. Ann Bowling and her team created the scale in 2013 (Bowling et al. 2013), as a condensed version of the original OPQOL scale that contained thirty five items (Bowling 2009). It has thirteen questions that cover important areas such leisure activities, house and neighborhoods, social interactions, autonomy, mental and emotional stability, and overall health. By assessing both positive and negative aspects, it provides a nuanced understanding of older individuals' well-being. To fill out the survey, participants typically rate their experiences and feelings over a specified timeframe, using a Likert scale with five points, where 1 represents "strongly agree" and 5 represents "strongly disagree." In order to guarantee that higher scores correspond to a higher quality of life, the positive items are then switched around. A higher quality of life is indicated by a higher total score on the OPQOL short, which is calculated by adding together all the items. The sum of all the scores ranges between 13 and 65 (Bowling and Stenner 2010; Bilotta et al. 2011). The OPQOL-brief is regarded as a very valid and dependable tool for assessing QOL in older individuals (Bowling et al. 2013). Additionally, it has been modified and approved for usage in Arabic-speaking nations in accordance with Sousa and Rojjanasrirat (2011). Two translators who were native Arabic speakers and well-versed in both Arabic and English worked on the translation and adaption process. To guarantee consistency and clarity, the translation was verified by a linguistics specialist and an expert committee comprising healthcare professionals. To ensure the highest level of quality, the back-translation was carried out by two separate translators who were fluent in Arabic and English. The OPQOL-brief was translated into Standard Arabic, which is universally comprehensible by all Arabic-speaking countries, regardless of the specific accent used. To
determine the clarity, comprehensibility, and cultural appropriateness of the questionnaire, as well as to establish interrater agreement for all items, a pilot test of 30 participants was conducted.

Resilience Scale of Older Adults (RSOA).

RSOA is a comprehensive and adaptable survey that has been designed to evaluate older persons' protective resilience characteristics, based on their own perspective. There are fifteen items in the survey, and the respondents must score each one on a five-point Likert scale from one (never) to five (always). With Cronbach's alpha of 0.882, the RSOA has shown strong reliability. The item dependability of each subscale varies from 0.25 to 0.83. Higher resilience levels in older individuals are indicated by higher scores on all RSOA variables as well as the overall score (Li and Ow 2022). Resilience is regarded as a critical ability because it enables older people to retain their feeling of well-being and high standards of living in the face of risks, difficulties, and adversity. Furthermore, it is often accepted that it is a highly significant predictor of older individuals' quality of life (Ratanasiripong et al. 2021).

Statistical analysis

The factor structure of the OPQOL-brief was assessed in this study by utilizing RStudio (Version 4.2.2) and the Exploratory to Confirmatory Factor Analysis (EFA-CFA) approach. Due to the original 13-item unidimensional version's poor fit to the available data, the sample was randomly divided or split into two subsamples: 33% (n = 177) and 67% (n = 362). An EFA based on the main component extraction technique and the orthogonal “Varimax” rotation was performed on the first half sample (n = 177). The data viability for factorability was evaluated using the Bartlett’s test of sphericity (P < 0.05) and the Kaiser–Meyer–Olkin (KMO) measure of sample adequacy (Values > 0.7). The Scree plot (Factors with eigenvalues > 1) was used to select factors for further study (Hu and Bentler 1998). Using the "Lavaan" and "SemTools" package, the other subsample (n = 361) conducted a CFA to validate the generated factor structure using EFA (Jorgensen et al. 2022; Rosseel et al. 2023). Standardized root means square residual (SRMR) values exceeding 0.05, Tucker-Lewis Index (TLI) and comparative fit index (CFI) values exceeding 0.95, and Goodness of Fit Index (GFI) values nearing 1.00 were indicative of a well-fitting model. However, values ≤ 0.10 were considered acceptable, and Steiger-Lind root mean square error of approximation (RMSEA) values were predicted to be at or below 0.08 for a reasonable model fit (Mulaik et al. 1989; Hu and Bentler 1999). The scalar, configural, and metric gender invariance of the OPQOL-brief scores was assessed using multi-group CFA. Proof of invariance was defined as ΔSRMR ≤ 0.010, or ΔCFI < 0.010, or ΔRMSEA ≤ 0.015 (Chen 2007).

Results

Description of the sample

539 senior citizens completed the survey; 50.3% of respondents were female and 60.7% were between the ages of 65 and 75. A summary of the specifics of our sample is given in Table 1.
Table 1
Description of the sample (n = 539)

<table>
<thead>
<tr>
<th>Demographics</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>268 (49.7%)</td>
</tr>
<tr>
<td>Females</td>
<td>271 (50.3%)</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
</tr>
<tr>
<td>65–75</td>
<td>327 (60.7%)</td>
</tr>
<tr>
<td>75–85</td>
<td>169 (31.4%)</td>
</tr>
<tr>
<td>&gt;85</td>
<td>43 (8.0%)</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>185 (34.3%)</td>
</tr>
<tr>
<td>Complementary</td>
<td>97 (18.0%)</td>
</tr>
<tr>
<td>Secondary</td>
<td>61 (11.3%)</td>
</tr>
<tr>
<td>University and post-graduate</td>
<td>196 (36.4%)</td>
</tr>
</tbody>
</table>

The initial 13-item version of the scale did not fit well, as indicated by the following results: RMSEA = 0.11 [90% CI 0.09, 0.12], CFI = 0.90, TLI = 0.87, and GFI = 0.86. Three factors were identified using an EFA with Varimax rotation using the OPQOL-brief measure. Table 2 shows factor loadings for the 13 items of the OPQOL-brief assessment across the three components that the EFA extracted.
### Table 2. OPQOL-brief

<table>
<thead>
<tr>
<th>Items</th>
<th>Extracted factors*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I enjoy my life overall</td>
<td>0.59</td>
</tr>
<tr>
<td>2 I look forward to things</td>
<td>0.48</td>
</tr>
<tr>
<td>3 I am healthy enough to get out and about</td>
<td>0.78</td>
</tr>
<tr>
<td>4 My family, friends or neighbors would help me if needed</td>
<td>0.59</td>
</tr>
<tr>
<td>5 I have social or leisure activities/ hobbies that I enjoy doing</td>
<td>0.56</td>
</tr>
<tr>
<td>6 I try to stay involved with things</td>
<td>0.51</td>
</tr>
<tr>
<td>7 I am healthy enough to have my independence</td>
<td>0.80</td>
</tr>
<tr>
<td>8 I can please myself what I do</td>
<td>0.55</td>
</tr>
<tr>
<td>9 I feel safe where I live</td>
<td>0.79</td>
</tr>
<tr>
<td>10 I get pleasure from my home</td>
<td>0.82</td>
</tr>
<tr>
<td>11 I take life as it comes and make the best of things</td>
<td>0.59</td>
</tr>
<tr>
<td>12 I feel lucky compared to most people</td>
<td>0.77</td>
</tr>
<tr>
<td>13 I have enough money to pay for household bills</td>
<td>0.61</td>
</tr>
</tbody>
</table>

* For the sake of simplicity, factor loadings less than 0.4 are not displayed in the exploratory factor analysis with Varimax rotation.

A confirmatory factor analysis was performed using the "Lavaan" and "SemTools" programs. The OPQOL-brief's three-factor solution revealed a significant CFI of 0.90, TLI of 0.87, and GFI of 0.87, but a subpar and medicore RMSEA of 0.10 [90% CI 0.09, 0.12]. We looked at the modification index (MI) to improve this main model and found that item 3 and item 7 had a substantial positive correlation. Taking this covariance into account, we developed a new modified model. With a lower chi-square value ($\chi^2 = 228.887$) than the primary model ($\chi^2 = 334.372$), considerable reductions in RMSEA of 0.08 [90% CI of RMSEA (0.07, 0.10)], a substantial CFI of 0.94, a TLI of 0.92, a GFI of 0.91, and the newly updated model showed good fit model indices. Figure 1 summarizes the standardized loading factors that were acquired via the CFA analysis. The second-order CFA's fit indices were good, with $\chi^2/df = 321.655/57 = 5.64$, CFI = 0.93, TLI = 0.91, GFI = 0.92, and RMSEA of 0.093 [90% CI of RMSEA (0.08, 0.10)]. The scale exhibits great and outstanding reliability, as evidenced by the values of Cronbach's alpha and McDonald's omega, both of which are 0.92. A minimal value of $\alpha > 0.70$ was determined to be acceptable (Peterson 1994; Terwee et al. 2003).

**Invariance of measurements between older adult males and females**
Table 3 presents the findings from the analysis of the gender invariance of the OPQOL-brief scale's three-factor structure using configural, metric, and scalar invariance. Notably, there were no discernible variations in QOL between respondents who identified as male and female. The mean scores of the male and female groups were 41.38 ± 11.23 and 42.16 ± 10.34, respectively. The statistical analysis revealed that there was no significant difference between the two groups (t (537) = −.84, p = .401).

<table>
<thead>
<tr>
<th>Model</th>
<th>CFI</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>Model Comparison</th>
<th>ΔCFI</th>
<th>ΔRMSEA</th>
<th>ΔSRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configural</td>
<td>0.925</td>
<td>0.089</td>
<td>0.060</td>
<td>Configural and metric</td>
<td>0.005</td>
<td>&lt; 0.001</td>
<td>0.004</td>
</tr>
<tr>
<td>Metric</td>
<td>0.930</td>
<td>0.089</td>
<td>0.056</td>
<td>Metric and scalar</td>
<td>0.005</td>
<td>&lt; 0.001</td>
<td>0.004</td>
</tr>
<tr>
<td>Scalar</td>
<td>0.925</td>
<td>0.089</td>
<td>0.060</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CFI = Comparative Fit Index; RMSEA = Steiger-Lind root mean square error of approximation; SRMR = standardized root means square residual.

**Concurrent validity**

The distribution of the QOL score was deemed normal, as evidenced by the skewness ( = −.299) and kurtosis ( = −.371) values. According to the Pearson test, there was a notable and favorable association between the QOL score and the RSOA score (r = .60, p < .001).

**Discussion**

The current research constitutes a noteworthy addition to the field of gerontology by emphasizing the importance of comprehensive measurement models that account for the multidimensional nature of QOL for Arabic-speaking older populations. The perception and experiences of QOL for older people from different cultural backgrounds are influenced by unique values, beliefs, and priorities. Ascertaining measures that are culturally and linguistically appropriate for specific populations requires rigorous research and validation processes, which can entail the adaptation of existing measures or the creation of new ones. One of the few validated questionnaires used to measure quality of life in the Egyptian population of older adults, the Arabic version of the abbreviated Older People's Quality of Life questionnaire aims to investigate the factor structure, reliability, gender invariance, and concurrent validity. The results of this research will be extremely helpful in the creation of measures that are both linguistically and culturally acceptable for assessing older individuals' quality of life in a variety of cultural situations. The Arabic version of the OPQOL-brief scale's internal consistency was assessed using reliability analysis. The scale is regarded as being quite excellent and dependable, according to the results. To assess the reliability, Cronbach's alpha and McDonald's omega coefficients were used. The questionnaire yielded a coefficient value of 0.92 for both measurements of the total score. This value is comparable to the Czech version's Cronbach's alpha coefficient (α = 0.921) (Bužgová et al. 2022) and exceeds the original OPQOL-brief (0.856) (Bowling et al. 2013), the Persian version (0.829) (Feizi and
Heidari 2020), and the Turkish version (0.867) (Caliskan et al. 2019). It is worth noting that the original scale did not report the McDonald’s omega value, although the Spanish version recorded it as 0.851 (Perogil-Barragán et al. 2023).

The validity of the OPQOL-brief construct was evaluated using multiple imputation (MI), confirmatory factor analysis (CFA), and exploratory factor analysis (EFA). The Arabic version of the OPQOL-brief scale’s underlying factor structure was discovered using EFA. The proposed factor structure was then verified using CFA. Utilizing Varimax rotation, three factors were found for the OPQOL-brief measure by employing factor analysis to assess construct validity. The Arabic OPQOL-brief’s factor structure matched that of the Persian version (Feizi and Heidari 2020), but differed from other versions of the questionnaire. Three factors were also found in the Persian version using EFA (Feizi and Heidari 2020), while the Czech (Bužgová et al. 2022) and Norwegian versions (the OPQOL-brief 8-items unidimensional version) (Haugan et al. 2020), as well as the original (Bowling et al. 2013) and Turkish validations (Caliskan et al. 2019), produced a unifactorial solution. The Spanish version (12 items) (Perogil-Barragán et al. 2023) confirmed a two-correlated-factor solution. All 13 items of the Arabic OPQOL-brief had factor loadings exceeding 0.40, which is similar to the Persian (Feizi and Heidari 2020), original (Bowling et al. 2013), and Turkish versions (Caliskan et al. 2019). The conflicting results may be attributed to variations in culture among the populations studied (Feizi and Heidari 2020).

The MI provides invaluable insights into the extent to which modifying item-level parameters could potentially augment the fit of the measurement model, culminating in a more precise and accurate evaluation of the construct under examination. The confirmatory factor analysis (CFA) in second order of the Arabic OPQOL-brief scale yielded satisfactory fit indices. The use of the modification indices (MIs) also supported by the Norwegian version of OPQOL-brief (Haugan et al. 2020).

To ascertain the concurrent validity of Arabic OPQOL-brief and RSOA, an investigation of correlation was performed. The Pearson test revealed a substantial positive correlation ($r = .60, p < .001$) between the QOL and RSOA scores. Furthermore, a strong association was found between the Czech OPQOL-brief total score and measures assessing anxiety, despair, sense of coherence, and self-esteem (Bužgová et al. 2022). Similar correlations were found between Persian OPQOL-brief and SF-36 (Feizi and Heidari 2020), as well as between Turkish OPQOL-brief and CASP-19 scales (Caliskan et al. 2019). A research project was undertaken in 2023 to look into how psychological resilience affected the QOL of middle-aged and older hospitalized patients with chronic illnesses. The study concluded that psychological resilience has a direct impact on the QOL of this population (Xu et al. 2023).

The OPQOL-brief questionnaire’s three-factor structure was evaluated for gender invariance utilizing configural, metric, and scalar invariance. The results indicate that older-aged men and women did not show a noteworthy variation in terms of their QOL. In parallel, an Indian research confirmed that QOL scores did not differ significantly between males and females (Soren et al. 2022). However, the research indicates that disparities in QOL between females and males populace stem from differences in health and illness trends, as well as health-seeking behaviors, obligations and duties, levels of adaptability,
requirements, vulnerabilities, and the availability and management of resources (Liu et al. 2019). According to the analytical findings of the Study on Global AGEing and Adult Health (SAGE), older males perceived a heightened QOL in comparative with older women on average across all countries (Lee et al. 2020).

**Study strengths and limitations**

In conclusion, this research contributes to addressing the lack of valid and well-suited models for analyzing QOL in older individuals Arabic-speakers. The study's comprehensive evaluation demonstrated the scale's reliability and robustness as a tool for assessing QOL in Arabic-speaking older demographic. Results postulated from the exploratory and confirmatory analyzed factors provided evidence for a consistent factorial structure, indicating that the scale can accurately measure the multidimensional natural phenomena of QOL in this population. Furthermore, reliability analyses supported the scale's subscales' and total score's internal consistency, indicating its reliability and usefulness in measuring QOL. Gender invariance analysis indicated that the scale operates similarly across both genders, making it applicable and interpretable for both men and women. The concurrent validity analysis demonstrated a strong relationship between the Arabic OPQOL-brief scale and associated metrics, confirming its ability to capture important aspects of QOL among Arabic-speaking older populace.

**Implications**

The Arabic translation of the OPQOL-brief scale has several clinical implications, including its usefulness as an assessment tool, its potential for cross-cultural comparisons, and its application in intervention planning. Additionally, researchers can use the scale in studies examining the factors influencing the quality of life in Arabic-speaking older adults, which can lead to evidence-based interventions and policies, guide the allocation of resources, and develop targeted programs.

Strengths of this study lie in its cultural relevance, comprehensive evaluation, adequate sample size, and methodological rigor. However, several limitations, such as generalizability, language and translation issues, concurrent validity measures, lack of longitudinal assessment, and limited participant characteristics such as their health status, should be acknowledged. These factors may influence quality of life and could have implications for the interpretation of the scale's whole results.

**Conclusion**

The study's conclusions back up the validity and reliability of the Arabic OPQOL-brief scale as a method for evaluating the QOL of the older Arabic-speaking population. Future studies should focus on further validation, cultural adaptation, and longitudinal studies. Comparative studies, predictive validity, and intervention development can enhance our understanding of QOL in older Arabic-speakers. This should include examining its sensitivity and responsiveness in diverse Arabic-speaking populations and different settings (e.g., community-dwelling older adults, nursing home residents).


Abbreviations

OPQOL-brief
Older People's Quality of Life-Brief
RSOA
Resilience Scale of Older Adults
CD-RISC
Connor-Davidson Resilience Scale
SDGs
Sustainable Development Goals
NHRS
National Strategy for Human Rights
WHO
World Health Organization
QOL
quality of life
needs satisfaction model
CASP-19
SRMR
standardized root means square residual
TLI
Tucker-Lewis Index
CFI
comparative fit index
GFI
Goodness of Fit Index
RMSEA
Steiger-Lind root mean square error of approximation

Declarations

Ethics Approval and Consent to Participate: On December 13, 2023, ethical permission was acquired with the IRB code 00013620 (AU-20-5-239) from the Research Ethics Committee of the Faculty of Nursing, Alexandria University, Egypt. Written informed permission was given by all subjects, and submitting a soft copy online was regarded as providing written informed consent as well. The study's methodology complied with all applicable rules and regulations.

Consent for publication: Not applicable.

Availability of data and materials: All of the data created or examined for this work are not publicly available, however they can be obtained from the corresponding author upon justifiable request.
Competing interests: The authors have nothing to reveal.

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Author contributions: FFR, MIMK, and SH designed the study. MIMK, EF Sm, and RSS drafted the text. SH performed the analysis and provided the interpretation. ME, RFMM, RSS, EF SM, and MIMK gathered the information. Each author gave their final approval to the work after examining it for intellectual merit.

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Figures
Figure 1

Testing the derived construct from EFA using confirmatory factor analysis on the Arabic OPQOL-brief items.