Translation and Cross-Cultural Adaptation of the 26-Item Cognitive Difficulties Scales in Persian-Speaking Elderly Population

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Abstract

Background: Cognitive impairment represents a significant global health challenge, necessitating early identification through reliable self-report questionnaires. The 26-item Cognitive Difficulties Scale (CDS-26) assesses subjective cognitive complaints but lacks validation in diverse linguistic contexts. In the present research, we systematically conducted the translation, cultural adaptation, and preliminary psychometric evaluation of the CDS-26 for the Persian-speaking elderly population in Iran.

Methods: Utilizing a methodological, cross-sectional design, the CDS-26 was translated into Persian following the International Quality of Life Assessment (IQOLA) protocol, including forward/back translation, expert committee review, and pilot testing. Psychometric evaluation involved 138 community-dwelling elderly participants (age ≥60 years). Construct validity was investigated using confirmatory factor analysis. The reliability of the scale was determined by analyzing its internal consistency through Cronbach's alpha and evaluating temporal stability via the intraclass correlation coefficient in a subgroup of 30 participants.

Results: Satisfactory face and content validity were confirmed (CVR ≥0.62, overall CVI = 0.89). Confirmatory Factor Analysis demonstrated excellent to good model fit (CFI = 0.977, RMSEA = 0.066, SRMR = 0.063), supporting the scale's multidimensional structure. The full scale exhibited excellent internal consistency (α=0.954) and test-retest reliability (ICC = 0.993). While age, gender, education, and marital status were not significant predictors, economic status was a crucial determinant: higher income groups reported significantly lower CDS scores (medium income: β=–7.97, *P*=0.005; high income: β=–16.00, *P*=0.018).

Conclusion: The Persian CDS-26 is a valid, reliable, and culturally appropriate instrument for assessing subjective cognitive difficulties in Iranian elderly. This tool is valuable for early identification and monitoring cognitive health in clinical and community settings, highlighting the significant impact of socioeconomic factors on perceived cognitive function.

Keywords: Cognitive Difficulties Scales, Questionnaire, Elderly, Validity, Reliability

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Introduction

From mild cognitive impairment (MCI) to severe dementia, cognitive decline poses an escalating public health concern worldwide, significantly impacting individuals' quality of life, functional independence, and imposing substantial healthcare burdens on societies worldwide (1). Globally, the prevalence of cognitive impairment among community-dwelling older adults varies widely (2-4). Current statistics show that about 57 million people across the globe are affected by dementia. Forecasts predict this will rise beyond 150 million by 2050 (5). The elderly population is particularly susceptible to age-related cognitive decline, necessitating effective and early identification strategies to facilitate timely detection of MCI and dementia and

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↑What is "already known" in this topic:
The Cognitive Difficulties Scale (CDS-26) is a widely used self-report tool for assessing subjective cognitive complaints. However, it has not been translated or culturally adapted for Persian-speaking elderly, limiting its use in Iran's clinical and research contexts.

→What this article adds:
This study provides the first validated Persian version of the CDS-26, demonstrating excellent psychometric properties and cultural relevance, enabling accurate screening and monitoring of subjective cognitive difficulties among older adults in Iran.

interventions, improve patient outcomes, and support research into prevention and treatment (6, 7).

Early identification of cognitive changes is critical, as subjective cognitive complaints often precede objectively detectable deficits. Self-report questionnaires, such as the Cognitive Difficulties Scale (CDS), are increasingly recognized as vital tools in this process, offering a practical, non-invasive means to assess perceived cognitive functioning in everyday contexts (8). These measures capture metacognitive awareness of changes in memory, attention, and executive function, which can predict future cognitive decline (9, 10). The CDS, originally developed by McNair and Kahn in 1983 as a 39-item questionnaire, assesses everyday memory-related difficulties over the past month using a 5-point Likert scale (11). Early studies highlighted its sensitivity to age and education level, while consistently reporting high internal consistency and acceptable test-retest reliability. Subsequent refinements, including the empirical validation of a 26-item version by Derouesné et al. (1993) in cognitively normal adults, confirmed its robust factor structure and expanded its utility (12-14). This shortened version provides a comprehensive assessment of self-reported difficulties across multiple cognitive domains, including Attention, Memory, Praxis, Orientation, and Language, offering a valuable perspective on the lived experience of cognitive challenges for screening, monitoring, and evaluating interventions in older adults. Previous research has demonstrated its strong internal consistency and multi-dimensional structure (12), and significant associations with objective cognitive test performance (13). Recent cross-cultural adaptations, such as the Portuguese version by Frias et al. (2022), further underscore the global need for culturally and linguistically appropriate tools for assessing cognitive complaints (15).

Despite its recognized utility, the CDS has primarily been validated in English-speaking populations, limiting its applicability in diverse cultural and linguistic contexts. Cross-cultural adaptation is essential to ensure equivalence in meaning, relevance, and psychometric properties across groups, particularly in elderly populations where cultural norms may influence the expression and interpretation of cognitive complaints.

The primary aim of this study was to systematically translate and culturally adapt the 26-item CDS and rigorously assess its initial psychometric properties for the effective assessment of subjective cognitive difficulties in the Persian-speaking elderly population aged 60 and above in Iran. By establishing a culturally relevant, reliable, and accurate instrument, this research seeks to significantly contribute to the development of tailored interventions that support cognitive health and ultimately enhance the quality of life for older adults within this specific cultural context and potentially inform broader global efforts.

Methods

This study employed a methodological, cross-sectional design to translate, culturally adapt, and evaluate the psychometric properties of the 26-item Cognitive Difficulties Scale (CDS-26) for use among the Persian-speaking elderly population. The research was conducted in two main phases: (1) translation and cultural adaptation of the CDS-26 into Persian, following the International Quality of Life Assessment (IQOLA) protocol (16), and (2) psychometric evaluation of the final Persian version of the scale.

Procedure

The adaptation and validation process followed a structured, multi-step approach, drawing from established guidelines for cross-cultural tool adaptation (16, 17).

Phase 1: Translation and Cultural Adaptation

Formal permission to translate and culturally adapt the Cognitive Difficulties Scale (CDS-26) was obtained from its developers (12) prior to commencing the study, ensuring adherence to ethical and intellectual property guidelines.

The translation process was divided into six steps per the IQOLA protocol to ensure linguistic equivalence, cultural relevance, and conceptual fidelity:

1. *Forward Translation:* The CDS-26, originally drafted in English, was converted to Persian independently by two bilingual experts, both of whom were native Persian speakers and fluent in English.. One translator was briefed on the clinical concepts of the questionnaire to ensure an accurate, conceptually equivalent translation, while the other was not, to produce a translation that reflects more common language usage. This resulted in two initial Persian drafts (P1 and P2).

2. *Synthesis of Translations:* The research team, along with the two forward translators, convened for a synthesis meeting. During this session, the two drafts (P1 and P2) were compared item by item. Discrepancies in wording and phrasing were discussed and resolved through consensus to create a single, reconciled preliminary Persian version (P-1.2). The goal was to produce a version that was both faithful to the original concepts and easily understood by the target population.

3. *Quality Assessment of Forward Translation:* The synthesized version was rated by the two forward translators for translation difficulty (on a 0–100 scale: 0 = completely easy, 100 = completely difficult) and quality (clarity, common language use, and conceptual equivalence; 0 = completely unsatisfactory, 100 = completely satisfactory). Items with mean difficulty scores >50 or quality scores <70 were revised.

4. *Back Translation:* The preliminary Persian version (P-1.2) was then translated back into English by two new independent translators (Translator 3 and Translator 4). These translators were native English speakers fluent in Persian and were kept blind to the original English version of the CDS-26. This step is critical for identifying any potential misinterpretations or shifts in meaning that may have occurred during the forward translation process. This produced two back-translated English versions (E-B1 and E-B2).

5. *Expert Committee Review:* An expert committee was formed to conduct a comprehensive review of all materials. The committee consisted of ten specialists, including a geriatric psychiatrist, a psychometrician, two audiologists, a speech and language pathologist, a linguist, and four translators. The committee meticulously compared the original

CDS-26 with the synthesized Persian version (P-1.2) and the two back-translations (E-B1 and E-B2). Their objective aimed at achieving uniformity between the original and translated versions across semantic, idiomatic, experiential, and conceptual dimensions. Any remaining ambiguities were discussed and resolved, leading to the development of a pre-final version of the Persian CDS-26.

6. *Pilot Testing:* The pre-final Persian CDS-26 was administered to a pilot sample of 15 elderly individuals from the target population (age > 60 years). After completing the questionnaire, each participant was interviewed using cognitive debriefing techniques.

They were invited to describe how they interpreted each question and its corresponding answer choices, and to identify any words or phrases that were confusing, difficult to understand, or culturally inappropriate. Feedback from this phase was used to make final minor adjustments to the wording, ensuring maximum clarity and relevance. This process resulted in the final version of the Persian CDS-26 used for the psychometric.

Instrument

The instrument validated in this study is the Persian version of the Cognitive Difficulties Scale (CDS-26), a 26-item self-report questionnaire designed to assess subjective cognitive difficulties over the past month. Respondents rate the frequency of each difficulty on a 5-point Likert scale, with the original instrument's six primary dimensions conceptually maintained in this version including "Attention, Concentration, and Language (10 items), Praxis (4 items), Delayed Recall (3 items), Orientation for Persons (2 items), Temporal Orientation (2 items), Prospective Memory (5 items)". For scoring, each item is assigned points from 0 ("Never") to 4 ("Always"). The total score is calculated by summing the points from all 26 items, with a maximum possible score of 104. A higher total score indicates a greater degree of subjective cognitive complaints. Scores are typically categorized into three ranges for interpretation: 0-30 points signifies a low or normal range of complaints, 31-60 points suggests moderate complaints requiring further investigation, and scores of 61 or above indicate severe cognitive complaints.

Phase 2: Psychometric Evaluation
Validity Assessment

The validity of the Persian CDS-26 was evaluated through several methods:

Face and Content Validity: Face validity, focusing on clarity and relevance, along with content validity, was assessed by a panel of ten specialists using the CVR and CVI indices . CVR was calculated from three-point ratings ("essential," "useful but not essential," "not essential") according to Lawshe's method (18), with values ≥ 0.62 deemed acceptable. CVI was determined from four-point relevance ratings ("not relevant" to "highly relevant"), with the index representing the proportion of experts rating an item as "quite" or "highly relevant"; values ≥ 0.78 were considered satisfactory (19).

Construct Validity: Confirmatory Factor Analysis (CFA) was performed using structural equation modeling to test model fit. Data distribution and item correlations were checked. Fit indices assessed included Comparative Fit Index (CFI), Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), Incremental Fit Index (IFI), Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit Index (AGFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). Acceptable thresholds were generally CFI, NFI, NNFI, IFI ≥ 0.90, RMSEA ≤ 0.08, and SRMR ≤ 0.08.

Reliability Assessment

Internal consistency was assessed via Cronbach's alpha ($\alpha \geq 0.954$ acceptable). Thirty individuals from the study sample were asked to complete the questionnaire a second time, with an interval of 2 to 4 weeks between the two administrations. , with an interval of 2 to 4 weeks between the two administrations. This interval is considered long enough to prevent recall of previous answers but short enough to assume that the participant's cognitive state has not significantly changed. Test-retest reliability used Intraclass Correlation Coefficients (ICC; ≥ 0.75 excellent) and Standard Error of Measurement (SEM) for the retest subsample (19, 20).

Participants

Following the finalization of the Persian CDS-26, a sample of 138 community-dwelling elderly individuals was recruited for the psychometric evaluation phase. Participants were recruited from geriatric clinics and community cultural centers. Inclusion criteria were: (1) age 60 years or older; (2) native Persian speaker; (3) able to provide informed consent; and (4) sufficient visual and hearing ability to complete the questionnaire with minimal assistance. Exclusion criteria were: absence of a history of neurological disorders (e.g., stroke, brain tumor) and no current use of psychiatric medications. Each participant was provided with a detailed explanation of the study's purpose and procedure before signing the consent form. The questionnaire was administered in a quiet setting by a trained research assistant who could clarify instructions if needed but did not influence the responses.

Data Analysis

Data analysis was performed in IBM SPSS Statistics for Windows, Version 26.0. The proposed factor structure underwent CFA via EQS to appraise construct validity and fit. Internal consistency for both the overall scale and its subcomponents was measured with Cronbach's alpha. Descriptive analyses outlined participant attributes and score patterns, while the Shapiro–Wilk test examined data normality. Statistical significance threshold was set at $P<0.05$.

Results

The findings are presented in two sequential parts. First, the results of the comprehensive psychometric evaluation of the Persian Cognitive Difficulties Scale (P-CDS-26) are detailed, including evidence for its validity and reliability.

Following this, the demographic characteristics and responses of the participants are described.

Psychometric Properties of the Persian CDS-26
Validity
Content and Face Validity

Face and content validity were evaluated by an expert panel (n = 10). All items demonstrated satisfactory clarity and relevance. The Content Validity Ratio (CVR) for all items exceeded the acceptable cutoff ($\geq$0.62 for 10 experts), indicating that each item was considered essential. The overall Content Validity Index (CVI) was 0.89, above the recommended threshold of 0.78.

Construct Validity

Confirmatory factor analysis (CFA) was conducted to evaluate the construct validity of the translated CDS. The model's fit was assessed using multiple fit indices. The chi-square test indicated a significant result (χ^2 = 416.094, df = 260, $P < 0.001$), which is expected in larger samples; therefore, alternative fit indices were considered. The comparative fit index (CFI) was 0.977, indicating excellent fit. The normed fit index (NFI) and the non-normed fit index (NNFI) were 0.941 and 0.974, respectively, both above the recommended threshold of 0.90. The incremental fit index (IFI) was also 0.977. The goodness-of-fit index (GFI) and the adjusted GFI (AGFI) were 0.768 and 0.710, respectively. The root mean square error of approximation (RMSEA) was 0.066 (90% CI: 0.054, 0.077), which falls within the acceptable range (< 0.08). Additionally, the standardized root mean square residual (SRMR) was 0.063, further supporting the adequacy of the model fit. Overall, these findings indicate that the CFA model demonstrated an acceptable to good fit with the observed data.

Reliability
Internal Consistency

Cronbach's alpha for the full 26-item Persian CDS was 0.954, indicating excellent internal consistency. Subscale alphas were as follows: Attention, Concentration, and Language (α = 0.908), Praxis (α = 0.821), Delayed Recall (α = 0.693), Orientation for Persons (α = 0.559), Temporal Orientation (α = 0.827), and Prospective Memory (α = 0.696). While most subscales demonstrated acceptable to good reliability ($\alpha \geq 0.70$), the lower alphas for Delayed Recall and Orientation for Persons may reflect fewer items and

potential cultural nuances in item interpretation, warranting further investigation in larger samples.

Test-Retest Reliability

Reliability across repeated administrations was measured in a subset of 30 respondents, with a time lapse of two to four weeks between sessions.

The single measures ICC was 0.993 (95% CI: 0.984 to 0.996), indicating excellent reproducibility over time. The F-test value was 268.944 with degrees of freedom (df1 = 29, df2 = 29), confirming the statistical significance of the ICC value. These results, along with a low standard error of measurement (SEM), demonstrate the strong temporal stability and dependability of the CDS scores.

Participant Characteristics

A total of 138 community-dwelling elderly participants (aged 60–88 years, mean age = 68.42 ± 7.24 years) completed the Persian version of the Cognitive Difficulties Scale (CDS-26). Of these, 50.7% were female (n = 70) and 49.3% were male (n = 68). Education levels ranged from elementary (18.1%) to PhD (2.1%). Detailed demographic characteristics of the participants are presented in Table 1.

A multiple linear regression model was employed to investigate the association between demographic factors and the CDS score. The full model explained approximately 10.7% (R^2 adjusted = 0.036) of the variance in CDS score, indicating modest explanatory power but identifying several notable predictors. The intercept was significant (β = 44.13, CI [5.96, 82.29], $P = 0.024$), representing the expected CDS score when all predictors are at their reference levels. Gender, age, and most education levels were not significant predictors, suggesting minimal impact on CDS after adjusting for other variables. However, economic status emerged as a critical determinant: individuals with medium income (β = –8.47, CI [–16.47, –0.47], $P = 0.038$) and high income (β = –17.13, CI [–31.23, –3.03], $P = 0.018$) reported significantly lower CDS scores compared to the low-income reference group indicating better cognitive performance (Table 2).

A stepwise regression was conducted to identify the most parsimonious set of predictors. The final model (Adjusted R^2 = 0.065) retained only economic status as a significant factor. The intercept remained highly significant (β = 29.89, CI [25.68, 34.09], $P < 0.001$). Medium income (β = –7.97, CI [–15.69, –2.24], $P = 0.005$) and high income (β = –16.00,

Table 1. Demographic and Socioeconomic Characteristics of Participants (N=138)

Characteristic	Category	n (%)
Education Level	Elementary	25 (18.1)
	High School	30 (21.8)
	Diploma	45 (32.6)
	Associate Degree	7 (5.1)
	Bachelor's Degree	25 (18.1)
	Master's Degree or higher	6 (4.3)
Marital Status	Married	124 (89.9)
	Single	14 (10.1)
Economic Status	Low Income	80 (58.0)
	Medium Income	49 (35.5)
	High Income	9 (6.5)

Table 2. Multiple Linear Regression Predicting CDS Score from All Factors

Predictor	Estimate	95% CI	P
Intercept	44.13	5.96 – 82.29	0.024
Gender			
Female		Reference	
Male	4.07	–1.21 – 9.36	0.129
Age (years)	–0.16	–0.65 – 0.33	0.504
Education Level			
Elementary		Reference	
High School	–0.93	–11.35 – 9.48	0.856
Diploma	–6.54	–16.95 – 3.86	0.216
Associate degree	–7.81	–24.80 – 9.17	0.362
Bachelor	–6.30	–18.92 – 6.32	0.325
MSc/PhD	4.01	–14.30 – 22.32	0.665
Marital Status			
Single		Reference	
Married	–1.95	–13.16 – 9.26	0.726
Economic Status			
Low		Reference	
Medium	–8.47	–16.47 – –0.47	0.038
High	–17.13	–31.23 – –3.03	0.018
Observations (n)		138	
R² / R² adjusted		0.107 / 0.036	

Table 3. Final Parsimonious Model from Stepwise Regression Predicting CDS Score

Predictor	Estimate	95% CI	P
Intercept	29.89	25.68 – 34.09	< 0.001
Economic Status [Low]		Reference	
Economic Status [Medium]	–7.97	–15.69 – –2.24	0.005
Economic Status [High]	–16.00	–29.23 – –2.77	0.018
Observations (n)		138	
R² / R² adjusted		0.079 / 0.065	

CI [–29.23, –2.77], $P = 0.018$) were consistently associated with reductions in CDS scores (Table 3).

Discussion

This study aimed to translate, culturally adapt, and evaluate the initial psychometric properties of the 26-item for use in the Persian-speaking elderly population of Iran. The findings indicate that the Persian version of the CDS-26 is a valid, reliable, and culturally appropriate instrument for assessing subjective cognitive difficulties in this demographic. This marks a significant contribution to the field, addressing a critical gap in culturally tailored tools for cognitive health assessment in non-English speaking populations (17, 21).

The rigorous methodology employed in the translation and cultural adaptation phase, adhering to the internationally recognized IQOLA protocol, is a key strength of this study. The multi-step process ensured linguistic equivalence, conceptual fidelity, and cultural relevance. This multi-step process ensured linguistic equivalence, conceptual fidelity, and cultural relevance, crucial for minimizing bias and ensuring construct understanding across cultures (16, 17). This meticulous approach corroborates the value of such robust methodologies, as advocated and successfully applied in other cultural adaptations like that of the Cognitive Decline Complaints Scale in the Portuguese population (15).

The psychometric evaluation of the P-CDS-26 demonstrated strong evidence of its validity and reliability. Face and content validity assessments by an expert panel confirmed that all items were clear, relevant, and essential, with an impressive overall CVI. This indicates that the P-CDS-26 comprehensively covers the domain of subjective cognitive difficulties from the perspective of experts familiar with the target culture and clinical context.

Construct validity, rigorously assessed through CFA, provided compelling evidence for the underlying factor structure of the P-CDS-26. The derived fit indices consistently indicated an excellent to good model fit with the observed data. These robust findings support the conceptualization of the P-CDS-26 as a multidimensional instrument, aligning precisely with the original scale's design, which comprehensively assesses various cognitive domains, including Attention, Memory, Praxis, Orientation, and Language (11). Furthermore, our CFA results corroborate the established factor structure confirmed by previous empirical validation of the 26-item CDS (14). This demonstrable structural validity unequivocally ensures that the adapted scale accurately measures its intended cognitive constructs within the Persian-speaking context.

In terms of reliability, the P-CDS-26 demonstrated excellent internal consistency for the full scale, a finding comparable to the original CDS and underscoring the high consistency among its items within the Persian context. While most subscales exhibited acceptable to good reliability, a few subdomains showed comparatively lower internal consistency. This observation may be attributed to a limited number of items within these specific subscales or subtle cultural nuances in interpretation, suggesting an area for

further investigation and potential item refinement in future research with larger samples. Furthermore, the test-retest reliability of the P-CDS-26 was exceptionally high over a short retesting interval. This indicates outstanding temporal stability and reproducibility, confirming the instrument consistently yields similar results, provided an individual's cognitive state remains stable. Notably, this level of stability surpasses that reported for the original CDS, further reinforcing the P-CDS-26's robust dependability.

Regarding the demographic factors influencing CDS scores, the multiple linear regression analysis yielded interesting insights. Unlike some early studies on the original CDS that showed sensitivity to age and education level (11), our study found that age, gender, marital status, and education level were not significant predictors of subjective cognitive complaints in the full model within this specific Persian-speaking elderly population. This suggests that the influence of these variables might be buffered or mediated differently within this cultural context, or that other factors exert a more dominant effect on perceived cognitive difficulties in this sample.

Specifically, in this study, no significant relationship was found between participants' age and their total CDS score.. This finding contrasts with studies reporting higher CDS levels with increasing age (13, 14). Possible explanations include demographic characteristics of the sample, a potentially restricted age range, the influence of comorbid health conditions, or cultural factors shaping the perception and reporting of cognitive difficulties in Iran, where self-reporting may be influenced by societal norms regarding aging. Similarly, all specific education levels did not emerge as significant predictors of subjective cognitive complaints in our regression models. This finding diverges from the cognitive reserve hypothesis (22) and prior studies (13) that often demonstrate a protective influence of higher education. This discrepancy may be due to the specific categorization of education levels in our sample, the unique interplay of socioeconomic factors in the Iranian context, or the characteristics of the community-dwelling sample that may not capture the full spectrum of educational attainment effects.

Contrary to certain other investigations, gender was not a significant determinant of CDS severity in this sample. While consonant with the foundational work of McNair and Kahn (1983) (11), this outcome diverges from studies reporting heightened complaint prevalence among women, a discrepancy potentially attributable to sociocultural variations in symptom expression and perception (23). In this study, marital status was not significantly associated with total CDS scores. This finding contrasts with reports suggesting that being married may confer a protective effect against cognitive decline through enhanced social and emotional support (24, 25). The absence of a significant relationship in our sample may be attributable to factors such as the quality of interpersonal relationships, the level of social engagement, or the extent of practical and emotional support, which are not necessarily determined by marital status alone. Moreover, within the Iranian cultural context, unmarried or widowed older adults may still benefit from extensive family support networks, potentially offsetting the differential effects of marital status observed in other settings.

Crucially, economic status emerged as a significant predictor, with individuals in medium and high-income groups reporting significantly lower CDS scores compared to the low-income group (26). This finding aligns with broader research indicating that socioeconomic status is a critical determinant of health outcomes, including cognitive function, globally (27-29). Higher income may correlate with better access to healthcare, improved nutrition, greater opportunities for cognitive stimulation, and reduced chronic stress, all of which are protective factors against cognitive decline and could influence the perception and reporting of cognitive difficulties (29-31). This finding warrants further investigation into the specific mechanisms through which economic status influences subjective cognitive complaints in the Iranian elderly population.

Limitations and Future Directions

Key limitations include the study's cross-sectional design, dependence on self-reported data, and an urban-skewed sample, all of which may constrain generalizability. Future research should aim to recruit larger and more socio-geographically diverse samples, including rural populations, and to test the predictive validity of the Persian CDS-26 for identifying mild cognitive impairment and dementia in longitudinal frameworks.

Conclusion

This study successfully translated and culturally adapted the 26-item Cognitive Difficulties Scale into Persian and provided robust evidence for its initial psychometric properties in an elderly Persian-speaking population. The P-CDS-26 demonstrates excellent validity and reliability, making it a valuable and culturally appropriate tool for screening and monitoring subjective cognitive complaints in clinical and community settings in Iran. Its utility will aid in the early identification of cognitive difficulties, thereby facilitating timely interventions and supporting research into cognitive health. Future research should focus on validating the P-CDS-26 against objective cognitive measures, exploring its discriminative abilities in different clinical populations, and conducting longitudinal studies to track its utility in predicting cognitive trajectories, while also delving deeper into the observed socioeconomic disparities in cognitive complaints.

Authors' Contributions

Dibajnia researched literature and conceived the study. Fathollahzadeh was involved in gaining ethical approval, patient recruitment, and data analysis. Mousavi & Fathollahzadeh wrote the first draft of the manuscript. All authors reviewed and edited the manuscript and approved the final version of the manuscript.

Ethical Considerations

This study is part of a research project with Ethical Code IR.SBMU.RETECH.REC.1401.433 from Shahid Beheshti University of Medical Sciences. All ethical principles and the purpose and stages of the research were explained to the

participants, who were given the option to discontinue at any point without describing their reason and provided access to the research findings if they desired.

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Conflict of Interests

The authors declare that they have no competing interests.

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