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Development and Evaluation of the Psychometric Properties of the Elder Neglect and Abuse Awareness Scale

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Research Article

Keywords: Awareness, Elder Abuse, Elder Neglect, Reliability and Validity

Posted Date: July 9th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-9922877/v1

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Additional Declarations: No competing interests reported.

Abstract

Introduction:

We aimed to develop a scale to assess societal awareness regarding elder neglect and abuse, an issue of increasing significance because of the rapidly growing elderly population, to facilitate the development of educational programs and social policies and contribute to existing literature.

Materials and Methods

This methodological research was conducted between September 2024 and May 2025 with 512 healthcare professionals working at Muş State Hospital and Malazgirt State Hospital under the Muş Provincial Directorate of Health. Ethical approval was obtained from the Non-Interventional Research Ethics Committee of Hasan Kalyoncu University. Data were collected using a Personal Information Form and the Elderly Neglect and Abuse Awareness Scale.

Results

Exploratory factor analysis revealed a two-dimensional structure that explained 48.395% of the total variance (Factor 1: 30.284%; Factor 2: 18.111%). Confirmatory factor analysis demonstrated acceptable and excellent fit indices: chi-square/degrees of freedom ratio = 3.475, comparative fit index = 0.966, Tucker–Lewis index = 0.962, goodness-of-fit index = 0.990, normed fit index = 0.953, incremental fit index = 0.966, standardized root mean square residual = 0.056, and root mean square error of approximation = 0.070 (90% confidence interval = 0.063–0.076). Corrected item–total correlations ranged from 0.416–0.531 for Factor 1 and 0.331–0.500 for Factor 2, which all exceeded the literature-accepted threshold of ≥ 0.30. Test–retest reliability showed no statistically significant differences between the applications ($p > 0.05$).

Conclusion

The scale is a valid and reliable instrument for determining awareness levels regarding elder neglect and abuse.

1. INTRODUCTION

Owing to falling birth rates and rising life expectancies, the world is undergoing demographic changes. The aging population is affecting the entire world and raises new issues (1). As the global elderly population increases, health problems among the elderly are also increasing. Consequently, physical, mental, and social difficulties have emerged. This reduces quality of life and pushes the elderly into dependency (2).

Over the last decade, elderly neglect and abuse have become increasingly serious problems. It is estimated that approximately 4% of the elderly population are subjected to neglect and abuse. To identify individuals with elder neglect and ensure their care and protection, public and healthcare professionals must be adequately equipped to address this issue (3). Elderly neglect and abuse are social problems; therefore, necessary research must be conducted on this topic, and attention must be paid to what needs to be done to prevent such neglect and abuse. A review of studies on neglect and abuse in older adults indicated that it is a preventable problem and can be reduced through early and appropriate intervention (4). Elder maltreatment manifests in diverse forms, ranging from physical and emotional abuse to financial exploitation and various modes of neglect or abandonment. Neglect is the most common issue during emergency department visits, followed by physical abuse. The reason elder neglect and abuse have not been sufficiently researched in many societies and why studies on the subject have failed to yield definitive results is that perspectives on this issue vary per society. Owing to cultural and contextual differences, behaviors considered elder neglect and abuse in one region may be regarded as normal in another. Consequently, elder abuse and neglect cannot be fully identified (5). A vast majority of elderly abuse cases worldwide have not been reported. In the United States, for every reported case of elder abuse, five cases are not reported. This situation is believed to exist in many other countries, such as Sweden. It is accepted that the identified cases represent only the tip of the iceberg (6).

Elderly neglect and abuse, which is a global public health issue, are of particular concern to healthcare professionals. Given that elderly neglect and abuse are difficult to detect and constitute a social phenomenon, healthcare professionals can identify them by considering existing symptoms (7). Although healthcare workers are aware that they play a role in intervening in cases of elder neglect and abuse, there is a lack of knowledge in this area. One study has shown that training provided to healthcare workers can improve the prevention of elder neglect and abuse and lead to more effective interventions (8).

Aiming to quantify degrees of elder abuse awareness, this study focused on the development and validation of a new measurement tool. This scale, which is being developed, will help identify the current level of public awareness regarding the neglect and abuse of the elderly, whose proportion within the population is rapidly increasing. We also aim to contribute to the literature by facilitating the development of relevant educational programs or social policies. It is anticipated that the Elder Neglect and Abuse Awareness Scale (ENAS) will be used to guide future research.

2. MATERIALS AND METHOD

2.1. Conceptual Model

A scale development study titled “The Development and Evaluation of the Psychometric Properties of the Elderly Neglect and Abuse Awareness Scale” was designed as a methodological study.

2.2. Ethics

The research protocol received formal approval from the Non-Interventional Research Ethics Committee of Hasan Kalyoncu University (Date: August 12, 2024; No: 2024/96), with additional administrative authorization granted by the Muş Provincial Health Directorate (No: E-35465298-605-263600458). Adhering to the principles of the Declaration of Helsinki, the study ensured that all participants provided written informed consent prior to their involvement." Clinical trial number: not applicable.

2.3. Instrument Administration

The population of the study consisted of healthcare personnel (doctors, dentists, dietitians, psychologists, nurses, midwives, geriatric care technicians, and home care technicians) working at Muş State Hospital and Malazgirt State Hospital, which are both under the jurisdiction of the Muş Provincial Health Directorate. The sample comprised healthcare staff from this population who met the study criteria and volunteered to participate.

2.4. Assessment Instruments

2.4.1 Personal Information Form

This 16-item form evaluates demographics such as age, gender, and marital status, alongside professional tenure, education, and household structure. It also assesses prior training, experiential knowledge, and awareness regarding elder mistreatment.

2.4.2 ENAS

This study was conducted to establish an item pool for ENAS on the basis of a review of the national and international literature on the elderly population, types of neglect and abuse of the elderly, and level of awareness regarding these issues. To assess awareness, knowledge, and attitudes toward elder mistreatment, a 40-item instrument was employed. Responses were recorded via a 5-point Likert-type scale, ranging from 'strongly disagree' (1) to 'strongly agree' (5). An expert panel (comprising academics specializing in nursing, public health, geriatrics and psychometrics) was formed, and the items were evaluated by the experts as “necessary,” “useful but insufficient,” or “unnecessary.”

2.5. Assessment of data

The statistical evaluation was executed via IBM SPSS Statistics 30.0 and JASP 0.95.2.0. Construct validity was established through exploratory factor analysis (EFA), incorporating the Kaiser–Mayer–Olkin (KMO) measure and Bartlett’s sphericity test. Furthermore, principal axis factoring (PAF) was applied utilizing the promax rotation techniqueConfirmatory factor analysis (CFA) was employed to evaluate the model's fit, determining how effectively it aligned with the projected theoretical framework. Model-data alignment was rigorously assessed through various fit indices, including the chi-square/degrees of freedom ratio (χ^2/df), goodness-of-fit index (GFI), adjusted GFI. Furthermore, the comparative fit index (CFI), normed fit index (NFI), non-NFI (NNFI), Tucker–Lewis index (TLI), and incremental fit index (IFI) were evaluated. To further verify the model's suitability, the root mean square error of approximation (RMSEA) and standardized root mean square residual (SRMR) were utilized, alongside the 'weighted

least squares mean and variance adjusted (WLSMV) estimation method. CFA was performed to verify the measurement model's validity and construct reliability. Convergent and discriminant validity were tested via average variance extracted (AVE), the Fornell–Larcker criterion, and the HTMT ratio. Reliability was evaluated through item–total correlations, internal consistency (Cronbach's α, McDonald's omega, CR), 27% split-half, test–retest, and the intraclass correlation coefficient (ICC).

3. RESULTS

3.1. Findings on Content Validity

Content validity analysis was conducted using Lawshe's technique. A 40-item draft scale was sent to 14 experts for evaluation, and 5 items with a content validity ratio (CVR) below the specified critical value were removed from the pool. The overall content validity index (CVI) value for the 35-item scale was 0.7836. The minimum acceptable CVI value according to Lawshe's technique for a panel of 14 experts was 0.51 (9).

3.2. Results of the Preliminary Research

A preliminary pilot was executed via face-to-face sessions with 30 multidisciplinary practitioners, including physicians, nursing staff, and specialized care technicians. Following the provision of written informed consent, participants from various clinical backgrounds were interviewed. Post-expert evaluation, the instrument was refined to 35 items; subsequently, the pilot study informed specific modifications required to finalize the tool for the retest stage. Thirty data points were not included in the samples used for the analyses.

3.3. Sociodemographic Characteristics of the Participants

Among the 512 people who participated in the survey, 32.4% were aged between 25 and 28 years, 53.5% were women, 55.9% were single, 44.5% had been employed for 0–3 years, 53.9% held a bachelor's degree, and 82.8% stated that they had not received any training on abuse and neglect.

Table 1
Distribution of Participants by Demographic Characteristics (n = 512)

Variables	Categories	EFA Group (n = 256)	CFA Group (n = 256)		
		n (%)	n (%)	Test (χ^2)	p
Age	20–24	54 (21.1)	69 (27.0)	2.736	0.434
	25–28	83 (32.4)	78 (30.5)		
	29–34	59 (23.0)	50 (19.5)		
	35+	60 (23.4)	59 (23.0)		
Gender	Woman	137 (53.5)	137 (53.5)	0.000	1.000
	Man	119 (46.5)	119 (46.5)		
Marital Status	Married	113 (44.1)	104 (40.6)	0.512	0.474
	Single	143 (55.9)	152 (59.4)		
Financial Year	0–3 year	114 (44.5)	122 (47.7)	3.876	0.423
	4–6 year	37 (14.5)	44 (17.2)		
	7–9 year	28 (10.9)	21 (8.2)		
	10–12 year	20 (7.8)	12 (4.7)		
	12 year +	57 (22.3)	57 (22.3)		
Educational Background	High school	14 (5.5)	11 (4.3)	2.831	0.418
	Associate degree	42 (16.4)	32 (12.5)		
	License	138 (53.9)	155 (60.5)		
	Degree	62 (24.2)	58 (22.7)		
Receiving Training	Yes	44 (17.2)	33 (12.9)	1.529	0.216
	No	212 (82.8)	223 (87.1)		

n: sample size; %: percentage; χ^2: chi-square test

According to chi-square results, no significant statistical variations were observed in the demographic profiles of the EFA and CFA cohorts ($p > 0.05$). This outcome confirms that both groups maintained demographic homogeneity.

3.4. EFA Results

An EFA was performed on a subsample of 256 participants, employing PAF with promax rotation. Aligned with the theoretical underpinnings of maltreatment and neglect, the factor extraction was intentionally restricted to a two-factor structure, irrespective of the eigenvalues.

Table 2
EFA Factor Structure, Items, and Factor Loadings (n = 256)

Items	Factors	
	F1	F2
I12	0.786	
I14	0.765	
I16	0.755	
I11	0.742	
I5	0.741	
I15	0.740	
I24	0.697	
I6	0.691	
I35	0.690	
I7	0.686	
I33	0.652	
I13	0.650	
I34	0.617	
I8	0.607	
I32	0.541	
I31		0.771
I28		0.762
I26		0.738
I20		0.689
I30		0.686
I19		0.667
I22		0.658
I29		0.623
I25		0.620
Explained Variance	30.284	18.111
Cumulative Explained Variance	30.284	48.395

Items	Factors	
	F1	F2
KMO and Bartlett's test results	KMO	0.928
	Bartlett test	
	χ^2 (276)	6824.864
	p	< 0.001

Extraction Method: principal axis factoring. Rotation Method: promax with Kaiser normalization. Rotation converged in three iterations. KMO: Kaiser–Meyer–Olkin

The EFA confirmed a two-factor structure aligned with the theoretical framework. Items were removed iteratively to ensure consistency, and 11 items with loadings below 0.30 (I1 [0.254], I2 [0.199], I3 [0.185], I4 [0.202], I9 [0.269], I10 [0.254], I17 [0.124], I18 [0.191], I21 [0.150], I23 [0.247], and I27 [0.204]) were excluded. Factor 1 accounted for 30.284% of the variance, while Factor 2 contributed 18.111%, resulting in a total cumulative variance of 48.395%. The KMO value of 0.928, coupled with a significant Bartlett's test ($\chi^2[276] = 6824.864$; $p < 0.001$), verified that the data set was appropriate for factor extraction.

3.5. CFA Result

A CFA was executed to examine the theoretical alignment of the 2-factor, 24-item structure previously established through EFA. The model derived from the EFA was tested using CFA on data from the remaining half of the sample (n = 256) out of the total (N = 512). The WLSMV was employed as an estimation method. During the CFA, an examination of the modification indices (MI > 80) revealed a high level of error variance overlap between items M32, M33, M34, and M35. To preserve the structural integrity and discriminant validity of the model, we avoided adding error correlations that lacked methodological or theoretical justification. As a result, these items were excluded from the survey due to high inter-item correlation. Following the exclusion of these 4 items from the initial 24-item structure, a final 20-item scale (11 items in the abuse factor and 9 items in the neglect factor) was created.

Table 3
CFA: Factor Loadings, Model Fit Indices, and Discriminant Validity (n = 256)

PART A: FACTOR PROVISIONS							
Factor	**Indicator**	**Std. Estimate**	**Std. Error**	**z-value**	**p**	**95% CI Lower**	**95% CI Upper**
Factor 1	I12	0.861	0.014	63.25	< 0.001	0.834	0.887
	I14	0.839	0.014	59.59	< 0.001	0.811	0.866
	I16	0.796	0.019	42.69	< 0.001	0.759	0.832
	I11	0.839	0.016	52.13	< 0.001	0.808	0.871
	I5	0.791	0.018	44.15	< 0.001	0.756	0.827
	I15	0.836	0.015	55.39	< 0.001	0.806	0.865
	I6	0.766	0.022	35.55	< 0.001	0.724	0.809
	I7	0.781	0.018	43.42	< 0.001	0.746	0.817
	I13	0.749	0.020	38.13	< 0.001	0.710	0.787
	I8	0.690	0.025	27.49	< 0.001	0.640	0.739
	I24	0.716	0.027	26.79	< 0.001	0.664	0.768
Factor 2	I31	0.805	0.018	45.10	< 0.001	0.770	0.840
	I28	0.790	0.017	46.79	< 0.001	0.757	0.823
	I26	0.764	0.018	41.56	< 0.001	0.728	0.800
	I20	0.733	0.020	35.93	< 0.001	0.693	0.773
	I30	0.721	0.020	35.44	< 0.001	0.681	0.761
	I19	0.725	0.023	31.70	< 0.001	0.681	0.770
	I22	0.710	0.022	32.14	< 0.001	0.666	0.753
	I29	0.674	0.023	29.88	< 0.001	0.629	0.718
	I25	0.632	0.024	26.54	< 0.001	0.585	0.679
PART B: MODEL FIT INDICES (Threshold)							
χ^2/df	CFI	TLI	NFI	IFI	RMSEA	SRMR	GFI
3.475 (≤ 5.00)	0.966 (≥ 0.95)	0.962 (≥ 0.95)	0.953 (≥ 0.95)	0.966 (≥ 0.95)	0.070 (≤ 0.08)	0.056 (≤ 0.08)	0.990 (≥ 0.95)
PART C: DISCRIMINANT VALIDITY							

PART A: FACTOR PROVISIONS							
Factor	**Indicator**	**Std. Estimate**	**Std. Error**	**z-value**	**p**	**95% CI Lower**	**95% CI Upper**
Variables		F1			F2		
F1		0.789 (0.623)*					
F2		0.141†			0.730 (0.533)*		
HTMT ratio		0.066 (< 0.85)					

CI: confidence interval; χ^2/df: chi-square/degrees of freedom ratio (χ^2 = 587.176, df = 169, p < 0.001); CFI: comparative fit index; TLI: Tucker–Lewis index; NFI: normed fit index; IFI: incremental fit index; RMSEA: root mean square error of approximation (90% CI = [0.063, 0.076]); SRMR: standardized root mean square residual; GFI: goodness-of-fit index; HTMT: heterotrait–monotrait. Values in parentheses indicate the threshold criteria. Diagonal values in Part C represent the square root of *AVE. Below the diagonal: Fornell–Larcker criterion/HTMT ratio (threshold < 0.85). †: correlation between factors.

Table 3 is structured into three distinct sections: Part A presents the factor loadings, Part B details the model fit indices, and Part C displays the discriminant validityIn Section A, the primary factor (abuse) consisted of 11 items (I12, I14, I16, I11, I5, I15, I6, I7, I13, I8, and I24), and the factor loadings for these items ranged from 0.690 to 0.861. Second factor (neglect) consisted of nine items (I31, I28, I26, I20, I30, I19, I22, I29, and I25) with factor loadings ranging between 0.632 and 0.805 (Fig. 1).

Within the CFA framework, multiple fit metrics are utilized to evaluate the model's structural validity. In Part B, some of these include the χ^2/df, RMSEA, CFI, IFI, NNFI, NFI, and GFI (10). Structural alignment was evaluated through a variety of fit metrics: χ^2 = 587.176 (df = 169, p < 0.001), CFI = 0.966, TLI = 0.962, RMSEA = 0.070 (90% CI: 0.063–0.076), and SRMR = 0.056. As illustrated in Table 3, the resulting fit indices demonstrate that the model achieves an acceptable level of adjustment.

Within Part C, the research model's discriminant validity was evaluated by employing the Fornell–Larcker criterion alongside HTMT ratios. The analysis indicates that the AVE square root for each factor (F1: 0.789, AVE = 0.623; F2: 0.730, AVE = 0.533) exceeded the inter-factor correlation (r = 0.141).Additionally, the HTMT ratio between the factors (0.066) was well below the threshold value of 0.85, as suggested in the literature. These findings demonstrate that the dimensions of the scale are statistically distinct from one another and that each construct represents a different concept, thereby confirming discriminant validity.

3.6. Reliability Analysis of ENAS

To establish a robust psychometric profile for the ENAS, internal consistency and construct reliability were verified using a combination of Cronbach's alpha, McDonald's omega, and CR indices. A test–retest

reliability study was conducted with 45 healthcare professionals at four-week intervals; the data obtained from this procedure were not included in the main sample used for the primary analyses.

Table 4
Item–Total Correlation and Scale Reliability Statistics, Pearson Correlation Coefficients and 95% CIs for Pre- and Post-Test Scores (n = 45) and Scale Discriminant Validity Results (Comparison Between Upper–Lower 27% Groups)

ITEM-TOTAL CORRELATİON AND RELİABİLİTY ANALYSİS					
Items	***Sub-Factor Item–Total Corr.***	**Corr. Item–Total Corr.**	**Cronbach's Alpha α (≥ 0.70)**	**McDanold's Omega ω (≥ 0.70)**	**CR (≥ 0.70)**
Factor 1			0.925	0.924	0.955
I5	0.732	0.511			
I6	0.686	0.506			
I7	0.701	0.537			
I8	0.601	0.416			
I11	0.753	0.528			
I12	0.777	0.531			
I13	0.646	0.474			
I14	0.733	0.503			
I15	0.715	0.502			
I16	0.717	0.484			
I24	0.636	0.471			
Factor 2			0.891	0.890	0.918
I19	0.631	0.450			
I20	0.649	0.453			
I22	0.621	0.500			
I25	0.571	0.331			
I26	0.695	0.473			
I28	0.717	0.495			
I29	0.584	0.433			
I30	0.636	0.405			
I31	0.722	0.500			
PRE-TEST AND POST-TEST					

ITEM-TOTAL CORRELATİON AND RELİABİLİTY ANALYSİS						
Items	***Sub-Factor Item–Total Corr.***	**Corr. Item–Total Corr.**	**Cronbach's Alpha α (≥ 0.70)**	**McDanold's Omega ω (≥ 0.70)**		**CR (≥ 0.70)**
Assessments	**Pre-Test**	**Post-Test**	**ICC (%95 CI)**			
	$\bar{x}$ ± SS	$\bar{x}$ ± SS	Average	Pearson r	t (sd)	p*
Factor 1: Pre-Test and Post-Test	47.49 ± 3.63	47.40 ± 3.83	0.86** (0.75–0.93)	0.76**	0.229 (44)	0.820
Factor 2: Pre-Test and Post-Test	32.58 ± 3.85	32.09 ± 4.32	0.82** (0.67–0.90)	0.70**	1.024 (44)	0.311
SCALE DİSCRİMİNANT VALİDİTY RESULTS						
	Lower %27 (n = 138)		**Upper %27 (n = 138)**			
Sub-dimensions	$\bar{x}$ ± SS		$\bar{x}$ ± SS		t	p
Factor 1	38.58 ± 7.49		53.25 ± 1.54		22.520	< 0.001
Factor 2	22.22 ± 5.48		37.69 ± 2.66		29.855	< 0.001

α: Cronbach's alpha; ω: McDanold's omega; CR: composite reliability, n: number of observations; $\bar{x}$: mean; SD: standard deviation; df: degrees of freedom; ICC: intraclass correlation coefficient (two-way mixed-effects model with absolute agreement definition); t: independent samples t-test value; r: Pearson correlation intervals. Paired samples t-test p-value: $p < 0.001$.

All calculated values for Factor 1 (α = 0.925, ω = 0.924, CR = 0.955) and Factor 2 (α = 0.891, ω = 0.890, CR = 0.918) were found to be significantly above the literature-accepted threshold of ≥ 0.70. When examined on a factor basis, the item–total correlation values ranged from 0.601 to 0.777 for Factor 1 and from 0.571 to 0.722 for Factor 2. The corrected item–total correlations ranged between 0.416–0.531 for Factor 1 and 0.331–0.500 for Factor 2, exceeding the literature-recommended threshold of ≥ 0.30. These results demonstrated that the items were highly consistent with the overall scale (11).

In the test–retest reliability analysis, the coefficients calculated for Factor 1 (ICC = 0.86, r = 0.76) and Factor 2 (ICC = 0.82, r = 0.70) were above the literature-accepted threshold of 0.70 (12) and significant at the $p < 0.001$ level. The lack of a statistically significant variance between the mean scores of both administrations ($p > 0.05$) verifies that the instrument exhibits high temporal stability and measurement reliability (Table 4).

According to the results of the independent samples t-test comparing the total and factor scores based on the upper and lower 27% groups (Table 4), the mean scores of the upper group were significantly higher than those of the lower group for all variables ($p < 0.001$). Such findings demonstrate the instrument's capacity to distinguish successfully among high-performing and low-performing respondent groups.

4. DISCUSSION

This section details the construction of ENAS, designed as a psychometrically sound instrument within the present study. To complement these results, content validity and reliability analyses were performed. Awareness is not merely "knowledge"; it is a phenomenon that should also be examined as "perception, attitude, and behavioral tendency." Consequently, ENAS addresses a critical scholarly void, functioning as a robust instrument for both theoretical research and clinical practice.

According to Ayre and Scally's recalculated thresholds, a minimum CVR of 0.51 is required for statistical significance in panels comprising 14 experts. It has been stated that CVI values should be 0.7 or higher for a study to possess content validity (13). Similarly, in the current study, the CVR values for the 35 items ranged from 0.5714 to 1.00, thus demonstrating that content adequacy was met according to the experts. By averaging the CVR values, the CVI was found to be 0.7836, thus confirming the validity of the scale.

A previous study indicated that factors such as age and gender influence research outcomes; specifically, although gender contributes to heterogeneity, younger participants have no significant effect (14). In the current study, an examination of the demographic distribution of the sample ($n = 512$) (Table 1) revealed a homogeneous structure according to the chi-square analysis results ($p > 0.05$).

Kaiser (15) classifies KMO values > 0.90 as "marvelous" and states that values at this level make it possible to obtain robust factor structures. A KMO coefficient of 0.928 confirmed that the sample size was excellent for factor analysis. A significant Bartlett's test ($\chi^2 = 6824.864$; $p < .001$) confirms adequate variable correlation and the suitability of factor analysis (Table 2).

The abuse sub-dimension (Factor 1) accounts for 30.284% of total variance, with factor loadings spanning 0.541–0.786 (Table 2). According to Field (16), factor loadings above 0.50 demonstrate substantial item-factor correspondence. In most scales developed with a similar structure in the literature, dimensions related to abuse awareness are prominent (17). With 18.111% of the total variance explained, Factor 2 (neglect) demonstrates high construct validity, supported by robust factor loadings between 0.620 and 0.771.Abuse and neglect have been treated as distinct topics in previous research, and studies have been conducted on this subject. These findings support those of various studies, thus indicating that elder neglect is a distinct structural domain of abuse (18).

According to the fit indices employed in various studies, model fit is considered adequate when RMSEA ≤ 0.08, CFI ≥ 0.90, and $\chi^2/df \leq 5.00$ (19). CFI and TLI values exceeding 0.96 are regarded as strong

indicators of construct validity (20). In the current study, the neglect and abuse sub-dimensions were examined via CFA, and the results met either the excellent or acceptable threshold levels (Table 3).

Reliability characterizes the resulting scores of a measurement rather than the instrument itself (21). Szymczak et al. (2024) reported a Cronbach's alpha of 0.727, confirming the scale's reliability (22).The fact that the alpha coefficients obtained from ENAS were close to these values (Table 4) indicates that the scale possesses strong internal consistency. In the current study, examining not only the Cronbach's alpha coefficient but also the CR and McDonald's omega values (Table 4) moved the reliability assessment beyond the classical internal consistency approach.

For excellent reliability in research, it is essential to ensure both internal consistency and test–retest reliability when measuring temporal stability (23). In a study assessing test–retest reliability with a two-month interval, initial results of 13.91 and subsequent results of 12.28 were found to satisfy internal consistency reliability (24). The lack of significant differences across applications ($p > .05$) validates the instrument's strong measurement stability and reliability over time (Table 4).

In a study by Ohlsson and Karlsson (2019), the lower group differences in the upper–lower group comparison varied from the smallest to the largest magnitude (25). Across all dimensions, the upper group significantly outscored the lower group ($p < .001$), confirming the instrument's capacity to differentiate between participant performance levels (Table 4).

CONCLUSION

ENAS is a valid and reliable tool suitable for measuring elder abuse and neglect awareness. We rigorously assessed content, construct validity, and reliability during the scale's creation. Present scale remained stable over time, and its two-factor structure could be utilized both independently and collectively. Consequently, given the limited number of existing instruments for identifying elder neglect and abuse, this scale is expected to facilitate identification and significantly contribute to the development of training programs, legislative regulations, and clinical practice strategies.

Declarations

Conflict of Interest:

The writers declare the absence of any conflicts of interest.

Funding Sources:

There was no external funding provided for this specific research

Author Contribution

Our study is a doctoral thesis on scale development. BB served as the first author of the study. SA is BBI's advisor and the second author. All authors reviewed the manuscript.

Acknowledgements:

The authors have no acknowledgements to declare.

Data Availability

This article is based on my doctoral dissertation. My dissertation has not yet been made available through open access at the National Thesis Center. Therefore, I am unable to cite it. My doctoral dissertation was accepted in February 2026, and I have successfully completed my doctoral program.

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Figures

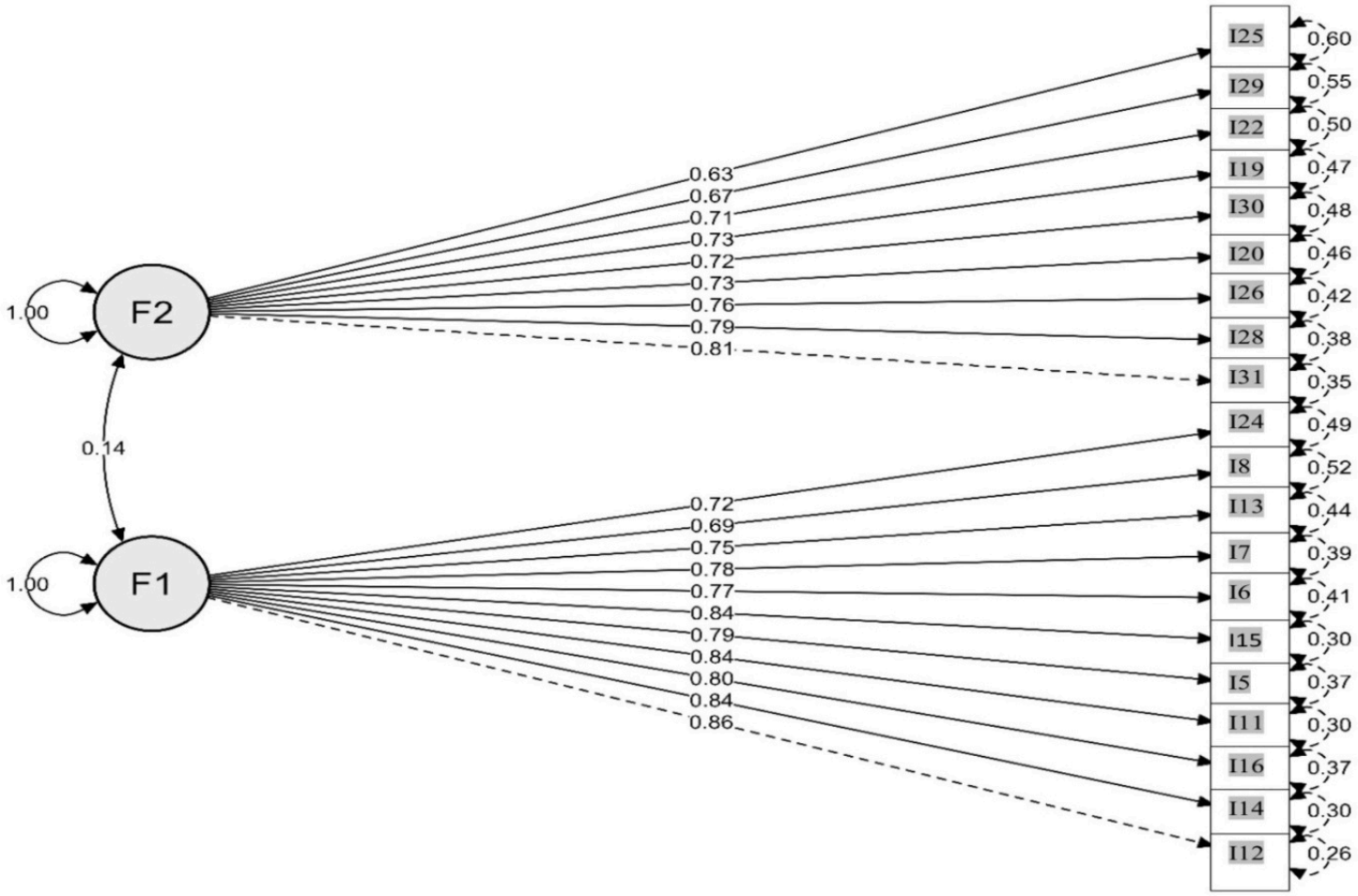


Figure 1

CFA Model Structure and Factor Loadings