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Cross-cultural adaptation and psychometric assessment of the Turkish version of the Vulnerability to Abuse Screening Scale

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Background/aim: The aim of this study was to evaluate the reliability and validity of the Turkish version of the Vulnerability to Abuse Screening Scale (VASS).

Materials and methods: This was a methodological study. The sample included 140 elderly individuals. Data were collected by using a questionnaire form, the VASS, and the Geriatric Depression Scale (GDS). The Cronbach alpha value was calculated and test–retest reliability was tested for the reliability analyses.

Results: The Cronbach alpha value calculated for the VASS (12 items) was 0.819. There was no difference between test and retest mean scores of the VASS. A statistically significantly positive and strong relationship was found between the test and retest scores of the individuals. A statistically significantly positive and moderate relationship was found between the VASS and GDS scores. Factor analysis revealed that a total of four factors accounted for 63.66% of the total variance with an eigenvalue of >1. These results show that the Turkish version of the VASS is a valid and reliable scale.

Conclusion: This study showed that the adoption of the translated VASS in Turkey is reliable and valid to evaluate the risk of abuse in adults over the age of 65.

Key words: Elder abuse, elder neglect, depression

1. Introduction

Elder abuse generally means a trusted person deliberately harming a defenseless elderly person or behaving in a neglectful way (1). Elder abuse has been defined as "a single, or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person" by the International Network for the Prevention of Elder Abuse and the World Health Organization (2). Elder abuse can be in the form of physical abuse, neglect, emotional/psychological abuse, financial abuse and exploitation, and sexual abuse (3,4). Elder neglect is defined as the individuals responsible for taking care of the elderly person (family members, social institution employees, private caregivers) not meeting the daily requirements of the elderly (3).

The frequency and type of elder abuse varies by country. Soares et al. (5) commented on the types of elder abuse seen in various European countries in a report published in 2010. According to this report, the incidence was 29.7% in Sweden and 27.1% in Germany for psychological abuse, 4% in Sweden and 3.8% in Lithuania for physical abuse, 1.5% in Greece and 1.3% in Portugal for sexual abuse, and 7.8% in Portugal and 4.8% in Spain for financial abuse (5). Physical abuse has been reported in 1.5% to 4.9% of the elderly in studies from Turkey (6,7). The data obtained from studies on abuse are said to be the visible part of the iceberg, with many other unidentified abused or neglected elderly individuals (8).

The many types of abuse affect the health and lives of individuals directly or indirectly (1,9). Abuse-related direct physical injuries such as brain and spinal cord injuries as well as psychological and behavioral problems and other disorders such as depression, alcohol use, and suicide attempts can be seen in elderly people (4).

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According to the National Center on Elder Abuse, abused elderly people have more suicidal tendencies and attempts than individuals who are not abused. The same report emphasized that problems such as fear, agitation, isolation, confusion, and disorientation can also be seen in such individuals (3).

The most important issues in elder abuse and neglect are not being aware of the problems and the difficulties in determining them. The reasons for these difficulties can be listed as follows. First, the family is considered sacred and intervention in family life by others is unacceptable. Second, abuse cannot be expressed by the elderly who rarely leave the house or cannot leave at all. Third, the elderly are unwilling to report the abuse by their family and relatives. The last factor is the inadequacy of healthcare staff such as nurses and social workers who could reveal such abuse (10).

Abuse is an extremely sensitive worldwide issue that individuals find difficult to express and it is important as regards the quality of the services provided to the elderly for healthcare staff to question individuals without upsetting them to expose any problems (11). All healthcare staff who spend time with the elderly and their families for diagnosis, caregiving, and follow-up should be informed about elder abuse and evaluate the elderly accordingly. While evaluating the elderly it should not be forgotten that abuse may not only be physical but also emotional, financial, and sexual. Guides, guidelines, and scales that help identify elder abuse and neglect are available for medical staff (11–17). However, we noticed that there is no standard measurement tool for the evaluation of elder abuse in Turkey. Therefore, our aim was to test the validity and reliability of the Vulnerability to Abuse Screening Scale (VASS) for Turkey.

2. Materials and methods

2.1. Patients and data collection

The study was conducted on a total of 140 individuals aged 65 years and older who presented to the geriatrics or internal medicine clinic and voluntarily agreed to participate in the study in Turkey between 1 January 2014 and 25 February 2015. Study inclusion criteria were voluntary participation in the study, ability to speak and understand Turkish, absence of dementia or Alzheimer disease as diagnosed by a physician, and absence of psychiatric diseases such as schizophrenia or bipolar disorder. Permission to produce a Turkish adaptation of the scale was obtained by e-mail from the author who first developed the scale. We obtained approval for the study from the Ethics Committee of Hacettepe University (No: GO 13/212-31). Informed consent was obtained from the individuals by the researchers.

A data collection form was used, which was developed by the researchers following a literature review to collect data and contained questions regarding the sociodemographic and medical characteristics of the individuals. The VASS was also used, the validity and reliability of which were being tested. The Geriatric Depression Scale (GDS) was used to evaluate the scale validity of the VASS.

The data were collected by the researchers through individual interviews with the elderly who presented to the outpatient clinic and met the study criteria. The relatives of the elderly individuals were not included in the interviews so that the individuals could answer the questions comfortably. The interviews lasted about 20 to 30 min. The 37 elderly individuals who presented to the hospital again within the 2–4 weeks after the first application were similarly administered the VASS again in order to evaluate the test–retest reliability.

This scale, consisting of 12 items, was developed by Schofield et al. (11) in 2002 in Australia to determine abuse of elderly women. Participants answer the questions of the scale as "yes/no" as they think is appropriate for them. A high score shows the presence of abuse. The scale includes 4 subscales, each consisting of 3 items: dependence, dejection, vulnerability, and coercion. It provides information on various forms of family abuse such as emotional, psychological, and verbal abuse (11,17). Cronbach's alpha coefficients of the VASS were determined as 0.31–0.74 for the original VASS.

The GDS is a self-notification scale developed by Yesavage et al. (18) in 1983 for elderly people and contains a total of 15 questions. There are 5 positive questions (questions 1, 5, 7, 11, and 13), while the others were prepared to be negative. "No" answers to the positive questions and "yes" answers to the negative questions receive 1 point each for the evaluation of the scale. A score of 6 or over is accepted as significant for the diagnosis of depression. A previous study showed that the scale is valid and reliable for the Turkish population (19).

2.2. Translation and cross-cultural adaptation

The double forward and backward method was performed for translation of the VASS (20). This process also provided a first indication of face and content validity. Forward translation was performed by two Turkish native-language translators independently. One of the translators had knowledge of the questionnaire's concept and the study's purpose to improve idiomatic and conceptual equivalence and reliability. There was no disagreement between the translators in the wording of the items. Back translation was performed blindly and independently by two English native-language speakers with the final versions compared to the original version for inconsistencies and to provide a final consensus version.

The scale was administered to 10 elderly individuals via a one-on-one interview to evaluate the understandability of the scale items after the translation stage was completed. The elderly individuals were asked whether they had difficulty in understanding the items in the scale after the interview. No problem in understanding the items was reported. The data of the 10 elderly individuals who were interviewed in the preliminary administration were not included in the study.

2.3. Psychometric testing of the VASS

Internal consistency analysis and test–retest reliability tests were performed in the evaluation of scale reliability. Content validity, criterion validity, and construct validity were tested to determine the validity of the scale. Content validity was evaluated during the translation and cultural adaptation process.

2.4. Statistical analysis

The outcomes were expressed as numbers and percentages for the numerical variables and as mean ± standard deviation for the measurement variables. The Cronbach alpha value was calculated for the reliability analyses. We calculated the test–retest reliability with the intraclass correlation coefficient and analyzed these results with the paired samples t-test. The Pearson correlation coefficient and the independent sample t-test were used to evaluate criterion validity, principal components analysis was used for descriptive factor analyses, and equamax rotation was performed to evaluate construct validity. SPSS 15.00 for Windows (SPSS Inc., Chicago, IL, USA) was used for the statistical evaluation of the data. $P < 0.05$ was considered statistically significant.

3. Results

The mean age for the individuals included in the study was 72.1 ± 7.1 years, 55.7% were female, 39.7% were illiterate, 68.6% were married, 48.6% were retired, and 51.4% reported their income status as "my income is equal to my expenses". We found that 57.9% were living with their spouse, 93.4% had children, and 77.9% had at least one chronic disease. The sociodemographic characteristics of the individuals included in the study are presented in Table 1.

The Cronbach alpha value calculated for the VASS (12 items) was 0.819 and the values calculated for scale's subscales were 0.479 (dependence), 0.623 (dejection), 0.745 (vulnerability), and 0.704 (coercion) (Table 2).

The total scale score of the 37 participants was 2.16 ± 2.34 for the first test and 2.24 ± 2.45 for the retest. There was no difference between test and retest mean scores of the VASS ($t = 1.782$; $P = 0.083$). A statistically significant positive and strong correlation was present between the test and retest test scores ($r = 0.994$; $P < 0.001$).

Table 1. Characteristics of study participants (n = 140).

Characteristics	N	%
Sex		
Female	78	55.7
Male	62	44.3
Level of education		
Illiterate	53	37.9
Primary school	71	50.8
High school and higher	16	11.4
Marital status		
Married	96	68.6
Single	44	31.4
Has children		
Yes	131	93.4
No	9	6.4
Employment status		
Employed full-time/part-time	7	5.0
Retired	68	48.6
Never worked	65	46.4
Perceived economic condition		
Income < expenses	39	27.9
Income = expenses	72	51.4
Income > expenses	29	20.7
Who does he/she live with		
With spouse	81	57.9
With children/relative	31	22.1
Alone	26	18.6
Nursing home	2	1.4
Chronic diseases		
Yes*	109	77.9
No	31	22.1
Incontinence		
Yes	42	30.0
No	98	70.0

*Diabetes mellitus, hypertension, coronary heart disease, rheumatoid arthritis, hypothyroidism, asthma.

The GDS was administered to the individuals simultaneously with the VASS to evaluate the criterion validity of the scale in this study. The mean VASS score was 1.97 ± 2.54 and the mean GDS score was 5.02 ± 4.72. A statistically significant positive and moderate correlation was found between the VASS and GDS scores ($r = 0.575$; $P < 0.001$). Comparison of the VASS according to the GDS score revealed that the VASS scores of those with depression (3.89 ± 3.15) were statistically significantly higher (0.97 ± 1.34) than the scores of those without depression ($t = 6.132$; $P < 0.001$).

Factor analysis revealed four factors accounting for 63.66% of the total variance with an eigenvalue of >1. Table 2 presents the factor analysis outcomes. The aforementioned 63.66% variance consisted of 37.1% explained by factor 1, 9.52% by factor 2, 8.92% by factor 3, and 8.11% by factor 4. The factor loading assessment of the items showed values varying between 0.358 and 0.846. The Cronbach alpha coefficients were calculated for each factor following the factor analysis as follows: 0.479 for factor 1, 0.623 for factor 2, 0.745 for factor 3, and 0.704 for factor 4 (Table 2).

4. Discussion

Abuse is known to cause many physiological, psychological, and social problems in the elderly (3). Although the elderly have been reported be abused at various rates in the literature, both from Turkey and worldwide, difficulties are known to be present in determining this elder abuse (8,10). There is no standard measurement tool for the evaluation of elder abuse in Turkey. We aimed to test the validity and reliability of the VASS in Turkish elderly individuals in order to eliminate the current shortcomings in this area in this study. This is the first study on psychometric evaluation of Turkish elderly individuals using the VASS.

The reliability of the VASS was investigated to demonstrate that it could make measurements without any errors and collect accurate data as a reproducible scale (21,22). Internal consistency and test–retest reliability analyses were performed to evaluate the reliability of the scale. It is recommended that the Cronbach alpha coefficient be larger than 0.70 for the internal consistency of a scale to be acceptable (23,24). The Cronbach alpha coefficient calculated for the VASS in this study was 0.819. This value was accepted to indicate the reliability of the Turkish version of the VASS. Cronbach alpha coefficients calculated for the subscales varied between 0.479 and 0.745. The VASS was found to provide consistent results over time with reliable test–retest results according to the test–retest reliability analyses. Cronbach's alpha coefficient of the VASS was determined as 0.31–0.74 in Schofield and Mishra's study (17) in which the VASS was developed. Cronbach's alpha coefficient of the VASS was determined as 0.688 in Maia and Maia's study (25) and as 0.711 in the study of Buri et al. (15). Although Cronbach's alpha values of the subscales were consistent with other studies evaluating the psychometric properties of the VASS,

Table 2. Results of exploratory factor analysis showing internal structure of VASS.

Items	Dependence (factor 1)	Dejection (factor 2)	Vulnerability (factor 3)	Coercion (factor 4)
Do you have enough privacy at home? (Item 4)	0.840			
Do you trust most of the people in your family? (Item 5)	0.358			
Can you take your own medication and get around by yourself? (Item 6)	0.594			
Are you sad or lonely often? (Item 7)		0.739		
Do you feel that nobody wants you around? (Item 8)		0.648		
Do you feel uncomfortable with anyone in your family? (Item 9)		0.648		
Are you afraid of anyone in your family? (Item 1)			0.690	
Has anyone close to you tried to hurt you or harm you recently? (Item 2)			0.668	
Has anyone close to you called you names or put you down or made you feel bad recently? (Item 3)			0.846	
Does someone in your family make you stay in bed or tell you you're sick when you know you're not? (Item 10)				0.778
Has anyone forced you to do things you didn't want to do? (Item 11)				0.482
Has anyone taken things that belong to you without your OK? (Item 12)				0.747
Eigenvalue	4.452	1.144	1.071	0.0973
Percentage of variance explained (%)	37.10	9.52	8.92	8.11
Accumulative percentage of variance explained (%)	37.10	46.63	55.55	63.66
Cronbach alpha	0.479	0.623	0.745	0.704

Cronbach's alpha values under 0.70 can be doubtful as regards reliability. Therefore, we suggest using the total scale score to assess elderly abuse in Turkish people.

Validity is defined as the degree to which a scale measures what one wants to measure. The evaluation of validity identifies whether the scale is consistent with the feature that one wants to measure. In other words, it can be determined whether the measurement was performed correctly in accordance with the rules and whether the measurement data reflect the feature that one wants to measure (21,22,26–28). Determination of content validity, face validity, criterion validity, and construct validity are recommended for the evaluation of the validity of a scale (21,22,26–28).

A relationship between depression and suffered neglect and abuse in the elderly has been reported, with depressive symptoms being an indicator of such behavior (16,29,30). Similarly, it was found by Dyer et al. (31) that the depression level increased as abuse and neglect increased in the elderly. We also found a positive and moderate correlation between depression and elder abuse and neglect in this study. This result showed that the Turkish version of the VASS provides criterion validity.

A minimum factor load of 0.300 is required to provide construct validity (21,22,28,32). The factor loadings in this study indicate that the Turkish version of the VASS has a good factor construct. We found a total of four factors similar to the original scale as a result of the factor analysis conducted in this study.

The VASS was shown to be a valid and reliable scale for Turkish society with possible use for the determination of abuse in Turkish elderly individuals. A comprehensive evaluation is required for healthcare staff to identify elder abuse and neglect. It is important that the scales used by healthcare staff when evaluating the elderly be specific for this age group and easily administered and evaluated. We believe that the VASS is a valid and reliable scale for Turkish elderly individuals and is easy for healthcare staff to use. We further believe that these study results close an important gap in the evaluation of elder abuse, which is a difficult issue to talk about and to evaluate. All healthcare staff who encounter elderly individuals are recommended to include elder abuse and neglect in their routine evaluation. The VASS can be used for this purpose and the data obtained from the VASS should be considered when providing services to the elderly.

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