

## ORIGINAL ARTICLE

## ABUSE AGAINST THE ELDERLY PERSON: ANALYSIS OF THE INTERNAL CONSISTENCY OF INSTRUMENTS\*

### HIGHLIGHTS

1. H-S/EAST was considered unstable from a reliability point of view.
2. The Conflict Tactics Scale was highly accurate in defining violence.
3. There is a need to develop instruments to determine violence against VCPI.

Renata Clemente dos Santos Rodrigues<sup>1</sup>   
Gleicy Karine Nascimento de Araújo-Monteiro<sup>2</sup>   
Emanuella de Castro Marcolino<sup>3</sup>   
Bárbara Maria Lopes da Silva Brandão<sup>4</sup>   
Lindemberg Arruda Barbosa<sup>5</sup>   
Ronei Marcos de Moraes<sup>4</sup>   
Rafaella Queiroga Souto<sup>4</sup> 

### ABSTRACT

**Objective:** to evaluate the internal consistency of instruments used in Brazil to measure situations of violence against the elderly in two states. **Method:** a cross-sectional study with 481 elderly people in two different samples, states, and time periods. Two instruments were used to measure violence against the elderly person. The data was analyzed and the internal consistency between the items was measured by the Cronbach's alpha coefficient. **Results:** the Hwalek-Sengstock Elder Abuse Screening Test showed a coefficient of  $\alpha = 0.08$  for the sample collected in Paraíba, while in Pernambuco it was  $\alpha = 0.57$ . The Conflict Tactics Scale was highly accurate in defining violence, with a coefficient of  $\alpha = 0.81$  and  $\alpha = 0.80$  for the two samples. **Conclusions:** only the Conflict Tactics Scale turned out to be reliable and stable for determining physical and psychological violence among the elderly, thus contributing as a way of uncovering the phenomenon.

**DESCRIPTORS:** Reproducibility of Results; Data Accuracy; Nursing Methodological Research; Forensic Nursing; Elder abuse.

### HOW TO REFERENCE THIS ARTICLE:

Rodrigues RC dos S, Araújo-Monteiro GKN de, Marcolino E de C, Brandão BML da S, Barbosa LA, Moraes RM de, et al. Abuse against the elderly person: analysis of the internal consistency of instruments. *Cogitare Enferm.* [Internet]. 2023 [cited "insert year, month and day"]; 28. Available from: <https://dx.doi.org/10.1590/ce.v28i0.93163>

<sup>1</sup>Universidade Estadual da Paraíba, Campina Grande, PB, Brasil.

<sup>2</sup>Universidade Federal de Alagoas, Maceió, AL, Brasil.

<sup>3</sup>Universidade de Pernambuco, Petrolina, PE, Brasil.

<sup>4</sup>Universidade Federal da Paraíba, João Pessoa, PB, Brasil.

<sup>5</sup>UNIFACISA Centro Universitário, Campina Grande, PB, Brasil.

## INTRODUCTION

Psychometrics is the science that studies consistent theories and methods for understanding subjects' responses<sup>1</sup> to certain stimuli and/or situations or corresponding to a latent trait. This, in turn, can be expressed by various concepts such as cognitive trait, mental process, aptitude, tendency, variable, mental structure, among others. In general, psychometrics proposes to study traits through analysis and reliable statistical parameters that will determine the latent behavior related to their attributes<sup>2</sup>.

The legitimacy of a test, scale or instrument is measured by validity and fidelity tests. Validation consists specifically of the behavior of the latent trait, which must be structured through empirical analysis of the literary content related to the trait, and then their statistical measurement. Accuracy (reliability) relates to the instrument's ability to measure the trait without error<sup>1</sup>.

To create a measurement instrument, it is necessary to include variables in its construct to determine the unique expressions that the latent trait indicates<sup>3</sup>. Nursing studies value the development of reliable instruments to determine subjective phenomena<sup>4</sup> with specific latent traits. E is one of these phenomena that Violence Against Old People/Elder Abuse(EA) difficult to determine and conceptualize, given its multiple faces.

Elder abuse is considered a global problem<sup>5</sup>. The World Health Organization (WHO) defines it as an "act of affection or omission that can manifest itself individually or collectively, regardless of frequency, in a relationship that causes harm or distress to that individual"<sup>6</sup> and is characterized by its high prevalence in several countries<sup>7</sup>, requiring the use of technologies that guide the screening and assistance to these individuals<sup>8</sup>.

As it is a phenomenon that reflects a social context, its prevalence is heterogeneous in different countries; a study in Croatia showed a prevalence of 21.4%<sup>9</sup>, 21.5% in Romania<sup>10</sup> and 90.4% in Iran<sup>11</sup>.

In Brazil, this heterogeneity is also observed in elderly people, depending on the region of the country. The state of São Paulo<sup>12</sup> showed a 10% prevalence of EA, while in the Amazon, 52.6%<sup>13</sup>. A population-based study carried out in 23 capital cities in the country, mediated by the Interpersonal and Self-inflicted Violence Surveillance System (VIVA/SINAN), showed that physical violence was the most prevalent (85%) among the elderly people, followed by neglect (9.1%)<sup>14</sup>.

Although it is not a new phenomenon, it is only recently that EA has been the subject of scientific study, which is advancing in the construction of the theoretical framework that underpins professional practice<sup>15</sup>. It is a challenge to identify EA, especially when it occurs in the domestic environment. Given its seriousness, the use and development of tools to help professionals detect it early is essential<sup>16</sup>.

The most used validated instruments for determining EA in Brazil are the Hwalek-Sengstock Elder Abuse Screening Test (H-S/EAST), for screening risk of violence<sup>17</sup>, and the Conflict Tactics Scales Form R (CTS-1)<sup>18</sup>, for detecting physical and psychological violence. The risk of violence measured by the H-S/EAST has been used in various contexts in Brazil, such as in a study carried out in São Paulo<sup>19</sup> with hospitalized elderly people, which found a prevalence of 56.0% risk among this age group, a similar finding in a study carried out in Paraíba, with a prevalence of 69.8% risk<sup>20</sup>. Regarding violence using the CTS-1 in the elderly population, a prevalence of 20.9% was observed for psychological abuse, and 5.9% for physical violence in a study carried out in Minas Gerais<sup>21</sup>.

The assessment of internal consistency between items and the use of the Cronbach's Alpha statistical coefficient is the most used measure in the health field<sup>4,23</sup>. To this end, the assessment of reliability measures is essential to verify their psychometric quality<sup>22</sup>, which can determine the stability of an instrument and/or its reliability using various types of

statistical tests.

To understand whether the instruments that measure the EA can be reproduced by different observers in different contexts, this study aims to assess the internal consistency of instruments used in Brazil to measure situations of violence against the elderly person in two states.

## METHOD

These are cross-sectional studies carried out in two Brazilian states, at different times and with different samples of elderly people, guided by the Strengthening of the Reporting of Observational Studies in Epidemiology (STROBE)<sup>24</sup>. The first cross-sectional study was carried out in the territory of Health District IV in the municipality of Recife, Pernambuco, between 2016 and 2017, with community-dwelling elderly people. The second collection took place between 2019 and 2020 in two hospitals in Paraíba: Lauro Wanderley University Hospital (HULW, in Portuguese) and Alcides Carneiro University Hospital (HUAC, in Portuguese).

For collection at the health unit, the population was made up of 1209 elderly people registered with the service, the sample was defined based on the finite population formula for epidemiological studies, and a power of error of 8% was adopted, so it was made up of 159 elderly people. In the study carried out in the hospital environment, the population was determined according to the number of consultations and admissions in the previous year, in the same period as the data collection, totaling 1259 elderly. The sample was calculated based on the finite population formula for epidemiological studies, using an expected prevalence of 60%<sup>8</sup>, a confidence level of 95% and a power of error of 5%, plus 10% for losses, so the sample consisted of 322 elderly.

Data were collected from people over the age of 60 who were receiving care in hospitals, for the elderly collected in Paraíba, and those registered at the basic health unit in the study collected in Pernambuco. 46 elderly people were excluded from the hospital sample, as they had a high level of communication deficit or clinical conditions that prevented them from taking part. At the health unit, 17 elderly were removed based on the same criteria. The criteria were identified and established by the researcher through observation and/or information provided by those responsible.

The following instruments were used for data collection: Hwalek-Sengstock Elder Abuse Screening Test (H-S/EAST)<sup>17</sup> to assess the risk for violence and the Conflict Tactics Scale (CTS-1)<sup>18</sup> for physical and/or psychological violence<sup>19</sup>.

The H-S/EAST is an American instrument, cross-culturally adapted for Brazil. This instrument screens for specific signs of violence and correlated circumstances, making it possible to classify the presence of risk for violence<sup>17</sup>. The CTS-1 aims to understand the strategies used to deal with conflicts. It is divided into three groups: argumentation; aggression; and physical aggression. It presents three response options according to the frequency of events in that situation<sup>18</sup>. Both instruments have been cross-culturally adapted for use in Brazil.

Calibration training was carried out for the data collection team, who then went to the collection sites according to their availability, looking for a reserved place to carry out the data collection to preserve the privacy of the interviewees.

Regarding data analysis, individuals with a score equal to or greater than three were classified as being at risk of violence according to the H-S/EAST<sup>17</sup>, while for the CTS-1<sup>18</sup> and the Violence and Maltreatment Assessment questionnaire, a positive response to the items was classified as "with violence"<sup>22</sup>.

The data was tabulated and analyzed in SPSS, version 26.0, using absolute and relative frequencies and, for internal reliability, Cronbach's alpha ( $\alpha$ ), which analyzes the internal consistency of the items included in the instrument. Its accuracy is measured by the covariance between the items in the instrument<sup>1</sup>. Reliability was classified as: very low ( $\alpha \leq 0.30$ ); low ( $0.30 < \alpha \leq 0.60$ ); moderate ( $0.60 < \alpha \leq 0.75$ ); high ( $0.75 < \alpha \leq 0.90$ ); and very high ( $\alpha < 0.90$ )<sup>24</sup>.

The stage collected from PE was approved by the Research Ethics Committee of the Health Sciences Center of the Federal University of Pernambuco under protocol number: 1.413.599/16, and the stage linked to PB is part of an umbrella project entitled "Instrumentalization of Forensic Nursing in the care of hospitalized elderly", approved by the Research Ethics Committee of HULW/UFPB under opinion number 3,709,600 and HUAL/UFCG under opinion number 3,594,339.

## RESULTS

The study sample consisted of 322 (100%) hospitalized elderly and 159 (100%) community-dwelling elderly people. In Table 1, according to the HS-EAST, most of the elderly were at risk of violence (202; 62.7%) in PB and PE (96; 60.4). According to the CTS-1, most of the elderly experience argumentation in inter-family conflicts (167; 51.7%) in PB, and there is no argumentation among those in PE (120; 77.4%); the majority experienced verbal aggression (178; 55.1%) in PB and in the state of PE it was not experienced (99; 64.3%). In both states, the elderly did not experience physical violence, in PB 88.5% (n=286) and in PE 95.5% (n=148).

**Table 1-** Distribution of relative frequency and absolute frequency of situations of violence among the elderly (2019 - 2020). João Pessoa, Paraíba, Brazil, 2023

Variables	PB (2019 – 2020)	PE (2016 – 2017)
	n (%)	n (%)
Risk of violence (HS-EAST)*		
At risk of violence	202 (62.7)	96 (60.4)
No risk of violence	120 (37.3)	63 (39.6)
Argumentation (CTS-1)†		
With argumentation between inter-family conflicts	167 (51.7)	35 (22)
Without argumentation between inter-family conflicts	156 (48.3)	120 (77.4)
Verbal aggression (CTS-1)†		
Experienced verbal aggression	178 (55.1)	55 (34.6)
Did not experience verbal aggression	145 (44.9)	99 (64.3)
Physical aggression (CTS-1)†		
Experienced physical aggression	37 (11.5)	7 (4.4)
Did not experience physical aggression	286 (88.5)	148 (95.5)
Total	322 (100)	159 (100)

\*HS-EAST - Hwalek-Sengstock Elder Abuse Screening Test; †CTS-1 - Conflict Tactics Scale

Source: The authors (2019-2020).

For the BP sample, the total mean of the 15 H-S/EAST items was 4.22 (SD= 8.3) and the variance was 68.9. Among all the items in the instrument,  $\alpha = 0.08$ , so it is considered to have very low consistency, as well as among all the domains of the scale ( $\alpha \leq 30$ ). In the sample of elderly people from PE, the mean of the items was 3.35 (SD=2.24) and the variance was 5.03; among all the items in the instrument,  $\alpha = 0.57$  was considered low, as well as among all the domains of the scale ( $\alpha \leq 0.42$ ). The variation in the coefficient between the two samples collected indicates instability in the instrument under analysis (Table 2).

**Table 2** - Mean H-S/EAST\* scores and standard deviation (SD) for individual items, total correlation between corrected items, internal consistency (Cronbach's  $\alpha$ ) by domain and total. João Pessoa, Paraíba, Brazil, 2023

H-S/EAST items	PB (2019 – 2020)			PE (2016 – 2017)		
	Mean (SD)	Item-total corrected correlation	$\alpha$ ‡ (item deleted)	Mean (SD)	Item-total corrected correlation	$\alpha$ ‡ (item deleted)
Potential abuse						
Q <sup>s</sup> .2 - Are you helping to support someone?	0.54 (0.49)	0.10	0.20	0.41 (0.49)	0.06	0.47
Q <sup>s</sup> .5 - Can you take your medication and go places on your own?	0.31 (0.46)	0.02	0.03	0.29 (0.45)	0.25	0.35
Q <sup>s</sup> .7 - Do you feel that nobody wants you around?	0.48 (5.52)	0.03	0.46	0.09 (0.29)	0.35	0.33
Q <sup>s</sup> .8 - Does anyone in your family drink a lot?	0.42 (0.49)	-0.00	0.04	0.40 (0.49)	0.10	0.45
Q <sup>s</sup> .12 - Do you trust most of the people in your family?	0.19 (0.39)	0.19	0.01	0.25 (0.43)	0.23	0.36
Q <sup>s</sup> .13 - Does anyone tell you that you cause many problems?	0.14 (0.350)	0.04	0.03	0.09 (0.28)	0.27	0.36
Q <sup>s</sup> .14 - At home, do you have enough freedom to be quiet when you want to?	0.06 (0.23)	0.02	0.03	0.09 (0.29)	0.22	0.38
$\alpha$ ‡ (domain)		0.04			0.42	
Violation of personal rights or direct abuse						
Q <sup>s</sup> .4 - Does someone else make decisions about your life - like how you should live or where you should live?	0.53 (5.52)	0.17	0.36	0.19 (0.39)	0.03	0.40
Q <sup>s</sup> .9 - Does anyone in your family make you stay in bed or tell you that you are ill when you know you are not?	0.08 (0.27)	0.21	0.04	0.03 (0.17)	0.26	0.25
Q <sup>s</sup> .10 - Has anyone ever made you do things that you didn't want to do?	0.09 (0.39)	0.21	0.04	0.06 (0.23)	0.22	0.25
Q <sup>s</sup> .11 - Has anyone taken things belonging to you without your consent?	0.33 (0.47)	0.10	0.05	0.31 (0.46)	0.23	0.20
Q <sup>s</sup> .15 - Has anyone close to you tried to hurt or harm you recently?	0.13 (0.33)	0.01	0.07	0.09 (0.29)	0.17	0.26

$\alpha_{\dagger}$ (domain)		0.06			0.32	
Vulnerability characteristic						
Q <sup>§.1</sup> - Do you have someone who keeps you company, takes you shopping or to the doctor?	0.10 (0.30)	-0.01	0.15	0.23 (0.42)	-0.08	0.27
Q <sup>§.3</sup> - Do you often feel sad or lonely?	0.49 (0.77)	0.10	-0.16	0.50 (0.50)	0.12	-0.28
Q <sup>§.6</sup> - Can you take your medication and go places on your own?	0.33 (0.47)	0.05	0.05	0.30 (0.46)	0.04	-0.00
$\alpha_{\dagger}$ (domain)		0.10			0.05	
Overall alpha of the scale		0.08			0.57	

\*HS-EAST - Hwalek-Sengstock Elder Abuse Screening Test; †DP - Standard Deviation;  $\alpha_{\dagger}$  - Cronbach's  $\alpha$ ; §Q - Question. ||V/S - You/Sir.

Source: The authors (2019-2020).

The 18 items of the CTS-1 are shown in Table 3, as well as the mean, standard deviation, corrected correlation between the items and Cronbach's  $\alpha$  (deleted). The scale showed high reliability ( $\alpha = 0.81$ ), with a mean of 3.45 (SD = 3.9) and variance of 15.3; reliability between the domains ranged from moderate to high for the BP sample. Similar data can be observed among the sample collected in PE, where the mean was 1.92 (SD = 3.24), variance 10.53 and high reliability ( $\alpha = 0.81$ ).

**Table 3** - Mean CTS-1\* scores and standard deviation (SD)† for individual items, corrected total correlation between items, internal consistency (Cronbach's  $\alpha$ ) by domain and total. João Pessoa, Paraíba, Brazil, 2023

CTS-1 items	PB (2019 – 2020)			PE (2016 – 2017)		
	Mean	Item-total corrected correlation	$\alpha_{\dagger}$ (item deleted)	Mean	Item-total corrected correlation	$\alpha_{\dagger}$ (item deleted)
Argumentation						
Q <sup>§.1</sup> - Discussed the problem calmly	0.56 (0.67)	0.45	0.59	0.24 (0.53)	0.49	0.46
Q <sup>§.2</sup> - You tried to get information to better understand his or her way of thinking, or yours	0.33 (0.59)	0.55	0.42	0.12 (0.36)	0.55	0.29
Q <sup>§.3</sup> - Brought or tried to bring someone to help calm things down	0.19 (0.46)	0.41	0.63	0.05 (0.20)	0.33	0.64
$\alpha_{\dagger}$ (domain)		0.65			0.60	
Verbal abuse						
Q <sup>§.4</sup> - Cursed or insulted you	0.41 (0.68)	0.62	0.73	0.29 (0.60)	0.66	0.80
Q <sup>§.5</sup> - Got angry. Did not talk about it again	0.51 (0.69)	0.68	0.71	0.32 (0.65)	0.68	0.79
Q <sup>§.6</sup> - Left the room, the house, or the area	0.40 (0.64)	0.60	0.73	0.22 (0.57)	0.73	0.78
Q <sup>§.7</sup> - Did or said things just to annoy you	0.53 (0.73)	0.65	0.72	0.40 (0.71)	0.72	0.79

Q <sup>§</sup> .8 - Threatened to hit or throw things at him/her or at you	0.14 (0.39)	0.32	0.79	0.09 (0.38)	0.48	0.83
Q <sup>§</sup> .9 - Destroyed, hit, threw, or kicked objects	0.09 (0.32)	0.35	0.79	0.06 (0.31)	0.49	0.84
$\alpha$ ‡ (domain)		0.77			0.83	
Physical abuse						
Q <sup>§</sup> .10 - Threw things at him/her or you	0.02 (0.19)	0.68	0.81	0.01 (0.11)	0.44	0.63
Q <sup>§</sup> .11 - Pushed or grabbed him/her or you	0.03 (0.18)	0.62	0.82	0.04 (0.22)	0.39	0.66
Q <sup>§</sup> .12 - Slapped or hit him/her or you	0.02 (0.15)	0.62	0.82	0.03 (0.19)	0.51	0.61
Q <sup>§</sup> .13 - Kicked, bit, or punched him/her or you	0.01 (0.11)	0.24	0.85	0.01 (0.08)	0.36	0.66
Q <sup>§</sup> .14 - Hit or tried to hit him/her or you with objects	0.04 (0.20)	0.63	0.82	0.01 (0.11)	0.54	0.62
Q <sup>§</sup> .15 - Beat him/her or you	0.03 (0.18)	0.54	0.83	0.00 (0.00)	0.00	0.69
Q <sup>§</sup> .16 - Burned him/her; strangled or suffocated him/her or you	0.03 (0.19)	0.55	0.83	0.01 (0.08)	0.36	0.66
Q <sup>§</sup> .17 - Threatened him/her or you with a knife or gun	0.07 (0.27)	0.53	0.84	0.03 (0.22)	0.52	0.61
Q <sup>§</sup> .18 - Used a knife or gun against him/her or you	0.03 (0.19)	0.66	0.81	0.00 (0.00)	0.00	0.63
$\alpha$ ‡ (domain)		0.84			0.67	
Overall alpha of the scale		0.81			0.81	

\*CTS-1 - Conflict Tactics Scale; †SD - Standard Deviation; ‡ $\alpha$  - Cronbach's  $\alpha$ ; §Q - Question  
Source: The authors (2019-2020).

## DISCUSSION

The development of a measurement instrument in the field of health involves the use of theoretical models for methodological construction. Classical Test Theory (CTT) aims to measure the total score of a latent trait (or construct). These traits are measured by measures of central tendency and dispersion. Item Response Theory (IRT), on the other hand, has its statistical support in the characteristic curve of the item, so it does not set out to determine a total score, but rather the relationship between all the items to indicate the construct<sup>2</sup>.

The two theories are not antagonistic in their psychometric use; however, CTT is the pioneer and IRT is more complex from a mathematical point of view<sup>2</sup>. Regardless of the theoretical model adopted, when designing an instrument or cross-cultural adaptation, the researcher needs to be able to answer the question: how valid and how accurate is the instrument for measuring the proposed construct? Validity measures are determined by validation studies and their reliability-by-reliability studies; the scope of this study focused on discussing the reliability between the items of the instruments designed to measure the EA.

The reliability of a test is a condition for verifying its quality, indicating how consistent it is in expressing the trait without significant errors or large differences in correlation<sup>24</sup>. There are five general classifications for estimating the reliability of an instrument, generically

classified into two large groups: stability tests (retest and parallel forms) and reliability tests (internal consistency, between raters and two halves).

The internal consistency coefficient is most popularly estimated by Cronbach's  $\alpha$ , which assumes that the internal estimate is classified by the variability of the items in the same test. The estimate varies between 0 and 1 in the correlation coefficient, where the closer it is to 1, the more accurate the reliability of the instrument and the more uniform its items<sup>25</sup>.

Among the two instruments used to determine the EA, the estimate of Cronbach's  $\alpha$ 23, the H-S/EAST, showed very low internal consistency ( $\alpha = 0.08$ ) in the PB sample and low among the PE elderly sample ( $\alpha = 0.57$ ), and high consistency between the two CTS-1 population samples ( $\alpha = 0.81$ ).

Of these, only the H-S/EAST and CTS-1 had their items validated when they were cross-culturally adapted for the Brazilian scenario<sup>17-18</sup>. The equivalences related to cross-cultural adaptations involve conceptual, operational, and functional semantics; measurement equivalence in some studies is not included in the adaptation phase, which is classified as a measure of psychometric validity and is then carried out in a subsequent stage<sup>26</sup>.

The H-S/EAST was originally developed in the United States to screen for signs of abuse in the elderly person through 15 questions that were validated for content and distributed in three dimensions: potential abuse; violation of personal rights or direct abuse; and vulnerability characteristics. The risk score is determined by a score of 3 or more, in items 2, 3, 4, 5, 7, 8, 9, 10, 11, 13 and 15, a score of 1 is given for each affirmative answer, while in the other items the score is given for negative answers<sup>27</sup>.

The internal reliability of the primary instrument was  $\alpha = 0.29$ , corroborating the findings of the present study, indicating low reliability and a fragile instrument for determining the concept of the EA. Because their data was heterogeneous, the authors relate this characteristic to the multiple facets of abuse, making it difficult to determine a homogeneous trait. In the cross-cultural adaptation of the instrument, internal reliability was determined by the Kuder-Richardson reliability coefficient (kr20)<sup>17</sup>.

Considering the kr20 measure of internal reliability, the H-S/EAST has good reliability (kr20=0.64) when its items are used together, but consistency decreases between the dimensions: kr20=0.53 in potential abuse, kr20=0.49 in the dimension of violation of personal rights or direct abuse and kr20=0.49 in the characteristics of vulnerability<sup>17</sup>. The Persian version of the instrument showed moderate internal reliability ( $\alpha=0.741$ )<sup>28</sup>. Despite the instability in the accuracy characteristics, this instrument is used in Brazil<sup>29</sup> and other countries<sup>30</sup>.

In its first proposed version, the CTS-1 was developed in the late 1970s to identify the strategies used to resolve inter-family conflicts and, in turn, to identify cases of self-reported physical and psychological violence. The instrument was not validated in its first version with elderly people, but between inter-family relationships (couples, parents, and children and between siblings); its final version contains 19 items, which received content and construct validation, with high fidelity ( $\alpha= 0.88$ )<sup>30</sup>.

The cross-cultural adaptation for Brazil was carried out in 2003 and was also applied to couples, identifying an  $\alpha$  of 0.70 between the physical and verbal violence dimensions and 0.34 to 0.38 between the argumentation facet<sup>18</sup>. Although the adaptation was used in a different population group, the data were similar, with high internal consistency.

Although each instrument has weaknesses that were considered when choosing it to classify the EA, it is important to consider the lack of instruments and measurement scales designed for the Brazilian context and social situation, as well as adapting them to include all the typological dimensions involved in the EA phenomenon

As a limitation of the study, we highlight the lack of valid and reliable instruments for measuring the EA, making it difficult to accurately understand the phenomenon in the elderly person; on the other hand, the study directs researchers, nurses, health professionals and the scientific community to the need for adequate instrumentation, considering the particularities of the EA.

## CONCLUSIONS

The H-S/EAST obtained low internal consistency for determining the risk of violence among hospitalized and community-dwelling elderly, since it showed divergent values for the Cronbach's alpha coefficient and was therefore considered unstable. Although the CTS-1 was not designed to measure situations of EA, the instrument showed stability when applied to the two groups studied, with high internal reliability.

The findings of this study point to the need to develop studies on the construction, validation and/or cross-cultural adaptation of instruments that offer support to nurses and other health professionals in determining situations of violence against the elderly person.

## REFERENCES

1. Pasquali L. Psychometrics. Rev. esc. enferm. USP [Internet]. 2009 [cited 2020 Sep. 05]; 43 (spe): 992-9. Available from: <https://dx.doi.org/10.1590/S0080-62342009000500002>
2. Pasquali L. Psicometria: teoria dos testes na psicologia e na educação. 5. ed. [Internet]. Petrópolis: Vozes; 2019. Available from: [https://books.google.com.br/books?hl=pt-BR&lr=&id=D\\_Y4DwAAQBAJ&oi=fnd&pg=PT4&ots=31vZ113d1e&sig=KcBZ4dBXqFaJLyOPKou5fPQhQ7Q&redir\\_esc=y#v=onepage&q&f=false](https://books.google.com.br/books?hl=pt-BR&lr=&id=D_Y4DwAAQBAJ&oi=fnd&pg=PT4&ots=31vZ113d1e&sig=KcBZ4dBXqFaJLyOPKou5fPQhQ7Q&redir_esc=y#v=onepage&q&f=false)
3. Borges RB, Leotti VB, Mancuso ACB, Castro SM de J, Hirakata VN, Camey SA. Statistical misconceptions: questions you've always wanted to ask, but never dared. clin. biomed. Res. [Internet]. 2020 [cited 2020 Sept. 05]; 40(1):63-70. Available from: <https://www.seer.ufrgs.br/hcpa/article/view/101299>
4. Oliveira F de, Kuznier TP, Souza CC de, Chianca TCM. Theoretical and methodological aspects for the cultural adaptation and validation of instruments in nursing. Texto contexto - enferm. [Internet]. 2018 [cited 2020 May. 28]; 27(2): e4900016. Available from: <https://www.scielo.br/j/tce/a/k3X9PvzsCD6qHLVHvpjYrNL/?format=pdf&lang=en>
5. World Health Organization [Internet]. Elder abuse [Internet]. 2020 [cited 2020 Sept. 23]. Available from: <https://www.who.int/news-room/fact-sheets/detail/elder-abuse>
6. World Health Organization. World report on violence and health. Geneve: Who; 2002. Available from: <https://www.who.int/publications/i/item/9241545615>
7. Orfila F, Coma-Solé M, Cabanas M, Cegri-Lombardo F, Moleras-Serra A, Pujol-Ribera E. Family caregiver mistreatment of the elderly: prevalence of risk and associated factors. BMC Public Health [Internet]. 2018 [cited 2020 Jan. 22]; 18(1):167. Available from: <https://d-nb.info/1154854019/34>
8. Santos MAB dos, Moreira R da S, Faccio PF, Gomes GC, Silva VL. Factors associated with elder abuse: a systematic review of the literature. Ciênc. saúde coletiva [Internet]. 2020 [cited 2020 June. 03]; 25 (6): 2153-2175. Available from: <https://www.scielo.br/j/csc/a/MpcwN3kZjqZnK9FQXYc6T6j/?format=pdf&lang=en>
9. Neuberg M, Meštrović T, Ribić R, Šubarić M, Canjuga I, Kozina G. Contrasting vantage pnts between

- caregivers and residents on the perception of Elder abuse and neglect during long-term Care. *Psychiatr Danub*. [Internet]. 2019 [cited 2020 Sept. 22]; 31(Suppl 3): 345-353. Available from: <https://pubmed.ncbi.nlm.nih.gov/31488751/>
10. Alexa ID, Ilie AC, Pislaru AI, Dronic A, Gavrilovici O, Alexa-Stratulat T, *et al*. Elder abuse and associated factors in eastern romania. *Psychogeriatrics* [Internet]. 2019 [cited 2020 Mar. 05]; 20(2): 96-205. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/psyg.12488>
11. Piri N, Tanjani PT, Khodkarim S, Etemad K. Domestic elder abuse and associated factors in elderly women in Tehran, Iran. *Epidemiol Health* [Internet]. 2018 [cited 2020 June. 02]; 40: e2018055. Available from: <https://pubmed.ncbi.nlm.nih.gov/30428642/>
12. Machado DR, Kimura M, Duarte YA de O, Lebrão ML. Violence perpetrated against the elderly and health-related quality of life: a populational study in the city of São Paulo, Brazil. *Ciênc. saúde coletiva* [Internet]. 2020 [cited 2020 Mar. 06]; 25(3): 1119-1128. Available from: <https://www.scielo.br/j/csc/a/cBqSSWBMrF9bnNv3Dhx8d7g/abstract/?lang=en>
13. Bezerra PC de L, Sampaio CA. Prevalence of violence and factors associated in elderly health units in a capital of the western Amazon. *REAS* [Internet]. 2020 [cited 2020 May. 29]; 12(8): e3434. Available from: <https://acervomais.com.br/index.php/saude/article/view/3434>
14. Andrade FMD de, Ribeiro AP, Bernal RTI, Machado IE, Malta DC. Profile of care for violence against the elderly in urgency and emergency services: VIVA analysis Survey 2017. *Rev. bras. Epidemiol* [Internet]. 2020 [cited 2020 July. 03]; 23(Suppl 1): e200008. Available from: <https://www.scielo.br/j/rbepid/a/FqWVGsrJ36TWdmfxK64Lm9L/?lang=en&format=pdf>
15. Storey JE. Risk factors for elder abuse and neglect: a review of the literature. *Aggression and violent behavior* [Internet]. 2020 [cited 2020 Feb. 06]; 50: 101339. Available from: <https://pure.royalholloway.ac.uk/en/publications/risk-factors-for-elder-abuse-and-neglect-a-review-of-the-literatu>
16. Yi Q, Honda J, Hohashi N. Development and validity testing of an assessment tool for domestic Elder abuse. *J Nurs Res* [Internet]. 2019 [cited 2020 Apr. 08]; 27(2): e12. Available from: <https://pubmed.ncbi.nlm.nih.gov/30085992/>
17. Reichenheim ME, Paixão Jr. CM, Moraes CL. Portuguese (Brazil) cross-cultural adaptation of the Hwalek-Sengstock Elder Abuse Screening Test (H-S/EAST) used to identify risk of violence against the elderly. *Cad. Saúde Pública* [Internet]. 2008 [cited 2020 Aug. 06]; 24(8): 1801-1813. Available from: <https://pubmed.ncbi.nlm.nih.gov/18709221/>
18. Hasselmann MH, Reichenheim ME. Cross-cultural adaptation of the portuguese version of the Cconflict Tactics Scales Form R (CTS-1) used to assess marital violence: semantic and measurement equivalence. *Cad. Saúde Pública* [Internet]. 2003 [cited 2020 Aug. 18]; 19(4): 1083-1093. Available from: <https://pubmed.ncbi.nlm.nih.gov/12973573/>
19. Antequera IG, Lopes MCBT, Batista REA, Campanharo CRV, Costa PCP da, Okuno MFP. Rastreamento de violência contra pessoas idosas: associação com estresse percebido e sintomas depressivos em idosos hospitalizados. *Esc. Anna. Nery* [Internet]. 2021 [cited 2020 Jul. 08]; doi: <https://doi.org/10.1590/2177-9465-EAN-2020-0167>
20. Santos RC dos, Menezes RM de P, Souto RQ, Araújo GKN de, Marcolino EC, Soares MC da S, *et al*. Frailty Syndrome: a risk factor associated with violence in older adults. *J Forensic Nurs* [Internet]. 2020 [cited 2020 Sept. 16]; 16(3):130-137. Available from: <https://pubmed.ncbi.nlm.nih.gov/32840339/>
21. Paiva MM de, Tavares DM dos S. Violência física e psicológica contra idosos: prevalência e fatores associados. *Rev. Bras. Enferm* [Internet]. 2015 [cited 2020 July. 06]; 68 (6). doi: <https://doi.org/10.1590/0034-7167.2015680606i>
22. Souza AC de, Alexandre NMC, Guirardello EB. Psychometric properties in instruments evaluation of reliability and validity. *Epidemiol. Serv. Saúde* [Internet]. 2017 [cited 2020 Sept. 08]; 26(3):649-659. Available from: <https://pubmed.ncbi.nlm.nih.gov/28977189/>

23. Viladrich C, Angulo-brunet A, Doval E. Un viaje alrededor de alfa y omega para estimar la fiabilidad de consistencia interna. *Anal. Psicol* [Internet]. 2017 [cited 2020 Oct. 18]; 33(3): 755-782. Available from: [http://scielo.isciii.es/scielo.php?script=sci\\_arttext&pid=S0212-97282017000300034](http://scielo.isciii.es/scielo.php?script=sci_arttext&pid=S0212-97282017000300034)
24. Cheng A, Kessler D, Mackinnon R, Chang TP, Nadkarni VM, Hunt EA, et al. Reporting guidelines for health care simulation research: extensions to the CONSORT and STROBE statements. *Simul Healthcare* [Internet]. 2016 [cited 2020 Sept. 08]; 11(4):238-48. Available from: <https://pubmed.ncbi.nlm.nih.gov/27465839/>
25. Bujang MA, Omar ED, Baharum NA. A review on sample size determination for cronbach's alpha test: a simple guide for researchers. *Malays J Med Sci* [Internet]. 2018 [cited 2020 Nov. 08]; 25(6):85-99. Available from: <https://pubmed.ncbi.nlm.nih.gov/30914882/>
26. Machado R da S, Fernandes AD de BF, Oliveira ALCB de, Soares LS, Gouveia MT de O, Silva GRF da. Cross-cultural adaptation methods of instruments in the nursing area. *Rev. Gaúcha Enferm.* [Internet]. 2018 [cited 2020 July. 02]; 39: e2017-0164. Available from: <https://pubmed.ncbi.nlm.nih.gov/29995073/>
27. Neale AV, Hwalek MA, Scott RO, Sengstock MC, Stahl C. Validation of the hwalek-sengstock Elder abuse screening test. *J Appl Gerontol* [Internet]. 1991 [cited 2020 Dec. 01]; 10(4):406-418. Available from: <https://psycnet.apa.org/record/1992-15012-001>
28. Aminalroaya R, Alizadeh-Khoei M, Hormozi S, Sharifi F, Taati F. Screening for elder abuse in geriatric outpatients: reliability and validity of the Iranian version Hwalek-Sengstock Elder Abuse Screening Test (H-S/EAST). *J Elder Abuse Negl.* [Internet]. 2020 [cited 2020 Feb. 15]; 32(1):84-96. Available from: <https://pubmed.ncbi.nlm.nih.gov/32008473/>
29. Santos RC dos, Menezes RMP de, Araújo GKN de, Marcolino E de C, Xavier AG, Gonçalves RG, et al. Frailty syndrome and associated factors in the elderly in emergency care. *Acta paul. enferm.* [Internet]. 2020 [cited 2020 June. 10]; 33: eAPE20190159. Available from: <https://www.scielo.br/j/ape/a/rqwwTcqvMcHVVwrQw4NVtLs/?lang=en>
30. Straus, MA. Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *J Marriage Fam* [Internet]. 1979 [cited 2020 Fev. 10]; 41(1): 75-88. Available from: <https://psycnet.apa.org/record/1981-11704-001>

\*Article extracted from the doctoral thesis "EVIDÊNCIAS DE VALIDADE DE ESCALA PARA RASTREIO DA VIOLÊNCIA CONTRA PESSOA IDOSA", Universidade Federal da Paraíba, João Pessoa, Paraíba, Brasil, 2023.

Received: 17/03/2023

Approved: 03/08/2023

Associate editor: Dra. Juliana Balbinot Reis Girondi

**Corresponding author:**

Renata Clemente dos Santos Rodrigues

Universidade Estadual da Paraíba

R. Baraúnas, 351 - Universitário, Campina Grande - PB, 58429-500

E-mail: renata.clemente@hotmail.com

**Role of Authors:**

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - **Rodrigues RC dos S, Araújo-Monteiro GKN de, Marcolino E de C, Brandão BML da S, Barbosa LA, Moraes RM de**. Drafting the work or revising it critically for important intellectual content - **Rodrigues RC dos S, Araújo-Monteiro GKN de, Marcolino E de C, Brandão BML da S, Barbosa LA**. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - **Rodrigues RC dos S, Araújo-Monteiro GKN de, Marcolino E de C, Brandão BML da S, Barbosa LA, Moraes RM de, Souto RQ**. All authors approved the final version of the text.

ISSN 2176-9133



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).