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REVISTA IBERO-AMERICANA DE SAÚDE E ENVELHECIMENTO
REVISTA IBERO-AMERICANA DE SALUD Y ENVEJECIMIENTO

RISK OF VIOLENCE AGAINST THE ELDERLY
ARVINI SCALE TEST

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VOL. 5 N.º 1 APRIL 2019

ABSTRACT

Aim: To test the Scale of Risk Assessment of Violence in Non-institutionalized Elderly (ARVINI), in a group of autonomous elderly of Alentejo.

Methods: Exploratory research, with a quantitative approach. Participated 500 elderly aged 65-96 years, from the Ageing Safely in Alentejo – Understanding to Act project at the University of Évora.

Results: The ARVINI scale test is constituted by 27 items. The Cronbach Alpha Coefficient with a value of 0.727 reveals an acceptable internal consistency. The cut-off point that produces the maximum sensitivity and specificity to predict the risk of violence on the elderly was 4.5 (sensitivity = 64.9%, specificity = 80.7%) and the ROC curve area = 0.812 (0.766 - 0.702, 95% confidence intervals).

Conclusions: 26.7% of the elderly presented a risk of violence. It is imperative to develop and improve instruments that detect the risk of violence against the elderly so that all health professionals and others can act early and preventively in the fight against violence against the elderly. The fact of being a woman, social isolation and low income stand out as risk factors for violence.

Key-words: Domestic Violence; aging; elderly; prevention.

INTRODUCTION

The significant aging of the population is now a reality in developed societies. Portugal is the 14th European Union (UE) country with the highest average life expectancy – 81.3 years[1]. In 2016, Portugal had a Longevity Index of 48.8 percent and an Aging Index of 148.7 percent. The region of the Alentejo, where the present study was conducted, had an Aging Index of 193.1 percent[1], being the oldest region in the country and in Europe itself.

Several authors report that violence against the elderly is a result of the general aging of the population and that this continuous increase in the elderly population may be associated with an increase in violence, becoming a pressing public health problem in all countries[2,3,4].

Although prevention and combating violence against the elderly does not emerge as a priority strategy for health and social services in Portugal, in most European countries, global and regional policies for the prevention of violence against the elderly are embodied in conventions and charters adapted by the Member States of the European region

with the principle of equity, solidarity and protection of citizens' rights. The United Nations Principles for the Elderly[5] exemplifies the social responsibility to protect the most vulnerable, such as the elderly, to provide them with adequate support and services for their needs such as the promotion of the right to a safe, non-violent environment, as well as the Toronto Declaration[6], Word Health Organization on the prevention of violence against the elderly, through its legal framework and a multidimensional intervention plan that promotes the work of care professionals as a form of intervention, the Madrid International Plan of Action on Aging[7] where, through international collaboration, the aim is to address the problems of aging, namely violence against the elderly, where it is argued that health systems have a central role in promoting equity and in giving priority to poor and most vulnerable people. Also, the Report of the Commission on Social Determinants of Health highlights the inequality of income, goods and services and access to health in the various countries and the identification of the elderly as a risk group, considering that the risk factors exist in structural problems and the lifestyles of modern society. Likewise, action on social determinants and health as a means of preventing violence and ill-treatment of the elderly[8] is highlighted.

The World Report on the Prevention of Violence[9:84], defines violence as "the wilful use of physical force or power, whether real or threatened, against an individual, or against a group or community, resulting in or likely to result in injury, death, psychological harm, injury development or deprivation". Violence against the elderly is conceived as an isolated or repeated action or the absence of an adequate response, occurring in any relationship where there is an expectation of trust, and which causes injury or suffering to the elderly[9]. The most consensual dimensions of violence against the elderly involve physical violence (acts done with the intention of causing pain or physical injury); psychological violence (acts carried out with the intention of causing pain or emotional injury); sexual assault; material/financial exploitation (involves the misappropriation of money, possessions or property of the elderly); and neglect (the caregiver's inability to meet the needs of the dependent elder)[2].

Despite the advances in recent years in the research on violence against the elderly, it remains scarce[10]. If we add the fact that violence against the elderly is not reflected in most national health action plans, as expressed in the World Report on the Prevention of Violence[9], it is not surprising that there is no data on this phenomenon. Nonetheless, this report presents information on 133 countries, indicating that one out of 17 older adults report having been ill during the month prior to the research. In addition to the size of the figures concerned, it is noteworthy that only 40 percent of these countries have passed laws against abuse of this age group.

In Portugal, Gil's study[11], which took place between 2011 and 2014, involved 1123 people aged 60 or over, living in the community in Portugal and its Islands, revealed that 123 out of 1000 (12.3%) people were victims of violence in the last 12 months[9].

These numbers are high when compared with studies conducted in other countries. A study[2] reveals that the highest combined prevalence in several studies was observed in China (36.2%) and Nigeria (30.0%), followed by Israel (18.4%), India (14.0%), Europe (10.8%), Mexico (10.3%), the United States (9.5%) and Canada (4%).

As important as detecting the prevalence of violence against the elderly, it is important to establish and come to a consensus on the predictors of risk of violence, so that it is possible to act/intervene preventively on this phenomenon, at individual, family and community levels. In fact, the identification of predictors of risk of violence against the elderly does not refer to the identification of violence cases per se, but seeks to detect factors that identify people who are at risk, or of becoming targets of some type of violence.

Several studies reveal[12,13,14] that people at high risk of violence are actually victims of some kind of violence. Risk factors for violence against older people according to available evidence should be analyzed according to the level, risk and strength of the evidence.

It is considered that these factors should be analysed at an individual level (victim and aggressor), at a relationship level and at a community/societal level. In individual terms, functional dependency/disability, poor physical health, cognitive impairment, poor mental health and poor income are considered risk predictors. These are considered, according to evidence, to be strong predictors of violence in individual terms (victim). Gender, age, financial dependence and ethnicity are considered as potential predictors (according to scientific evidence). At the aggressor level, strong predictors of risk of violence are mental illness, substance abuse and aggressor dependence. At the relationship level the victim-aggressor relationship, marital status and geographical location are considered potential risk factors. At the community and societal level, scientific evidence challenges negative stereotypes about aging and cultural norms as predictors of risk of violence against the elderly[2].

In Portugal, in relation to predictors of risk of violence, it is estimated that the potential victims are mostly women, with a higher prevalence in their 80s and over, with low levels of schooling and some kind of physical and/or mental vulnerability[11,15]. The authors point out that advanced age alone is not a risk factor, but rather linked to another, since the greatest impact occurs in situations in which physical and psychological conditions are more deteriorated. The risk is higher when women are dependent on family members or other people close to them to carry out their Daily Living Activities (DLAs).

Some authors[16] mentioned that the main predictors of risk of violence against the elderly are the fact that they are women, married, have a fragile state of health, are of older age, live with psychological problems, are dependent and are in social isolation.

In turn, perpetrators are characterized by excessive use of addictive substances, psychiatric problems, lack of experience in the role of caregiver, history of abuse, stress and excessive burden, dependence, and lack of social support. Regarding the social context, they are characterized by financial difficulties, family violence, lack of social support, dysfunctional family environment and a culture of acceptance of violence.

According to the European Report on Preventing Elder Maltreatment[8] the main risk predictors are: women over 74 years old, with high levels of physical or intellectual dependence, mental health problems and aggressive behaviour. In the case of the aggressor, the majority are men who are victims of physical abuse, in the case of negligence, they are mostly women with mental disorders, with a history of substance abuse such as alcohol and drugs, with hostile and aggressive characteristics, monetary problems and who are exposed to stress, which can cause them to burnout as caregivers. In the relationship between the aggressor and the victim there is a major financial, emotional and/or housing dependency, intergenerational transmission of violence, a history of difficult relationships, the majority are children or conjugal partners. Social isolation is also a risk factor for violence. Mostly the elderly person lives only with the aggressor, does not have contact with the community where they live and does not have a social support network. At a societal level, discrimination is based on age, or other forms such as sexism or racism, social and economic factors, and the acceptance of a culture of violence.

Violence against the elderly is a social and public health problem, with serious consequences for the well-being and health of the elderly. In this way, the priority is to focus on early detection and prevention of violence, as well as referral to support suspected cases.

The Indicator Of Abuse (IOA) was one of the first validated tools, with the specific objective of identifying risk factors for violence against the elderly, based on interviews with them. The indicators established for the evaluation of the risk of violence for the elderly were family problems, changes in emotional state, financial dependence, weak social support network/isolation, cognitive/dementia problems, and multiplicity of serious health problems. Cohen[17] sought to create a tool that could be applied efficiently and effectively by various technicians from different areas in a short space of time so as to facilitate the identification of cases of violence against the elderly, which could be applied in medical, nursing and social services. The same author[17] points out that more than half of health professionals have never questioned their clients about possible abuse, which

has meant that they have never identified any cases. However, it also reveals that the professionals who most detect this type of situation are the professionals in the area of nursing and social care.

The reasons for this lack of action are the lack of theoretical and practical training in identifying signs of violence, the feeling of discomfort and fear of causing harm to the person, the fact that they do not know how to solve the situation, the work overload and the difficulty in distinguishing between the characteristics of a pathology and the signs of violence.

This article aims to test the Risk Assessment Scale for Violence in Non-institutionalised Elderly (ARVINI), built from the Elder Abuse and Neglect – Risk Assessment Tool (IOA) and Vulnerability to Abuse Screening Scale (VASS), in a group of autonomous elderly in the Alentejo/Portugal region.

Violence against the elderly, although it is usually more prevalent in elderly dependents, is also present in the most diverse forms among autonomous elderly, and it is imperative to analyse the risk factors of violence that these elderly experience on a daily basis, so that they can be prevented and so that the most appropriate interventions can be triggered in each identified situation, preventing the risk from materialising and threatening the health, well-being and quality of life of these elderly.

METHODOLOGY

Within the framework of the ESACA project (*Envelhecer em Segurança no Alentejo* - Ref: ALT20-03-0145-FEDER-000007, funded by Alentejo 2020, Portugal 2020 and UE) a cross-sectional and exploratory study was carried out with non-institutionalised elderly people from the Alentejo region. The sample consisted of elderly who attend active aging programs (Active Seniors and the University of Évora) who volunteered to participate in this research. Inclusion criteria were 65 years of age or older, absence of severe cognitive deficit and being independent in their daily lives. The sample consisted of 500 elderly individuals between the ages of 65 and 96, of both sexes. Data collection took place between April and July 2017, at the Gerontopsychotryl Laboratory of the Nursing School/ University of Évora.

The tool used to collect data was constructed based on the adaptation of the Elder Abuse and Neglect Risk Assessment Tool (E-IOA), after obtaining permission from the respective authors[13] and also receiving contributions from the Vulnerability to Abuse Screening

Scale (VASS) adapted to the Brazilian reality[18], who also granted authorization for this adaptation.

From the E-IOA, were withdrawn questions about the social network of support and isolation, the cognitive and emotional difficulties of the elderly person, the family context and the financial issues, and also were added classic VASS questions. The purpose was to find a set of questions that would frame and predict the risk of violence under evaluation.

This resulted in the tool called the Scale for Assessing the Risk of Violence in Non-institutionalized Elderly (ARVINI), consisting of 27 dichotomous items, which, through the self-report of the elderly person, allows the identification of the risk of violence. A tool was made that was accessible to all professionals; little extensive; which does not require specific training for its operationalization/implementation; is simple to apply and through which it is possible to obtain almost immediate results.

The scale score is obtained by adding together the values assigned to each of the items. The 27 items (Annex) aim to identify the risk of violence from four dimensions present in the WHO (physical, psychological, sexual and financial violence), not integrating the neglect.

Data analysis was performed by the SPSS program version 24. The analysis protocol included descriptive and inferential statistics, namely calculation of means, standard deviation and ANOVA calculation. To verify the reliability of the ARVINI scale, we used the Cronbach Alpha Coefficient, the validity and factorial analysis test with the Kaser-Meyer-Olkin (KMO) statistic, the rotation and interpretation of the main components, with the test of Bartlett's sphericity and analysis of communalities.

All the ethical procedures of human research were followed. All necessary authorizations for the study were requested, as well as informed consent for the elderly, and all conditions of anonymity and confidentiality of the answers obtained were also guaranteed. The project was approved by the Ethics Committee of the Health and Welfare Area of the University of Évora under number 16012 dated 19/05/2016.

RESULTS

Reliability of the ARVINI scale

To test the reliability of the scale, the Cronbach's Alpha Coefficient was calculated, with a result of 0.727. This value reveals that the ARVINI scale consists of items considered acceptable in terms of internal consistency.

Table 1 – Reliability Statistics.

Cronbach's Alpha	N of Items
.727	27

The analysis of main components for the different items of the ARVINI scale revealed that 10 main components explain 58.711% of the total variance. The first factor explains 13.508% about one-third of the total variance, as can be seen in the following table.

Table 2 – (PCA – Variance).

Total Variance Explained									
	Initial eigen values			Extraction sums of squared loadings			Rotation sums of squared loadings		
Component	Total	% of variance	% cumulative	Total	% of variance	% cumulative	Total	% of variance	% cumulative
1	3.647	13.508	13.508	3.647	13.508	13.508	1.902	7.043	7.043
2	2.025	7.500	21.008	2.025	7.500	21.008	1.839	6.810	13.853
3	1.756	6.503	27.511	1.756	6.503	27.511	1.800	6.667	20.520
4	1.517	5.620	33.131	1.517	5.620	33.131	1.727	6.396	26.916
5	1.280	4.739	37.870	1.280	4.739	37.870	1.675	6.202	33.118
6	1.244	4.609	42.480	1.244	4.609	42.480	1.543	5.716	38.834
7	1.172	4.342	46.822	1.172	4.342	46.822	1.514	5.609	44.444
8	1.133	4.197	51.019	1.133	4.197	51.019	1.415	5.240	49.683
9	1.054	3.905	54.923	1.054	3.905	54.923	1.256	4.653	54.336
10	1.023	3.787	58.711	1.023	3.787	58.711	1.181	4.375	58.711
11	.977	3.617	62.328						
12	.930	3.445	65.773						
13	.875	3.242	69.015						
14	.812	3.009	72.024						
15	.780	2.889	74.913						
16	.760	2.814	77.727						
17	.747	2.765	80.492						
18	.714	2.643	83.135						
19	.694	2.569	85.704						
20	.668	2.474	88.178						
21	.574	2.127	90.306						
22	.569	2.107	92.413						
23	.508	1.882	94.295						
24	.494	1.830	96.124						
25	.475	1.758	97.882						
26	.331	1.225	99.107						
27	.241	.893	100.000						

Extraction Method: Principal Component Analysis.

The next step was to estimate the correlation matrix between the variables and to test the validity of the application of this type of analysis through the Bartlet test for a significance level of 0.05 and the Kaser-Meyer-Olkin (KMO) Statistics. The KMO value for the ARVINI scale was 0.682. The Bartlett sphericity test presented a significance level of zero in all items of the scale, which allows us to conclude that there is a correlation between the variables and thus support the factorial analysis of principal components – (351)= 2118.069, p= 0,000.

In the Principal Component Analysis, (PCA) and after the extraction, the communalities found vary between 0.464 and 0.827, as can be seen in the following table three.

Table 3 – Communalities.

Communalities	Initial	Extraction
1	1.000	.642
2	1.000	.564
3	1.000	.772
4	1.000	.775
5	1.000	.729
6	1.000	.464
7	1.000	.477
8	1.000	.517
9	1.000	.644
10	1.000	.641
11	1.000	.562
12	1.000	.540
13	1.000	.481
14	1.000	.511
15	1.000	.571
16	1.000	.639
17	1.000	.555
18	1.000	.530
19	1.000	.511
20	1.000	.522
21	1.000	.628
22	1.000	.347
23	1.000	.508
24	1.000	.592
25	1.000	.494
26	1.000	.827
27	1.000	.809

Extraction Method: Principal Component Analysis.

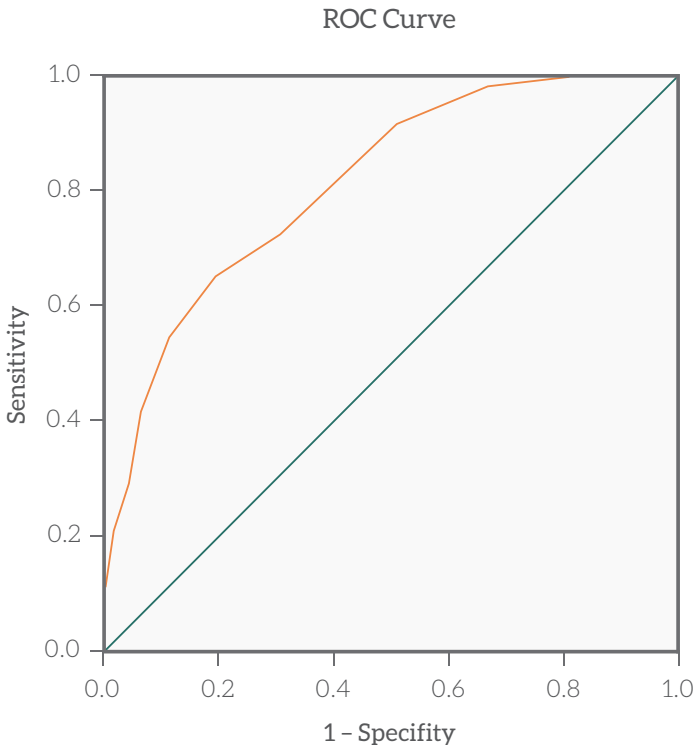
The values obtained reveal that the fidelity of the ARVINI scale can be considered acceptable. The ROC analysis was used to determine the cut-off values that minimize the total number of misclassifications and provide an assessment of the overall impact of the ARVINI scale performance to discriminate against people who have or are not at risk of

violence. The ROC analysis therefore evaluates the performance of any continuous variable to discriminate between two mutually exclusive states, in the case of our study, if the person whether or not it is at risk of violence, providing the measures of Sensitivity (*Se*), Specificity (*Sp*) and area under curve.

Table 4 – Area Under the Curve.

Area	Std. Error	Asymptotic Sig.	Asymptotic 95% Confidence Intervals	
			Lower Bound	Upper Bound
.812	.024	.000	.766	.858

Test Result Variable(s): Total 27.



Diagonal segments are produced by ties.

Image 1 – ROC Curve.

The *Se* and *Sp* are inversely related indicating the performance of the recommended cut-off point. The ideal cut-off point (value in which the sum of *Se* and *Sp* is maximized) was 4,5 for the ARVINI Scale, as can be seen in the following table. The categorical variable to diagnose the retrospective occurrence of violence (0 = no risk violence, 1 = risk of violence), was determined from items 13 and 14 of the scale ("Some member of your family already yelled at you and called you names that made you feel ashamed?" "Someone in your family already physically assaulted you - pushed, hit ... ").

Table 5 – Cut-off point results.

Point/Cut Level	Se	1-Sp	Sp=(1-(1-Sp)	Se+Sp
4.5	0.649	0.193	0.807	1.456
5.5	0.543	0.112	0.888	1.431
3.5	0.723	0.307	0.693	1.416
2.5	0.915	0.511	0.489	1.404
6.5	0.415	0.064	0.936	1.351
1.5	0.979	0.666	0.334	1.313
7.5	0.287	0.043	0.957	1.244
8.5	0.213	0.019	0.981	1.194
9.5	0.17	0.011	0.989	1.159
0.5	1	0.842	0.158	1.158
10.5	0.106	0.003	0.997	1.103
11.5	0.074	0	1	1.074
12.5	0.053	0	1	1.053
14	0.043	0	1	1.043
15.5	0.021	0	1	1.021
16.5	0.011	0	1	1.011
-1	1	1	0	1
18	0	0	1	1

In the case of the ARVINI scale, the cut-off level that produces the maximum sensitivity and specificity to predict the risk of violence was 4,5 with sensitivity of 64,9%, specificity of 80,7%, and curve area of 0,812 (0,766-0,702, 95% confidence intervals). The results obtained reveal the validity of the ARVINI Scale for the prediction of the Risk of Violence in non-institutionalized elderly. From the identified cut-off point, it was found that 26,7% of the elderly had a risk of violence.

Demographic Characterization

The study sample consisted of 500 elderly aged 65-96 years, with a mean age of 73.70 years, of which 113 were males and 390 were females. The majority of participants (47.1%) had 4 years of schooling, and 8.9% did not have any schooling. In relation to in-come, it can be seen that 34% of the elderly receive up to 350 euros per month and 27% say that they earn between € 350-550. The majority are married (61.6%) and 28.8% are widowers. The validation of the ARVINI scale included 492 elderly.

Risk Factors for Violence

The results from the ARVINI scale show that 39.2% of the elderly feel lonely often. Similarly, 74.8% say they have no one to make them company daily. Already 86.9% report not having someone to take them shopping and 88.5% say they have no one to take them to the doctor when they need it. It is found that 86.7% do not meet friends/colleagues weekly and 79.7% do not meet weekly with family. Of the elderly questioned, 8% said they had conflicting relations with their neighbors. When asked if someone already told them that they gives too much work 2.2% answered affirmatively and 4.2% claim to feel that no one wants to be with them.

The results also reveal that 3.6% of elderly have been forced to have sex against their will. 4.4% of people claim to be afraid of someone in your family and 5% feel that no one in your family wants them around. When asked whether they have a family member had shouted and called them names. 16.5% respond affirmatively. It was found that 5.6% of the elderly respondents said they had already been physically assaulted by a family member. 4% states that someone in their family already told them that they were sick when they knew that was not. When asked if anyone in the family made him do things he did not want to do, 2.2% of the elderly answered yes. Similarly, 6.6% reveal that some of his family withdrew them things without your consent and 3% say they have someone in your family (a) forced to sign papers against his will.

It is also noted that 8% of respondents do not trust most of the people in their family and that 14.9% say that someone from their family who drinks a lot. Regarding the issue of drug use, 4.2% have someone in their family who uses drugs. 22.5% of elderly think that other people are unfair to them (the elderly).

Of those surveyed 21.7% assume it difficult to make decisions about their lives, 45.5% say they feel anxious or often impatient and 39.2% usually get angry often. 3.6% of older people say they can not pay their bills with their income and 2.2% say they can not buy food or other necessities with their earnings.

The relationship between the variable age and the different items of the scale did not present statistically significant differences. On the other hand, the relationship between the sex variable and the different items of the scale, verified that there are statistically significant differences (sig. 0.000) between elderly who feel alone many times and the gender variable, especially in women in whom this difference is more evident. Similarly, there are statistically significant differences (sig. 0.000) between the two sexes and having no one to make company every day is higher in females.

Regarding the relationship between the educational variable and the different items of the scale, statistically significant differences were detected in five items of the ARVINI scale. When they asked if they often feel alone, are those with four years of schooling that respond more often than yes (sig. 0.001). The same thing happened in the question "do you have someone to keep you company on a daily basis?" It is also people with four years of schooling who often respond that they do not usually have company on a daily basis (sig. 0.005). It is also people with four years of schooling, who claim that they do not have anyone to take them to the doctor if necessary (sig. 0.031); the same occurred when asked if someone forced him to have sexual intercourse against his will, and the majority who answered that yes had the same level of schooling (sig. 0.000). Finally, on the issue "Are you afraid of someone in your family?", the elderly who answered yes also have four years of schooling (sig. 0.000).

In the relation of the variable yield with the different items of the scale, statistically significant differences were detected in six items. About loneliness, are people with an income <350 euros claiming to feel alone more often (sig. 0.012). When asked if necessary, there is someone to accompany them to the doctor, most people who said they did not have anyone have an income less than 350 euros (sig. 0.048). With regard to feel that "nobody likes to be with you," and the "fear of someone in your family" are on both the elderly who receive a less than 350 euros of yield that responded positively to these two questions (sig. 0.042, and sig. 0.000, respectively). The same is true with the financial matters. Older people with yields of less than 350 euros say they can not afford to buy food or meet other needs with their income (see 0.025).

Regarding the variable marital status, it was verified that there are statistically significant differences, between this variable and the items "feels alone many times" (sig. 0.000) and "there is someone who keeps him company on a daily basis", being on average more frequent in the singles and widowers (0.000). In relation to having someone to take you shopping, when necessary, widows and married elderly who say they do not have this kind of help (sig. 0.012). The same was true about the difficulties in making decisions about your life. The majority claiming they have no difficulties in this situation are married or widowed (sig. 0.000).

DISCUSSION

One of the relevant and also constant data in similar studies is the imbalance between women and men at the sample level. In this, mainly women have low schooling and low income, characteristics of the eminently rural and impoverished region where the study took place – the Alentejo. Most women are more exposed to the risk of violence than men, as was shown in the sample[15,19]. In the case of elderly women, it is important to note that they are less likely than younger women to report abuse, as well as to seek help. The reluctance to seek help is related to shame and humiliation, fear of further abuse, fear of having to make major changes in life, lack of financial resources to live independently, and the idea that family problems should be kept private – within the family[20].

The aging process involves a gradual degradation that involves morpho-physiological and psychological changes that lead to social repercussions, affecting the person biologically, psychologically and socially. This path is marked by the loss of functional capacities, which compromise the autonomy of the individual in the satisfaction of daily needs[21]. Thus, the cognitive and emotional changes that are inherent to the aging process are also (high) risk factors for violence, such as anxiety, frequent impatience and irritation, difficulty in making decisions about life and daily consumption of alcohol.

Social isolation and the absence of a supportive social network are also risk factors for abuse against elderly, which end up perpetuating further ill-treatment[22,23]. Social isolation is a potential risk factor for all forms of violence in this age group and may represent a crucial dimension of social insecurity and vulnerability which affects older people due to their move away from active citizenship in modern society. Leaving the world of work puts the elderly into a role that is passive and of social isolation, which is often permanent. In relation to other countries, such as Greece and Lithuania, the Portuguese report less perceived social support. This situation seems to be related to recent demographic/socioeconomic changes (such as low fertility rates, smaller families, increased presence of women in the labour market, urbanization and increased individualization)[24,25]. Amstadter et al.[26] also suggests that isolation and lack of social support are important risk factors for violence against the elderly.

Reduced social support is frequent in economically disadvantaged elderly[27,28]. In the ESACA project and with regard to *financial issues* (a potential risk factor[2], it is worth noting that more than half of elderly, despite the low average income that characterizes the sample, financially support someone in their family, as opposed to the small percentage of elderly who claim to receive financial support from family members. According to

Luo and Waite[29], one of the community factors that exacerbates violence among the elderly is the lack of social support networks and the fight against poverty. If the elderly person is economically dependent, this may increase the stress experienced by caregivers and family members of older people and end up playing a role in violence against the elderly[30]. The same happens when the family is financially dependent (totally or partially) on the elderly person.

Intrafamily violence against the elderly can be defined, not only by physical aggression, but also by omissions or actions that harm the physical and emotional integrity of the victim. The violence in the intrafamilial space is quite complex and delicate, and it is extremely difficult to penetrate the silence of the families of the violated elderly[31]. The *family context* indicators (a potential risk factor[2] revealed that intrafamily violence is also present in the analysed sample, highlighting the fear of family members, the feeling that no one in the family wants to spend time with them, to the verbal and psychological violence that many have already suffered from their relatives, as well as physical violence, although this to a lesser degree. Highlighting some of the psychological violence that some elderly were subjected to, this includes when they were forced to sign papers against their will, having possessions removed without their authorization or those who, for these reasons or others, do not trust most family members. While it is true that emotional and affective support and family solidarity play a more important role than instrumental support with regard to the psychological symptoms experienced by the elderly, when this support fails, the elderly are left to their own devices[32,33].

Just as relevant as physical violence are the other forms of violence (verbal, psychological, financial) and the risk predictors that identify them. Since violence is a complex and multidimensional phenomenon and risk predictors mostly work together, they must necessarily be analysed as a whole (not individually) in the identification of the risk of violence on the elderly.

CONCLUSION

The ARVINI scale reliability test, using the Cronbach's Alpha Coefficient (0.727), showed that the scale consists of items considered adequate in terms of internal consistency.

Although with a high number of items (27) it is considered that these are important because it is their joint action that allows for the assessment of the risk of violence to which the elderly are subjected. The results obtained in the ROC analysis also reveal the validity of the ARVINI scale, which can become an instrument to be used in the health area in detecting the risk of violence on the elderly.

It should be noted that more than a quarter of the elderly are at risk. The identified risk factors for violence were gender (female), income (low), *emotional and cognitive changes* inherent in the aging process, frequent anxiety, impatience and irritation, difficulty in making decisions about life and daily consumption of alcohol. *Social isolation and the lack of a social support network* are risk factors for violence, and are inseparable from the dimension of social insecurity and vulnerability that affects older people due to their role in Portuguese society.

Financial issues also act as a predictor of risk of violence, either because they financially support someone in their family, or because they are economically dependent. The two situations, however opposing, place the elderly and the family in a situation of stress that is very difficult to manage and can lead to both the financial exploitation of the elderly by relatives, the refusal of family support or the poverty and indigence of the elderly.

The risk factors for *intrafamily violence* include verbal and psychological aggression (being forced to sign papers against their will or those from whom objects have been removed without their authorization). Fear of family members and the feeling that no one in the family wants them around is evident. Physical and sexual violence are also present but to a lesser extent.

The importance of knowing the risk factors is decisive in combating violence against the elderly. These factors must include the different forms that violence can take and also the situations/processes inherent in aging where social isolation, vulnerability, and cognitive changes mark daily existence.

In order to prevent all forms of violence against the elderly, instruments are necessary to identify the risk of violence of each elderly person, whether this risk is strong, potential or weak. Health professionals and the social sector should test and validate tools of violence risk factors, produce scientific evidence about them and introduce them in their

daily work in community and/or hospital health, and work with the community to combat it. In this sense, we challenge researchers to use the ARVINI scale to detect the risk of violence against older people so that it is consolidated and improved as an instrument for the early detection of the risk of violence against the elderly.

Acknowledgements

The authors thank all the participants and institutions for their contribution to this work, namely the University of Évora, the National Confederation of Solidarity Institutions (CNIS); Regional Health Administration of Alentejo, IP, (ARS Alentejo) and the programmes that financed the project Ageing Safely in Alentejo, Ref: ALT20-03-0145-FEDER-000007: Alentejo 2020, Portugal 2020 and the European Union.

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Annex – Scale of Risk Assessment of Violence in non institutionalized Elderly - ARVINI

Developed by Mendes and Gemito (2017) from the adaptation of the E-IOA (Cohen, Halevi-Levin, Gagin, & Friedman, 2006) and VASS, Brazilian version Maia & Maia, 2014).

	Yes	No
1. Do you often feel lonely?	1	0
2. Is there someone to keep you company on a daily basis?	0	1
3. Is there someone who takes you shopping when you need to?	0	1
4. Is there someone who takes you to the doctor when necessary?	0	1
5. Do you meet with friends/colleagues weekly?	0	1
6. Do you meet with family members weekly?	0	1
7. Do you have hostile relationships with neighbours?	1	0
8. Has anyone told you that you give too much/work too much?	1	0
9. Has anyone forced you to have sex against your will?	1	0
10. Do you feel like no one wants to spend time with you?	1	0
11. Are you afraid of anyone in your family?	1	0
12. Do you feel that no one in your family wants to spend time with you?	1	0
13. Has any member of your family shouted at you and called you names, making you feel ashamed?	1	0
14. Has anyone in your family physically assaulted you (pushed you, hit you...)?	1	0
15. Has anyone in your family told you that you are ill when you know you are not?	1	0
16. Has anyone in your family forced you to do things you did not want to do?	1	0
17. Has anyone in your family taken things that belong to you without your consent?	1	0
18. Has anyone in your family forced you to sign papers against your will?	1	0
19. Do you trust most people in your family?	0	1
20. Does anyone in your family have problems with alcoholism?	1	0
21. Does anyone in your family use drugs?	1	0
22. Do you feel that other people are unfair to you?	1	0
23. Do you have trouble making decisions about your life?	1	0
24. Do you often feel anxious/impatient?	1	0
25. Do you often get irritated?	1	0
26. Can you pay your bills with your income?	0	1
27. Can you buy food or other necessities with your income?	0	1
	27	