RASP Research on Ageing and Social Policy

Hipatia Press
www.hipatiapress.com

Instructions for authors, subscriptions and further details:

http://rasp.hipatiapress.com

Dimensions of Violence Against the Elderly and Health Conditions: a Population-Based Study in Southern Brazil

Carolina Carvalho Bolsoni, Sheila Rubia Lindner, Eleonora D'Orsi, & Elza Berger Salema Coelho[1]

1) Federal University of Santa Catarina. Brazil

Date of publication: July 30th, 2019
Edition period: July 2019- December 2019

To cite this article: Carvalho Bolsoni, C., Rubia Lindner, Sheila, D'Orsi, E., & Salema Coelho, E.B. (2019). Dimensions of Violence Against the Elderly and Health Conditions: a Population-Based Study in Southern Brazil. *Research on Ageing and Social Policy*, *7*(2), 402-426. doi: 10.4471/rasp.2019.4425

To link this article: http://dx.doi.org/10.4471/rasp.2019.4425

RASP – Research on Ageing and Social Policy Vol. 7 No. 2 July 2019 pp. 402-426

Dimensions of Violence Against the Elderly and Health Conditions in Southern Brazil

Carolina Carvalho Bolsoni
Sheila Rubia Lindner
Eleonora D'Orsi
Elza Berger Salema Coelho
Federal University of Santa Catarina

(Received: 28 June 2019; Accepted: 10 July 2019; Published: 30 July 2019)

Abstract

The objective of this study was to estimate the prevalence of violence and its association with the health conditions of the elderly. The method used was a cross-sectional study with 1140 elderly individuals aged 60 and older of both sexes interviewed in years 2013 and 2014 in Florianópolis. The prevalence and dimensions of violence were measured using the Hawlek-Sengstock Elder Abuse Screening Test. To test the association of violence with health conditions, a bivariate and multivariate logistic regression model was applied. A high prevalence of violence against the elderly (25,7%) was found, regarding the dimensions of violence, potential abuse (56,1% p = 0,039) and violation of personal rights or direct abuse (31,9% p = 0,012) was higher among males compared to females, while the vulnerability characteristics were higher in both sexes and did not present statistical difference between them (p = 0,857). We highlight the relevance of depressive symptoms among health conditions, which increased the chance of suffering violence about three times for both men and women.

Keywords: violence, violence against elderly, domestic violence

Hipatia Press
www.hipatiapress.com

ISSN: 2014-6728
DOI: 10.4471/rasp.2019.4425

RASP – Research on Ageing and Social Policy Vol. 7 No. 2 July 2019
pp. 402-426

Dimensiones de la Violencia Contra los Mayores y las Condiciones de Salud: Estudio en Brasil Sur

Carolina Carvalho Bolsoni
Sheila Rubia Lindner
Eleonora D'Orsi
Elza Berger Salema Coelho
Federal University of Santa Catarina

(Recibido: 28 junio 2019; Acceptado: 10 julio 2019; Publicado: 30 julio 2019)

Resumen

El objetivo de este estudio fue estimar la prevalencia de la violencia y su asociación con las condiciones de salud de los ancianos. El método utilizado fue un estudio transversal con 1140 adultos mayores de 60 años o más de ambos sexos entrevistados en los años 2013-2014 en Florianópolis. La prevalencia y las dimensiones de la violencia se midieron utilizando la prueba de detección de abuso de ancianos Hawlek-Sengstock. Para probar la asociación de la violencia con las condiciones de salud, se aplicó un modelo de regresión logística bivariada y multivariada. Se encontró una alta prevalencia de violencia contra los ancianos (25,7%) en relación con las dimensiones de la violencia, el abuso potencial (56,1% p = 0,039) y la violación de los derechos personales o el abuso directo (31,9% p = 0,012) fue mayor entre los hombres en comparación con las mujeres, mientras que las características de vulnerabilidad fueron mayores en ambos sexos y no presentaron diferencias estadísticas entre ellos (p = 0,857). Destacamos la relevancia de los síntomas depresivos entre las condiciones de salud, lo que aumentó la posibilidad de sufrir violencia aproximadamente tres veces, en hombres y mujeres.

Palabras clave: violencia, violencia contra mayores, violencia domestica

ISSN: 2014-6728
DOI: 10.4471/rasp.2019.4425

Violence against the elderly is understood as an act of assault or omission, which may be intentional or involuntary, of a physical or psychological nature, and may involve financial or material ill-treatment (Krug, Dahlberg, Mercy, Zwi, and Lozano, 2002). Researchers considered the caregiver's stress level to be a relevant factor for violence, but it does not respond alone to this occurrence (Conceição, 2010; Queiroz, Lemos, and Ramos, 2010; Souza, Meira, Neri, Silva, and Gonçalves, 2004). Veras (2010) corroborates this information and states that a large part of the violence against the elderly happens in the family, and children are the main perpetrators.

A study conducted in Nepal (Yadav and Paudel, 2016) estimated the prevalence of violence against the elderly at 49.1%; in Peru, Silva-Fhon et al. (2015) found that 79.9% of the elderly had suffered some type of violence; among these, 40.1% was psychological, 13.3% physical and 53.1% financial. When analyzing violence against the elderly person stratified by gender, a study carried out in Cuba estimated a prevalence of 44.7%, of which 56% were women (Ribot et al., 2015). Similar results were found in Ireland (Naughton et al., 2012), where 55% of those who reported experiencing violence were female, just as being a woman was a risk factor found among elderly women in a study conducted in Mexico, increasing threefold their risk of violence (Ruelas González and Salgado Zinder, 2009). In Brazil, research from surveys of violence against the elderly identified that most were women (65.2%) aged 60-69 years (50.9%), retired (73.2%) and with elementary school education level (66.1%) (Aguiar, Leite, Dias, Mattos, and Lima, 2015).

Elderly abuse occurs in multiple ways, the effects of which often overlap and are confused with signs and symptoms related to several conditions prevalent at this age (Apratto Junior, 2010). It is estimated that emotional and affective losses can occur in the medium and long term, temporarily distant from the violent acts themselves. Suffering caused by violence can serve as a catalyst for mental and physical illness processes, such as various morbidities that are in place or even predisposed (Florêncio, 2014). According to Tobiasz-Adamczyk et al. (2014), some specific conditions such as chronic diseases, inability to perform activities of daily living,

cognitive impairment, dementia and depression may increase the risk of the elderly person suffering some type of violence.

According to Cohen (2013), given the increasing knowledge about the prevalence and risk factors for violence against the elderly and the adverse repercussions on health status, it is important to investigate violence at the population level, since it creates a serious and continuous negative impact on the psychological well-being and quality of life of victims.

Considering the magnitude of this rising issue, a population-based survey was conducted in Florianópolis to discover the life and health conditions of the elderly, including domestic violence. This survey provided the information to carry out this study, which aims to estimate the prevalence of violence against the elderly and its association with health conditions, as well as differences in these estimates between men and women.

Methods

Study Design and Sampling

This is a cross-sectional population-based household study comprised of elderly people aged 60 years or older residing in the city of Florianópolis, Santa Catarina. The population of the EpiFloripa Idoso 2013/2014 (segment) originates from a longitudinal study whose baseline occurred in 2009/2010, which selected elderly of both genders residing in one of the 80 urban census tracts in Florianópolis drawn for the research.

For the investigation of the segment, the elderly were interviewed in the survey baseline, which considered parameters of population size equal to 44,460 inhabitants, unknown prevalence of 50%, sample error equal to 4 percentage points, 95% confidence interval and design effect equal to 2. A further 20% for predicted losses and 15% for association studies were added, totaling a desirable sample of at least 1,599 people. The Epi-Info program version 6.04 was used to calculate sample size.

Baseline sampling was performed by two-stage clusters. In the first stage, the 420 urban census tracts of the city were sorted by the mean monthly income of heads of households domiciled in the sector and stratified in deciles. Subsequently, 80 sectors were randomly selected (eight in each

income decile), and the sample's socioeconomic representativeness was assured. Households were considered as second-stage units.

Older people who were traveling and those not located after four visits by the interviewers (one of these visits occurred at night or weekend) were considered a loss. Those who refused to respond to the questionnaire were considered as refusals. An active search was performed on data provided by the Mortality Information System (SIM) to identify possible deaths, and 200 deaths were identified. After this stage, the others received an informative letter about the new interview and those who had a telephone were contacted, in order to prepare them for the visit of the interviewer and address update. In this procedure, relatives reported another 17 deaths.

As a contact strategy with the participants, telephone, social networks, telephone directory, neighbors, relatives and friends were used, and 1,564 elderly eligible for the segment were achieved in the end. Interviews answered by informants were excluded from this study.

Data Collection

Data collection from the segment occurred from November 2013 to October 2014. The study questionnaire was applied through face-to-face interviews by trained interviewers using netbooks. Considering the delicate nature of the investigation, the questioning about violence happened at the end of the interview because of the possibility of establishing a bond of trust between the interviewer and the elderly person. This occurred preferably without the presence of others.

Data consistency was checked weekly by quality control of telephone interviews with application of the short version questionnaire in about 10% of the randomly selected interviews. The Kappa test was applied to calculate reproducibility of questions, ranging from 0.50 to 0.94, which corresponds to good to excellent reproducibility (Landis and Koch, 1977).

Study Variables

The variable outcome of this study, violence was investigated through the cross-cultural adaptation of the Hwalek-Sengstock Elder Abuse Screening

Test (H-S/EAST) (Reichenheim, Paixão Jr, and Moraes, 2008). It is a tool developed with the aim of identifying both (direct) and suspected (indirect) signs of abuse against the elderly. It consists of 15 questions, the answers to which are dichotomized (yes and no), and a point is assigned for each affirmative answer – except for items 1, 6, 12 and 14, in which the point is assigned for the negative answer. According to literature, if the elderly achieve a three-point score by answering yes and no, depending on the question, it may indicate that they are at increased risk of suffering some type of violence (Reichenheim et al., 2008).

Three realms of violence represent the set of questions of the tool: "potential abuse", "violation of personal rights or direct abuse" and "vulnerability characteristics". Each of these three realms of violence consists of a set of questions, as follows.

The following questions were made to establish potential abuse: "Are you helping to support someone?"; "Do you feel uncomfortable with someone in your family?"; "Do you feel that no one wants you around?"; "Does anyone in your family drink too much?"; "Do you not trust most people in your family?"; "Does anyone tell you that you cause too much trouble?"; "At home, do not you have enough freedom to be quiet when you want to?"

The following questions were made to establish violation of personal rights or direct abuse: "Does anyone else make decisions about your life – such as how you should live or where you should live?"; "Does anyone in your family force you to stay in bed or tell you that you are sick when you know they are not?"; "Has anyone ever made you do things you did not want to do?"; "Has anyone ever taken things that belong to you without your consent?"; "Has anyone close to you tried to hurt or harm you recently?"

The following questions were made to establish characteristics of vulnerability: "Don't you have someone to keep you company, who takes you to the shop or to the doctor?"; "Do you often feel sad or lonely?"; "Are you unable to take your medicine and go places on your own?"

The independent variables were gender, self-reported skin color (white, brown / black), schooling (no formal schooling, 1 to 4, 5 to 8, 9 to 11, ≥ 12 years of study), marital status (married/divorced/separated/widowed), household income stratified into minimum wages – the minimum wage in

2013 was R$ 678.00 and in 2014 R$ 724.00 (up to 3 minimum wages, greater than 5 and less or equal to 10, greater than 10 minimum wages). Also related to socioeconomic variables, the elderly were asked about work (yes/no) and the number of people who depended on their income (only the elderly, 2-3 people, 4 people or more).

At the same time, the functional capacity verified through the application of the basic and instrumental activities daily life scale (ADL) (Rosa, Benício, Latorre, and Ramos, 2003), was investigated, with the classification of lack dependence (disability/no difficulty in carrying out any of the activities), mild dependence (difficulty in carrying out 1-3 activities), and moderate / severe dependence (disability/difficulty in carrying out any four or more activities), investigation of the cognitive status by the Mini-State Examination (MMSE), dichotomized in the lack of cognitive impairment and probable impairment using cutoff points that take into account the level of schooling.

Thirteen self-reported morbidities with dichotomous response (yes/no) were investigated. The questions were: "Has any doctor or health professional ever told you that you have had back pain, arthritis, cancer, diabetes, bronchitis, heart or cardiovascular disease, chronic renal failure tuberculosis, cirrhosis, stroke, osteoporosis, hypertension and depression?" The variables were categorized as follows: none or one morbidity and two or more (Amaral et al., 2015). Depressive symptoms were obtained through the application of the 15-question Geriatric Depression Scale (GDS) (Almeida and Almeida, 1999) and cutoff points used were five (lack of depressive symptoms) and six (suspected depressive symptoms) in a score that can vary from zero to 15 points.

Data Review and Ethical Aspects

The Stata program version 12.0 was used for the statistical analysis, considering the study design effect and sample weights. Descriptive statistics were used for the prevalence calculations and the chi-square test measured the association of each exploratory variable with the outcome; tests' level of significance was set at 5%. The association between variables was tested by bivariate and multivariate logistic regression, stratified by gender and

adjusted for age, race, schooling and income, with values expressed as odds ratio (OR) and the respective 95% confidence intervals. All variables with p value ≤0.20 in the bivariate analysis entered the multivariable model and values of p≤0.05 were considered statistically significant. The analysis was performed with the svy routine to consider the fact that the data originated from complex sampling.

The EpiFloripa Idoso project met all ethical precepts, according to Resolution No. 466 of the National Health Council (CNS), of December 12, 2012. The Human Research Ethics Committee of the Federal University of Santa Catarina (CONEP / UFSC) approved it under opinion Nº 526.126/2013.

Results

In this study, 1,197 interviews were conducted with the elderly, 57 were excluded because they were answered by informants, leaving out 1,140 interviews for analysis. Among participants, women were approximately two-thirds (62.7%) of the sample, a large part (87.7%) self-declared white. Nearly half (43.3%) were widows and most men were married (82.5%). Both income and years of schooling were higher among men. It is worth mentioning the high prevalence of elderly people who reported two or more morbidities, representing 67.5% in men and more than 80% among women; these are more affected by the difficulty in performing four or more daily life activities (31.5%) and cognitive impairment (25.5%) when compared to men.

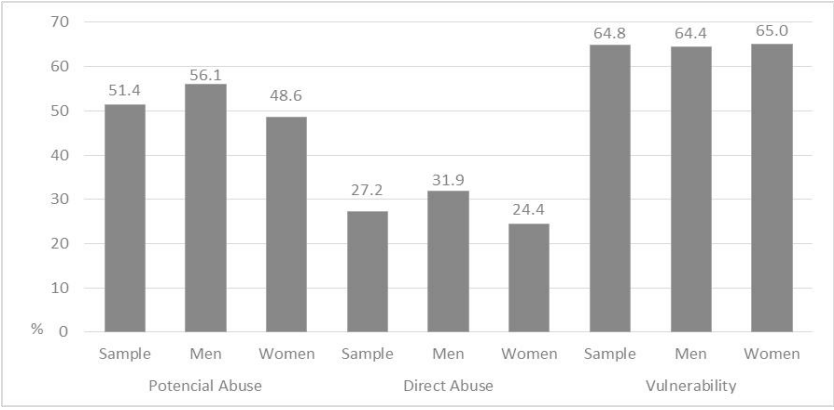
Violence against the elderly had a high prevalence (25.7%), both in men (27.9%) and in women (24.4%), and this difference between genders was not statistically significant (p=0.333), suggesting that men suffer violence as much as women do. Other characteristics of the sample are described in Table 1.

Table 1
Characteristics of the sample and stratified by sex, according to the variables investigated. Florianópolis, Santa Catarina, Brazil, 2013/2014.

	Sample	**Men**	**Women**	
Variables	**n (%)**	**n (%)**	**n (%)**	***p***
Age group (n=1,140)				0.550
60-69 years	405 (35.1)	154 (37.5)	251 (33.7)	
70-79 years	499 (44.3)	171 (42.3)	328 (44.8)	
80 and over	236 (20.6)	78 (19.2)	158 (21.5)	
Skin color (n=1,130)				0.187
White	980 (87.7)	338 (85.7)	642 (88.8)	
Brown/Black	150 (12.3)	58 (14.3)	92 (11.2)	
Schooling (n=1,139)				0.000
No formal schooling	81 (6.3)	29 (6.3)	52 (6.3)	
1-4 years	407 (33.5)	119 (25.6)	288 (38.2)	
5-8 years	191 (15.9)	61 (14.6)	130 (16.6)	
9-11 years	177 (17.8)	57 (17.1)	120 (18.2)	
12 years and over	283 (26.4)	137 (36.2)	146 (20.5)	
Marital status (n=1,140)				0.000
Married	637 (56.1)	336 (82.5)	301 (40.4)	
Single/divorced/separated	154 (13.9)	37 (10.0)	117 (16.2)	
Widowed	349 (29.9)	30 (7.5)	319 (43.3)	
Household income in minimum wages (n=1,093)				0.000
Under 3	396 (35.1)	113 (26.7)	283 (40.1)	
Over 3 and under or equal to 5	218 (19.1)	69 (16.7)	149 (20.6)	
Over 5 and under or equal to 10	262 (23.9)	92 (25.1)	170 (23.1)	
Over 10	210 (21.8)	116 (31.3)	101 (16.0)	
Cognitive status (n=1,132)				0.003
Lack of probable cognitive impairment	872 (78.4)	330 (85.1)	542 (74.5)	
Likely presence of cognitive impairment	260 (21.5)	73 (14.9)	187 (25.5)	
Functional capacity (n= 1,136)				0.000
No difficulty to perform ADLs*	365 (32.1)	171 (43.6)	194 (26.8)	
1-3 ADLs	452 (39.8)	148 (37.4)	304 (41.8)	
4 ADLs and over	319 (28.1)	81 (19.0)	238 (31.5)	
Morbidities (n= 1,140)				0.000
None or 1	250 (23.8)	124 (32.5)	126 (18.7)	
2 and over	890 (76.1)	279 (67.5)	611 (81.3)	
Depressive symptoms (n= 1,130)				0.056
None	907 (80.9)	336 (84.3)	571(79.0)	
Suspected	223 (19.1)	62 (15.7)	161 (21.0)	
Prevalence of violence (n=1,137)				0.323
No	830 (74.3)	290 (72.1)	540 (75.6)	
Yes	307 (25.7)	113 (27.9)	194 (24.4)	

Figure 1 shows the general prevalence of each realm of stratified violence in men and women. Both were subject to all realms of violence, however, potential abuse (56.1% p=0.039) and violation of personal rights or direct abuse (31.9% p=0.012) was higher among men compared to women, noting that in this last realm, about one third of men suffered some type of abuse. Characteristics of vulnerability reached three out of five elderly people of both genders, however, with no statistical difference between them (p=0.857).

Figure 1
Prevalence of potential abuse, direct abuse and vulnerability in the sample and in men and women. Florianópolis, Santa Catarina, Brazil, 2013-2014.



When analyzing separately potential abuse, violation of personal rights/direct abuse and characteristics of vulnerability, we observed differences between men and women regarding distribution of some questions underlying the realms of violence.

Regarding potential abuse, two-fifths of men are helping to support someone and 12% feel uncomfortable with someone in the family. In women, the same items were the most prevalent; however, the proportion of those who help support someone is one-fourth. In this realm, it is important to note that 10.8% of men said that one of their family drinks a lot, and for women,

this characteristic is found in 15.3%, with no statistically significant difference between genders.

Regarding the violation of personal rights or direct abuse, women showed a higher percentage measure in the item "someone makes decisions about your life", which is twice as large in women compared to men. While in the affirmative answer to the question "if someone took things that belong to you without consent", it was 10% higher for men, a result that may indicate that elderly people are suffering financial or property violence. It is necessary to mention that one out of every 45 men answered affirmatively that "someone close to them tried to hurt or harm them recently", while in women this ratio was one in every 31.

In the characteristics of vulnerability, five out of ten men "do not have someone who keeps them company" and, in women, this ratio is three out of ten. However, when asked about "often feeling sad or lonely", 32% of women against 13.8% of men reported this situation (Table 2).

Table 2
Distribution of responses to issues of violence realms in elderly men and women. Florianópolis, Santa Catarina, Brazil 2013/2014.

Questions	n (%)	Men % (CI95%)	Women % (CI95%)	*p*
Potential abuse				
2. Are you helping to support someone?	349 (31.6)	41.2 (35.4-47.0)	25.8 (22.3-29.4)	0.000
5. Do you feel uncomfortable with someone in your family?	138 (12.5)	12.1 (7.8-16.4)	12.7 (10.0-15.4)	0.843
7. Do you feel that no one wants you around?	30 (2.2)	2.8 (0.8-4.7)	1.9 (0.9-2.9)	0.431
8. Does anyone in your family drink too much?	186 (13.6)	10.8 (7.4-14.2)	15.3 (12.2-18.3)	0.052
12. Do you not trust most people in your family?	77 (6.4)	8.0 (4.6-11.5)	5.4 (3.7-7.2)	0.171
13. Does anyone tell you that you cause too much trouble?	51 (4.3)	5.7 (2.8-8.5)	3.4 (2.0-4.9)	0.137
14. At home, do not you have enough freedom to be quiet when you want to?	50 (4.0)	3.7 (1.6-5.8)	4.2 (2.0-6.3)	0.765

(continued)

Table 2
Distribution of responses to issues of violence realms in elderly men and women. Florianópolis, Santa Catarina, Brazil 2013/2014 (continued).

Questions	n (%)	Men % (CI95%)	Women % (CI95%)	p
Violation of personal rights or direct abuse				
4. Does anyone else make decisions about your life – such as how you should live or where you should live?	76 (6.7)	4.2 (2.0-6.4)	8.2 (6.2-10.2)	0.014
9. Does anyone in your family force you to stay in bed or tell you that you are sick when you know they are not?	9 (0.7)	0.4 (0.4-1.3)	0.8 (0.1-1.4)	0.558
10. Has anyone ever made you do things you did not want to do?	38 (3.1)	3.3 (1.2-5.4)	2.9 (1.5-4.4)	0.776
11. Has anyone ever taken things that belong to you without your consent?	215 (19.0)	25.0 (20.4-29.5)	15.3 (12.6-18.1)	0.000
15. Has anyone close to you tried to hurt or harm you recently?	42 (2.8)	2.2 (0.7-3.6)	3.2 (2.0-4.4)	0.305
Characteristics of vulnerability				
1. Don't you have someone to keep you company, who takes you to the shop or to the doctor?	459 (41.4)	50.1 (43.0-57.2)	36.2 (31.6-40.9)	0.000
3. Do you often feel sad or lonely?	301 (25.2)	13.8 (9.5-18.1)	32.0 (26.3-37.7)	0.000
6. Are you unable to take your medicine and go places on your own?	155 (12.5)	12.5 (8.3-16.6)	12.5 (9.1-15.8)	0.999

When we tested violence adjusted for sociodemographic and economic characteristics stratified by gender (Table 3), we verified that, in the bivariate analysis, health conditions and their association with violence are different for men and women. Among them, only the evidence of "cognitive impairments" and "depressive symptoms" were associated with a greater probability of suffering violence, while among the elderly, all variables related to health conditions were statistically significant in this test, with emphasis on morbidities and suspected depressive symptoms that increase by more than 100% and 300%, respectively, the probability of suffering violence.

Table 3
Bivariate and multivariate analysis of violence in the elderly according to health conditions. Florianópolis, Santa Catarina, Brazil, 2013/2014.

	Bivariate analysis		**Multivariate analysis**	
	Men	**Women**	**Men**	**Women**
	OR ($CI_{95\%}$)	**OR ($CI_{95\%}$)**	**OR ($CI_{95\%}$)****	**OR ($CI_{95\%}$)****
Cognitive status				
Lack of probable cognitive impairment	1.00	1.00	1.00	1.00
Likely presence of cognitive impairment	1.52 (0.79-2.90)	1.40 (0.92-2.13)	1.99 (0.85-4.65)	1.20 (0.72-2.00)
P-value	0.197	0.112	0.108	0.466
Functional capacity (n=1.193)				
No difficulty to perform ADLs *	1.00	1.00		1.00
1-3 ADLs	1.42 (0.86-2.34)	0.98 (0.57-1.85)		0.77 (0.41-1.46)
4 ADLs and over	1.14 (0.63-2.06)	1.85 (1.09-3.15)		1.10 (0.59-2.06)
P-value	0.401	0.019		0.687
Morbidities (n= 1.197)				
None or 1	1.00	1.00		1.00
2 and over	1.04 (0.61-1.77)	2.34 (1.18-4.66)		1.68 (0.81-3.49)
P-value	0.871	0.015		0.159
Depressive symptoms (n= 1.130)				
None	1.00	1.00	1.00	1.00
Suspected	2.43 (1.08-5.46)	4.57 (2.94-7.10)	2.91 (1.14-7.39)	3.79 (2.32-6.17)
P-value	0.031	<0.001	0.025	<0.001

* ADL – Activity of Daily Living,
** Adjusted for age, ethnicity, schooling and income. OR: Odds Ratio – (CI95%) – interval.

In the multivariate analysis, of all the variables related to health conditions, the "suspected depressive symptoms" remained associated, increasing the odds of suffering violence in 280% for women and 190% for men, and was an important condition to be considered when studying violence against the elderly.

Discussion

This study represents the follow-up of a population-based epidemiological survey conducted in Florianópolis, Santa Catarina, which investigated

violence against the elderly and indicated a high prevalence. We further demonstrated that men suffer more violence in situations related to financial conditions, while women suffer more in situations related to vulnerability in the item "feeling of sadness and loneliness". We highlight the relevance of depressive symptoms among health conditions, which increased about threefold the odds of suffering violence in both men and women.

It is worth highlighting some characteristics of the elderly investigated, such as high schooling and economic conditions, since 44.2% have nine years or more of study and 64.8% receive up to three minimum wages. The information found meets the socioeconomic profile of Florianópolis, which has the third highest human development index in Brazil (PNUD, 2017), while in the Brazilian elderly population, only 17.4% have the same level of schooling (Instituto Brasileiro de Geografia e Estatística, n.d.). Given this indicator, it was expected that the elderly would be protected from situations of violence, considering that studies (Dong, Simon, and Evans, 2014; Paiva and Tavares, 2015) point to elderly people with low income and schooling who are more subject to violence.

We considered that violence (25.7%) against the elderly is high compared to international surveys that used the same tool and found a prevalence of 15% in two studies (Dong, Chen, Fulmer, and Simon, 2014; Dong, Chen, and Simon, 2016) with elderly Chinese and in the United States. In Brazil, a higher prevalence (54.7%) was estimated in a survey conducted in João Pessoa (PB) (Florêncio, 2014), using the same tool. It is worth noting that authors of that study built the "prevalence" variable by scoring each item answered, whereas in our study, the situation of violence was scored only after the elderly responded to at least three items.

We also consider that the prevalence in our study is high when comparing national studies with different tools to investigate violence, as the one of Duque et al. (2012), performed in Recife, with 20.8% prevalence, and Paiva and Tavares (2015) in Uberaba, with 20.9%. These data indicate the alarming situation of violence when compared to the estimate of the World Report on Violence and Health (Krug et al., 2002) which is that 4% to 6% of the elderly are victims of violence, at least three times lower than our findings.

When analyzing the realms of violence with the elderly, we emphasize that there are differences between genders. Men reported suffering more violence in two realms: "potential abuse" and "direct abuse"; while in the realm "characteristics of vulnerability", men continue to show high prevalence followed by women.

The potential abuse, a seven-item realm, showed that 41.2% of men and 25.8% of women are helping to support someone. This fact shows the magnitude of this item for men, considering that 56.4% of them are in the highest income strata (from 5-10 minimum wages). This fact can occur since family members who live with the elderly feel they are not able to manage their own resources without considering it a violence, as they still support adult children and sometimes grandchildren, without being an option for the elderly person. Similarly, another item referred to in a similar proportion by men and women is feeling uncomfortable with someone in the family and that someone in your family drinks too much. According to Gil et al. (2015), perpetrator's alcohol abuse was referred by 42.3% of victims of violence. We believe that the sum of all these daily situations of the elderly make them potentially abused at home.

In the realm of violation of personal rights or direct abuse, the most prevalent item for men (25.0%) and women (15.3%) was "if someone took things that belong to you without consent." This fact clearly shows that the elderly may be victims of financial or property violence, which is defined as exploitation or non-consensual use of financial and property resources of the elderly. Beach et al. (2010) found an aggravating factor of this type of violence. In their study, this type of exploitation and psychological abuse increased six-fold the risk of depression.

In this realm, we also point out the item "other people make decisions about their lives – that is, how they should live", which is more frequent among women, and the decision about where and how to live – whether alone, with relatives or caregivers. These situations are difficult to evaluate because they depend on family dynamics, financial conditions and the health situation of the elderly. This determination can cause discomfort and discontent, making the most appropriate decision not necessarily the one expected by the elderly. In women, this feature is exacerbated, and may be linked to the role of the caregivers that they do not perform at this stage of

life, now requiring many times to be cared for, in reversed functions that cause family conflicts (Cabote, Bramble, and McCann, 2015). Therefore, it is important to respect the opinion of the elderly about how they want to live, not ruling out the possibility of living alone, which is a trend in Brazil and in the world (Perseguino, Horta, and Ribeiro, 2017).

In our findings, 3% of men and women reported that "someone close to them tried to hurt or harm them recently, as well as forced them to do things they did not want to do", a situation that is characterized as indicative of psychological and/or physical violence. Brazil stands out for high prevalence of physical violence committed against the elderly. Based on the analysis of reports in the health sector, Mascarenhas et al. (2012), showed a prevalence of 67.7%, while Melo et al. (2006) found a prevalence of 17.4% for men and 40% for women in Recife. It is worth remembering that other types of abuse often accompany physical violence, and when they occur simultaneously ("polyvictimization"), they may exacerbate violence experienced by the elderly, with negative consequences for their health (Leung et al., 2015).

It is noteworthy that half of the men and 36% of the women answered "NO" to the item "if they had someone to keep them company", in the realm of characteristics of vulnerability. This difference can be attributed to the fact that men in the study were more independent for activities of daily living and had less cognitive impairments and morbidities than women. According to Caldas (2012), elderly's condition is successfully outlined when they have good physical and mental functioning and greater interaction with life, but not all the elderly show these characteristics. Thus, the opportunity for the elderly to have someone to keep them company is pointed out as an advantage at this point in life.

Another relevant item was "feeling sad or lonely", more often referred to by women. These results point to a common characteristic of hegemonic masculinities, which determine that men cannot express their feelings, especially those that indicate fragility, and to women, who have their social function attributed to femininity, so that they can assume the role of passivity, submission and weakness, and thus talk about feelings, signaling this vulnerability among the elderly women. Silva, Pereira, Guimarães, Perrelli, and Santos (2014), say that the ageing process is accompanied by

physical, social and psychological changes, which causes insecurity and feelings of loneliness.

A study (Lopes and Camara, 2009) on elderly's solitude showed that most respondents did not live alone, although most felt lonely. This finding points out that feeling lonely is not synonymous with being alone and that maintaining family life and work seems to avoid the feeling of loneliness. Azeredo and Afonso (2016), argues that solitude is seen as a painful and distressing feeling, which leads to a malaise in which they feel alone, although surrounded by people, thinking that they lack support, especially of affective nature.

The feeling of loneliness can often be tied to various health conditions. In our study, we highlighted the high prevalence of two or more morbidities (76.1%) and the magnitude of the association of depressive symptoms in the sample, which in both men and women was associated, increasing threefold and fourfold the probability of suffering violence, respectively. A study conducted in China on violence found that depression was associated with a 347% increase in the probability of elder abuse among men and 754% among women (Dong, Beck, and Simon, 2010). In a study conducted in Chicago, depressive symptoms were classified as low, medium and high severity, and participants in the highest tertile of depressive symptoms were twice as likely to have violence confirmed (Roepke-Buehler, Simon, and Dong, 2015).

Depression has been pointed out as one of the most common and worrying mental health conditions among the elderly, caused by biological, psychological and social factors, such as other mental disorders (Wagner, 2015). In this study, depressive symptoms were found in 19.1% of the population and there was no statistically significant difference between men and women, showing that both are subject to this situation.

Because it is one of the risk factors most closely associated with suicide in the elderly, depression is considered a major mental disorder. Bortolini (2016) found among the psychological and psychiatric factors most associated with suicide; in this category, depression stands out at 26.3%. It is important to emphasize that suicide is a preventable event, and that improved social contact, support and community integration are effective in its reduction as well (Moyer, 2013).

Elderly people who participated in this study have a high prevalence of morbidities. We understand that depression can be neglected in the face of the many demands for care that other illnesses bring to the lives of the elderly, family, and caregivers, increasing the likelihood of suffering violence. Borges and Dalmolin (2012), argue that comorbidities – especially the onset of chronic diseases – are capable of producing depressive symptoms and were evidenced in their study as factors associated with depressive elderly. What causes as stir in this information is that both violence and depressive symptoms, as well as suicide, are preventable circumstances that harm elderly's health. Silva-Fhon et al. (2015) corroborate this assertion, since the elderly in their study who did not have depressive symptoms were 62% less likely to suffer violence.

Regarding the relevant aspects of this study, worth noting is the use of a questionnaire on violence against the elderly adapted to Portuguese, which showed the prevalence of domestic violence in men and women and in which realms they are more prevalent in each gender. The fact that this tool investigates the direct signs and the suspected situation of violence elucidated which items most predisposed the elderly to such situations. Another relevant point is the careful methodology used to collect the data and the high response rate to represent the elderly population of Florianópolis. Among the limitations of the study, we highlight its cross-sectional design, since it does not allow causality to be established among the variables investigated, especially those related to health conditions and the recall bias linked to self-report of being in some violence episode.

The results of this study reiterate the importance of analyzing further the phenomenon of violence, especially against the elderly, as well as how it appears to men and women. In view of the information provided and the relevance of the theme, we emphasize the importance that new population-based studies that focus on violence against the elderly should be carried out, so that evidence shown may support effective actions to prevent violence against the elderly, especially those occurring at home. In addition, health conditions of the elderly and even their survival should be investigated longitudinally in order to provide us with a true understanding of the magnitude of violence in the health of the elderly.

Acknoledgment

The authors would like to thank the Federal University of Santa Catarina for its support. This study was financially supported by the National Council for Scientific and Technological Development (CNPq grant number 475904/2013-3).

References

Aguiar, M. P. C. d., Leite, H. A., Dias, I. M., Mattos, M. C. T. d., & Lima, W. R. (2015). Violência contra idosos: descrição de casos no Município de Aracaju, Sergipe, Brasil. Escola Anna Nery, 19, 343-349. doi: 10.5935/1414-8145.20150047

Almeida, O. P. & Almeida, S. A. (1999). Confiabilidade da versão brasileira da Escala de Depressão em Geriatria (GDS) versão reduzida. *Arquivos de Neuro-Psiquiatria, 57*, 421-426.

Amaral, C. d. A., Portela, M. C., Muniz, P. T., Farias, E. d. S., Araújo, T. S. d., & Souza, O. F. (2015). Associação da força de preensão manual com morbidades referidas em adultos de Rio Branco, Acre, Brasil: estudo de base populacional. *Cadernos de Saúde Pública, 31, 1313-1325.*

Apratto Junior, P. C. (2010). The domestic violence against the elderly within the Family Health Program of Niteroi (RJ, Brazil). *Ciência & Saúde Coletiva, 15*(6), 2983-2995. doi: 10.1590/S1413-81232010000600037

Azeredo, Z. d. A. S. & Afonso, M. A. N. (2016). Solidão na perspectiva do idoso. *Revista Brasileira de Geriatria e Gerontologia, 19 (2),* 313-324. doi: 10.1590/1809-98232016019.150085

Beach, S. R., Schulz, R., Castle, N. G., & Rosen, J. (2010). Financial exploitation and psychological mistreatment among older adults: differences between African Americans and non-African Americans in a population-based survey. *Gerontologist, 50*(6), 744-757. doi: 10.1093/geront/gnq053

Borges, D. T. & Dalmolin, B. M. (2012). Depressão em Idosos de uma Comunidade assistida pela Estratégia de Saúde da Família em Passo Fundo, RS. *Revista Brasileira de Medicina de Família e Comunidade, 7*(23). doi: 10.5712/rbmfc7(23)381

Bortolini, S.M. (2016). Fatores associados ao suicídio como violência autoinfligida entre idosos: revisão sistemática. Dissertação (Mestrado) - Universidade Federal de Santa Catarina. Retrieved from: http://www.bu.ufsc.br/teses/PGSC0146-D.pdf

Brucki, S. M. D., Nitrini, R., Caramelli, P., Bertolucci, P. H. F., & Okamoto, I. H. (2003). Sugestões para o uso do mini-exame do estado mental no Brasil. *Arquivos de Neuro-Psiquiatria, 61,* 777-781.

Cabote, C. J., Bramble, M., & McCann, D. (2015). Family Caregivers' Experiences of Caring for a Relative With Younger Onset Dementia: A Qualitative Systematic Review. *Journal of Family Nursing, 21*(3), 443-468. doi: 10.1177/1074840715573870

Caldas, C. P. (2012). O envelhecimento populacional e transição demográfica: implicações para a enfermagem. In: Gonçalves e Tourinho (orgs). Enfermagem no cuidado ao idoso hospitalizado. Manole: São Paulo.

Cohen, M. (2013). The process of validation of a three-dimensional model for the identification of abuse in older adults. *Archives of Gerontology and Geriatrics, 57*(3), 243-249. doi: 10.1016/j.archger.2013.06.009

Conceição, L. F. S. d. (2010). Saúde do idoso: orientações ao cuidador do idoso acamado Elderly health: guidance to bedridden elderly caregivers. *Revista Médica de Minas Gerais, 20*(1), 81-91.

Dong, X., Beck, T., & Simon, M. A. (2010). The associations of gender, depression and elder mistreatment in a community-dwelling Chinese population: the modifying effect of social support. *Archives of Gerontology and Geriatrics*, *50*(2), 202-208. doi: 10.1016/j.archger.2009.03.011

Dong, X., Chen, R., Fulmer, T., & Simon, M. A. (2014). Prevalence and correlates of elder mistreatment in a community-dwelling population of U.S. Chinese older adults. *Journal Aging Health, 26*(7), 1209-1224. doi: 10.1177/0898264314531617

Dong, X., Chen, R., & Simon, M. A. (2016). Elder Mistreatment in U.S. Community-Dwelling Chinese Older Women. *Violence Against Women, 22*(9), 1097-1112. doi:10.1177/1077801215618804

Dong, X., Simon, M., & Evans, D. (2014). A population-based study of physical function and risk for elder abuse reported to social service agency: findings from the chicago health and aging project. *Journal of Applied Gerontology, 33*(7), 808-830. doi: 10.1177/0733464812459371

Duque, A. M., Leal, M. C. C., Marques, A. P. d. O., Eskinazi, F. M. V., & Duque, A. M. (2012). Violência contra idosos no ambiente doméstico: prevalência e fatores associados (Recife/PE). *Ciência & Saúde Coletiva, 17*(8), 2199-2208.

Florêncio, M. V. D. L. (2014). Rastreamento de Violência Contra Pessoas Idosas Cadastradas pela Estratégia de Saúde da Família em João Pessoa-PB. . Faculdade de Medicina, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre.

Gil, A. P., Santos, A. J., Kislaya, I., Santos, C., Mascoli, L., Ferreira, A. I., & Vieira, D. N. (2015). Estudo sobre pessoas idosas vítimas de violência em Portugal: sociografia da ocorrência. *Cadernos de Saúde Pública, 31,* 1234-1246.

Instituto Brasileiro de Geografia e Estatística. Proporção de idosos no Brasil (n.d). Retrieved from: https://teen.ibge.gov.br/biblioteca/293-teen/teen-sobre-o-brasil/populacao-economia-e-sociedade/3361-idosos.html

Krug, E. G., Dahlberg, L. L., Mercy, J. A., Zwi, A. B., & Lozano, R. (2002). *World report on violence and health.* World Health Organization: Geneva.

Landis, J. R. & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics 33*(1)*,* 159-174.

Leung, D. Y., Lo, S. K., Leung, A. Y., Lou, V. W., Chong, A. M., Kwan, J., Chan, W.C., & Chi, I. (2015). Prevalence and correlates of abuse screening items among community-dwelling Hong Kong Chinese older adults. *Geriatrics & Gerontology International 17*(1), 150-160. doi:10.1111/ggi.12655

Lopes, R. F, L. M. & Camara, V. D. (2009) Entendendo a solidão do idoso. *Revista Brasilera de ciéncias do envelhecimiento humano 6*(3), 373-381. doi: 10.5335/rbceh.2012.362

Mascarenhas, M. D., Andrade, S. S., das Neves, A. C., Pedrosa, A. A., da Silva, M. M., & Malta Dde, C. (2012). Violence against the elderly: analysis of the reports made in the health sector--Brazil, 2010. *Ciência & Saúde Coletiva, 17*(9), 2331-2341.

Melo, V. L., Cunha, J. O. C., & Falbo Neto, G. H. (2006). Maus-tratos contra idosos no município de Camaragibe, Pernambuco. *Revista Brasileira de Saúde Materno Infantil, 6,* S43-S48.

Moyer, V. A. (2013). Screening for intimate partner violence and abuse of elderly and vulnerable adults: U.S. preventive services task force recommendation statement. *Annals of Internal Medicine, 158*(6), 478-486. doi: 10.7326/0003-4819-158-6-201303190-00588

Naughton, C., Drennan, J., Lyons, I., Lafferty, A., Treacy, M., Phelan, A., & Delaney, L. (2012). Elder abuse and neglect in Ireland: results from a national prevalence survey. *Age Ageing, 41*(1), 98-103. doi: 10.1093/ageing/afr107

Paiva, M. M. d., & Tavares, D. M. d. S. (2015). Violência física e psicológica contra idosos: prevalência e fatores associados. *Revista Brasileira de Enfermagem, 68,* 1035-1041.

Perseguino, M. G., Horta, A. L. d. M., & Ribeiro, C. A. (2017). The family in face of the elderly's reality of living alone. *Revista Brasileira de Enfermagem, 70*, 235-241. doi: 10.1590/0034-7167-2016-0398

PNUD (2017). *Programa das Nações Unidas para o Desenvolvimento. Atlas do desenvolvimento humano. Índice de Desenvolvimento Humano (IDHM).* Retrieved from: http://atlasbrasil.org.br/2013/pt/perfil_m/florianopolis_sc

Queiroz, Z. P. V. d., Lemos, N. d. F. D., & Ramos, L. R. (2010). Fatores potencialmente associados à negligência doméstica entre idosos atendidos em programa de assistência domiciliar. *Ciência & Saúde Coletiva,* 2815-2824. doi: 10.1590/S1413-81232010000600019

Reichenheim, M. E., Paixão Jr, C. M., & Moraes, C. L. (2008). Adaptação transcultural para o português (Brasil) do instrumento Hwalek-Sengstock Elder Abuse Screening Test (H-S/EAST) utilizado para

identificar risco de violência contra o idoso. *Cadernos de Saúde Pública, 24,* 1801-1813. doi: 10.1590/S0102-311X2008000800009

Ribot, V. C., Rousseaux, E., Garcia, T. C., Arteaga, E., Ramos, M., & Alfonso, M. (2015). Psychological the most common elder abuse in a Havana neighborhood. *MEDICC Review, 17*(2), 39-43.

Roepke-Buehler, S. K., Simon, M., & Dong, X. (2015). Association Between Depressive Symptoms, Multiple Dimensions of Depression, and Elder Abuse: A Cross-Sectional, Population-Based Analysis of Older Adults in Urban Chicago. *Journal of Aging and Health, 27*(6), 1003-1025. doi: 10.1177/0898264315571106

Rosa, T. E. d. C., Benício, M. H. D. A., Latorre, M. d. R. D. d. O., & Ramos, L. R. (2003). Fatores determinantes da capacidade funcional entre idosos. *Revista de Saúde Pública, 37,* 40-48.

Ruelas González, M. G. & Salgado Zinder, N. (2009). Factores asociados con el auto-reporte de maltrato en adultos mayores en México. *Revista Chilena de Salud Pública, 13*(2), 90-99.

Silva, G. É. M. d., Pereira, S. M., Guimarães, F. J., Perrelli, J. G. A., & Santos, Z. C. d. (2014). Depressão: conhecimento de idosos atendidos em unidades de saúde da família no muncípio de Limoeiro – PE. *Revista Mineira de Enfermagem, 18*(1), 82-87.

Silva-Fhon, J. R., Del Río-Suarez, A. D., Motta-Herrera, S. N., Coelho Fabricio-Wehbe, S. C., & Partezani-Rodrigues, R. A. (2015). Violencia intrafamiliar en el adulto mayor que vive en el distrito de Breña, Perú. *Revista de la Facultad de Medicina, 63,* 367-375.

Souza, A. S., Meira, E. C., Neri, I. G., Silva, J. A. d., & Gonçalves, L. H. T. (2004). Fatores de risco de maus-tratos ao idoso na relação idoso/cuidador em convivência intrafamiliar. *Textos sobre Envelhecimento, 7,* 63-85.

Tobiasz-Adamczyk, B., Brzyski, P., & Brzyska, M. (2014). Health-related quality of life in older age and a risk of being a victim of domestic violence. *Archives of Gerontology and Geriatrics, 58*(3), 388-398. doi: 10.1016/j.archger.2013.11.012

Veras, R. (2010). Vida plena sem violência na maturidade: a busca contemporânea. *Ciência & Saúde Coletiva, 15*(6), 2669-2676

Wagner, G. A. (2015). Treatment of depression in older adults beyond fluoxetine. *Revista de Saúde Pública, 49*(1-4). doi: 0.1590/S0034-8910.2015049005835

Yadav, U. N. & Paudel, G. (2016). Prevalence and associated factors of elder mistreatment: a cross sectional study from urban Nepal. *Age Ageing, 45*(5), 609-613. doi:10.1093/ageing/afw112

Carolina Carvalho Bolsoni, Postdoctoral fellow in Public Health, Universidade Federal de Santa Catarina.
Sheila Rubia Lindner, Professor, Universidade Federal de Santa Catarina
Eleonora D'Orsi, Associate Professor
Elza Berger Salema Coelho, Professor at the Department of Public Health, Universidade Federal de Santa Catarina

Health Sciences Center: R. Delfino Conti, S/N - Trindade, Florianópolis - SC -CEP 88040-370. carolina.bolsoni@ufsc.br