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Intimate partner violence prevalence in the elderly and associated factors: systematic review

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Abstract *This article aims to identify the prevalence of intimate partner violence (IPV) in the elderly and its associated factors. A systematic review of cross-sectional population-based studies was conducted in PubMed, Lilacs and PsycInfo databases, without restrictions with respect to the period and language of publication. Two independent reviewers conducted the selection, data extraction and the methodological quality analysis. Nineteen papers were selected for the analysis. There was a variation in the type of violence, gender of respondents and tools used. Most studies had a moderate or high methodological quality. IPV occurred in elderly men and women, with greater prevalence of psychological violence and economic abuse. The most frequent associated factors were alcohol use, depression, low income, functional impairment and previous exposure to violence.*

Key words *Intimate partner violence, Elderly, Prevalence, Associated factors, Elder abuse*

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Introduction

Population aging is a global reality, and Brazil is on a fast track lane. This phenomenon occurred initially in developed countries and has been growing steadily in developing countries[1,2]. In this context, elder violence is a reality in various social levels and has relevant consequences on the health of this population[2]. Thus, violence is a challenge to public health, as it imposes the need for specific social policies and new directions for comprehensive elderly health care[1].

Intimate partner violence (IPV) includes any behavior that causes physical, psychological or sexual harm to those who are part of the intimate relationship. They include acts of physical assault, psychological abuse, controlling behavior[3] and economic abuse[4]. In the context of elder violence, that which has been committed by an intimate partner has been less investigated, and, when addressed, is considered less severe than when applied to young women[5,6].

However, in US studies, women older than 55 years were more affected by IPV than younger women[7], with intimate partners accounting for 13-50% of the abuse committed[8]. Similarly, in Spain, 29.4% of elderly women suffered this type of violence[9].

In Brazil, the prevalence of intimate partner violence in the study of elderly women and men was 5.9% for physical violence and 20.9% for psychological violence[10], while in Brazil and Colombia, a study carried out with 60-74 year-olds, IPV found prevalence of psychological violence in women of 26.0% and 20.4%, respectively. This prevalence was 11.1% for men in both countries[11].

IPV has a negative impact on the physical and mental health of the elderly. Among the victims of physical and psychological violence, there is a greater proportion of reports of muscular and skeletal pain, headache, stomach problems, anxiety, sleep disorders, stress and suicidal mindset[12,13]. Violence also has a social impact on the lives of the elderly, contributing to low self-esteem, social isolation and feelings of insecurity, reinforcing negative aspects of old age[14].

Studies[15-17] dealing with elder violence tend to analyze the elderly as victims of abuse in most cases by caregivers or relatives, and intimate partner violence is still a scarce approach in the literature. This fact may be embedded in the understanding that violence does not occur among elderly partners, masquerading as neglect or family violence, since the caregiver may be the intimate partner.

The concept of IPV in this age group is still little understood in the literature as a single construct, which leads us to affirm that it is important to further investigate this issue to bridge the existing gap and highlight the phenomenon in a growing and significant population that has been understudied[18].

In view of the foregoing, this study aimed to identify from a systematic review of literature the prevalence and factors associated with IPV in the elderly.

Methodology

We conducted a survey of published studies on the prevalence of intimate partner violence in the elderly and factors associated with the phenomenon.

Registration and protocol

This systematic review was performed according to the guidelines outlined in the PRISMA Check List (Preferred Reporting Items for Systematic Reviews and Meta-Analysis - Prospective Register of Systematic Reviews)[19]. The protocol of this systematic review was registered in the International Prospective Register of Systematic Reviews database (PROSPERO).

Eligibility Criteria

Inclusion criteria were original scientific papers that covered cross-sectional population-based studies; that analyzed the prevalence of intimate partner violence and its associated factors, with a clearly described methodology; papers with target population that included the elderly; papers published in national and international journals.

Literature reviews, letters, opinion papers, experience reports, case studies, book chapters and conference presentations were excluded. There were no restrictions regarding the publication date or language.

These criteria sought to ensure that only representative studies of the general population were inserted, since they more accurately reflect the prevalence and factors associated with IPV in the elderly population.

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Search strategy

The search for papers was carried out in PubMed, Lilacs and PsycInfo databases. PubMed's search strategy was adapted for the other databases was as follows: ("Intimate Partner Violence"[Mesh] OR "Intimate Partner Violence"[All Fields] OR "Spouse abuse"[Mesh] OR "Spouse abuse"[All Fields]) AND ("Prevalence"[Mesh] OR "Prevalence"[All Fields] OR "Cross-Sectional Studies"[Mesh] OR "Cross-Sectional Studies"[All Fields]) AND ("aged"[MeSH] OR "aged"[All Fields] OR "aged, 80 and over"[MeSH] OR "80 and over aged"[All Fields] OR elderly[All Fields]) NOT (pregnancy OR child$ OR AIDS).

Search was conducted from March to September 2016. Selected papers' reference lists were reviewed and a manual search was done for other potentially eligible publications.

Selection of studies and data extraction and review

Studies were selected by two independent reviewers. Initially, duplicate references between databases were identified and excluded using the EndNote Web reference manager (*Thomson Reuters*).

According to the eligibility criteria, the selection was done through the evaluation of titles and abstracts and then full texts. Any disagreement between reviewers regarding the application of criteria would require an expert's opinion on the specific matter and would be defined by consensus. The general characteristics of papers (year and place of collection, gender and age of respondents, sample size and violence measurement tool), prevalence and factors associated with IPV and recorded in electronic spreadsheets were extracted. Data were sorted in a documentary form, analyzed in a descriptive way and shown in tables.

Evaluation of methodological quality

The methodological quality was evaluated by two independent reviewers, using the tool proposed by Loney et al[20] indicated for the critical evaluation of cross-sectional studies. Authors adopt eight items in the evaluation. For each criterion not met, the study received a zero, and scored "one" point if met. High-quality studies were those scoring 7-8 points; 4-6 points indicated moderate quality studies, and 0 to 3 points, low quality studies. No papers were excluded due to the level of methodological quality. The eight evaluation criteria are:

- Sample: adequate if the study was performed with all population or with probabilistic sampling.
- Sampling source: adequate if it was population census-based.
- Sample size: adequate if statistically calculated.
- Measurement of outcome: adequate if intimate partner violence was measured by a validated tool.
- Impartial interviewer: adequate if results were surveyed by trained interviewers.
- Response rate: adequate if ≥ 70.0%.
- Prevalence with 95% CI: adequate if confidence intervals of intimate partner violence prevalence were shown.
- Similar participants: adequate if subject under study were described and stratified per age group and similar to the study question (elderly).

Results

Eight hundred forty-two papers were identified in the searched databases and five were added from the analysis of the references of the selected studies and manual search from other sources, totaling 847 articles. Of these, 49 were excluded because they were duplicates and 707 because they did not meet the eligibility criteria after reading titles and abstracts. Thus, 91 studies were submitted to full analysis, and from this process, 19 papers[4,10,21-37] were chosen for this study (Figure 1).

Of the 19 papers selected, 15 included in their samples adults and elderly[4,20-33] and four only elderly[10,35-37]. Five studies[4,24,25,29,33] stratified the prevalence by age group, thus identifying IPV among the elderly. In the others, prevalence was shown for the general sample of the study, in which the elderly were included.

Papers included were published between 2004 and 2015, more frequently in the period 2012-2015[4,10,28-37]; surveys between 2004 and 2010[24-30,32-34,36] predominated. There was a higher concentration of studies in Europe[4,26,29,31,34,35] and the United States[21,25,27,29,31,37]; Brazil only had two studies[10,22]. In 11 studies[10,23,25,28,29,31-33,36,37], respondents were men and women concomitantly, others included only women, and there were no studies with men alone. The sample size varied from 356 to 70,156 respondents.

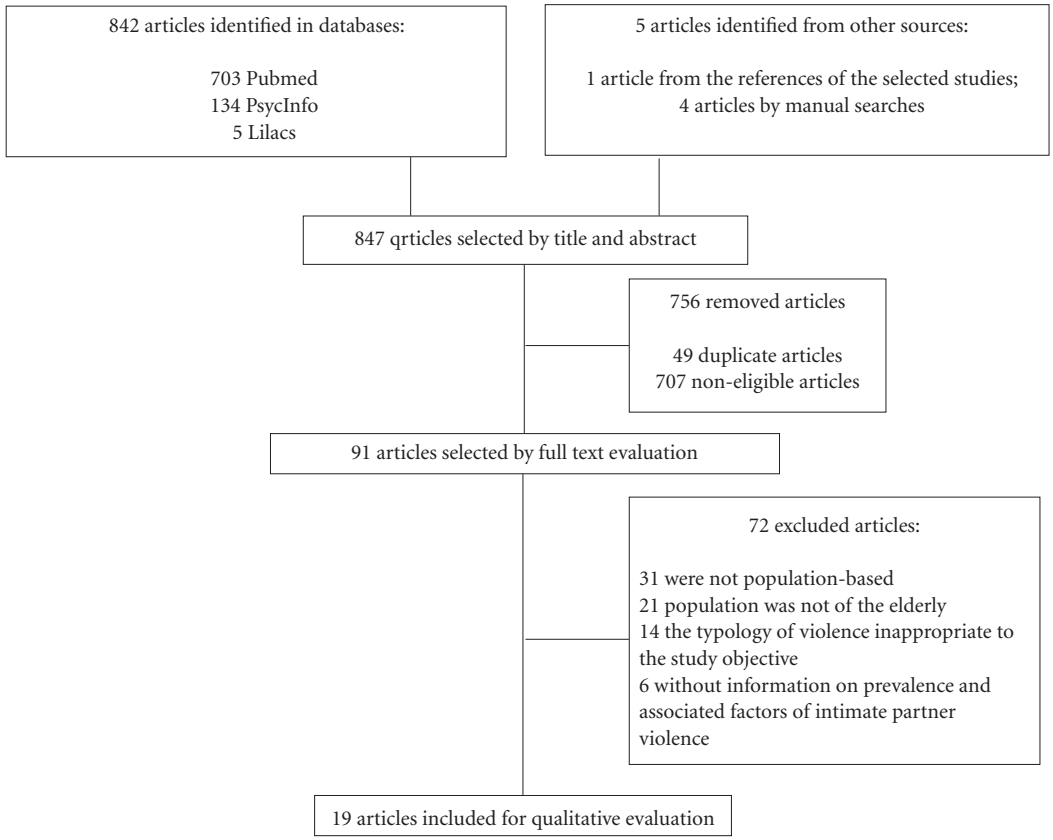

Figura 1. Fluxograma do resultado da busca, seleção e inclusão dos estudos.

The most widely used tool for measuring violence was the Conflict Tactics Scale (CTS), versions 1, 2 and adaptations[4,10,22,23,27,29-37]. The violence recall period varied, and the last 12 months was the most widely used[4,10,21,22,24,27-33,36,37], followed by "in lifetime"[25,26,34]. The main characteristics of the studies are summarized and shown in Chart 1.

Evaluation of the methodological quality

Based on the evaluation of the methodological quality proposed by Loney et al.[20], among the studies, seven[22,27,29,31,33,36,37] achieved high quality; eleven[4,10,21,23-25,28,30,32,34,36] obtained moderate quality, and one[26] had low quality. Studies developed with samples consisting exclusively of the elderly[10,35-37] achieved high or moderate quality, with an overall mean score of 6.5 points, while those with samples composed of adults and the elderly reached an overall mean score of 5.7 points. This positive difference for the group of studies exclusively with the elderly is mainly due to the item that analyzes the similarity of participants with the research question (adequate if there was a description of the subjects under study stratified by age group and similar to the research question). No work achieved the maximum score, and prevalence with a 95% confidence interval (95% CI) the item with the lowest overall mean, both for studies exclusively with the elderly and those that investigated adults and the elderly. Table 1 shows details of the methodological quality evaluation.

Prevalence of Intimate Partner Violence

In the 19 studies analyzed, 14[4,10,22-26,31-37] had their prevalence stratified by nature of intimate

Chart 1. Characteristics of the studies included in the systematic review of intimate partner violence prevalence and its associated factors in the elderly.

Author, year of publication	Year of Collection	Location	Gender	Age Group	Sample Size	IPV measurement tool
Studies with adults and elderly						
Mouton, 2004[21]	NA	United States	F	50-79	91,749	Own questionnaire
Reichenheim, 2006[22]	2002/ 2003	Brazil	F	15-69	6,760	CTS 1
Cohen, 2006[23]	1999	Canada	F/M	≥ 15	16,216	CTS 2 + own questionnaire
Aekplakorn, 2007[24]	2005	Thailand	F	17-78	580	Own questionnaire
Breiding, 2008[25]	2005	United States	F/M	≥ 18	70,156	Own questionnaire
Svavarsdottir, 2009[26]	2005/ 2006	Iceland	F	22-67	2,746	WAST
Sareen, 2009[27]	2004/ 2005	United States	F	≥ 20	13,928	CTS 1- adapted
Brisibe, 2012[28]	2006	Nigeria	F/M	16-65	346	Own questionnaire
Afifi, 2012[29]	2004/ 2005	United States	F/M	≥ 20	25,778	CTS 1 - adapted
Sonego, 2013[30]	2009/ 2010	Spain	F	18-70	2,835	CTS 1 - adapted + own questionnaire
Renner, 2014[31]	1994 to 1997	United States	F/M	≥ 20	1,096	CTS 1- adapted
Hellemans, 2014[32]	2009	Belgium	F/M	18-75	1,472	CTS 1 - adapted + own questionnaire
Lee, 2014[33]	2006	South Korea	F/M	≥ 30	8,877	CTS 1- adapted
Stöckl, 2015[4]	2003/ 2004	Germany	F	16-86	10,264	CTS 2 + own questionnaire
Hellemans, 2015[34]	2011/ 2012	Belgium	F/M	18-80	1,448	CTS 1 + WHO VAW
Studies with elderly only						
Stöckl, 2012[35]	2003	Germany	F	65-86	10,264	CTS 2
Yan, 2012[36]	2004	China	F/M	60-100	5,049	CTS 2
Burnes, 2015[37]	NA	United States	F/M	≥ 60	4,156	CTS 1- adapted
Paiva, 2015[10]	2014	Brazil	F/M	≥ 60	729	CTS 1

F = Female M = Male. IPV – Intimate Partner Violence. NA – Not available in the study. CTS – *Conflict Tactics Scale*. WAST - *Woman Abuse Screening Tool*. WHO VAW - *World Health Organization Violence Against Wom*en.

partner violence (physical, psychological, sexual, controlling behavior, economic abuse), whether isolated[4,10,22,23,26,32,33,34,36,37] or combined[4,24,25,31,35].

Nine studies identified IPV prevalence according to the nature of the act combined and evidenced the following proportions in the elderly: 14.1% for physical and psychological violence[24] among women in the last 12 months; 10-12.9% for physical and sexual violence in women[4,25,35] and 5.6% for men, in lifetime[25]. In papers that showed the nature of violence in isolation, worth highlighting are values of psychological violence in the 60-69 age group (25.5% in women and 21.2% in men) and 70 years+ (24.5% % in women and 20.1% in men).

In studies that investigated only the elderly[10,35-37], or these separately from adults[4,24,25,29,33], IPV type prevalence ranged from 1.8-5.9% for physical violence[10,33,36,37], 1.2% for sexual violence[36] and 1.9-36.1% for psychological violence[4,10,36,37]. We highlight the variation found in coefficients of psychological IPV, since studies used the same measurement tool, namely, the CTS (versions 1 or 2). The country with the highest prevalence was China (36.1%)[36], followed by Germany (13%)[4], Brazil (5.9%)[10] and the United States (1.9%) [37]. It is noteworthy that only one study[33] investigated in the elderly separately the controlling behavior (21%) and economic abuse (13%) in women aged 66-86 years. In the six studies that identified general prevalence in adults and the elderly, it ranged from 5.5% in the United States[28] to 55.8% in Nigeria[27].

The phenomenon of intimate partner violence in elderly men was identified in a study by Afifi et al.[29], which found a higher IPV prevalence in this population (4.9%) when compared to elderly women (3.3%). In contrast, Breiding

Table 1. Result of the evaluation of the methodological quality of the included studies.

Author, year of publication	Sample	Sampling Source	Sample Size	Outcome Measurement	Impartial interviewer	Response Rate	Prevalence CI95%	Similar Participants	Total
Studies with adults and elderly									
High methodological quality									
Reichenheim, 2006[22]	1	1	1	1	1	1	1	0	**7**
Sareen, 2009[27]	1	1	1	1	1	1	0	1	**7**
Afifi, 2012[29]	1	1	1	1	1	1	0	1	**7**
Renner, 2014[31]	1	1	1	1	1	0	1	1	**7**
Lee, 2014[33]	1	1	1	1	1	1	0	1	**7**
Moderate methodological quality									
Mouton, 2004[21]	1	1	1	0	1	1	0	1	**6**
Breiding, 2008[25]	1	1	1	0	1	0	1	1	**6**
Stöckl, 2012[35]	1	1	1	1	1	0	0	1	**6**
Aekplakorn, 2007[24]	0	1	1	0	1	1	0	1	**5**
Hellemans, 2014[32]	1	1	1	1	1	0	0	0	**5**
Hellemans, 2015[34]	1	1	1	1	1	0	0	0	**5**
Cohen, 2006[23]	0	0	1	0	1	1	0	1	**4**
Brisibe, 2012[28]	1	1	1	0	0	1	0	0	**4**
Sonego, 2013[30]	1	1	0	1	1	0	0	0	**4**
Low methodological quality									
Svavarsdottir, 2009 [26]	1	1	0	1	0	0	0	0	**3**
Total	13 (86.7%)	14 (93.4%)	13 (86.7%)	10 (66.7%)	13 (86.7%)	8 (53.4%)	3 (20.0%)	9 (60.0%)	**Mean = 5.7**
Studies with elderly only									
High methodological quality									
Yan, 2012 [36]	1	1	1	1	1	1	0	1	**7**
Burnes, 2015[37]	1	1	1	1	1	1	1	1	**7**
Moderate methodological quality									
Stöckl, 2012[35]	1	1	1	1	1	0	0	1	**6**
Paiva, 2015[10]	1	1	1	1	1	0	0	1	**6**
Total	4 (100%)	4 (100%)	4 (100%)	4 (100%)	4 (100%)	2 (50%)	1 (20%)	4 (100%)	**Mean = 6.5**

0 = criterion not met. 1 = criterion met.

et al.[25] and Lee et al.[33] showed that the perpetration by elderly men is more prevalent than by elderly women, as can be seen in the different percentage measures regarding the nature of IPV, respectively: physical (5.1% versus 1.6%)[33]; psychological (25.5% versus 21.2%)[33]; physical and sexual (12.6% versus 5.6%)[25]. While coefficients are higher in women, there are also significant proportions in men, pointing to the relevance of investigating the occurrence of violence in both genders.

There were methodological variations regarding the nature, severity and directionality (suffered or perpetrated) of the violence investigated, gender of respondents and measurement tools used. The different methods implied heterogeneous prevalence. Chart 2 shows the prevalence identified according to the methodological approach of each study.

Factors associated with intimate partner violence

Alcohol use[4,24,26,28,29,33,36] was the most frequent factor associated with IPV, followed by depression[26,30-32]. More specifically, there was a positive association with violence, tobacco use[21,26], tranquilizers[32] and other drugs[29], as well as anxiety[35], stress[38], sleep and eating disorders[29].

Regarding the sociodemographic and economic factors, worth highlighting are low income[21,23,24,37] and low schooling[22,25,37], being divorced/separated[23,37] and being a young elderly[10,37]. With respect to conditions related to physical health, functional impairment[10,37], poor health assessment[23] and HIV infection[27] were associated with IPV.

Previous exposure to violence was analyzed by two studies[35,36], and both found an association between IPV and having witnessed parental violence in childhood. Stöckl et al.[35] linked the occurrence of physical and sexual violence among 55-65 year-olds to having suffered physical violence in childhood or violence by an aggressor other than their partner, indicating a possible perpetuation of life-threatening violence.

Most studies[4,10,21,23-27,29-37] have employed regression analysis models. All the results presented were statistically significant. IPV-associated factors are shown in Table 2.

Discussion

In this review, we highlight the occurrence of intimate partner violence in elderly men and women, with psychological violence and economic abuse being the most prevalent in this age group. The most frequent associated factors were alcohol consumption, depression, low income, functional impairment and exposure to violence in childhood.

National and international studies evidenced a relevant production between 2004 and 2015, mainly in Europe and the United States. This predominance may be related to the fact that these locations have a greater number of journals indexed in the databases consulted[38] and specific journals on elder violence, but also because these countries have a higher proportion of elderly people, where factors related to aging are more investigated. The Latin American publication on this topic is incipient, represented by two Brazilian studies[10,22].

IPV measurement was performed primarily through Conflicts Tactics Scale - FORM R (CTS-1)[39], which assesses physical and psychological violence, and Review Conflicts Tactics Scale (CTS-2)[40], which measures physical, sexual, and psychological violence. While the CTS tool is not specific to the elderly population, it meets the validity and reliability criteria, which gives reliability to the studies[41]. Economic abuse and controlling behavior among intimate partners, which were relevant in the elderly, were measured by their own questionnaires due to the lack of validated tools. Thus, it is necessary to develop and validate tools that include such violence between intimate partners to better understand the phenomenon in this population.

The methodological quality of the studies was considered moderate and high, which reinforces the reliability and representativeness of the results of the analyzed populations. The mere selection of population-based studies contributed to the quality achieved, since most studies met the three criteria for sample evaluation.

The comparison of prevalence was difficult due to studies' methodological diversity, related to both tools used and the types of review, which were stratified by different variables such as gender, age group, nature, intensity and directionality of violence. Espíndola and Blay[41], when investigating elder abuse in a review study, identified such diversity of information. However, the prevalence shown in the studies (Chart 2) indicate the relevance and magnitude of IPV in the elderly.

The various possibilities of combining the nature of violence (physical, sexual, psychological, controlling behavior and economic abuse) in research show the cruel setting of the phenomenon and limits comparison between studies. Even with this difficulty, analyzed studies[4,10,23,24,32,34,36] point to high prevalence that have stratified IPV according to their nature.

However, it is assumed that intimate partner violence in the elderly is not unique to this age group, since violence is a relational process, probably established in adulthood, perpetuating in lifetime. Rennison and Rand[42] argue that prevalence of physical and sexual violence declines among the elderly, but psychological violence persists and may even increase in frequency and severity[42,43].

Among the studies analyzed, the economic abuse identified by Stöckl et al.[35] stands out, with a prevalence of 13% among 66-86 year-olds in Germany. It is understood that hardships inherent to aging, such as dependence on family and, consequently, intimate partners can exacerbate this elderly's exposure to both financial exploita-

Chart 2. Prevalence of intimate partner violence in included studies.

Author, year of publication	IPV recall period	Elderly age range	IPV prevalence in the sample	IPV prevalence in elderly
Studies with adults and elderly				
Mouton, 2004[21]	Last 12 months	50-79 years	General - 11.1%	NA
Reichenheim, 2006[22]	Last 12 months	NA	Psychological - 75%	NA
			Physical minor - 21.5%	
			Physical severe - 12.9%	
Cohen, 2006 [23]	Last 5 years	≥ 55 years	Physical/woman - 7.8%	NA
			Physical/men - 6.6%	
			Sexual/woman - 1.4%	
			Psychological/woman -17.7%	
			Psychological/man -18.2%	
			Financial/woman - 7.5%	
			Financial/man -1.4%	
Aekplakorn, 2007 [24]	Last 12 months	≥ 55 years	Physical and psychological - 27.2%	Physical and psychological - 14,1%
Breiding, 2008[25]	Lifetime	≥ 65 years	Physical and sexual/woman - 26.4%	Physical and sexual/ woman - 12,9%
			Physical and sexual/man - 15.9%	Physical and sexual/man - 5,6%
Svavarsdottir, 2009 [26]	Lifetime	NA	Physical/married - 2.0%	NA
			Physical/ cohabiting - 3.3%	
			Psychological/married - 16.7%	
			Psychological/cohabiting - 18.2%	
			Sexual/married - 1.2%	
			Sexual/live together - 1.3%	
Sareen, 2009[27]	Last 12 months	NA	General - 5.5%	NA
Brisibe, 2012[28]	Last 12 months	NA	General- 55.8%	NA
Afifi, 2012[29]	Last 12 months	≥ 65 years	*Victimization; Perpetration*	*Victimization; Perpetration*
			General/women – 5.5%; 7.0%	General/women – 3,3%; 3,5%
			General/men – 5.8%; 4.2%	General/men – 4,9%; 6,8%
Sonego, 2013[30]	Last 12 months	NA	General - 12.2%	NA
Renner, 2014[31]	Last 12 months	NA	Physical and emocional/woman - 50.9%	NA
			Physical and emotional/man - 40.0%	
Hellemans, 2014[32]	Last 12 months	NA	Physical - 1.3%	NA
			Sexual (women) - 0.3%	
			Psychological - 14.0%	

it continues

tion situations and physical and psychological violence. This setting occurs domestically and tends to perpetuate, with the possible aggravation of both violence and health conditions of the elderly. Kwong et al.[44] corroborate the finding and point out that violence has deep cumulative effects in lifetime, which scale-up in this period of greater physical and emotional vulnerability.

Papers of this review highlight the violence identified in both genders[24,28,32]. These results em-

Chart 2. continuation

Author, year of publication	IPV recall period	Elderly age range	IPV prevalence in the sample	IPV prevalence in elderly
Lee, 2014[33]	Last 12 months	≥ 60 years	*Victimization; Perpetration*	*Victimization; Perpetration*
			Verbal/ woman	Verbal/ woman
			General - 28.2%; 26.7%	60-69 years - 25,5%; 22,8%
				>70 years - 24,5%; 20,9%
			Verbal/ man	Verbal/ man
			General - 24.4%; 25.0%	60-69 years - 21,2%; 23,5%
				>70 years - 20,1%; 21,4%
			Physical/ woman	Physical/ woman
			General - 6.9%; 3.4%	60-69 years - 5,1%; 1,4%
				>70 years - 3,1%; 1,0%
			Physical/ man	Physical/ man
			General - 3.4%; 5.1%	60-69 years - 1,6%; 3,7%
				>70 years - 1,0%; 2,6%
Stöckl, 2015[4]	Last 12 months	66-86 years	Physical or sexual	Physical or sexual
			16-49 years - 8%	66-86 years - 1%
			50-65 years - 3%	
			Psychological	Psychological
			16-49 years 13%	66-86 years - 13%
			50-65 years 13%	
			Controlling behavior	Controlling behavior
			16-49 years 21%	66-86 years - 21%
			50-65 years 21%	
			Economic abuse	Economic abuse
			16-49 years 12%	66-86 years - 13%
			50-65 years 14%	
Hellemans, 2015[34]	Lifetime	NA	Physical - 10.0%	NA
			Psychological - 56.7%	
Studies with elderly only				
Stöckl, 2012[35]	Current, last year, last 5 years and in lifetime	50-86 years	Physical and/or sexual in life	Physical and/or sexual in lifetime
			General - 18%	50-65 years: 23%
				66-86 years: 10%
			Physical and/or sexual in the last 5 years	Physical and/or sexual in the last 5 years
			General - 2%	50-65 years: 3%
				66-86 years: 1%
			Physical and/or sexual in the last year	Physical and/or sexual in the last year
			General - 1%	50-65 years: 2%
				66-86 years: 0%
			Physical and/or sexual in the current relationship	Physical and/or sexual in the current relationship
			General - 11%	50-65 years: 14%
				66-86 years: 5%

it continues

Chart 2. continuation

Author, year of publication	IPV recall period	Elderly age range	IPV prevalence in the sample	IPV prevalence in elderly
Yan, 2012[36]	Lifetime; last 12 months	60-100 years	Lifetime; last year	
			Physical - 6.6 %; 2.5%	
			Sexual - 3.2%; 1.2%	
			Psychological - 53.6%; 36.1%	
			General - 7.7%; 2.9%	
Burnes, 2015[37]	Last 12 months	≥ 60 years	Psychological	Psychological
			General - 1.9%	60-69 = 0,9%
				70-84 = 0,8%
				> 85 = 0,1%
			Physical	Physical
			General - 1.8%	60-69 = 1,0%
				70-84 = 0,6%
				> 85 = 0,2%
Paiva, 2015[10]	Last 12 months	60 years	Physical	Physical
			General - 5.9%	60-80 = 6,4%
				> 85 = 3,8%
			Psychological	Psychological
			General - 20.9%	60-80 = 22,1%
				> 80 = 15,0%

phasize the fact that there are people in situations of violence, both men and women, who may suffer or perpetrate it in an intimate relationship, and such findings are also found in other studies[45-48].

Men were identified in the review as victims of intimate partner violence in two studies[28,32], and in one of them[28], there was a higher prevalence (4.9%) of IPV in men than in women (3.3%). According to Afifi et al.[49], IPV against men in the literature in general is still scarce and, when investigated, it is only focused on these as aggressors. Lindner et al.[50] affirm that it is relevant to investigate man not only as the perpetrator of violence, but also as a victim. One constraint reported by Carmo et al.[51] was that men would tend to hide the assault suffered, since exposure would break with social gender roles, which attribute them characteristics of invulnerability and virility, thus contributing to the underreporting of this type of violence. Factors that permeate these relationships must be evidenced and disseminated, so that they may translate into the implementation of public policies geared to men and women in situations of violence.

Among factors associated with elder violence, alcohol use was the most identified in the studies of this review[4,23,25,27,28,32,35]. According to these findings, Nagassar et al.[52] affirm that alcohol and other drugs abuse is one of the main reasons for physical violence, as well as a factor associated with an increased likelihood of violent acts[52,53]. It can be assumed that the intake of alcoholic beverages would be a strategy adopted by the victims to deal with stress caused by the context of violence[52,54]. One research evidence[55] indicates that heavy drinking contributes to violence, but this does not mean that alcohol is a primary, necessary and sufficient condition for violence. Thus, alcohol would not determine such behaviors, but would contribute to their manifesting more intensely or severely.

Depression was also a factor associated with IPV in this review, such as Renner et al.[31], who found higher likelihood of victims suffering from depressive symptoms, both for men (2.4 times) and women (3.0 times) when compared with those who did not suffer violence. However, abuse perpetration was associated with increased depressive symptoms for women, not for men. Even if cross-sectional studies cannot establish a causal and temporal relationship between the facts, longitudinal studies show that IPV can lead to depression[56], as well as precede or facilitate situations of violence[57].

Table 2. Factors associated with Intimate Partner Violence according to the studies analyzed.

Factors associated with intimate partner violence	Papers that evidenced the associated factor n (%)
Health-related behaviors	
Alcohol use	7 (36.9%)
Tobacco use	2 (10.6%)
Use of other drugs	1 (5.3%)
Mental health conditions	
Depression	4 (21.0%)
Stress	2 (10.6%)
Use of tranquilizers	1 (5.3%)
Sleep disorders	1 (5.3%)
Anxiety	1 (5.3%)
Physical health conditions	
Functional impairment	2 (10.6%)
HIV infection	1 (5.3%)
Gastrointestinal and pelvic symptoms	1 (5.3%)
Sexual dysfunction	1 (5.3%)
Poor health evaluation	
Economic and sociodemographic factors	
Low income	4 (21.0%)
Low schooling	3 (15.8%)
Being divorced / separated	2 (10.6%)
Being a young elderly	2 (10.6%)
Women schooling higher than her husbands	1 (5.3%)
Being single	1 (5.3%)
Living with spouse	1 (5.3%)
Previous exposure to violence	
Witnessing parental violence in childhood	2 (10.6%)
Suffering physical punishment in childhood	1 (5.3%)
Suffering physical or sexual violence by non-partner	1 (5.3%)

Functional impairment was associated with IPV in two analyzed studies[10,36], stating that violence may increase vulnerability, leaving the elderly with reduced ability to defend themselves against ill-treatment. They also consider that the reduced functional capacity for instrumental activities of daily living (IADL) limits the independent social participation of the elderly, restricting contact with other people, besides relatives or caregivers who live together, hindering the search for health services and specialized services to report to when subjected to violence.

It is noteworthy that only one paper[26] of this review addressed HIV-IPV association, but this study did not separate adults and the elderly, and there were gaps in the specific issues among older people, and research on the subject is relevant. Alencar and Ciosak[59] point out that the investigation of anti-HIV serology for the elderly is not routine in the primary health care services. Elder sexuality is made invisible by health professionals because they do not consider that they can be sexually active, and the investigation of sexual health is not part of routine consultations. However, in Brazil, the number of elderly people (> 60 years) corresponded to 2.5% of those infected in 2002, increasing to 5.0% in 2013. Increased HIV epidemic among the elderly has also occurred worldwide[59,60].

Low income[20,21,23] and low schooling[21,24,36] are factors associated with IPV in the elderly, since they trigger conflicts between the intimate partners[23]. However, one study[34] found that older people aged 66-86 are more likely to be in a situation of violence when women have professional qualifications and men have high schooling. One hypothesis is that because of greater empowerment of women, them would be more independent than the partner and could challenge traditional gender roles, increasing the risk of violence[61,62].

A striking part in this study is that, in the papers reviewed, previous exposure to violence, such as witnessing parental violence[10,35] or suffering physical punishment in childhood[35] was associated with IPV in the elderly. Paixão et al.[63] corroborate this finding when analyzing the intergenerationality of spouse violence experienced by women, stating that there is a relationship between violence witnessed in the family of origin and intimate partner violence. Violence intergenerational effects trigger their lifelong permanence, and the high prevalence of IPV in adulthood certainly contributes to their perpetuation in old age[45].

As this systematic review of IPV in the elderly is unprecedented, information is provided to broaden knowledge about the phenomenon, aiming to contribute to the establishment of actions and strategies to prevent violence by elderly intimate partners. It is important to carry out new epidemiological studies with representative samples of the elderly population to investigate IPV prevalence and associated factors, which addresses the directionality of violence suffered and perpetrated between men and women.

In order to give visibility to the nature of the most prevalent IPV among the elderly, we suggest developing and validating specific tools for this population group, which include economic abuse and controlling behavior among intimate partners, given their relevance in this age group. The specificities and vulnerabilities of the elderly should be taken into account, with further analysis of issues regarding mental health, sexual health and functional disability, which are still incipient in the literature on IPV in this age group.

However, some limitations can be pointed out in this review. The low number of scientific publications on the subject in the elderly population stands out. In addition, we note that information is available from studies with methodological limitations, due to the non-stratification of results between adults and the elderly. Most studies were conducted from self-reported interviews as a way to keep respondents' privacy and confidentiality. However, this type of evaluation is subject to memory bias, over or underestimation of the fact, as well as fear or shame of exposing to the interviewer situations of violence experienced in the intimate relationship.

Noteworthy is publication bias, which may occur due to the non-publication of studies in indexed journals due to the limited number of papers per journal, language, methodology, among others. With regard to the very heterogeneous characteristics of the studies found, we only conducted a qualitative evaluation of the results and quantitative data synthesis was not possible through meta-analysis.

This review shows a method according to the current recommendations for the elaboration of systematic reviews, such as comprehensive sources search, specific search strategy, no language restrictions or publication period, selection and extraction of data in pairs and evaluation of the methodological quality of the studies included. The adoption of these measures shows relevant results, which provide an overview of national and international scientific knowledge produced on prevalence and factors associated with intimate partner violence in the elderly.

Collaborations

D Warmling participated in the design, search, review and interpretation of the result and final writing. SR Lindner participated in the search, review and interpretation of result and final writing. EBS Coelho participated in the design, review and interpretation of results, critical review and approval of final version.

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