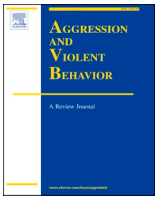
Aggression and Violent Behavior 75 (2024) 101918

Contents lists available at ScienceDirect

Aggression and Violent Behavior

journal homepage: www.elsevier.com/locate/aggviobeh



Violence towards formal and informal caregivers and its consequences in the home care setting: A systematic mixed studies review

B. Lucien [a,b,*], S. Zwakhalen [a], O. Morenon [b], S. Hahn [c]

[a] Department of Health Services Research, Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, Netherlands
[b] Haute École Arc Santé, HES-SO University of Applied Sciences and Arts Western Switzerland, Neuchâtel, Switzerland
[c] Applied Research & Development in Nursing, Division of Health Professionals, Bern University of Applied Sciences, Bern, Switzerland

ARTICLE INFO

Keywords:
Caregivers
Exposure to violence
Home care services
Home health nursing
Physical abuse
Violence
Workplace violence

ABSTRACT

Violence towards formal and informal caregivers is a frequently occurring and complex international hazard in healthcare that has a negative impact on the physical and psychological health states of caregivers. However, little is known about the prevalence and type of violence towards formal and informal caregivers by care recipients in the home care settings. The aim of this review is to obtain insight into the prevalence of violence by home care recipients against formal and informal caregivers in home care settings and the types and consequences of violence. A systematic review was conducted between March and May 2023 using the PubMed, EMBASE, CINAHL, and PsycINFO databases. A methodological quality appraisal was conducted using the Mixed Methods Appraisal Tool (MMAT). Data collection was performed until May 2023. Out of 1087 screened articles, a total of 10 full texts were included after the screening process. Findings demonstrate that workplace violence is an understudied area of research. The few studies found in this review showed high prevalence rates of violence with risk for physical and mental injuries for formal caregivers. No information at all on violence against informal caregivers was available. Strategies for prevention and intervention against violence in the home care setting must be developed. To develop strategies, it is important to have more insight in the prevalence and types of violence. It is also important to explore violence against informal caregivers in research.

Tweetable abstract: Violence towards formal caregivers in home care settings is a common risk that negatively impacts the health status of caregivers.

1. Background

Violence towards formal caregivers, such as nursing staff or physicians, is a frequently occurring and complex international hazard in healthcare (Edward, Ousey, Warelow, & Lui, 2014; Pazvantoğlu, Gümüş, Böke, Yildiz, & Şahin, 2011). Worldwide, the prevalence of violence by care recipients towards formal caregivers during the past 12 mth in hospital settings has been estimated at 61.9 % (Liu et al., 2019). Worldwide, one of the very rare studies investigating this violence in the mental health setting in Japan estimated the prevalence of violence towards informal caregivers by a relative with schizophrenia throughout their life at >90 % (Kageyama et al., 2018). The negative impact of violence on the physical and psychological health of formal caregivers is well known and includes physical injuries (e.g., pain and sleep disruption), psychological symptoms (e.g., feelings of insecurity, fear, anger or chronic anxiety including post-traumatic stress disorder and depression) and, at worst, may lead to death (Magnavita et al., 2019; Najafi, Fallahi-Khoshknab, Ahmadi, Dalvandi, & Rahgozar, 2018; Palma et al., 2018; Quinn et al., 2016). Furthermore, injuries may impair job performance and create negative relationships and interactions between formal caregivers and care recipients (Canton et al., 2009). Violence also affects care recipients' quality of care when formal caregivers avoid or refuse to provide care for violent care recipients (Arnetz & Arnetz, 2001; Brady, O'Connor, Burgermeister, & Hanson, 2012; Chirico & Leiter, 2022; Edward et al., 2014; Magnavita, Heponiemi, & Chirico, 2020). Violence could also have a major impact on the economics and policy of institutions that have high turnover rates because of, e.g., formal caregiver occupational burnout or absence due to injuries (Gascon et al., 2013; Johnson et al., 2018).

Informal caregivers, such as relatives or friends of a care recipient,

* Corresponding author at: Espace de l'Europe 11, CH-2000 Neuchâtel, Switzerland.
E-mail address: baptiste.lucien@he-arc.ch (B. Lucien).
@LUCIENBaptiste4 (B. Lucien)

https://doi.org/10.1016/j.avb.2024.101918
Received 21 May 2021; Received in revised form 6 October 2023; Accepted 10 January 2024
Available online 15 January 2024

are also affected by care recipient violence. The literature in the mental health setting highlights that informal caregivers exposed to violence by family members with dementia may have thoughts of suicide with the care recipient or wish for the care recipient's death (Hiyoshi-Taniguchi, Becker, & Kinoshita, 2018; Kageyama et al., 2018).

1.1. Defining violence

The World Health Organization (WHO) defines violence as 'the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation' (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002, p. 5). The healthcare sector defines workplace violence (WPV) as 'incidents where employees are abused, threatened, assaulted or subjected to other offensive behaviour in circumstances related to their work' (di Martino, 2003, p. 1). This definition of WPV includes any incidents in which formal caregivers are abused, threatened, assaulted, sexually/racially harassed and experience aggression in work-related circumstances. This definition only focusing on intentional WPV and does not consider WPV perpetrated by cognitively impaired care dependent people. However, WPV could be underreported because the formal caregivers reason that the care dependent people did not intend to harm them (Moylan, Cullinan, & Kimpel, 2014).

The literature distinguishes four types of WPV: physical violence (e.g., pushing, hitting, slapping, kicking, threat of violence, and being attacked with a weapon), nonphysical violence (e.g., someone threatening to kill you, someone firing a gun in your presence, name calling, and bullying), sexual harassment (e.g., exposure to sexual explicit materials or comments and being offered money for sex) and sexual aggression (e.g., being fondled or touched in a sexual way and being raped) (Barling, Rogers, & Kelloway, 2001; Galinsky et al., 2010; Hanson, Perrin, Moss, Laharnar, & Glass, 2015; Nakaishi et al., 2013; Wharton & Ford, 2014). For the ease of understanding, we will focus on workplace violence for violence against formal and informal caregivers at home in this review.

1.2. WPV in home care setting

With an aging population, an increase in chronic diseases and comorbidities, and a projected shortage of physicians, home care is becoming increasingly important to meet the needs of those being cared for (Hatcher, Chang, Schmied, & Garrido, 2019; Ward-Griffin et al., 2012). Nevertheless, in the home care setting, formal and informal caregivers are also affected by care recipients' WPV. Often, in this setting, WPV is underestimated, and intervention and WPV prevention strategies are lacking (Duffield, Roche, Homer, Buchan, & Dimitrelis, 2014). Additionally, the situation of WPV in home care is more complex. Caregivers often work alone in a challenging, sometimes unfamiliar or unsafe situations (Duxbury, Hahn, Needham, & Pulsford, 2008; Fitzwater & Gates, 2000). Prevention and intervention strategies for formal caregivers to prevent and manage violence are rare. With the increase in the level of home care service, WPV is more likely to become a problem for formal caregivers who do not have the means to prevent WPV and de-escalate situations to defend themselves. Moreover, in home care, a significant part of care is provided by informal caregivers who are just as likely, if not more likely, to be exposed to violence by their care recipients (Seidel & Thyrian, 2019; Stall, 2019; Wharton & Ford, 2014). The Organization for Economic Cooperation and Development (OECD) defined informal caregivers as 'people providing any help to older family members, friends and people in their social network, living inside or outside their household, who require help with everyday tasks' (OECD, 2019). Informal caregiving has increased over the past five years due to a number of factors, e.g., to the need to offset rapidly rising healthcare costs, an aging population, and an increase in chronic conditions and comorbidities (OECD, 2019). The burden of informal caregivers (e.g., due to lack of support, WPV, lack of recognition and poor working conditions) has been well reported by various studies and can result in a deterioration of the quality of care for these care recipients and generate exorbitant costs for institutions (Seidel & Thyrian, 2019; Stall, 2019; Ward-Griffin et al., 2012). We currently know much about WPV in different healthcare settings and in inpatient long-term care (Duxbury et al., 2008; Hahn et al., 2011; Nijman et al., 1999; Warburton & Stahl, 2015; Zeller, Dassen, Kok, Needham, & Halfens, 2012). Prevention and intervention strategies in these settings are also well known (Bayramzadeh, 2017; Björkdahl, Hansebo, & Palmstierna, 2013; Blair et al., 2017; Duxbury et al., 2008). However, recent articles highlight that formal caregivers in home care are regularly confronted with acts of physical violence (Hanson et al., 2015; Karlsson et al., 2019). In 2015, in the United States, 27.5 % of healthcare workers were victims of assaults (Hanson et al., 2015). Moreover, there is a lack of knowledge about care recipient violence towards formal and informal caregivers in the home care setting. Therefore, it seems important to have clearer insight into the recent knowledge on this topic and provide a systematic overview to support safety efforts for formal and informal caregivers and care recipients in the home care setting.

1.3. Aim

To overcome the knowledge gaps, the main research questions are the following: (1) what are the different types of WPV in the home care setting, (2) what is the prevalence rate of WPV towards formal and informal caregivers by care recipients in the context of home care, (3) what are the consequences of WPV for formal and informal caregivers, (4) What is the context for formal caregivers experiencing WPV, and (5) what are the context for care recipients who inflict WPV?

2. Methods

To answer the research questions, a mixed-method systematic review was conducted between March and May 2023 following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines (Page et al., 2021). The research questions and search strategy were developed using the patient, intervention, comparison, outcome, and study design (PICOS) process (Akers, Aguiar-Ibanez, Writh, & Worthy, 2009). A mixed-method systematic review can provide a better understanding of complex phenomena and interventions by maximizing the findings (Hong & Pluye, 2019; Pearson et al., 2015). The review protocol was registered with the International Prospective Register of Systematic Reviews (PROSPERO). The protocol registration number is the following: CRD42020209836.

2.1. Search strategy

Data collection was performed until May 2023. The following electronic databases were used: MEDLINE (PubMed), EMBASE, CINAHL, and PsycINFO. Regarding the search strategy, Medical Subject Headings (MeSH) (e.g., 'violence', 'aggression', 'caregivers', 'health personnel', 'Home nursing', and 'Home care services') were used for PubMed, applying search terms that were adapted to other databases. To complete the search equation, keywords (e.g., 'violence', 'aggression', 'workplace violence', 'home care workers', 'family caregivers', and 'home care service') were searched in the titles and abstracts of the articles. The Boolean indicators 'OR' and 'AND' were used to combine search terms. To obtain an extensive overview of the literature, no time frame was delimited. After the title screening, the references of the selected articles were screened for additional relevant research articles. More details on the search strategy are available in Appendices 2–4.

2.2. Inclusion and exclusion criteria

The study selection was performed by the first author (BL) and a

reviewer (OM). Studies meeting the following criteria were included: (1) the study focused on WPV perpetrated by care recipients in the home care setting, (2) the study population was formal or informal caregivers, (3) the study population was from a home care setting, (4) the article was in English or French, and (5) the study met the general criteria for critical appraisal. We excluded secondary research, essays, conference abstracts, letters, protocols, and commentaries.

2.3. Identification of studies

Following duplicate removal, both review authors independently screened the titles and abstracts to identify studies fitting the study population, the phenomenon, and the language criteria. The search hits were inserted in EndNote, and duplicates were removed. For the publications selected, full texts were obtained and screened to decide on inclusion or exclusion for further analysis. In the case of nonagreement between the two reviewers, a third reviewer (SH) assessed the article concerned, and a decision was made.

2.4. Data extraction

For the data extraction from the selected studies, author(s) name(s), country, year of publication, study type, aim, setting and subject, sample size, prevalence rate and types of WPV, characteristics of the care recipients and consequences of WPV for the caregivers were extracted by one of the researchers (BL).

2.5. Data selection

Quantitative synthesis was conducted for all studies on the prevalence rate; and qualitative synthesis was conducted for all studies on the different types of WPV, the consequences, and the context of formal caregivers and care recipients. The PRISMA guideline and the Sandelowski guideline were used to structure the synthesis of the results (Page et al., 2021; Sandelowski, Voils, & Barroso, 2006).

2.6. Quality appraisal

Two reviewers (OM and BL) independently assessed and compared articles meeting the inclusion criteria for methodological quality using the Mixed Methods Appraisal Tool (MMAT) (Hong & Pluye, 2019). The MMAT was chosen because it allows the assessment of qualitative, quantitative and mixed methods studies (Hong & Pluye, 2019). The general criteria for the critical appraisal of eligible studies were the presence of a clear research question and data collected to answer the research questions. In line with the MMAT, the studies were excluded if they did not contain clear information on research questions or collected data allowing the research questions to be addressed (Hong & Pluye, 2019). The assessment criteria for qualitative studies encompass the appropriateness of the qualitative approach, adequacy of data collection methods, derivation of findings from data, substantiation of result interpretation, and coherence across data aspects. For quantitative studies, the criteria include the relevance of the sampling strategy, sample representativeness, measurement appropriateness, and mitigation of nonresponse bias. In mixed methods studies, the criteria involve suitable statistical analysis, rationale for mixed method design, effective integration of study components, coherent result synthesis, addressing discrepancies between quantitative and qualitative results, and adherence of study components to respective methodological quality criteria. The two reviewers opted for the exclusion of articles in cases where half or more of the criteria were either indistinct or absent. In line with the MMAT, an overall quality score was not considered to be informative (Hong & Pluye, 2019). In the case of nonagreement between the two reviewers, a third reviewer (SH) assessed the article concerned, and a decision was made.

3. Results

3.1. Search results

The initial searches resulted in 1819 hits: PubMed (n = 572), CINAHL (n = 404), EMBASE (n = 625), PsychINFO (n = 212), and six additional publications find in the grey literature, although other sources were found manually. After removing 896 duplicates, 923 records remained. After verification of the eligibility based on the titles and abstracts, 863 references were excluded due to population or setting, resulting in 60 full-text articles. After full-text article screening, 42 of 60 were excluded. The reasons for exclusions were not answering the research question (n = 18), study design was review (n = 1) and the population did not include formal or informal caregivers (n = 16) or both (n = 6). Two of these articles had abstracts and titles in English, but the text was in Chinese (n = 2). Six studies were excluded after assessment of the methodological quality because they did not present a research question or the purpose of the study, and the data collected did not therefore answer the research questions. More details on the quality appraisal of the included studies are available in Table 1. Thus, 12 articles were eventually included in the review (Fig. 1).

3.2. Characteristics of included studies

The 12 included studies were published between 2000 and 2020, and were conducted in Switzerland (n = 2), and in United States of America (n = 10) (Byon et al., 2016, 2017; Fitzwater & Gates, 2000; Galinsky et al., 2010; Geiger-Brown et al., 2007; Hanson et al., 2015; Karlsson et al., 2019; Nakaishi et al., 2013; Quinn et al., 2016; Schnelli, Mayer, Ott, & Zeller, 2021; Schnelli, Ott, Mayer, & Zeller, 2021; Vladutiu, Casteel, Nocera, Harrison, & Peek-Asa, 2016). Most of these (n = 10) were quantitative nonrandomized studies, and the others were focus groups (n = 1) and mixed methods (n = 1). As demonstrated in Table 2, eleven studies focused on the prevalence rate of WPV (Byon et al., 2016, 2017; Fitzwater & Gates, 2000; Galinsky et al., 2010; Geiger-Brown et al., 2007; Hanson et al., 2015; Karlsson et al., 2019; Nakaishi et al., 2013; Quinn et al., 2016; Schnelli, Mayer, et al., 2021; Schnelli, Ott, et al., 2021), five addressed the types of WPV (Fitzwater & Gates, 2000; Geiger-Brown et al., 2007; Hanson et al., 2015; Nakaishi et al., 2013; Quinn et al., 2016), eight addressed the characteristics of care recipients and formal caregivers in WPV situations (Byon et al., 2016, 2017; Fitzwater & Gates, 2000; Galinsky et al., 2010; Schnelli, Mayer, et al., 2021; Schnelli, Ott, et al., 2021) and five addressed the consequences of experiencing WPV (Fitzwater & Gates, 2000; Galinsky et al., 2010; Geiger-Brown et al., 2007; Hanson et al., 2015; Schnelli, Ott, et al., 2021). None of these studies focused on WPV towards informal caregivers by relatives in the home care setting. More details on the characteristics of the included studies are available in Table 2.

3.3. Description of type of WPV in the home care setting

Of the 12 included studies, two did not specify the type of WPV (Galinsky et al., 2010; Vladutiu et al., 2016). Seven studies only focused on physical violence or verbal abuse (Byon et al., 2016, 2017; Geiger-Brown et al., 2007; Karlsson et al., 2019; Quinn et al., 2016; Schnelli, Mayer, et al., 2021; Schnelli, Ott, et al., 2021). In two studies, the authors also distinguished sexual harassment and sexual aggression (Hanson et al., 2015; Nakaishi et al., 2013). In another study, the authors used a specific classification for the home care setting where in-home violence (threatening behavior by a friend or family member of a care recipient, biting or intimidation by an animal, harassment or sexual aggression towards formal caregivers) and out-of-home violence (telephone harassment, theft of the means of transport, or distinguished (Fitzwater & Gates, 2000)). Overall, the different articles describe four different types of WPV:

Table 1
Mixed methods appraisal tool.

Study	S1	S2	Qualitative					Quantitative descriptive					Mixed methods				
			1.1	1.2	1.3	1.4	1.5	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	5.4	5.5
Included studies																	
Byon, Storr, Edwards, & Lipscomb, 2016	Y	Y						Y	Y	Y	C	Y					
Byon, Storr, & Lipscomb, 2017	Y	Y						Y	Y	Y	C	Y					
Fitzwater and Gates, 2000	Y	Y	Y	Y	Y	Y	Y										
Galinsky et al., 2010	Y	Y						Y	Y	Y	Y	Y					
Geiger-Brown, Muntaner, McPhaul, Lipscomb, & Trinkoff, 2007	Y	Y						Y	Y	Y	Y	Y					
Hanson et al., 2015	Y	Y						Y	C	Y	C	Y					
Karlsson et al., 2019	Y	Y						Y	Y	Y	C	Y					
Nakaishi et al., 2013	Y	Y											Y	Y	Y	Y	Y
Quinn et al., 2016	Y	Y						Y	Y	Y	Y	Y					
Schnelli, Ott, et al., 2021	Y	Y						C	Y	Y	Y	Y					
Schnelli, Mayer, et al., 2021	Y	Y						Y	Y	Y	C	Y					
Vladutiu et al., 2016	Y	Y						Y	Y	Y	C	Y					
Excluded studies																	
Barling et al., 2001	N	N															
Canton et al., 2009	C	C															
Freysteinson, 2011	N	N															
Maddox and Mackenzie, 2022	Y	N															
Wharton and Ford, 2014	C	N															
Yamamoto et al., 2009	C	C															

Y, yes; N, no; and C, cannot tell.
Criteria for the critical appraisal of eligible studies: S1: Are there clear research questions? S2: Do the collected data allow the research questions to be addressed? 1.1. Is the qualitative approach appropriate to answer the research question? 1.2. Are the qualitative data collection methods adequate to address the research question? 1.3. Are the findings adequately derived from the data? 1.4. Is the interpretation of results sufficiently substantiated by data? 1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation? 4.1. Is the sampling strategy relevant to address the research question? 4.2. Is the sample representative of the target population? 4.3. Are the measurements appropriate? 4.4. Is the risk of nonresponse bias low? 4.5. Is the statistical analysis appropriate to answer the research question? 5.1. Is there an adequate rationale for using a mixed method design to address the research question? 5.2. Are the different components of the study effectively integrated to answer the research question? 5.3. Are the results adequately brought together into overall interpretations? 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?

- Physical violence such as bounced caregiver off the wall; swung at caregiver with fists; tried to slap caregiver; and biting, kicking, and/or grabbing caregiver (Byon et al., 2016; Fitzwater & Gates, 2000; Geiger-Brown et al., 2007; Hanson et al., 2015; Nakaishi et al., 2013; Schnelli, Mayer, et al., 2021; Schnelli, Ott, et al., 2021).
- Nonphysical violence (Verbal abuse and threats or intimidation) such as cursed at, called names, yelled or screamed at, verbalized racial preferences, rumors spread, observed family fights, racial incidents, stalking, threatened with weapons, weapons displayed, financial control, threats of physical harm, foul letters sent, telephone threats, complaint calls to employers, false accusations, and threatening animals inside or outside the home (Fitzwater & Gates, 2000; Geiger-Brown et al., 2007; Hanson et al., 2015; Karlsson et al., 2019; Nakaishi et al., 2013; Schnelli, Mayer, et al., 2021; Schnelli, Ott, et al., 2021).
- Sexual aggression such as grabbed or touched in a sexual way; subjected to explicit or implicit sexual comments; experienced someone breaking your personal boundaries; been pinched, patted, hugged, or had an arm around you in a way that made you uncomfortable; been fondled or touched in a sexual way; been kissed in a way that made you feel uncomfortable; had somebody physically restrain you; and been raped (e.g., forced to have sex against your will) (Hanson et al., 2015; Nakaishi et al., 2013).
- Sexual harassment such as exposure to explicit sexual materials or comments, sexual harassment (been a target of rumors of sexual promiscuity, whistled or leered at, teased sexually, and had sexual compliments), sexism (gender–based insults and sexist remarks), been asked personally intrusive questions about your body or sex, received repeated requests for dates, received sexual notes or other correspondence, been sexually propositioned (i.e., incited to engage in sexual intercourse), and been offered money for sex (Fitzwater & Gates, 2000; Hanson et al., 2015; Nakaishi et al., 2013).

3.4. Prevalence rate of WPV

Two of the studies used a detailed scale to assess the prevalence of various types of WPV that included physical violence, sexual aggression, nonphysical violence and sexual harassment (Hanson et al., 2015; Nakaishi et al., 2013) while six other studies observed only physical violence and/or verbal abuse (Byon et al., 2016, 2017; Geiger-Brown et al., 2007; Karlsson et al., 2019; Quinn et al., 2016; Schnelli, Mayer, et al., 2021). Three of the twelve included studies did not provide information on prevalence (Fitzwater & Gates, 2000; Galinsky et al., 2010; Vladutiu et al., 2016). Different time frames were used to explore the prevalence of different types of WPV. Six studies asked the formal caregivers whether they had faced WPV during the past 12 mth, one study asked the question regarding throughout their career and one study asked the requestion regarding the past 6 mth. WPV towards formal caregivers during the past 12 mth ranged from 7.9 % and 61.3 %, including between 2.5 % and 27.5 % for physical violence (Byon et al., 2016; Hanson et al., 2015; Schnelli, Mayer, et al., 2021). In the same time frame, sexual aggression was estimated at 12.8 %, and sexual harassment was estimated at 27.6 % (Hanson et al., 2015). Moreover, 1 % of the formal caregivers were physically restrained by somebody, 2.3 % were kissed in a way that made them feel uncomfortable, and 0.3 % of them were raped (e.g., forced to have sex against the formal caregiver's will) (Hanson et al., 2015). Further details are provided in Table 3.

3.5. Consequences of WPV

Five of the 12 articles approach the consequences of WPV for formal caregivers (Galinsky et al., 2010; Geiger-Brown et al., 2007; Hanson et al., 2015; Schnelli, Mayer, et al., 2021). WPV was significantly associated with depression in formal caregivers and short–and long-term emotional consequences for them (Geiger-Brown et al., 2007). WPV leads to negative psychological reactions (e.g., anger, depression, and

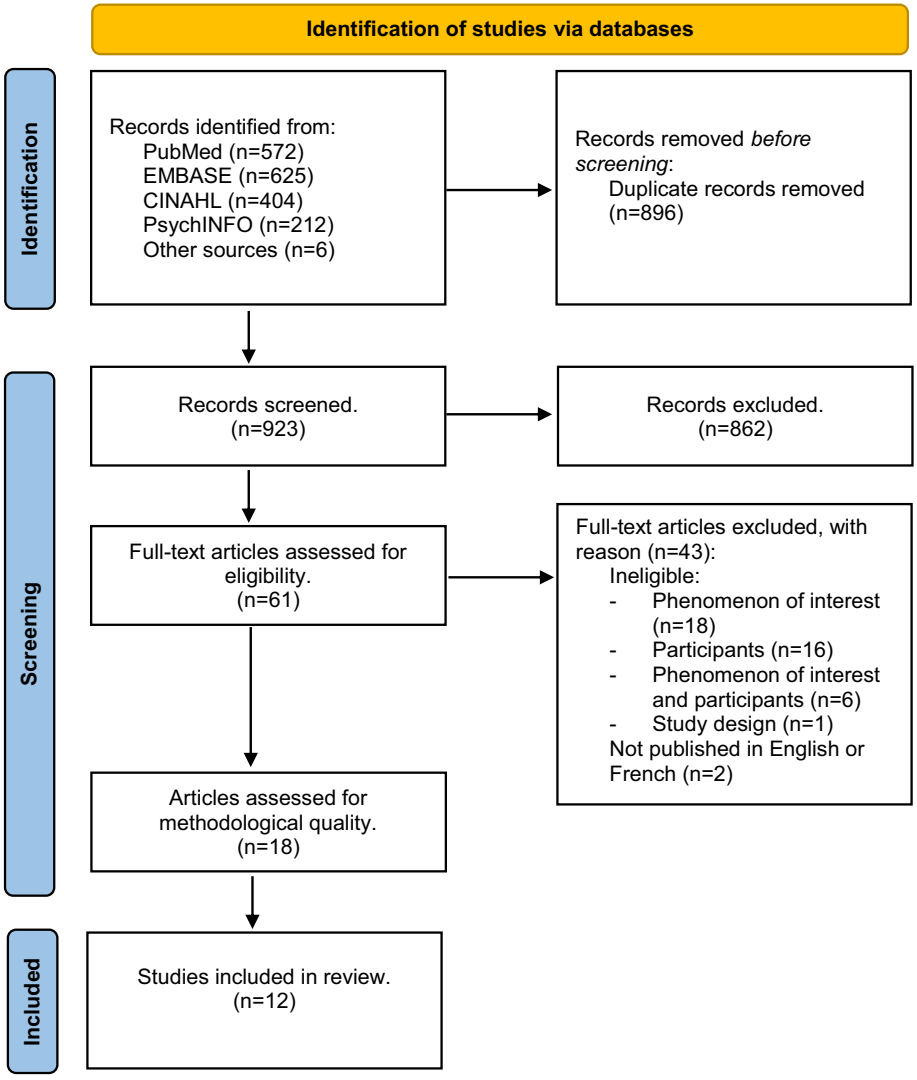


Fig. 1. Search outcome.

post-traumatic stress syndrome), which could result in aggressive responses of formal caregivers or shortened visit behavior, both of which could reduce the quality of care (Galinsky et al., 2010; Geiger-Brown et al., 2007; Schnelli, Mayer, et al., 2021). WPV could also result in greater stress, depression, sleep problems and a fear of a new violent event. The fear of further violence aggravates the health states of formal caregivers and could result in occupational burnout or the caregiver exiting the profession (Galinsky et al., 2010; Hanson et al., 2015; Schnelli, Mayer, et al., 2021). All of these elements could also influence the economics of the facilities, which can be exacerbated by the absence and burnout of professionals who need to be replaced (Galinsky et al., 2010; Geiger-Brown et al., 2007; Hanson et al., 2015).

3.6. Care recipients context

Six of the 12 articles discuss the characteristics of violent care recipients (Byon et al., 2016; Fitzwater & Gates, 2000; Karlsson et al., 2019; Quinn et al., 2016; Schnelli, Ott, et al., 2021; Vladutiu et al., 2016). In these articles, WPV was found to be associated with care recipients with a previous history of violence. A significant positive association was found between the frequency of WPV towards formal healthcare providers by the care recipient and the presence of a history of violence, mental disorder or addictive behaviors in the care recipient (Byon et al., 2016; Fitzwater & Gates, 2000; Karlsson et al., 2019; Schnelli, Mayer, et al., 2021; Vladutiu et al., 2016). Care recipients aged 80 or older who were male and had dementia also show a higher risk of assaulting formal caregivers (Fitzwater & Gates, 2000; Galinsky et al., 2010; Karlsson et al., 2019; Schnelli, Ott, et al., 2021; Vladutiu et al., 2016). Having a care recipient who smoked indoors also increases the risk of verbal abuse towards formal caregivers (Karlsson et al., 2019).

3.7. Formal caregivers context

Three of the included studies reported the characteristics of formal caregivers who suffered from WPV (Byon et al., 2017;Fitzwater & Gates, 2000; Karlsson et al., 2019). Studies highlight a significant association between age, experience, and the frequency of WPV. Moreover, the more that formal caregivers are young and inexperienced at providing in-home care, the greater their risk of experiencing WPV (Fitzwater & Gates, 2000; Karlsson et al., 2019). The type of relationship between the care recipients and the caregivers may also have an impact on the risk of WPV. Boundary confusion or the absence of a boundary could improve the risk of care recipient WPV towards formal caregivers (Byon et al., 2017; Fitzwater & Gates, 2000). Caregivers with predictable hours, with a clear care plan and that use a safe handling device for patient mobilization were less likely to report verbal abuse (Karlsson et al., 2019). Furthermore, working in a home with too little space was most strongly associated with a risk of verbal abuse, especially if the care recipient had

Table 2
Article description.

Author(s), year	Study design	Country	Instrument (time frame)	Sample N[a] (response rate in %)	Setting	Information about				
						Typ.[b]	Pre.[c]	CR.[d]	Car.[e]	Con.[f]
Byon et al., 2016	RCS	United States	A cross sectional survey during the past 12 mth	Formal caregivers n = 876 (74 %)	Home care to the elderly (n = 2)		X	X		
Byon et al., 2017	RCS	United States	A cross sectional survey during the past 12 mth	Formal caregivers n = 964 (74 %)	Home care to the elderly (n = 2)		X		X	
Fitzwater and Gates, 2000	Focus group study	United States	Group interviews	Formal caregivers and nursing managers n = 28	Home care (n = 1)	X	X	X	X	X
Galinsky et al., 2010	RCS	United States	A cross sectional survey during the past 18 mth	Formal caregivers n = 677 (64 %)	Home care (n = 11)		X			X
Geiger-Brown et al., 2007	RCS	United States	A cross sectional survey during the past 3 mth	Formal caregivers n = 1643 (88 %)	Home care (n = 4500)	X	X			X
Hanson et al., 2015	RCS	United States	Survey	Female formal caregivers n = 1214 (33.3 %)	Home care	X	X			X
Karlsson et al., 2019	RCS	United States	A cross sectional survey during the past 6 mth	Home care aides n = 954	Home care (n = 7)		X	X	X	
Nakaishi et al., 2013	Mixed methods	United States	Survey interviews during 12 mth	Home care caregivers (n = 83), case managers (n = 99) and consumer employers (n = 11)	Home care	X	X			
Quinn et al., 2016	RCS	United States	A cross sectional survey during the past 6 mth	Home care aides n = 149 (84 %)	Home care aides agency (n = 7)	X	X	X		
Schnelli, Ott, et al., 2021	RCS	Switzerland	Analysis of the care recipients' documentations during the past 3 mth	Care recipient n = 1186	Home care (n = 6)		X	X		
Schnelli, Mayer, et al., 2021	RCS	Switzerland	A cross sectional survey during the past 3 mth	Formal caregivers n = 852 (45.4 %)	Home care (n = 24)		X			X
Vladutiu et al., 2016	Prospective study	United States	Survey interview during 1 yr	Formal caregivers n = 782 (95 %)	Home care and hospice (n = 6)			X		

RCS = Retrospective Cross-sectional study.
[a] n = number of center involved in the study;
[b] Type of WPV.
[c] Prevalence rate.
[d] Care recipients' characteristics.
[e] Caregivers' characteristics.
[f] Consequences of WPV.

Table 3
Prevalence of WPV per type.

	Physical violence (in %)	Sexual aggression (in %)	Nonphysical violence		Sexual harassment (in %)	All type of violence (in %)
			Verbal abuse (in %)	Threats or intimidation (in %)		
Byon et al., 2016	2.5[a]					7.9[a]
Byon et al., 2017	5[a]					
Geiger-Brown et al., 2007	5[c]		20[c]			
Hanson et al., 2015	27.5[a]	12.8[a]	51.5[a]	24.7[a]	27.6[a]	61.3[a]
Karlsson et al., 2019			22.0[a]			
Nakaishi et al., 2013	44.6[b]	14.5[b]	65.1[b]		41.0[b]	
Quinn et al., 2016	7[a]		20[a]			
Schnelli, Mayer, et al., 2021	14.8[a]		51.3[a]	12.8[a]		54.7[a]

[a] In the 12 past mth.
[b] Throughout their career.
[c] In the past 6 mth.

mobility problems or other mental illnesses (Karlsson et al., 2019). Moreover, a significant association was established between care recipients' WPV and shortened visits. Formal caregivers were most likely to report WPV by care recipients if they had shortened one or more home visits (Galinsky et al., 2010). Finally, independent formal caregivers were somewhat less likely to report verbal abuse than those hired by agencies (Karlsson et al., 2019).

4. Discussion

This systematic review describes the types, prevalence, and consequences of WPV by home care recipients against formal and informal caregivers. All included studies were conducted in the United States and Switzerland. Moreover, none of these studies included care recipient violence against informal caregivers. This lack of studies could indicate an underestimation of the problem worldwide, as well as a focus of WPV

research towards hospitals and long-term care facilities (Liu et al., 2019; Markkanen et al., 2007; Ogbonnaya & Guo, 2013; Thobaben, 2007; Wharton & Ford, 2014). The lack of studies on WPV against informal caregivers could also be explained by the difficulty of contacting them or by the fact that these individuals do not spontaneously raise this question, possibly due to their perception of WPV. e.g., some informal caregivers could perceive violence as normal in their relationship with care recipients or not perceive it at all (Moylan et al., 2014; Munkejord, Stefansdottir, & Sveinbjarnardottir, 2020). Researchers have not agreed on a common classification of the different types of WPV. This could be explained by the prevalence of different forms of WPV according to the setting of interest. In the home care setting, WPV includes not only on physical aggression and verbal abuse but also on sexual harassment, sexual aggression, threats, and intimidation. In home care settings, formal caregivers are exposed to types of WPV that have little or no presence in the hospital setting, such as sexual aggression, sexual harassment, car theft, and intimidation by gangs (Fitzwater & Gates, 2000). The results of the studies show that formal caregivers are also exposed to severe sexual aggression, e.g., rape (Fitzwater & Gates, 2000; Hanson et al., 2015; Nakaishi et al., 2013). Although the prevalence of WPV is high in other settings (e.g., emergency and mental health units), sexual harassment and aggression appear to have been less studied in these settings (Byon et al., 2016; Geiger-Brown et al., 2007; Karlsson et al., 2019; Quinn et al., 2016). In the home care setting, most of these acts result in negative psychological reactions that could lead to a reduction in the quality of care. In emergency and mental health settings, the literature described how WPV could create alterations in the dynamics of institutions and in the dynamics between formal caregivers (Edward et al., 2014; Johnson et al., 2018). These events can lead to the occurrence of certain adverse events, such as care recipients falling or medication administration errors (Brady et al., 2012). With the increase in home care services, the frequency of adverse events may also increase and have a profound negative affect on the quality of care for care recipients. Additionally, in home care in the private sphere of care recipients, it is much more complicated to collect and track these events than in hospital settings. Moreover, few of the analyzed studies in this review explored associations between different specific types of WPV and the characteristics or consequences of WPV. However, the included studies showed that young and inexperienced formal caregivers are at a high risk of WPV in the home care setting. This can be induced by the difficulty reported by young formal caregivers when attempting to create relationships with adapted boundaries (Byon et al., 2017; Fitzwater & Gates, 2000; Karlsson et al., 2019). However, only a few published studies on sexual assault and harassment are addressed in settings other than home care. This may be because the problem is less present in other settings or because it is a taboo subject; therefore, no question has been asked in this regard.

4.1. Strengths and limitations

To the best of our knowledge, there are no systematic studies on WPV against formal and informal caregivers in the home care setting. A strength of this review is the focus on formal and informal caregivers. Another strength of this review is the detailed and systematic electronic search strategy, which was based on the PRISMA guidelines (Page et al., 2021). Another strong point is the high response rate and the strong methodology used in the included studies. However, there are also some limitations. First, the data extraction was only performed by one of the researchers (BL), this may lead to an increased risk of bias. Second, the different definitions and classifications of WPV make it difficult to understand, describe and investigate this phenomenon in a unique way. Therefore, the comparison of the research results between the included studies is limited. Third, the studies included come solely from a few home care agencies in the United States and in Switzerland. This may limit the generalization of this review. Fourth, only currently employed formal caregivers are included in the selected studies and gave information about WPV in the last 6 or 12 mth. As abused workers may have left their jobs since the last incident, this may lead to an underestimation of the prevalence rate of WPV. This limitation is present in many studies and suggests that the prevalence of WVP towards caregivers would be much higher when considering the causes of leaving the service (Barling et al., 2001; Wharton & Ford, 2014).

4.2. Implications

WPV is an understudied area in homecare setting. Considering the findings of this review, we recommend further research to gain more insight into WPV in the home care setting with more attention given to the following issues. First, the research community must agree on a common definition and universal classification of WPV to allow a better understanding of this phenomenon. Moreover, it seems important for further research to explore and consider some specific forms of violence, e.g., sexual harassment or sexual aggression. Second, our findings show that violence against informal caregivers is considered, even though informal caregivers are the ones who provide most of the care and home care would not be possible without their work (Stall, 2019). This is surprising as in most Western countries, outpatient care is on the rise and is receiving increasingly more importance in the overall healthcare system (Hatcher et al., 2019; Ward-Griffin et al., 2012). For researchers, it might be an appropriate starting point to explore violence towards informal caregivers using a qualitative design. This will allow researchers to describe the situation from the viewpoint of informal caregivers in a comprehensive way and will provide important basic information for further study using a quantitative research paradigm. Third, it is important to continue to explore the phenomenon of violence towards formal and informal caregivers using a broader worldwide database on each type of violence in the home care setting. It is crucial for future research to quantitatively describe the prevalence of sexual assault and sexual harassment in home care to better consider and understand it. These forms of violence seem to be underestimated in WPV research. Third, for future research and to develop prevention and intervention strategies to reduce WPV in the home care setting, it would be important to explore more situations in which WPV in home care arises in depth. Additionally, attitudes of formal and informal caregivers regarding WPV are important to investigate. This may help to determine whether the caregivers are conscious of being assaulted and whether they trivialized the act. This is also important information for the development of targeted prevention and intervention strategies.

5. Conclusion

Because of the limited literature on this topic, we can conclude that WPV towards formal and informal caregivers in the home care setting is an underestimated phenomenon in health care. However, the few studies included in this review show that formal caregivers are faced with WPV events not commonly found in the hospital setting, such as rape, robbery, and intimidation by an animal. Despite a few studies reporting the problem of WPV towards formal caregivers, no study has paid attention to informal caregivers. It therefore became necessary to explore the prevalence of WPV among informal caregivers and the consequences of this WPV. Thus, it becomes paramount to consider the violence inflicted on formal and informal caregivers in the home care setting and support this with the targeted adaptation of prevention and intervention strategies to reduce WPV from other settings.

Funding

The authors report receiving no funding for this article.

Author statement

Term	Definition
Conceptualization	Baptiste Lucien, Sabine Hahn, Sandra Zwakhalen
Methodology	Baptiste Lucien, Sabine Hahn, Sandra Zwakhalen
Software	Baptiste Lucien, Olivier Morenon
Validation	Baptiste Lucien, Sabine Hahn, Sandra Zwakhalen
Formal analysis	Baptiste Lucien, Olivier Morenon
Investigation	Baptiste Lucien, Olivier Morenon
Resources	Baptiste Lucien, Olivier Morenon
Data Curation	Baptiste Lucien, Olivier Morenon
Writing - Original Draft	Baptiste Lucien
Writing - Review & Editing	Baptiste Lucien, Sabine Hahn, Olivier Morenon, Sandra Zwakhalen
Visualization	Baptiste Lucien, Sabine Hahn, Sandra Zwakhalen
Supervision	Baptiste Lucien, Sabine Hahn, Sandra Zwakhalen
Project administration	Baptiste Lucien, Sabine Hahn, Sandra Zwakhalen
Funding acquisition	None

CRediT authorship contribution statement

BL designed the study and was involved in the data collection, analysis and drafting the manuscript. OM, SW, and SH were involved in the design of the study, drafting the manuscript, and critically reviewing the manuscript. OM checked the data and analyses. All authors have read and approved the manuscript.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

Appendix 1. PubMed (NLM) search strategy

Search	Query	Results
#1	**(("health personnel"[mesh]) or ("health personnel"[tiab]) or (healthcare personnel[tiab]) or (healthcare personnel[tiab]) or ("caregivers"[mesh]) or (caregivers[tiab]) or (carers [tiab]) or ("nurses"[mesh]) or (nurses[tiab]) or (healthcare workers [tiab]) or (personnel, health[tiab]) or (healthcare providers[tiab]) or (healthcare providers[tiab]) or (healthcare providers[tiab]) or (healthcare providers[tiab]) or (providers, healthcare[tiab]) or (providers, healthcare[tiab]) or (providers, healthcare[tiab]) or (providers, healthcare[tiab]) or (healthcare workers[tiab]) or (healthcare worker[tiab]) or (nurse[tiab]) or (personnel, nursing[tiab]) or (nursing personnel[tiab]) or (registered nurses [tiab]) or (nurse, registered[tiab]) or (nurses, registered[tiab]) or (registered nurse[tiab]) or (Caregiver[tiab]) or (Carers[tiab]) or (Carer[tiab]) or (Care Givers[tiab]) or (Care Giver[tiab]) or (Informal Caregiver [tiab]) or (Informal Caregivers [tiab]) or (Caregiver, Informal[tiab]) or (Caregivers, Informal[tiab]) or (Spouse Caregivers[tiab]) or (Caregiver, Spouse[tiab]) or (Caregivers, Spouse[tiab]) or (Spouse Caregiver[tiab]) or (Family Caregivers[tiab]) or (Caregiver, Family[tiab]) or (Caregivers, Family[tiab]) or (Family Caregiver[tiab]))**	896,533
#2	((assaultive behavior[tiab]) or (behavior, assaultive[tiab]) or (abuse, physical[tiab]) or (physical violence[tiab]) or (violence, physical[tiab]) or (physical maltreatment[tiab]) or (maltreatment, physical[tiab]) or (violence, workplace[tiab]) or (violences, workplace[tiab]) or (workplace violences[tiab]) or (abuse, physical[tiab]) or (physical violence[tiab]) or (violence, physical[tiab]) or (physical maltreatment[tiab]) or (maltreatment, physical[tiab]) or (sexual harassment[tiab]) or (harassment, sexual[tiab]) or (harassment, sexual[tiab]) or (sexual harassment[tiab]) or (harassment, sexual[tiab]) or (harassment, sexual[tiab]) or (sexual harassment[tiab]) or ("physical abuse"[mesh]) or (physical abuse[tiab]) or ("aggression"[mesh]) or (aggression[tiab]) or ("sexual harassment"[mesh]) or (sexual harassment[tiab]) or ("violence"[mesh]) or (violence[tiab]) or ("workplace violence"[mesh]) or (workplace violence[tiab]) or ("exposure to violence"[mesh]) or (exposure to violence[tiab]) or ("rape"[mesh]) or (rape[tiab]) or (Aggressive behavior[tiab]) or (Patient assault[tiab]) or (Assault[tiab]) or (Aggressive behavior[tiab]))	205,215
#3	(("Home Care Services"[Mesh]) or (Home Care Services[tiab]) OR ("Home Health Nursing"[Mesh]) OR (Home Health Nursing[tiab]) OR (Community Health Nursing[tiab]) OR ("Home Care Agencies"[Mesh]) OR (Home Care Agencies[tiab]) OR ("Home Health Aides"[Mesh]) OR (Home Health Aides[tiab]) OR ("Home Nursing"[Mesh]) OR (Home Nursing[tiab]) or (Home Care Service[tiab]) or (Service, Home Care[tiab]) or (Care Services, Home[tiab]) or (Domiciliary Care[tiab]) or (Care, Domiciliary[tiab]) or (Services, Home Care[tiab]) or (Home Care[tiab]) or (Care, Home[tiab]) or (Nursing, Home Health[tiab]) or (Home Healthcare Nursing[tiab]) or (Agencies, Home Care[tiab]) or (Agency, Home Care[tiab]) or (Care Agencies, Home[tiab]) or (Care Agency, Home[tiab]) or (Home Care Agency[tiab]) or (Home Healthcare Agencies[tiab]) or (Home Health Agencies[tiab]) or (Agencies, Home Health[tiab]) or (Agency, Home Health [tiab]) or (Home Health Agency[tiab]) or (Aide, Home Health[tiab]) or (Aides, Home Health[tiab]) or (Health Aide, Home[tiab]) or (Health Aides, Home[tiab]) or (Home Health Aide[tiab]) or (Homemaker-Home Health Aides[tiab]) or (Aide, Homemaker-Home Health[tiab]) or (Aides, Homemaker-Home Health[tiab]) or (Health Aide, Homemaker-Home[tiab]) or (Health Aides, Homemaker-Home[tiab]) or (Homemaker Home Health Aides[tiab]) or (Homemaker-Home Health Aide[tiab]) or (Home Care Aides[tiab]) or (Aide, Home Care[tiab]) or (Aides, Home Care[tiab]) or (Care Aide, Home[tiab]) or (Care Aides, Home[tiab]) or (Home Care Aide[tiab]) or (Nursing, Home[tiab]))	88,415
#4	#1 AND #2 AND #3 **Filters: English, French**	572

Appendix 2. CINAHL (EBSCOhost) search strategy

Search	Query	Results
#1	**MH "health personnel" OR TI "health personnel" OR AB "health personnel"** OR **TI "healthcare personnel" OR AB "healthcare personnel" OR TI "healthcare personnel" OR AB "healthcare personnel" OR MH "caregivers+" OR TI "caregivers" OR AB "caregivers" OR MW "caregivers**" OR **TI "carers" OR AB "carers" OR MW "carers**" OR **MH "nurses+" ORTI "nurses" OR AB "nurses" OR MW "nurses**" OR **TI "healthcare workers" OR AB "healthcare workers"** OR **TI "healthcare providers" OR AB "healthcare providers"** OR **TI "healthcare providers" OR AB "healthcare providers"** OR **TI "healthcare providers" OR AB "healthcare providers"** OR **TI "healthcare providers" OR AB "healthcare providers" OR TI "healthcare workers" OR AB "healthcare workers"** OR **TI "healthcare worker" OR AB "healthcare worker"** OR **TI "nurse" OR AB "nurse" OR MW "nurse**" OR**TI "nursing personnel" OR AB "nursing personnel"** OR **TI "registered nurses" OR AB "registered nurses"** OR **TI "registered nurse" OR AB "registered nurse"** OR **TI "Caregiver" OR AB "Caregiver" OR MW "Caregiver**" OR **"Carers" OR AB "Carers" OR MW "Carers**" OR **TI "Carer" OR AB "Carer" OR MW "Carer**" OR **TI "Care Givers" OR AB "Care Givers" OR TI "Care Giver" OR AB "Care Giver" OR TI "Spouse Caregivers" OR AB "Spouse Caregivers" OR TI "Spouse Caregiver" OR AB "Spouse Caregiver"** OR **TI "Family Caregivers" OR AB "Family Caregivers"** OR **TI "Family Caregiver" OR AB "Family Caregiver"**	620,384
#2	**TI "**physical violence**" OR AB "**physical violence**" OR TI "**physical maltreatment**" OR AB "**physical maltreatment**" OR TI "**workplace violences**" OR AB "**workplace violences**" OR TI "**physical violence**" OR AB "**physical violence**" OR TI "**physical maltreatment**" OR AB "**physical maltreatment**" OR TI "**sexual harassment**" OR AB "**sexual harassment**" OR MH "**p**hysical abuse+" OR TI "**bullying**" OR AB "**bullying**" OR MH "**aggression+**" OR TI "**aggression**" OR AB "**aggression**" OR MW "**aggression**" MH "**sexual harassment+**" OR MH "**violence+**" OR TI "**violence**" OR AB "**violence**" OR MW "**violence**" OR MH**	128,988

(*continued on next page*)

(*continued*)

Search	Query	Results
	"workplace violence**" OR TI "**workplace violence**" OR AB "**workplace violence**" OR MH "**exposure to violence+**" OR TI "**exposure to violence**" OR AB "**exposure to violence**" OR MH "**rape+**" OR TI "**rape**" OR AB "**rape**" OR MW "**rape**" OR TI "**Aggressive behavior**" OR AB "**Aggressive behavior**" OR TI "**Patient assault**" OR AB "**Patient assault**" OR TI "**Assault**" OR AB "**Assault**" OR MW "**Assault**"	
#3	**MH "**Home Care Services+**" OR TI "**Home Care Services**" OR AB "**Home Care Services**" OR MW "**Home Care Services" OR MH "**Home Health Nursing +**" OR TI "**Home Health Nursing**" OR AB "**Home Health Nursing**" OR MW "**Home Health Nursing" OR MH "**Home Care Agencies +**" OR TI "**Home Care Agencies**" OR AB "**Home Care Agencies**" OR MW "**Home Care Agencies" OR MH "**Home Health Aides +**" OR TI "**Home Health Aides**" OR AB "**Home Health Aides**" OR MW "**Home Health Aides" OR MH "**Home Nursing +**" OR TI "**Home Nursing**" OR AB "**Home Nursing**" OR MW "**Home Nursing" OR TI "**Home Care Service**" OR AB "**Home Care Service**" OR MW "**Home Care Service" OR TI "**Domiciliary Care**" OR AB "**Domiciliary Care**" OR MW "**Domiciliary Care" OR TI "**Home Care**" OR AB "**Home Care**" OR MW "**Home Care" OR TI "**Home Healthcare Nursing**" OR AB "**Home Healthcare Nursing**" OR MW "**Home Healthcare Nursing" OR TI "**Home Care Agency**" OR AB "**Home Care Agency**" OR MW "**Home Care Agency" OR TI "**Home Healthcare Agencies**" OR AB "**Home Healthcare Agencies**" OR MW "**Home Healthcare Agencies" OR TI "**Home Health Agencies**" OR AB "**Home Health Agencies**" OR MW "**Home Health Agencies" OR TI "**Agencies, Home Health**" OR AB "**Agencies, Home Health**" OR MW "**Agencies, Home Health" OR TI "**Home Health Agency**" OR AB "**Home Health Agency**" OR MW "**Home Health Agency" OR TI "**Home Health Aide**" OR AB "**Home Health Aide**" OR MW "**Home Health Aide" OR TI "**Homemaker-Home Health Aides**" OR AB "**Homemaker-Home Health Aides**" OR MW "**Homemaker-Home Health Aides" OR TI "**Homemaker Home Health**" OR AB "**Homemaker Home Health**" OR MW "**Homemaker Home Health" OR TI "**Homemaker-Home Health Aide**" OR AB "**Homemaker-Home Health Aide**" OR MW "**Homemaker-Home Health Aide" OR TI "**Home Care Aides**" OR AB "**Home Care Aides**" OR MW "**Home Care Aides" OR TI "**Home Care Aide**" OR AB "**Home Care Aide**" OR MW "**Home Care Aide"	37,967
#4	#1 AND #2 AND #3 **Filters: English, French**	404

Appendix 3. EMBASE (Elsevier) search strategy

Search	Query	Results
#1	**'healthcare personnel':ti,ab,de OR 'healthcare personnel':ti,ab,de OR 'caregivers'/exp OR 'caregivers':ti,ab,de OR 'nurses'/exp OR 'nurses':ti,ab,de OR 'personnel, health':ti,ab,de OR 'healthcare providers':ti,ab,de OR 'healthcare providers':ti,ab,de OR 'providers, healthcare':ti,ab,de OR 'providers, healthcare':ti,ab,de OR 'healthcare workers':ti,ab,de OR 'healthcare worker':ti,ab,de OR 'nurse':ti,ab,de OR 'personnel, nursing':ti,ab,de OR 'nursing personnel':ti,ab,de OR 'registered nurses':ti,ab,de OR 'nurse, registered':ti,ab,de OR 'nurses, registered':ti,ab,de OR 'registered nurse':ti,ab,de OR 'caregiver':ti,ab,de OR 'carers':ti,ab,de OR 'carer':ti,ab,de OR 'care givers':ti,ab,de OR 'care giver':ti,ab,de OR 'spouse caregivers':ti,ab,de OR 'caregiver, spouse':ti,ab,de OR 'caregivers, spouse':ti,ab,de OR 'spouse caregiver':ti,ab,de OR 'family caregivers':ti,ab,de OR 'caregiver, family':ti,ab,de OR 'caregivers, family':ti,ab,de OR 'family caregiver':ti,ab,de**	683,839
#2	"assaultive behavior**":ti,ab,de** or "behavior, assaultive**":ti,ab,de** or "abuse, physical**":ti,ab,de** or "physical violence**":ti,ab,de** or "violence, physical**":ti,ab,de** or "physical maltreatment**":ti,ab,de** or "maltreatment, physical**":ti,ab,de** or "violence, workplace**":ti,ab,de** or "violences, workplace**":ti,ab,de** or "workplace violences**":ti,ab,de** or "abuse, physical**":ti,ab,de** or "physical violence**":ti,ab,de** or "violence, physical**":ti,ab,de** or "physical maltreatment**":ti,ab,de** or "maltreatment, physical**":ti,ab,de** or "sexual harassment**":ti,ab,de** or "harassment, sexual**":ti,ab,de** or "harassment, sexual**":ti,ab,de** or "sexual harassment**":ti,ab,de** or "harassment, sexual**":ti,ab,de** or "harassment, sexual**":ti,ab,de** or "sexual harassment**":ti,ab,de** or "physical abuse**":ti,ab,de** or "aggression**":ti,ab,de** or "sexual harassment**":ti,ab,de** or "violence**":ti,ab,de** or "workplace violence**":ti,ab,de** or "workplace violence**":ti,ab,de** or "exposure to violence**":ti,ab,de** or "exposure to violence**":ti,ab,de** or "rape**":ti,ab,de** or "rape**":ti,ab,de** or "Aggressive behavior**":ti,ab,de** or "Patient assault**":ti,ab,de** or "Assault**":ti,ab,de** or "Aggressive behavior**":ti,ab,de**	209,645
#3	"Home Care Services**":ti,ab,de** OR "Home Health Nursing**":ti,ab,de** OR "Home Care Agencies**":ti,ab,de** OR "Home Health Aides**":ti,ab,de** OR "Home Nursing**":ti,ab,de** or "Home Care Service**":ti,ab,de** or "Service, Home Care**":ti,ab,de** or "Care Services, Home**":ti,ab,de** or "Domiciliary Care**":ti,ab,de** or "Care, Domiciliary**":ti,ab,de** or "Services, Home Care**":ti,ab,de** or "Home Care**":ti,ab,de** or "Care, Home**":ti,ab,de** or "Nursing, Home Health**":ti,ab,de** or "Home Healthcare Nursing**":ti,ab,de** or "Agencies, Home Care**":ti,ab,de** or "Agency, Home Care**":ti,ab,de** or "Care Agencies, Home**":ti,ab,de** or "Care Agency, Home**":ti,ab,de** or "Home Care Agency**":ti,ab,de** or "Home Healthcare Agencies**":ti,ab,de** or "Home Health Agencies**":ti,ab,de** or "Agencies, Home Health**":ti,ab,de** or "Agency, Home Health**":ti,ab,de** or "Home Health Agency**":ti,ab,de** or "aide, Home Health**":ti,ab,de** or "Aides, Home Health**":ti,ab,de** or "Health Aide, Home**":ti,ab,de** or "Health Aides, Home**":ti,ab,de** or "Home Health Aide**":ti,ab,de** or "Homemaker-Home Health Aides**":ti,ab,de** or "Aide, Homemaker-Home Health**":ti,ab,de** or "Aides, Homemaker-Home Health**":ti,ab,de** or "Health Aide, Homemaker-Home**":ti,ab,de** or "Health Aides, Homemaker-Home**":ti,ab,de** or "Homemaker Home Health Aides**":ti,ab,de** or "Homemaker-Home Health Aide**":ti,ab,de** or "Home Care Aides**":ti,ab,de** or "Aide, Home Care**":ti,ab,de** or "Aides, Home Care**":ti,ab,de** or "Care Aide, Home**":ti,ab,de** or "Care Aides, Home**":ti,ab,de** or "Home Care Aide**":ti,ab,de** or "Home Care, Nonprofessional**":ti,ab,de** or "care, Nonprofessional Home**":ti,ab,de** or "Nonprofessional Home Care**":ti,ab,de** or "Home Care, Non-Professional**":ti,ab,de** or "care, Non-Professional Home**":ti,ab,de** or "Home Care, Non Professional**":ti,ab,de** or "Non-Professional Home Care**":ti,ab,de** or "Nursing, Home**":ti,ab,de**	148,485
#4	#1 AND #2 AND #3	625

Appendix 4. PsychINFO (Ovid) search strategy

Search	Query	Results
#1	**'healthcare personnel'.tw,sh OR 'healthcare personnel'.tw,sh OR exp caregivers/ OR 'caregivers'.mh or 'caregivers'.tw,sh OR exp 'nurses'/ OR 'nurses'.mh OR 'nurses'.tw,sh OR 'personnel, health'.tw,sh OR 'healthcare providers'.tw,sh OR 'healthcare providers'.tw,sh OR 'providers, healthcare'.tw,sh OR 'providers, healthcare'.tw,sh OR 'healthcare workers'.tw,sh OR 'healthcare worker'.tw,sh OR 'nurse'.tw,sh OR 'personnel, nursing'.tw,sh OR 'nursing personnel'.tw,sh OR 'registered nurses'.tw,sh OR 'nurse, registered'.tw,sh OR 'nurses, registered'.tw,sh OR 'registered nurse'.tw,sh OR 'caregiver'.tw,sh OR 'carers'.tw,sh OR 'carer'.tw,sh OR 'care givers'.tw,sh OR 'care giver'.tw,sh OR 'spouse caregivers'.tw,sh OR 'caregiver, spouse'.tw,sh OR 'caregivers, spouse'.tw,sh OR 'spouse caregiver'.tw,sh OR 'family caregivers'.tw,sh OR 'caregiver, family'.tw,sh OR 'caregivers, family'.tw,sh OR 'family caregiver'.tw,sh**	158,708
#2	'assaultive behavior**'.tw,sh** or 'behavior, assaultive**'.tw,sh** or 'abuse, physical**'.tw,sh** or 'physical violence**'.tw,sh** or 'violence, physical**'.tw,sh** or 'physical maltreatment**'.tw,sh** or 'maltreatment, physical**'.tw,sh** or 'violence, workplace**'.tw,sh** or 'violences, workplace**'.tw,sh** or 'workplace violences**'.tw,sh** or 'abuse, physical**'.tw,sh** or 'physical violence**'.tw,sh** or 'violence, physical**'.tw,sh** or 'physical maltreatment**'.tw,sh** or 'maltreatment, physical**'.tw,sh** or 'sexual harassment**'.tw,sh** or 'harassment, sexual**'.tw,sh** or 'harassment, sexual**'.tw,sh** or 'sexual harassment**'.tw,sh** or 'harassment, sexual**'.tw,sh** or 'harassment, sexual**'.tw,sh** or 'sexual harassment**'.tw,sh** or 'physical abuse**'.tw,sh** or 'aggression**'.tw,sh** or 'sexual harassment**'.tw,sh** or 'violence**'.tw,sh** or 'workplace violence**'.tw,sh** or 'workplace violence**'.tw,sh** or 'exposure to violence**'.tw,sh** or 'exposure to violence**'.tw,sh** or 'rape**'.tw,sh** or 'rape**'.tw,sh** or 'Aggressive behavior**'.tw,sh** or 'Patient assault**'.tw,sh** or 'Assault**'.tw,sh** or 'Aggressive behavior**'.tw,sh**	174,953

(*continued on next page*)

(*continued*)

Search	Query	Results
#3	'Home Care Services'**.mh,tw,sh** or 'Home Care Services'**.tw,sh** OR 'Home Health Nursing'**.tw,sh** OR 'Home Care Agencies'**.tw,sh** OR 'Home Health Aides'**.tw,sh** OR 'Home Nursing'**.tw,sh** or 'Home Care Service'**.tw,sh** or 'Service, Home Care'**.tw,sh** or 'Care Services, Home'**.tw,sh** or 'Domiciliary Care'**.tw,sh** or 'Care, Domiciliary'**.tw,sh** or 'Services, Home Care'**.tw,sh** or 'Home Care'**.tw,sh** or 'Care, Home'**.tw,sh** or 'Nursing, Home Health'**.tw,sh** or 'Home Healthcare Nursing'**.tw,sh** or 'Agencies, Home Care'**.tw,sh** or 'Agency, Home Care'**.tw,sh** or 'Care Agencies, Home'**.tw,sh** or 'Care Agency, Home'**.tw,sh** or 'Home Care Agency'**.tw,sh** or 'Home Healthcare Agencies'**.tw,sh** or 'Home Health Agencies'**.tw,sh** or 'Agencies, Home Health'**.tw,sh** or 'Agency, Home Health'**.tw,sh** or 'Home Health Agency'**.tw,sh** or 'aide, Home Health'**.tw,sh** or 'Aides, Home Health'**.tw,sh** or 'Health Aide, Home'**.tw,sh** or 'Health Aides, Home'**.tw,sh** or 'Home Health Aide'**.tw,sh** or 'Homemaker-Home Health Aides'**.tw,sh** or 'Aide, Homemaker-Home Health'**.tw,sh** or 'Aides, Homemaker-Home Health'**.tw,sh** or 'Health Aide, Homemaker-Home'**.tw,sh** or 'Health Aides, Homemaker-Home'**.tw,sh** or 'Homemaker Home Health Aides'**.tw,sh** or 'Homemaker-Home Health Aide'**.tw,sh** or 'Home Care Aides'**.tw,sh** or 'Aide, Home Care'**.tw,sh** or 'Aides, Home Care'**.tw,sh** or 'Care Aide, Home'**.tw,sh** or 'Care Aides, Home'**.tw,sh** or 'Home Care Aide'**.tw,sh** or 'Home Care, Nonprofessional'**.tw,sh** or 'care, Nonprofessional Home'**.tw,sh** or 'Nonprofessional Home Care'**.tw,sh** or 'Home Care, Non-Professional'**.tw,sh** or 'care, Non-Professional Home'**.tw,sh** or 'Home Care, Non Professional'**.tw,sh** or 'Non-Professional Home Care'**.tw,sh** or 'Nursing, Home'**.tw,sh**	23,647
#4	#1 AND #2 AND #3 **Filters: English, French**	212

References

Akers, J., Aguiar-Ibanez, R., Writh, K., & Worthy, G. (2009). *Systematic reviews*. CRD: University of York. https://www.york.ac.uk/crd/guidance/.

Arnetz, J. E., & Arnetz, B. B. (2001). Violence towards health care staff and possible effects on the quality of patient care. *Social Science & Medicine, 52*(3), 417–427. https://doi.org/10.1016/S0277-9536(00)00146-5

Barling, J., Rogers, A. G., & Kelloway, E. K. (2001). Behind closed doors: In-home workers' experience of sexual harassment and workplace violence. *Journal of Occupational Health Psychology, 6*(3), 255–269. https://doi.org/10.1037/1076-8998.6.3.255

Bayramzadeh, S. (2017). An assessment of levels of safety in psychiatric units. *HERD, 10*(2), 66–80. https://doi.org/10.1177/1937586716656002

Björkdahl, A., Hansebo, G., & Palmstierna, T. (2013). The influence of staff training on the violence prevention and management climate in psychiatric inpatient units. *Journal of Psychiatric and Mental Health Nursing, 20*(5), 396–404. https://doi.org/10.1111/j.1365-2850.2012.01930.x

Blair, E. W., Woolley, S., Szarek, B. L., Mucha, T. F., Dutka, O., Schwartz, H. I., … Goethe, J. W. (2017). Reduction of seclusion and restraint in an inpatient psychiatric setting: A pilot study. *The Psychiatric Quarterly, 88*(1), 1–7. https://doi.org/10.1007/s11126-016-9428-0

Brady, S., O'Connor, N., Burgermeister, D., & Hanson, P. (2012). The impact of mindfulness meditation in promoting a culture of safety on an acute psychiatric unit. *Perspectives in Psychiatric Care, 48*(3), 129–137. https://doi.org/10.1111/j.1744-6163.2011.00315.x

*Byon, H. D., Storr, C., Edwards, L., & Lipscomb, J. (2016). Client history and violence on direct care workers in the home care setting. *American Journal of Industrial Medicine, 59*(12), 1130–1135. https://doi.org/10.1002/ajim.22652

*Byon, H. D., Storr, C. L., & Lipscomb, J. (2017). Latent classes of caregiver relationships with patients: Workplace violence implications. In , *Vol. 38(4). Geriatric nursing* (pp. 291–295). https://doi.org/10.1016/j.gerinurse.2016.11.009 (New York, N.Y.).

Canton, A. N., Sherman, M. F., Magda, L. A., Westra, L. J., Pearson, J. M., Raveis, V. H., & Gershon, R. R. M. (2009). Violence, job satisfaction, and employment intentions among home healthcare registered nurses. *Home Healthcare Now, 27*(6), 364–373. https://doi.org/10.1097/01.NHH.0000356828.27090.bd

Chirico, F., & Leiter, M. (2022). Tackling stress, burnout, suicide, and preventing the "Great resignation" phenomenon among healthcare workers (during and after the COVID-19 pandemic) for maintaining the sustainability of healthcare systems and reaching the 2030 Sustainable Development Goals. *Journal of Health and Social Sciences, 1*, 9–13. https://doi.org/10.19204/2022/TCKL1

Duffield, C. M., Roche, M. A., Homer, C., Buchan, J., & Dimitrelis, S. (2014). A comparative review of nurse turnover rates and costs across countries. *Journal of Advanced Nursing, 70*(12), 2703–2712. https://doi.org/10.1111/jan.12483

Duxbury, J., Hahn, S., Needham, I., & Pulsford, D. (2008). The Management of Aggression and Violence Attitude Scale (MAVAS): A cross-national comparative study. *Journal of Advanced Nursing, 62*(5), 596–606. https://doi.org/10.1111/j.1365-2648.2008.04629.x

Edward, K., Ousey, K., Warelow, P., & Lui, S. (2014). Nursing and aggression in the workplace: A systematic review. *British Journal of Nursing (Mark Allen Publishing), 23*(12). https://doi.org/10.12968/bjon.2014.23.12.653, 653–654, 656–659.

*Fitzwater, E., & Gates, D. (2000). Violence and home care: A focus group study. *Home Healthcare Now, 18*(9), 596–605. https://doi.org/10.1097/00004045-200010000-00012

Freysteinson, W. M. (2011). Opening Pandora's box: A comprehensive approach to home violence prevention. *Home Health Care Management & Practice, 23*(1), 6–12. https://doi.org/10.1177/1084822309360381

*Galinsky, T., Feng, H. A., Streit, J., Brightwell, W., Pierson, K., Parsons, K., & Proctor, C. (2010). Risk factors associated with patient assaults of home healthcare workers. *Rehabilitation Nursing: The Official Journal of the Association of Rehabilitation Nurses, 35*(5), 206–215. https://doi.org/10.1002/j.2048-7940.2010.tb00049.x

Gascon, S., Leiter, M. P., Andrés, E., Santed, M. A., Pereira, J. P., Cunha, M. J., … Martínez-Jarreta, B. (2013). The role of aggressions suffered by healthcare workers as predictors of burnout. *Journal of Clinical Nursing, 22*(21−22), 3120–3129. https://doi.org/10.1111/j.1365-2702.2012.04255.x

*Geiger-Brown, J., Muntaner, C., McPhaul, K., Lipscomb, J., & Trinkoff, A. (2007). Abuse and violence during home care work as predictor of worker depression. *Home Health Care Services Quarterly, 26*(1), 59–77. https://doi.org/10.1300/J027v26n01_05

Hahn, S., Müller, M., Needham, I., Dassen, T., Kok, G., & Halfens, R. J. (2011). Measuring patient and visitor violence in general hospitals: Feasibility of the SOVES-G-R, internal consistency and construct validity of the POAS-S and the POIS. *Journal of Clinical Nursing, 20*(17–18), 2519–2530. https://doi.org/10.1111/j.1365-2702.2011.03768.x

*Hanson, G. C., Perrin, N. A., Moss, H., Laharnar, N., & Glass, N. (2015). Workplace violence against homecare workers and its relationship with workers health outcomes: A cross-sectional study. *BMC Public Health, 15*, 11. https://doi.org/10.1186/s12889-014-1340-7

Hatcher, D., Chang, E., Schmied, V., & Garrido, S. (2019). Exploring the perspectives of older people on the concept of home. *Journal of Aging Research, 2019*, Article 2679680. https://doi.org/10.1155/2019/2679680

Hiyoshi-Taniguchi, K., Becker, C. B., & Kinoshita, A. (2018). What behavioral and psychological symptoms of dementia affect caregiver burnout? *Clinical Gerontologist, 41*(3), 249–254. https://doi.org/10.1080/07317115.2017.1398797

Hong, Q. N., & Pluye, P. (2019). A conceptual framework for critical appraisal in systematic mixed studies reviews. *Journal of Mixed Methods Research, 13*(4), 446–460. https://doi.org/10.1177/1558689818770058

Johnson, J., Hall, L. H., Berzins, K., Baker, J., Melling, K., & Thompson, C. (2018). Mental healthcare staff well-being and burnout: A narrative review of trends, causes, implications, and recommendations for future interventions. *International Journal of Mental Health Nursing, 27*(1), 20–32. https://doi.org/10.1111/inm.12416

Kageyama, M., Solomon, P., Yokoyama, K., Nakamura, Y., Kobayashi, S., & Fujii, C. (2018). Violence towards family caregivers by their relative with schizophrenia in Japan. *Psychiatric Quarterly, 89*(2), 329–340. https://doi.org/10.1007/s11126-017-9537-4

*Karlsson, N. D., Markkanen, P. K., Kriebel, D., Gore, R. J., Galligan, C. J., Sama, S. R., & Quinn, M. M. (2019). Home care aides' experiences of verbal abuse: A survey of characteristics and risk factors. *Occupational and Environmental Medicine, 76*(7), 448–454. https://doi.org/10.1136/oemed-2018-105604

Krug, E., Dahlberg, L., Mercy, J., Zwi, A., & Lozano, R. (2002). *World report on violence and health* (p. 346). World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/42495/9241545615_eng.pdf.

Liu, J., Gan, Y., Jiang, H., Li, L., Dwyer, R., Lu, K., Yan, S., Sampson, O., Xu, H., Wang, C., Zhu, Y., Chang, Y., Yang, Y., Yang, T., Chen, Y., Song, F., & Lu, Z. (2019). Prevalence of workplace violence against healthcare workers: A systematic review and meta-analysis. *Occupational and Environmental Medicine, 76*(12), 927–937. https://doi.org/10.1136/oemed-2019-105849

Maddox, A., & Mackenzie, L. (2022). Occupational violence experienced by care workers in the Australian home care sector when assisting people with dementia. *International Journal of Environmental Research and Public Health, 20*(1), 438. https://doi.org/10.3390/ijerph20010438

Magnavita, N., Di Stasio, E., Capitanelli, I., Lops, E. A., Chirico, F., & Garbarino, S. (2019). Sleep problems and workplace violence: A systematic review and meta-analysis. *Frontiers in Neuroscience, 13*, 997. https://doi.org/10.3389/fnins.2019.00997

Magnavita, N., Heponiemi, T., & Chirico, F. (2020). Workplace violence is associated with impaired work functioning in nurses: An Italian cross-sectional study. *Journal of Nursing Scholarship: An Official Publication of Sigma Theta Tau International Honor Society of Nursing, 52*(3), 281–291. https://doi.org/10.1111/jnu.12549

Markkanen, P., Quinn, M., Galligan, C., Chalupka, S., Davis, L., & Laramie, A. (2007). There's no place like home: A qualitative study of the working conditions of home health care providers. *Journal of Occupational and Environmental Medicine, 49*(3), 327–337. https://doi.org/10.1097/JOM.0b013e3180326552

di Martino, V. (2003). *Relationship between work stress and workplace violence in the health sector* (p. 2003). Geneva: ILO. https://www.worktrauma.org/health/wv_management_victims.pdf.

Moylan, L. B., Cullinan, M. B., & Kimpel, J. E. (2014). Differences in male and female nurses' responses to physical assault by psychiatric patients: A supplemental finding of a mixed-methods study. *Journal of Psychosocial Nursing and Mental Health Services, 52*(12), 36–42. https://doi.org/10.3928/02793695-20140903-01

Munkejord, M. C., Stefansdottir, O. A., & Sveinbjarnardottir, E. K. (2020). Who cares for the carer? The suffering, struggles and unmet needs of older women caring for husbands living with cognitive decline. *International Practice Development Journal, 10* (Suppl. 1), 1–11. https://doi.org/10.19043/ipdj.10Suppl.005

Najafi, F., Fallahi-Khoshknab, M., Ahmadi, F., Dalvandi, A., & Rahgozar, M. (2018). Antecedents and consequences of workplace violence against nurses: A qualitative study. *Journal of Clinical Nursing, 27*(1–2), e116–e128. https://doi.org/10.1111/jocn.13884

*Nakaishi, L., Moss, H., Weinstein, M., Perrin, N., Rose, L., Anger, W. K., … Glass, N. (2013). Exploring workplace violence among home care workers in a consumer-driven home health care program. *Workplace Health & Safety, 61*(10), 441–450. https://doi.org/10.1177/216507991306101004

Nijman, H. L. I., Muris, P., Merckelbach, H. L. G. J., Palmstierna, T., Wistedt, B., Vos, A. M., … Allertz, W. (1999). The staff observation aggression scale–revised (SOAS-R). *Aggressive Behavior, 25*(3), 197–209. https://doi.org/10.1002/(SICI)1098-2337(1999)25:3<197::AID-AB4>3.0.CO;2-C

OECD. (2019). *Health at a glance 2019: OECD indicators* (pp. 232–233). Paris: Éditions OCDE. https://doi.org/10.1787/4dd50c09-en

Ogbonnaya, I. N., & Guo, S. (2013). Effect of domestic violence on the risk of out-of-home placement: A propensity score analysis. *Journal of the Society for Social Work and Research, 4*(3), 198–213. https://doi.org/10.5243/jsswr.2013.14

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *PLoS Medicine, 18*(3), Article e1003583. https://doi.org/10.1371/journal.pmed.1003583

Palma, A., Ansoleaga, E., Ahumada, M., Palma, A., Ansoleaga, E., & Ahumada, M. (2018). Workplace violence among health care workers. *Revista Médica de Chile, 146*(2), 213–222. https://doi.org/10.4067/s0034-98872018000200213

Pazvantoğlu, O., Gümüş, K., Böke, Ö., Yildiz, I., & Şahin, A. R. (2011). Perception of patient aggression among nurses working in a university hospital in Turkey. *International Journal of Nursing Practice, 17*(5), 495–501. https://doi.org/10.1111/j.1440-172X.2011.01967.x

Pearson, A., White, H., Bath-Hextall, F., Salmond, S., Apostolo, J., & Kirkpatrick, P. (2015). A mixed-methods approach to systematic reviews. *JBI Evidence Implementation, 13*(3), 121. https://doi.org/10.1097/XEB.0000000000000052

*Quinn, M. M., Markkanen, P. K., Galligan, C. J., Sama, S. R., Kriebel, D., Gore, R. J., … Davis, L. (2016). Occupational health of home care aides: Results of the safe home care survey. *Occupational and Environmental Medicine, 73*(4), 237–245. https://doi.org/10.1136/oemed-2015-103031

Sandelowski, M., Voils, C. I., & Barroso, J. (2006). Defining and designing mixed research synthesis studies. *Research in the Schools: A Nationally Refereed Journal Sponsored by the Mid-South Educational Research Association and the University of Alabama, 13*(1), 29.

*Schnelli, A., Mayer, H., Ott, S., & Zeller, A. (2021). Experience of aggressive behaviour of health professionals in home care services and the role of persons with dementia. *Nursing Open, 8*(2), 833–843. https://doi.org/10.1002/nop2.689

*Schnelli, A., Ott, S., Mayer, H., & Zeller, A. (2021). Factors associated with aggressive behaviour in persons with cognitive impairments using home care services: A retrospective cross-sectional study. *Nursing Open, 8*(3), 1345–1359. https://doi.org/10.1002/nop2.751

Seidel, D., & Thyrian, J. R. (2019). Burden of caring for people with dementia – Comparing family caregivers and professional caregivers. A descriptive study. *Journal of Multidisciplinary Healthcare, 12*, 655–663. https://doi.org/10.2147/JMDH.S209106

Stall, N. (2019). We should care more about caregivers. *CMAJ, 191*(9), E245–E246. https://doi.org/10.1503/cmaj.190204

Thobaben, M. (2007). Horizontal workplace violence. *Home Health Care Management & Practice, 20*(1), 82–83. https://doi.org/10.1177/1084822307305723

*Vladutiu, C. J., Casteel, C., Nocera, M., Harrison, R., & Peek-Asa, C. (2016). Characteristics of workplace violence prevention training and violent events among home health and hospice care providers. *American Journal of Industrial Medicine, 59*(1), 23–30. https://doi.org/10.1002/ajim.22543

Warburton, K. D., & Stahl, S. M. (2015). Treat the treatable: A comprehensive and optimistic approach to treating psychiatric violence. *CNS Spectrums, 20*(3), 170–171. https://doi.org/10.1017/S1092852915000309

Ward-Griffin, C., Hall, J., DeForge, R., St-Amant, O., McWilliam, C., Oudshoorn, A., … Klosek, M. (2012). Dementia home care resources: How are we managing? *Journal of Aging Research, 2012*, 1–11. https://doi.org/10.1155/2012/590724

Wharton, T. C., & Ford, B. K. (2014). What is known about dementia care recipient violence and aggression against caregivers? *Journal of Gerontological Social Work, 57*(5), 460–477. https://doi.org/10.1080/01634372.2014.882466

Yamamoto, Y., Hayashino, Y., Yamazaki, S., Takegami, M., & Fukuhara, S. (2009). Violent patient behavior is associated with bodily pain and a high burden on informal caregivers. *Journal of General Internal Medicine, 24*(10), 1085–1088. https://doi.org/10.1007/s11606-009-1060-3

Zeller, A., Dassen, T., Kok, G., Needham, I., & Halfens, R. J. G. (2012). Factors associated with resident aggression toward caregivers in nursing homes. *Journal of Nursing Scholarship: An Official Publication of Sigma Theta Tau International Honor Society of Nursing, 44*(3), 249–257. https://doi.org/10.1111/j.1547-5069.2012.01459.x