Nurse's Perception toward Factors Contributing to Violence Exposure at Complex for Mental Health in Tabuk City: A Scoping Review

Amal H. S. Albalawi[1], Fathia K. Kassem[2], Nofaa A. Alasmee[3]

[1]Nursing Department, Faculty of Applied Medical Sciences, Tabuk University, Tabuk, Saudi Arabia.
e-mail: ah-albalawi@ut.edu.sa
[2]Community Health Nursing Department, Faculty of Nursing, King Abdulaziz University, Saudi Arabia.
e-mail: fkibrahim@kau.edu.sa
[3]Psychiatric and Mental Health Nursing Department, Faculty of Nursing, King Abdulaziz University, Jeddah, Saudi Arabia.
e-mail: nalasmee@kau.edu.sa

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ABSTRACT

Context: Exposure to violence among health care workers, particularly nurses working in mental health, is prevalent globally. This problem results from different factors in the workplace. These factors must be understood by the nurse to deal with patients and protect themselves.

Aim: This review aimed to describe the nurses' perception toward factors contributing to violence exposure at a complex for mental health in Tabuk city.

Methods: A scoping review based on the PRISMA guidelines includes qualitative, quantitative, and mixed-method research on nurses' exposure to violence. A literature search was carried out using the following databases: MEDLINE, CINAHL, and EBSCO through the Saudi Digital Library databases. The search included studies published between January 2015 and December 2020. All the included studies were assessed for their quality. After the selection process, 26 studies that matched the inclusion criteria emerged and were incorporated into the review.

Results: This scoping review is categorized into six themes. Most of the included studies revealed that violence against nurses is outspread worldwide. The most common types of violence among nurses were physical and verbal violence. The primary source of violence was the patients or their relatives. The causal factors of violence exposure included the nature of the patient's illness, increased expectations by patients and their relatives about the care provided, shortage of drug and staff, insufficient security guards in the health settings, work experience, and skills in dealing with aggressive behavior patients. The consequences of exposure to violence among nurses were job dissatisfaction, anxiety and depression, malpractice, and high nurses' turnover. The ways to reduce exposure to workplace violence, such as training courses, improvement of security measures inside the health care settings, were reported as strategies to overcome this phenomenon.

***Conclusion*:** Violence is situated, an interpersonal, emotional, and cognitive action involving undesirable interaction. Nurses' exposure to violence can be reduced first by perceiving contributing factors. This review highlighted the problem of nurses' exposure to different types of violence and its associated factors and ways to reduce exposure to workplace violence.

Keywords: Violence, nurses, perception, factors, mental health

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1. Introduction

Workplace violence in health care areas is a career threat with harmful effects on work-related health *(Basfr et al., 2019)*. It is defined as any incident in which an employee is mistreated, intimidated, or assaulted in the course of their work, including traveling to and from work, posing a direct or indirect threat to their safety, well-being, or health *(Sisawo et al., 2017)*.

According to a recent study done by *Spelten et al. (2020)*, violence against health care workers is estimated to affect 95% of health care workers. Many of them threatened or suffered from verbal violence. Violence is mainly perpetrated by patients, relatives, colleagues, and physicians *(Honarvar et al., 2019)*.

Furthermore, the health care providers may become the target of collective or organizational violence. Half of the health care workers have experienced at least one occurrence of physical or psychological violence throughout professional life. For example, nurses' exposure to violence rate is as high as (75.8%, 67.2%, 61%, 37%, 54.0%, 46.7%) in Bulgaria, Australia, South Africa, Portugal, Thailand, and Brazil, respectively *(Albashtawy, 2013)*. Another study in Iran revealed that most nurses (89.6%) had experienced at least one type of violence *(Honarvar et al., 2019)*.

Because of the nursing work nature that needs nurses to have longer contact with patients, they are the highest risk group exposed for workplace violence than other healthcare providers *(Wei et al., 2016)*. Violence exposure in the psychiatric and mental health hospital has become an unfortunate reality. The nurses in mental health areas have

[1]*Correspondance author: Amal H. S. Albalawi*

a higher violence rate than nurses working in other health care areas *(Pekurinen et al., 2017)*. The elevation of nurses' exposure to violence in psychiatric and mental health hospitals is mainly because of the nature of the patients' illness who are mentally unstable and might be more aggressive *(Ladika, 2018)*.

Evidence shows that exposure to violence is health-threatening for the caregiver and the care receiver by reducing care quality and concentration of nurses during their work, which subsequently raises their error. Moreover, exposure to workplace violence undermines ethics and affects the nurses' emotions leading to anger, sadness, or even fear. These may lead to resignation and even death *(Hurskainen & Katainen, 2015).*

2. Significance of the study

According to a recent study conducted in Saudi Arabia, most nurses (90.3%) were exposed to workplace violence; more than half of them (57.7%) had been exposed to both verbal and physical violence *(Basfr et al., 2019)*. This review examines the findings of previous studies published between January 2015 and December 2020 related to workplace violence in hospitals, focusing on the types of workplace violence, contributing factors, and the solutions for this problem. It also encompasses an in-depth examination of the effects of the nurses' exposure to violence at work.

3. Aim of the study

This review aimed to describe the nurses' perception of factors contributing to violence exposure at their workplace.

4. Subjects & Methods

4.1. Identifying the research question

The following PICOT question format was used to identify the research question" What is the level of nurse's perception toward factors contributing to violence exposure?" and conduct the search process in the databases (table 1).

Table1: PICOT question.

PICOT	CONTENT	PICOT QUESTION
P	Mental health nurses	What is the level of nurses' perception toward factors contributing to violence exposure**?**
I	Not applicable	
C	Not applicable	
O	Determine nurse's perception toward factors contributing to violence exposure	
T	January 2015-December 2020	

4.2. Search strategy

The literature review aimed to find all studies that describe the nurses' exposure to violence at their workplace. It includes an initial search of chosen databases MEDLINE, CINAHL, and EBSCO through the Saudi Digital library using keywords (violence against nurses, violence toward nurses, psychiatric nurses, perception, factors, causes, or influences). The search for keywords linked by using the Boolean operator as and/or such as "and violence exposure" "or violence exposure."

4.3. Inclusion and exclusion criteria

Specific inclusion criteria were followed during the search process. All studies that explore and describe violence exposure among nurses or mental health nurses used qualitative or quantitative research design published between January 2015 and December 2020, any studies published in the English language, and search for articles based on full-text electronic copy availability.

Furthermore, all the selected articles were screened and guided using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) flow diagram *(Moher et al., 2009)*. There are four phases flow diagram in the PRISMA diagram (Figure 1). At first, 138 articles were selected; but 62 articles were excluded because of duplication. Further, 28 articles were excluded according to the inclusion and exclusion criteria. Then, the titles, abstracts, and full texts were screened for the remaining articles. Accordingly, 22 articles were excluded because they did not match the review inclusion criteria. Twenty-six articles were considered appropriate to be included for this review.

4.4. Extracting the data

This step includes extracting appropriate data from the literature, which involved gathering all relevant information from the included studies to answer the review question. The data extraction is used to record information about the study's characteristics, methodology, and findings.

Data extraction may also help reduce bias and improve validity and reliability *(Coughlan & Cronin, 2016).* The data extraction needs to contain variables to answer the review's research question (*Coughlan & Cronin, 2016).* In the current review, all required information was independently extracted by the researcher, including details of publication, the aims of the study, the characteristics of the study, and the main findings.

4.5. Quality assessment

The twenty-six studies that met the review's inclusion criteria were assessed for their quality using the tool established by *Hawker and colleagues (2009)*. The appraisal tool examines the abstract and title, introduction and aims, method and data sampling, data analysis, ethics and bias, result, transferability, and implications. The overall score is 36 points, and a score is of four points: 1 (very poor), 2 (poor), 3 (fair), and 4 (good quality). All the studies' quality scores were calculated by summing the nine items' scores. A score ranging from 9-18 is considered a poor-quality study, 19-27 is a fair-quality one, and 28-36 is a good one. The result showed that all the studies are described as high-quality studies by critiquing all the included studies.

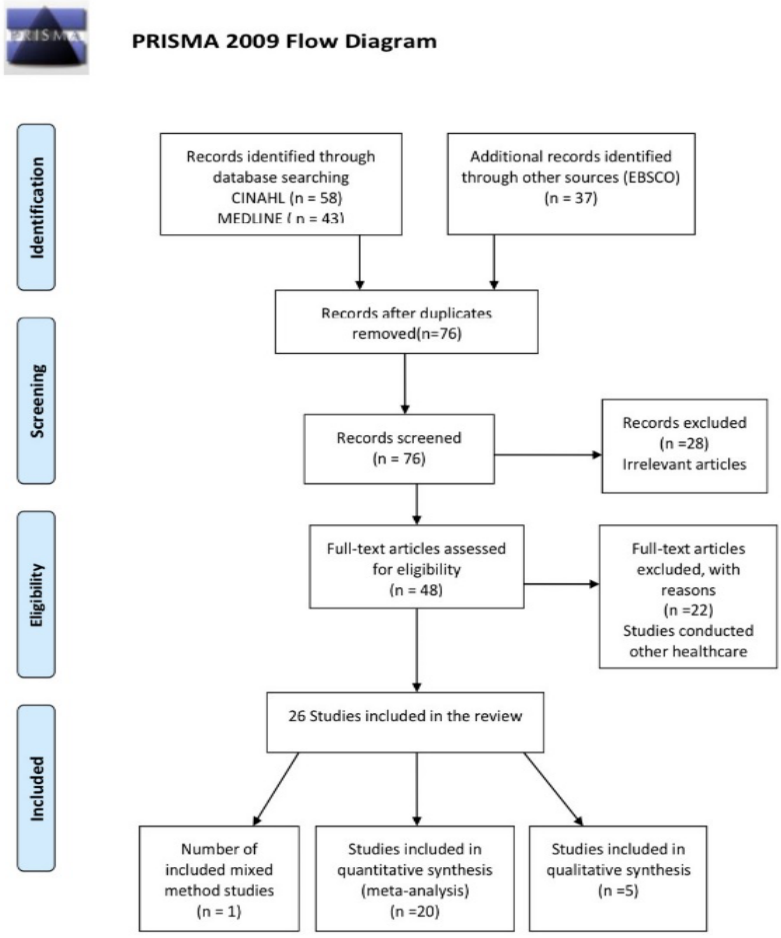

Figure (1): PRISMA Flow Diagram.

Table (2): Research quality scoring system.

Author	Abstract	Introduction and aims	Method / data	Sampling	Data analysis	Ethics/ bias	Findings/ Result	Transferability/ Generalizability	Implication/ usefulness	Total	
Al-Azzam et al. (2017)	3	4	4	4	4	4	4	4	4	35	Good
Bekelepi et al. (2015)	4	4	4	4	4	4	3	3	4	34	Good
Pandey et al. (2017)	4	4	4	3	4	4	4	3	3	33	Good
Das and Avci (2015)	3	4	4	4	3	3	4	3	3	31	Good
Honaarvar et al. (2019)	4	3	4	4	4	4	4	3	3	33	Good
Basfr et al. (2019)	3	4	4	4	4	3	4	3	3	32	Good
Niu et al. (2019)	4	3	4	4	3	4	3	3	4	32	Good
Maneeton et al. (2019)	4	3	4	4	3	4	3	2	4	31	Good
Sisawo et al. (2017)	3	4	4	4	3	4	3	3	3	31	Good
da Silva et al. (2015)	3	3	4	4	4	3	4	3	4	32	Good
Stevenson et al. (2015)	4	3	4	4	4	4	4	3	4	34	Good
Itzhaki et al. (2018)	4	4	3	4	3	3	3	3	3	30	Good
Hemati-Esmaeili et al. (2018)	4	3	4	4	4	4	4	3	3	33	Good
Casey (2019)	3	4	4	3	2	4	3	3	3	29	Good
Chaiwuth et al. (2020)	4	3	4	4	4	4	4	3	3	33	Good
Cengiz et al. (2018)	3	4	3	4	4	4	3	3	4	32	Good
Ridenour et al. (2015)	3	4	3	3	4	4	4	3	4	32	Good
Isaiah et al. (2019)	4	3	3	4	3	3	4	3	4	35	Good
Bablarczyk et al. (2020)	4	3	4	4	3	4	3	3	4	32	Good
Tomagová et al. (2020)	4	3	4	4	4	4	3	3	3	32	Good
Cheung and Yip (2017)	3	4	4	4	4	4	4	3	3	33	Good
Sun et al. (2017)	4	3	3	4	3	4	3	3	4	31	Good
Fafliora et al. (2016)	3	4	4	4	4	4	4	3	3	33	Good
Alsaleem et al. (2016)	4	3	4	3	4	3	3	3	3	30	Good
Hamdan and Abu Hamra (2015)	4	3	4	4	4	4	3	3	3	32	Good
Sachdeva et al. (2019)	4	3	4	4	4	3	3	3	4	32	Good

5. Result of the search

The total numbers of included studies were 26. In this literature, six main themes were developed. The prevalence of workplace violence among hospital nurses, types of violence, source of violence, the causal factors of violence exposure, the consequences of exposure to violence among nurses, and ways to reduce exposure to workplace violence.

Table (3): Reviewed studies themes.

Theme	Studies
The prevalence of workplace violence among hospital nurses	*Hamdan and Abu Hamra (2015); Das and Avci (2015); Fafliora et al. (2016); Alazzam et al. (2017); Pandey et al. (2017); Sisawo et al. (2017); Cheung and Yip (2017); Alsaleem et al. (2018); Honaarvar et al. (2019); Basfar et al. (2019); Isaiah et al. (2019).*
Types of violence	*Bekelepi et al. (2015); Stevenson et al. (2015); Ridenour, (2015); Hamdan and Abu Hamra, (2015); Fafliora et al. (2016); Sisawo et al. (2017); Al-Azzam et al. (2017); Pandy et al. (2017); Cheung and Yip (2017); Alsaleem et al. (2018); Itzhaki et al. (2018); Niu et al. (2019); Basfr et al. (2019); Honaarvar et al. (2019); Bablarczyk et al. (2020).*
Source of violence	*Hamdan and Abu Hamra (2015); Al-Azzam et al. (2017); Sisawo et al. (2017); Cheung and Yip (2017); Pandy et al. (2017); Basfr et al. (2019); Sachdeva et al. (2019); Honaarvar et al. (2019); Babiarczyk et al. (2020).*
Causal factors of violence exposure	*Bekelepi et al. (2015); Das and Avci (2015); Hamdan and Abu Hamra (2015); Ridenour et al. (2015); Sisawo et al. (2017); Pandy et al. (2017); Cheung and Yip (2017); Sun et al. (2017); Basfr et al. (2019); Maneeton et al. (2019); Honarvar et al. (2019); Sachdeva et al. (2019) Isaiah et al. (2019); Chaiwuth et al. (2020).*
Consequences of exposure to violence among nurses	*da Silva et al. (2015); Stevenson et al. 2015); Fafliora et al. (2016); Cheung and Yip (2017); Cengiz et al. (2018); Itzhaki et al. (2018); Sachdeva et al. (2019); Basfr et al. (2019); Tomagová et al. (2020).*
Ways to reduce exposure to workplace violence	*Stevenson et al. (2015); Das and Avci (2015); Fafliora et al. (2016); Hemati-Esmaeili et al. (2018); Niu et al. (2019); Casey (2019).*

5.1. The prevalence of workplace violence among hospital nurses

Most of the studies revealed that violence is outspread in the world's countries, especially in hospitals. Violence against nurses in all forms still prevails. A cross-sectional correlational study aimed to assess the mental health nurses' perspective of workplace violence in the mental health department found that 80% of the respondents were victims of at least one violent act in the last two years *(Alazzam et al., 2017).*

Furthermore, two studies in the same year have found that the prevalence of workplace violence against nurses was between 89.6% and 90.3%, which is considered a high level *(Honaarvar et al. 2019; Basfar et al., 2019). Fafliora et al. (2016)* reported a prevalence of 76% of the nurses who had experienced workplace violence. Also, *Hamdan and Abu Hamra (2015)* reported that most participants (76.1%) experienced a type of working place violence (WPV) in the past 12 months. *Das and Avci (2015)* reported that 78.4% of the health care workers had been exposed to violence.

Moreover, a higher level of inpatient aggression against psychiatric nurses, 94.7%, was found in a study conducted by *Isaiah et al. (2019)* to study the experience and attitude of psychiatric nurses toward clients' aggression. They also reported that about 20% had experienced it more than six times in the past year prior to the study.

Furthermore, two studies found a moderate level of nurses' exposure to violence at their workplace (*Pandey et al., 2017; Sisawo et al., 2017). Pandey et al. (2017)* undertook a study to assess the prevalence of workplace violence and its associated factors among nurses in Nepal. They found that about two-thirds (64.5%) of the nurses experienced some type of violence in the last six months at their workplace. *Sisawo et al. (2017)* reported that less than two-thirds of studied nurses, 62.1% reported exposure to violence in the last year prior to the study survey. Also, *Alsaleem et al. (2018)* reported that more than half (57.5%) had experienced workplace violence at least once.

However, a low level of the nurse's exposure to workplace violence, 44.6%, during the preceding year was found in a study conducted by *Cheung and Yip (2017)* to estimate the prevalence and examine the socio-economic and psychological correlates of workplace violence among professional nurses in Hong Kong.

5.2. Types of violence

Various types of violence may nurse experienced, which can be physically described as hitting, slapping, choking, punching, kicking, pushing, grabbing, throwing, burning, hair-pulling, twisting arms, tripping, confinement, and use of weapons. It can also be psychological, which comes in the form of isolating the victims from others, making fear, threatening, or bullying. Verbal violence comes in the form of shouting, yelling, swearing, using derogatory language, and put-downs. Sexual violence may be forced sexual activity or unwanted sexual touching, or sharing private photos without consent *(Chaiwuth et al., 2020). Chaiwuth et al. (2020)* reported that the prevalence of physical workplace violence in the preceding 12 months was found to be 12.1%, while the prevalence of psychological violence was verbal abuse (50.3%), bullying/mobbing (10.3%), and sexual harassment (1.6%).

Many studies had concerns about the most common type of violence experienced by nurses in their work settings *(Bekelepi et al., 2015; Stevenson et al., 2015; Ridenour, 2015; Hamdan & Abu Hamra, 2015; Fafliora et al., 2016; Sisawo et al., 2017; Al-Azzam et al., 2017; Pandy*

et al., 2017; Cheung & Yip, 2017; Alsaleem et al., 2018; Itzhaki et al., 2018; Niu et al., 2019; Basfr et al., 2019; Honaarvar et al., 2019; Bablarczyk et al., 2020). In these studies, it was found that verbal and physical violence is the most common among nurses.

According to *Bekelepi et al. (2015),* all the participants reported having experienced verbal violence (100%), followed by physical violence (88.5%), and only (30.8%) reported having experienced sexual violence. Similarly, *Stevenson et al. (2015)* conducted a study involving 17 semi-structured interviews with a purposeful sample of 12 Canadian registered nurses who were self-reported experiencing patient violence within acute care inpatient psychiatry. Nurses reported physical, emotional, and verbal assault. *Hamdan and Abu Hamra (2015)* stated that 35.6% were exposed to physical violence and 71.2% to non-physical assaults. Regarding the non-physical assault, 69.8% of nurses reported verbal abuses, 48.4% threats, and 8.6% sexual harassment.

Moreover, a study conducted by *Ridenour (2015)* to evaluate risk factors associated with patient aggression toward nursing staff at eight locked psychiatric units found that the overall rate was 0.60 for verbal violence incidents and 0.19 for physical violence per nurse per week. *Fafliora et al. (2016)* reported verbal violence as a dominant type (98%).

One of the cross-sectional correlation studies conducted by *Al-Azzam and colleagues (2017)* from Jordan on 134 nurses to assess their perceptions of workplace violence in mental health departments. The study showed that 35% had been exposed to verbal violence; furthermore, physical, and verbal aggression had been experienced by 40.1 percent of nurses, whereas just 5.1% of nurses had been exposed to physical violence. Moreover, the most common physical violence types were grabbing, punishment, kicking, or pushing. *Sisawo et al. (2017)* reported that exposure to verbal abuse, physical violence, and sexual harassment was 59.8%, 17.2%, and 10%, respectively.

Furthermore, a descriptive cross-sectional study conducted by *Pandy et al. (2017)* on 200 nurses in Nepal showed that the proportion of verbal violence was more significant (61.5%) compared to physical (15.5%) and sexual violence (9%). *Cheung and Yip (2017)* reported that verbal abuse/bullying was the most common form of WPV (39.2%), followed by physical violence (22.7%), and the last was sexual harassment (1.1%).

This result was similar to *Alsaleem et al. (2018),* who presented that 55.9% of healthcare workers had been exposed to verbal violence, 11.1% had been exposed to only physical violence, whereas 32.9% had been exposed to both physical and verbal abuse. Slaps with verbal aggression were the most common (58 percent), followed by other unpleasant experiences and being pushed (17 percent), being spat at (13 percent), and the least common (5 percent) for both restraining and punching.

Itzhaki and colleagues (2018) conducted a cross-sectional study on 114 mental health nurses in Israel. They have found that the majority of the study's nurses (88.6%) experienced verbal violence, more than half (56.1%) experienced physical violence, and just (2.6%) did not expose to violence.

A recent study by *Niu et al. (2019)* explored the prevalence of workplace violence, victims' reactions, and strategies to prevent violence among 429 nurses in Taiwan. The study found that physical and psychological violence rates were 55.7% and 82.1%, respectively; 25.1% of the violence victims were injured during physical violence events.

Another recent study conducted in Saudi Arabia by *Basfr et al. (2019)* measured the prevalence of workplace violence among nurses working in psychiatric hospitals. It found that 57.7% of them had been exposed to both physical and verbal abuse. *Honaarvar et al. (2019)* reported that 10.4% suffered from more than one type of violence.

A more recent retrospective cross-sectional study conducted by *Bablarczyk et al. (2020)* on 1089 nurses found that 54% of them stated that they had been exposed to non-physical violence, and 20% had been exposed to physical violence.

5.3. Source of violence

Patients were considered the primary source of violence *(Al-Azzam et al., 2017)* or the patients' relatives *(Pandy et al., 2017). Basfr et al. (2019)* found that patients themselves were the primary source of violent behavior (81.3%). *Hamdan and Abu Hamra (2015); Sachdeva et al. (2019)* reported that the patients' families/visitors were the primary perpetrators of physical and non-physical violence (85.4 percent and 79.5 percent, respectively). *Sisawo et al. (2017)* reported that the perpetrators were primarily patients' escorts/relatives, followed by patients themselves.

Cheung and Yip (2017) reported that patients were the most common perpetrators of WPV (36.6%), followed by their relatives (17.5%), followed by colleagues (7.7%), and supervisors (6.3%). *Honaarvar et al. (2019)* stated that patient companions (70.6%), patients (43.1%), and physicians (4.1%) were reported as the source of violence. In *2020, Babiarczyk et al.* stated that the most common perpetrators were patients and patient's relatives.

5.4. Causal factors of violence exposure

Nurses' exposure to violence may occur due to many factors such as psychological problems, shortage of nursing staff, smoking prevention in the psychiatric inpatient wards, patient's refusal for admission, overcrowding of the hospitals, long waiting times, especially in the emergency department and the outpatient clinics and violation of visiting hours *(Basfr et al., 2019).*

In addition to the previous factors, the nature of the patient's illness is also considered one of the contributing factors to violence. Violent acts in patients with schizophrenia may respond to psychotic delusions (particularly paranoid or persecutory delusions), hallucinations, or misperceptions. A recent study done in

Thailand through a cross-sectional design applied among 230 patients with schizophrenia found that 7.7% of psychiatric patients had violent behavior, including verbal aggression, which may threaten nurses as it is one of the causal factors to violence *(Maneeton et al., 2019).*

Another study done in Iran by *Honarvar et al. (2019)* illustrated that the most important factors contributing to violence exposure among nurses at their work were the increased expectations and idealism by patient's relatives regarding care provided to their patients and insufficient awareness about hospital policies by patients and their companions, and their requests for providing cigarette, drugs, or alcohol to their patients. Regarding nursing staff, long working hours, and staff exhaustion, nursing staff shortage were the most common nursing staff-related factors. *Honarvar and colleagues* added that nurses with non-official employment and non-Farsi ethnicity, those with chronic diseases, those who worked non-evening shifts, and those who worked for short or lengthy periods were more affected.

Moreover, a study conducted by *Sisawo et al. (2017)* revealed that the factors associated with workplace violence are nurse-client disagreement, nurses' manners, shortage of drug and staff, the insufficient or complete absence of security guards in their health center, and policy vacuum and inadequate management support. Similarly, *Basfr et al. (2019)* presented the factors associated significantly with nurses' exposure to violence as a lack of administrative support for nurses as violence victims, staffing levels, and patients or their relatives' dissatisfaction with the provided care. *Basfr and colleagues* added that during the morning shift, more nurses were exposed to WPV than during the nighttime shift (58.4 percent versus 42.3 percent).

Work experience and skills in dealing with violent patients can be factors also. *Bekelepi et al. (2015)* carried out a quantitative, descriptive study from Australia to identify professional nurses' knowledge and skills in managing psychiatric patients' aggression. The study demonstrated that nurses with fewer years of experience know possible reasons and control violent behavior. Most of the nurses had not received training in the management of patient violence. However, their levels of knowledge and skills were good.

Other contributing factors for the exposure of nurses to violence in Turkey were included age, marital status, nurse's position, and nurses' level of education and anger control *(Das & Avci, 2015).* Furthermore, *Sachdeva et al. (2019)* conducted a cross-sectional study on 112 nurses in India. Their results illustrated that nurses with less age group, male gender, or fewer years of experience were more exposed to violence. Similarly, in Nepal, *Pandy et al. (2017)* conducted a study involving 200 nurses in a descriptive cross-sectional study. They found that three-quarters (75%) of the nurses aged from 36 to 40 years old were more prone to workplace violence. The single and divorced nurses were more exposed to workplace violence than married nurses. Also, the working area and shift may affect nurses' exposure to violence. The nurses who worked the night shift and those in the Intensive Care Unit were also more exposed to violence.

Male gender, clinical position, shift work, job satisfaction, recent disturbances with colleagues, deliberate self-harm, and anxiety symptoms were significantly correlated with workplace violence for nurses in a study conducted by *Cheung and Yip (2017).*

These results were similar to *Isaiah et al. (2019),* who conducted a cross-sectional study on 170 psychiatric nurses in Nigeria. The study intended to explore the experience and attitude of psychiatric nurses towards clients' aggression. Their study concluded that violence was predictable by age, marital status, cadre, and nurses' years of experience.

Sun et al. (2017) reported that gender, age, profession, anxiety, and shift work were predictive of workplace violence toward healthcare workers. Also, *Ridenour et al. (2015)* illustrated that nurses' exposure to violence during the evening shift is more than the other shift. Also, the weeks with a high percentage of personality disorder cases admissions were significantly associated with nurses' exposure to violence. According to *Fafliora et al. (2016),* the long waiting time was the main factor (99%) contributing to violence against the nurses. The result was supported by *Hamdan and Abu Hamra (2015)*, in which the waiting time, insufficient preventive actions, and unmet expectations of patients and their families were the main factors contributing to violence exposure.

Chaiwuth et al. (2020) reported that the risk factors for verbal abuse included being a registered nurse with direct nursing care responsibilities, workplaces without adequate security, having workplace violence concerns, less than ten years of work experience. Physical violence risk factors included high patient workloads per nurse, providing nursing care to adolescent and adult patients; lack of workplace violence reporting procedures, being under 35 years; and workplaces without adequate security.

5.5. Consequences of exposure to violence among nurses

Many studies discussed the negative consequences of nurses' exposure to violence. da *Silva et al. (2015)* conducted a cross-sectional study on 2940 primary care teams in Brazil. It aimed to examine the association between violence at work, depressive symptoms, and major depression in primary care teams (physician, nurses, nursing aides, and community health personnel). This study revealed that 36% of the participants presented moderate symptoms of depression and 16% probable major depression. *da Silva and colleagues* added that insults (44.9 percent), threats (24.8 percent), physical aggressiveness (2.3 percent), and witnessing violence (29.5 percent) were the most common types of violence encountered at work. Depressive symptoms were substantially and progressively linked to these exposures.

Furthermore, an interpretive descriptive study with a sample that consists of 12 Canadian registered nurses who were experiencing violence from their patients identified

that they often struggled with role conflict between one's duty to care and ones' duty to self when providing care following a critical incident involving violence. Issues of power, control, and stigma influenced nurse participant perceptions and responses to patient violence *(Stevenson et al., 2015). Fafliora et al. (2016)* reported that 80% of the nurses reported a negative psychological impact for WPV. Also, *Cheung and Yip (2017)* showed that job dissatisfaction, conflicts with colleagues, and anxiety symptoms were significantly associated among nurses exposed to workplace violence.

Similarly, in Turkey, a descriptive study conducted by *Cengiz et al. (2018)* involved 188 nurses found that psychological violence negatively affects the nurses' professional self-esteem. Professional self-esteem is a condition of professional agreement and satisfaction. If nurses become unsatisfied with their profession, their success in the nursing field will decrease *(Cengiz et al., 2018).*

Likewise, a descriptive, cross-sectional correlative study on 114 mental health nurses was conducted in Israel. The study aimed to study the association between violence exposure, job stress, and professional quality of life, revealing the individuals' feelings regarding their work. The study showed that nurses' exposure to work stress had reduced professional quality of life among nurses who perceived their work as stressful. They had lower satisfaction from their work *(Itzhaki et al., 2018). Sachdeva et al. (2019)* reported that most of the participants had reported a lack of job satisfaction due to violence.

Basfr et al. (2019) reported that a 64.2 percent of the nurses felt tense, 53.5 percent felt worried, and 34.2 percent felt depressed after the incident. *Basfr and colleagues* also reported that over half of the nurses (57.4%) required medical intervention due to violent behaviors. *Tomagová et al. (2020)* conducted a recent study that revealed a high intensity of nurses' psychological harm resulting from their exposure to violence.

5.6. Ways to reduce exposure to workplace violence

Nurses employ a range of measures to ensure their safety and prevent and manage patient violence. Nurses agreed that better education, debriefing after an incident, and a supportive work atmosphere are necessary to prevent further patient aggression *(Stevenson et al., 2015).* Some studies had concerns about the management of workplace violence. According to *Das and Avci (2015),* it was found that when the communication skills of the health workers increased, their personal manner of anger, anger-in, and anger-out levels were reduced while their anger control levels were raised. *Fafliora et al. (2016)* set that the most common suggested prevention measure was entrance control (93%).

Niu et al. (2019), in a cross-sectional study conducted on 429 nurses, aimed to explore the prevalence of workplace violence, the response of victims, and strategies assumed by the workplace organization to prevent violence in acute psychiatric settings in northern Taiwan. The study concluded that the strategies assumed by workplaces to prevent violence were security measures (e.g., guards, warnings alarms, and portable telephones 79%), patient protocols (medicines, restraints, activities, and transferring 60.8%), and training courses (e.g., coping strategies with workplace violence, communication skills, conflict resolution, and self-defense 58.5%).

A non-experimental one-group, a pretest-posttest study was carried out by *Casey (2019)* from the United States to implement an educational program for nurses in handling aggressive patients. After implementing the program, the study found positive changes in the nurses' confidence and attitude in handling patient aggression. The same findings were reported in a study by *Hemati-Esmaeili et al. (2018)* in Iran found that applying for educational and managerial courses effectively reduced nurses' exposure to violence.

6. Discussion

Globally, workplace violence (WPV) within the health care system has become a major occupational and public health hazard. WPV is a complex phenomenon with profound negative effects on the overall health care system. The consequences of WPV are relevant to the health care system since it adversely affects quality of care, long-term financial costs, and health care staff retention. The psychiatric nursing profession has the highest frequency of workplace violence compared to all other health care professions *(Dean et al., 2021).*

Although numerous studies highlighted the nurses' exposure to violence, the prevalence is still high or even increasing. This finding is what the current review supported; the result revealed that most nurses had been exposed to violence during their work. These findings were similar to *Tomagova et al. (2020),* who reported that in the Czech Republic and Slovakia, verbal and physical abuse against nurses is common in the workplace. *Viottini et al. (2020)* conducted a retrospective observational study on 10970 health workers in a large-sized university hospital. The data obtained from the "aggression reporting form" revealed that 164 workers experienced almost one aggressive incidence.

Furthermore, it has been determined that nurses, particularly those engaged in psychiatric mental health (PMH) practice, are at high risk for experiencing WPV *(Al-Ali et al., 2016; Jacobowitz, 2013)* compared with workers in all occupational sectors. Several studies have found that health care workers are 16 times more likely to experience WPV and four times the chance to be injured due to WPV *(Al-Ali et al., 2016; Fallahi-Khoshknab et al., 2015).* This phenomenon is especially true for the nursing profession. Nurses are three times more likely to experience WPV when compared with other health care workers *(Al-Ali et al., 2016; Unsal Atan et al., 2013).*

Regarding types of violence, in the current review, verbal and physical violence was higher than other types. This result may be related to the workplace nature, which is the health care settings, especially the mental health

hospitals. The mentally ill patient might be highly aggressive, especially in the acute phase of the disease, along with more contact hours of work with the patients with mood disorders, personality disorders, addicts, and those with psychotic symptoms who are unpredictable, illogical in their behaviors that are increasing the risk of WPV *(Zeng et al. 2013).* Patients with schizophrenia who had access to weapons were more likely to act aggressively or violently *(Maneeton et al., 2019). Viottini et al. (2020)* reported that verbal aggression was the most prevalent. *Lantta et al. (2016)* reported that 70% of all nurses had experienced non-physical forms of violence (i.e., verbal threats or psychological abuse.

The current review also reported that the patients and their families were one of the main sources of violence. This result is similar to two studies; one was conducted in Slovenia by *Kvas and Seljak (2015),* and another was conducted in Egypt by *Hassan et al. (2020).* Both studies showed that the main source of violence was the patient. During aid and patient care, most aggressive acts happened (38.2 percent). The most common aggressor was the patient (46.7 percent) *(Viottini et al., 2020).*

Nurses' exposure to violence may occur due to many factors such as the nature of the patient's illness, shortage of nursing staff, patient's refusal for treatment, overcrowding of the hospitals, long waiting times, and long contact hours with the patients. Similar results were revealed by *Sisawo et al. (2017),* which reported that staff shortage was highly associated with workplace violence. Staff shortage makes clients wait longer time rendering clients bored and impatient. Such frustrations cause comments from patients like "nurses are inefficient and incompetent" and, in certain situations, physical confrontation.

This review also reveals that the health care providers' position was associated with their exposure to violence related to the environment. One possible reason for this result may be that the nurses who are usually in direct contact with the patient were more apt to violence than the nursing supervisor or the nurses working in offices.

Additional factors mentioned in the previous studies indicate age, gender, marital status, working shift as predictive factors for aggression exposure. These findings matched those of a study done by *Sun et al. (2017),* who found that gender, age, profession, anxiety, and shift work were predictive of workplace violence toward health care providers. *Viottini et al. (2020)* reported that aggression was associated with being female, being less than 50 years old, and working for 6-15 years. WPV is common in spring, during the afternoon/morning shifts, and took place in locations where patients were present (47.3%)

Exposure to violence may negatively affect individual, organizational, and social levels. On the individual level, exposure to workplace violence has a significant impact on nurses' health and well-being. Violence occurrences may lead to injury and death and increase the risk of post-traumatic stress disorder. Violence can significantly disturb nurses' lives and have serious financial effects such as lost income and increased health care costs.

At the organization level, there is a substantial economic impact as malpractice, absenteeism from work, and high turnover among nursing staff to change their workplace where the violent incident occurs. A variety of consequences might occur on a societal level. Violence may result in low quality of care provided to the patient *(Spelten et al., 2020).* These consequences were similar to that of *Aladah et al. (2020),* who studied the job stress and self-efficacy among nurses working in Al-Amal psychiatric and addiction hospitals in Saudi Arabia. They reported that 47% of the studied mental health nurses were suffering from high job stress; 84% refer it to the patient attitudes toward nurses.

Furthermore, WPV has also been shown to strain the nurse-patient relationship by decreasing nurses' empathy and overall quality of care to their patients and leading to occupational burnout and compassion fatigue *(Stevenson et al., 2015).* Employee turnover because of WPV only serves to exacerbate the shortage of PMH nurses. Consequently, the shortage of psychiatric mental health (PMH) nurses often leads to understaffing, which ultimately increases the risk for WPV *(Renwick et al., 2019).* This shortage creates a vicious cycle that should be broken.

Many studies had presented different viewpoints to the WPV, which participated in intensifying the problem, such as nurses were reluctant to report the incident, the only action is to narrate the incident to friends, family, and colleagues *(Niu et al., 2019).* Many nurses consider it a "part of the job" *(Stevenson et al., 2015).* One study indicated that psychiatric nurses perceived aggression as violent or harmful, normal, functional, and offensive reaction more than intrusive, destructive, communicative problem *(Isaiah et al., 2019).* Another study pointed out incomplete problem solutions by the management of healthcare facilities *(Tomagova et al., 2020).*

Dean et al. (2021) reported that although WPV resources may be available within the facility, participants identified a need for increased administrative support in the form of addressing serious consequences for assaults, coordinating with the judicial system, increasing staff ratios, having direct contact with employees, demonstrating a desire for change, conveying support for their employees, and educating the police to encourage transparency regarding risks. All these factors may hinder the nursing staff or organization from preventing the WPV. WPV necessitates cumulative effort from all parties to prevent and manage the WPV.

While there is no secure way to prevent exposure to violence, there are many strategies that can be taken either by nurses themselves or by the health care organizations to reduce the incidence of violence. Studies mentioned education, security, supportive work environment, entrance control, patients' protocol as strategies that could prevent or reduce violence. However, these studies mentioned that nurses who had training in aggression management reported that it did not meet their needs *(Bekelepi et al., 2015).*

Occupational Safety and Health Administration (OSHA) (2016) recommended a workplace violence prevention program to be integrated into the organization's

overall safety and health program. The program offers an effective approach to reducing or eliminating the risk of violence in the workplace. The program included management commitment and employee participation, worksite analysis, hazard prevention and control, safety and health training, and record-keeping and program evaluation.

7. Conclusion

Violence is an interpersonal, emotional, and cognitive action involving undesirable interaction. Nurses' exposure to violence can be reduced first by perceiving contributing factors. This literature review highlighted the problem of nurses experiencing various types of violence every day worldwide.

According to the literature findings, the prevalence of nurses' exposure to violence is still high, and most of the nurses were experiencing verbal violence, then comes physical type, which has dangerous consequences like injuries. Lastly, the other types of violence come worldwide.

Being exposed to workplace violence can affect nurses' mental and physical well-being; high quality of care provided to their patients. Based on the results of this literature, there is a lack of policies and assertive regulations in most of the settings that demonstrate workplace violence. It led to a higher and more frequent risk of violence. As a result, additional research is needed to set solutions relevant to this problem, such as reporting processes, policies, educational conferences, and appropriate interventions to face violence and its various types.

8. Recommendations

This review provides an assessment of the nurses' exposure to violence and contributing factors for that. Although physical violence is well-known and has been the focus of workplace intervention in many healthcare organizations, other forms of violence, such as bullying and sexual harassment, are less well-known. Given that patients are the ones who commit the majority of physical violence, violence prevention programs must include patients, their families, and friends, as well as staff members such as nurses and physicians. Only by covering all types and sources of violence, the workplace can become a safer environment.

A second issue is that even though violence exposure is widespread, the rates and the sources of violence vary by region and country. Hence, interventions should be customized to the particular violence issues in a particular setting. It is also essential to determine if the low rates of sexual harassment in some regions are due to low incidence or under-reporting; that would help recognize the extent to which efforts should be dedicated toward sexual harassment prevention in those regions.

9. References

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No.	Author/year /country	Study aim	Study design	Sample	Instrument	Main results
1	Al-Azzam et al. (2017) Jordan	To assess the mental health nurses' perspectives of workplace violence in mental health departments in Jordan.	Cross-sectional correlation study	One hundred thirty-four nurses were working in the department of mental health.	Self-reported questionnaire	- In the previous two years, 80% of the respondents had been victims of at least one violent act. - 35% of the nurses had been exposed to verbal violence, 41.1% had been exposed to both verbal and physical violence, 5.1% had been exposed to physical violence. - The most common physical types were grabbing, punishment, kicking, or pushing. - Patients were considered the main source of violence.
2	Bekelepi et al. (2015) Australia	To determine the knowledge and skills of professional nurses in managing aggression of patients in a psychiatric hospital in the Western Cape.	A quantitative descriptive survey design	52 nurses	Close-ended questionnaire	- All the participants have been exposed to verbal aggression (100%), followed by physical aggression (88.5%), and only 30.8% had been exposed to sexual aggression. - Nurses who had training in aggression management reported that it did not meet their needs. - The study demonstrated that nurses with fewer years of experience know possible reasons and control violent behavior. Most of the nurses did not receive training in the management of patient violence. However, their levels of knowledge and skills were good.
3	Pandey et al. (2017) Nepal	To assess the prevalence of workplace violence and its associated factors among nurses in Pokhara, Nepal.	Descriptive cross-sectional study	200 nurses	A self-administered questionnaire was developed by the International Labor Office, International Council of Nurses, World Health Organization (WHO), and Public Services International.	- In the recent six months, two-thirds of nurses (64.5%) have encountered some form of workplace violence. - When compared to physical (15.5%) and sexual violence (9%), verbal violence was more prevalent (61.5%). - Most of the violent assailants were patients' relatives and hospital workers. - The age of nurses and working stations had a statistically significant association with workplace violence. - The single and divorced nurses were more exposed to workplace violence than married nurses. - Nurses who worked on the night shift and nurses in the ICU were more exposed to violence.
4	Das and Avci (2015) Turkey	To determine the effect of anger management levels and communication skills of emergency department staff on their frequency of being exposed to violence.	Cross-sectional study	283 health personnel	A questionnaire including descriptive characteristic, anger management scale, and communication skills scale	- Violence has been experienced by 78.4 percent of the health workers. - Significant associations were found between the health workers' ages, marital status, working position and education level, and anger control. - The study found that when the communication skills of the health workers increased, their peronal manner of anger, anger-in, and anger-out levels were reduced while their anger control levels were raised.

No.	Author/year/ country	Study aim	Study design	Sample	Instrument	Main results
5	Honaarvar et al. (2019) Iran	To determine various aspects of violence against nurses in Shiraz public hospitals.	Cross-sectional study	405 nurses	Using a three-section checklist (the 1st section consisted of 28 items- the 2nd consisted of 5 items- the 3rd consisted of 35 items)	- Most nurses (89.6%) had experienced at least one kind of violence; more than one sort of violence affected 10.4% of them. - Patients' associates (70.6%), patients (43.1%), and physicians (4.1%) were reported as the main sources of violence. - Nursing staff with non-official employment and non-Farsi ethnicity, those who were ill, worked non-evening shifts, and worked for a short or lengthy amount of time were more affected. - The most common contributing factors were patients' companions' unrealistic expectations and lengthy working hours.
6	Basfr et al. (2019) Saudi Arabia	To measure the prevalence of WPV among nurses working in psychiatric hospitals in Saudi Arabia	Cross-sectional study	310 nurses	A self-reported questionnaire was used to measure the prevalence and explore the associated factors of workplace violence.	- The prevalence of WPV against nurses was 90.3%, of which 57.7% had been exposed to both physical and verbal abuse. - More nurses were exposed to WPV during the morning shift than the evening shift (58.4% versus 42.3%). - Violent behavior was exhibited mostly by the patients themselves (81.3%). Over half of the nurses (57.4%) required medical intervention in such cases. - Most nurses felt either stressed (64.2%) or anxious (53.5%), and 34.2% felt depressed after the incident. - Time of violence, source of violence, patient dissatisfaction with medical care, and lack of organizational support for nurses were significantly associated with WPV in psychiatric units.
7	Niu et al. (2019) Taiwan	To explore the prevalence of workplace violence, the reaction of victims, and workplace strategies adopted to prevent violence among acute psychiatric settings in northern Taiwan.	Cross-sectional study	429 nurses In Taiwan	- The Chinese version of the Workplace Violence Survey Questionnaire was developed by the International Labor Office, International Council of Nurses, World Health Organization, and Public Services International.	- Exposure rates of nurses to physical and psychological violence were 55.7% and 82.1%, respectively. 25.1% of the violence victims were injured during physical violence events - Patients were the major perpetrators of workplace violence. - Most victims replied by telling the attacker to stop, then telling their friends, family, and coworkers about it. - Workplaces used various techniques to prevent violence, including security measures, patient guidelines, and training on communication skills, conflict resolution, and self-defense.
8	Maneeton et al. (2019) Thailand	To determine the prevalence of violence and factors associated with aggressive or violent behavior in Thai patients with schizophrenia.	Cross-sectional study	230 patients with schizophrenia	Interviews	- Patients with schizophrenia who had access to weapons were more likely to have aggressive or violent behavior. - 7.7% of psychiatric patients had violent behavior, including verbal aggression, which may threaten nurses as it is one of the causal factors to violence.

No.	Author/year/ country	Study aim	Study design	Sample	Instrument	Main results
9	Sisawo et al. (2017) Gambia	To assess the prevalence, perpetrators, and factors associated with workplace violence against nurses in public secondary health care facilities from two health regions in the Gambia.	Mixed methods design	219 nurses	Self - administered questionnaire and 35 face-to-face interviews	- Slightly less than two-thirds of studied nurses (62.1%) reported exposure to violence in the past 12 months prior to the survey; exposure to verbal abuse was 59.8%, physical violence 17.2%, and sexual harassment 10%. - The perpetrators were mostly patients' escorts/relatives, followed by patients themselves. - Factors associated with workplace violence are Nurse-client disagreement, nurses' workplace manners, shortage of drugs and staff, and lack of security.
10	da Silva et al. (2015) Brazil	To examine the associations between violence at work and depressive symptoms in the primary health care team.	Cross-sectional study	2940 primary care teams	Interview	- 36.3% presented intermediate depressive symptoms, and 16% probable major depression. - The frequencies of exposure to the different types of violence at work were insults (44.9%), threats (24.8%), physical aggression (2.3%), and witnessing violence (29.5 %). - These exposures were strongly and progressively associated with depressive symptoms.
11	Stevenson et al. (2015) Canada	To explore psychiatric nurses' experiences of patient violence in acute care inpatient psychiatric settings.	An interpretive descriptive design	12 Canadian registered nurses	Semi-structured interviews	- Nurses reported experiencing physical, emotional, and verbal assault. - Patient violence was seen as "part of the job" by many. - When giving care following a major occurrence involving violence, nurses are frequently faced with role conflict between their responsibility to care and their duty to themselves. - Nurses' perceptions and responses to patient aggression were influenced by power, control, and stigma issues. - Nurses employed a range of measures to keep themselves safe while preventing and managing patient violence. Nurses agreed that more education, debriefing after an incident, and a supportive work environment are necessary to prevent patient aggression.
12	Itzhaki et al. (2018) Israel	To investigate the relation of professional quality of life to job stress and violence exposure at a large mental health center.	A descriptive, cross-sectional correlative study	114 mental health nurses	Self - administered questionnaire	- Almost all nurses (88.6%) experienced verbal violence, and more than half (56.1%) experienced physical violence. Only 2.6% do not experience violence. - Professional quality of life (ProQOL) was not associated with violence exposure but was reduced by work stress and previous exposure to violence; nurses who perceived their work as more stressful had lower satisfaction from their work.
13	Hemati-Esmaeili et al. (2018) Iran	To plan a workplace violence prevention program to reduce the level of patients and their family's violence against nurses.	An action research study	44 nurses	A self-administered questionnaire	- Frequencies of verbal violence 85.7% before implementing workplace violence prevention program decreased to 57.1% after implanting the VWP.

No.	Author/year/ country	Study aim	Study design	Sample	Instrument	Main results
14	Casey (2019) United States	Implement an educational program in managing aggressive patients for nurses in non-psychiatric settings.	A non-experimental one group, pretest-posttest design	23 nurses 20 (RNs) and 3 (LPNs).	The Incidence of and attitudes toward aggression in the workplace (including a demographic data questionnaire) and a course evaluation, were used as part of the educational program.	- In handling patient hostility, positive changes in confidence and attitudes occurred. Nurses' awareness of their role and responsibilities in caring for aggressive patients on the neurological unit remained unchanged.
15	Chaiwuth et al. (2020) Thailand	This study examined the prevalence and perceived risk factors of WPV among RNs in tertiary hospitals in Northern Thailand.	A descriptive cross-sectional design	555 registered nurses	The survey tool was adapted from the standardized Workplace Violence Questionnaire developed by the ILO/ICN/WHO/PSI in 2003.	- The prevalence of physical workplace violence in the preceding 12 months was found to be 12.1%, while the prevalence of psychological violence in form of verbal abuse (50.3%), bullying/mobbing (10.3%), and sexual harassment (1.6%). - Risk factors for verbal abuse included being a registered nurse with direct nursing care responsibilities, workplaces without adequate security, having workplace violence concerns, and less than ten years of work experience. Physical violence risk factors included high patient workloads per nurse, providing nursing care to adolescent and adult patients, lack of workplace violence reporting procedures; being under 35 years; and workplaces without adequate security.
16	Cengiz et al. (2018) Turkey	To investigate the effect of mobbing (psychological violence) on professional self-esteem in nurses.	A descriptive study	188 nurses	An introductory information form, Negative Acts Questionnaire-Revised (NAQ-R), and Professional Self-esteem Scale (PSES)	- Psychological aggression has a negative impact on nurses' self-esteem.
17	Ridenour et al. (2015) United States	To evaluate risk factors associated with patient aggression towards nursing staff at eight locked psychiatric units.	Descriptive study	284 nurses	Rates were calculated by dividing the number of incidents by the total hours worked by all nurses, then multiplying by 40 (units of incidents per nurse per 40-hour workweek).	- The researcher combined the data across all hospitals and weeks. The overall rate was 0.19 for physical violence and 0.60 for verbal violence incidents per nurse per week. - When it came to physical events, the evening shift (3 pm-11 pm) was much more aggressive than the day shift (7 am - 3 pm). - Weeks with a larger percentage of patients with personality disorders were associated with a considerably increased probability of verbal and physical aggressiveness.
18	Isaiah et al. (2019) Nigeria	To study the experience and attitude of psychiatric nurses towards clients' aggression.	A cross-sectional survey design	170 psychiatric nurses	The Attitudes Towards Aggression Scale (ATAS).	- Inpatient aggressiveness against psychiatric nurses is reported by 94.7 percent of nurses, with roughly 20% having experienced it more than six times in the preceding 12 months. - Psychiatric nurses regarded aggression as a violent or harmful, typical, functional, and offensive reaction rather than an intrusive, destructive, communicative, or protective response. - Male psychiatric nurses highlighted inpatient aggression more than female psychiatric nurses. - Age, married status, cadre, and year of experience all influence inpatient hostility.

No.	Author/year/ country	Study aim	Study design	Sample	Instrument	Main results
19	Babiarczy et al. (2020) Europe	To assess country-specific evidence of physical and non-physical acts of workplace violence toward nurses working in the health sector in 5 European countries, and then to identify reasons for not reporting violence experienced at work.	Retrospective cross-sectional study	1089 nurses	A questionnaire adapted from the workplace violence in the health sector country case study-questionnaire	- 54% of nurses stated that they had been exposed to non-physical violence, and 20% had been exposed to physical violence. - The most common perpetrators were patients and patients' relatives. - In 70% of cases, no actions were taken. - About fifty percent of the participants did not report violence as they believed it was useless or unimportant.
20	Tomagová et al. (2020) Europe	To identify the incidence of workplace violence against nurses in the Czech Republic and Slovakia	A cross-sectional study	526 nurses	Workplace Violence in the Health Sector Country Case Study – Questionnaire	- Verbal and physical violence against nurses is frequent in nurses' workplaces in the Czech Republic and Slovakia. - A significant difference in verbal aggression from patients and higher intensity of nurses' psychological problems due to patients' aggression. - An incomplete problem solution by the management of healthcare facilities.
21	Cheung and Yip (2017) Hong Kong	To estimates the prevalence and examines the socio-economic and psychological correlates of workplace violence (WPV) among professional nurses in Hong Kong	A cross-sectional survey design	850 nurses	Workplace violence in the health sector country case studies research questionnaires	- WPV has been experienced by 44.6 percent of the nurses in the previous year. - Male nurses reported WPV at a higher rate than female nurses. - Verbal abuse/bullying was the most common form of WPV (39.2%), followed by physical assault (22.7%) and sexual harassment (1.1 percent). - Patients (36.6%) and their families (17.5%) were the most prevalent offenders of WPV, followed by coworkers (7.7%) and supervisors (6.3 percent). - WPV for nurses was significantly correlated with clinical position, shift work, job satisfaction, recent disturbances with colleagues, deliberate self-harm (DSH), and anxiety symptoms. - Job dissatisfaction, conflicts with colleagues, and anxiety symptoms were significantly associated among nurses exposed to workplace violence
22	Sun et al. (2017) China	To determine the prevalence of workplace violence (WPV) against healthcare workers, explore the frequency distribution of violence in different occupational groups, determine which healthcare occupation suffers from WPV most frequently, and compare risk factors affecting different types of WPV in Chinese hospitals	Across-sectional design	1899 healthcare workers	Questionnaire	- Workplace violence toward healthcare workers was predicted by gender, age, profession, anxiety, and shift work.

No.	Author/year/ country	Study aim	Study design	Sample	Instrument	Main results
23	Fafliora et al. (2016) Greek	To assess workplace violence encountered by nurses working in three different healthcare settings.	A cross-sectional study 80 nurses	80 nurses	Self-report questionnaire	- The majority (76%) had experienced workplace violence. - Verbal violence was the dominant type (98%). - 80% reported a negative psychological impact. - One of the main suggested causes of workplace violence was the long waiting time (99%), while the most common suggested measure of prevention was entrance control (93%).
24	Alsaleem et al. (2018) Saudi Arabia	To determine the frequency and types of violence against healthcare workers in a Saudi Arabian city. It was also to identify the risk factors of violence against healthcare workers and investigate the possible consequences of such behavior.	A cross-sectional study	738 healthcare workers	Structured self-administered questionnaire	- More than half (57.5%) of respondents said they had been victims of workplace violence at least once. - Simply 11.1 percent of healthcare professionals had been exposed to only physical violence, whereas 55.9% had been exposed to verbal violence, 32.9% had been exposed to both physical and verbal abuse. - Slaps with verbal abuse were the most regularly reported violent actions (58%), followed by other unpleasant experiences, or being pushed (17%), being spat at (13%), restraining, and punching (5 percent for both).
25	Hamdan, and Abu Hamra, (2015) Palestine	To assess the characteristics (level and type), associated risk factors, causes, and consequences of WPV against workers in Palestinian EDs.	A cross-sectional study	444 participants were 161 nurses, 142 physicians, and 141 administrative personnel.	A self-administered questionnaire	- In the previous 12 months, most participants (76.1%) had been subjected to some form of WPV, with 35.6 percent having been subjected to physical assaults and 71.2 percent to non-physical assaults (69.8 percent verbal abuses, 48.4 percent threats, and 8.6 percent sexual harassments). - Patients' families/visitors were the leading perpetrators of physical and non-physical violence (85.4 percent and 79.5 percent, respectively). - The main reasons include long wait times, a lack of preventive efforts, disappointed patients, and unmet family expectations.
26	Sachdeva et al. (2019) India	To seek the amount and type of WPV perceived by the ER physicians and nurses, their reporting agencies, and the impact of violence on them.	A cross-sectional study	235 participants (123 doctors and 112 nurses)	24-items questionnaire	- Family members were the main perpetrator. - Violent incidences were mostly reported to the ED security and ED faculty. - Individuals with less age group, less experienced, and male gender were more exposed to violence. - Most of the participants had reported lacking job satisfaction due to violence.