LITERATURE REVIEW

WORKPLACE VIOLENCE EXPERIENCED BY HEALTHCARE WORKERS IN ARAB AND AFRICAN COUNTRIES: A LITERATURE REVIEW

Safae Ouma¹, Samia Boussaa²*, Nabil Benomar Bakali³, Nabila Rouahi⁴

¹Higher Institute of Nursing and Technical Sciences (ISPITS), 93 000, Tetouan, Morocco; PhD student, Universidad de Jaén, Campus Las Lagunillas, 23071, Jaén, Spain.
²Higher Institute of Nursing and Technical Sciences (ISPITS), 10000, Rabat, Morocco.
³Facultad de Ciencias de Salud, Universidad de Jaén, Campus Las Lagunillas, 23071, Jaén, Spain.
⁴Higher Institute of Nursing and Technical Sciences (ISPITS), Annexe de Kenitra, Morocco.

Abstract

Background: Workplace violence (WPV) is a problem of health. Instruments used are a key for an accurate evaluation of the phenomenon. The aim of our literature review is to study the WPV perpetrated against the healthcare workers in Arab and African countries and to identify the best instrument for monitoring and evaluating this phenomenon in local context.

Methods: A bibliographic review was conducted in PubMed, Science Direct, Web of Science and Scopus databases using as keywords ‘Healthcare worker’ AND ‘Workplace Violence’, AND ‘Arab population’ OR ‘African population’. Initially, a total of 311 publications was extracted. Then, non-empirical research (Reviews, proceedings, encyclopedia); research on violence outside the workplace or on other categories of professionals; studies conducted in non-Arab and non-African countries, and redundant articles were excluded. Therefore, we validated and analyzed 26 pertinent articles covering the period from 2002 to 2021.

Results: Among a total of 26 articles, 3 were from Arab – African countries (2 from Egypt and 1 from Morocco), 11 were from African – non arab countries and 12 from Arab non african countries. The prevalence of at least one form of WPV by the healthcare workers varied from 43.1 % to 92.7 %, while the verbal abuse is the form of WPV most frequently experienced by healthcare workers in African and Arab countries. Fourteen different tools were identified, including six standardized forms. The most widely used was the Health Sector Workplace Violence questionnaire with 81 items followed by the Violent Incidence Form with 20 items.

Conclusion: The WPV is a neglected problem in Arab and African countries considering the number of publications during the last twenty years. The Violent Incidence Form, covering all forms of violence with only twenty items, is suggested for the monitoring of WPV perpetrated against healthcare workers.

Keywords: Workplace violence, Healthcare worker, Violent Incidence Form, Arab population, African population.

* samiaboussaa@gmail.com
1. INTRODUCTION

The World Health Organization (WHO) classifies the workplace violence (WPV) into physical and non-physical violence. The two categories include physical assault, homicide, verbal abuse, bullying/mobbing, sexual/racial harassment and making threats [1]. Workplace violence is defined by the National Institute for Occupational Safety and Health as violent acts including physical assaults and threats of assaults directed toward persons at work or on duty [2]. Other classifications are known according to the nature of the relationship between the two involved parties [3], [4].

In health facilities, WPV is a global problem of public health. Between 8% and 38% of health workers are reported to experience physical violence during their career. Many more are threatened or exposed to verbal abuse. The widely responsible for WPV are the patients and the visitors [1]. All categories of health workers are affected by WPV, but the highest rate is reported among nurses and midwives in both public and private sectors and in different geographical areas [5].

The notified incidence of violence in the health sector constitutes almost a quarter of all violence at work [6]. As a consequence, the WPV affects the work demand [7], the quality of healthcare and the psychological state of the staff [8]–[12].

The sociological, economic and political underlying factors leading to violence are critical in many countries, including Arab and African countries. According to different authors, the WPV is reported to have been growing from 1992 to 2019 [13]. The most reported risk factors are ‘Psychological setting, illness of the perpetrators, miscommunication, youth and alcohol abuse’ [14]. Despite the growing interest and the huge number of studies published on the incidence of WPV against healthcare workers, data remains underestimated due to unreported cases [15] and lack of an official notification system in many areas, especially in Arab and African countries.

In addition, no microscopic analysis of the literature or evaluation of instruments for WPV monitoring has been carried out in these countries. Less than 50 publications about WPV had been identified in three decades in Arab and African countries [13]. In Morocco, a report on the working environment highlights a workload, stress, the absence of an ergonomic workplace, and the unawareness of the consequences of the exposure to the risk of violence in the healthcare sector [16]. The first Moroccan study on WPV in the healthcare sector was published in 2010 [17].

The objective of the present study is to analyze the status of WPV against health workers in Arab and African countries and, therefore, to identify an instrument for a continuous monitoring of the incidence, risk factors, consequences and reactions to WPV in Arab and African populations. The result of this study provides the key items to insert an epidemiological monitoring system of the WPV and its associated risk factors and/or consequences.

2. METHODES

To achieve the objective of the study, a bibliographic review was conducted in PubMed, Science Direct, Web of Science and Scopus databases by using ‘Healthcare worker’ AND ‘Workplace Violence’ as keywords; then the research was affined by adding the origin of the population ‘Arab’ OR ‘African’.

We adopted a simple definition for the Arab and the African populations. The Arab population is referred to as people living in Arab countries and North Africa, and the African is that living in the rest of the African continent.

In order to select original articles with a WPV status and a detailed description of the instruments, we excluded from each database the following documents:

1. Proceedings, encyclopedia, reviews and abstracts,
2. Studies conducted in non-Arab or non-African populations;
3. Studies on violence perpetrated out of workplace,
4. Studies targeting other category of professionals than healthcare workers,
5. Redundant articles.

3. RESULTS

As an output, through these four databases, 26 original articles, published in the period lasting from 2002 to 2021 were analyzed (Table 1). According to the country (Table 1), the results showed studies conducted in Jordan, Kingdom of Saudi Arabia (KSA), Kuwait, Lebanon, Libya, Palestine and Yemen for Arab-non african countries; studies conducted in Botswana, Ethiopia, Gambia, Ghana, Nigeria and South Africa for
African – non arab countries; and studies conducted in Egypt and Morocco for Arab – African countries. The proportion of the articles based on quantitative approach was 96 % versus 4 % on qualitative approach. The categories of healthcare workers concerned were nurses, physicians, and, less frequently, midwives, dentists and other categories of professionals in the health sector. The healthcare workers were exposed to different forms of WPV as Physical Violence, Emotional and psychological Violence, Physical sexual violence, Sexual Harassment.

**WPV AGAINST HEALTHCARE WORKERS IN ARAB AND AFRICAN COUNTRIES**

The analysis of the findings showed that the response rate varied from 65% to 88%. The prevalence of at least one form of WPV experienced last year by healthcare workers varied from 43.1 % in Ethiopia to 92.7 % in Nigeria. The verbal abuse is the form of WPV most frequently studied and most frequently experienced by healthcare workers. It ranged between 24.2% and 95%. The other forms of WPV experienced less frequently were verbal threats, physical assault, intimidation, physical violence, bullying and sexual harassment.

All occupational groups were concerned by WPV; whereas, the most exposed healthcare workers were nurses and physicians. As for the perpetrator’s profile, the most incriminated were patients' relatives, patients themselves, visitors, colleagues and managers. The causes of WPV were the inability to satisfy the patient's needs and family expectations, delay of consultation or care, nurse-client disagreement, understaffing, shortage of drugs and supplies, security system, lack of management attention to WPV, acute drunkenness, neuropsychiatric diseases. The risk factors were gender, age, education, night, nationality, high level of working stress and low level of care quality. The most frequent reaction to WPV is ‘Stop talking to the abusive person’. The most neglected aspects of WPV are the reporting system of the incidents and the security system. The least frequent reaction was the lawsuit.

**ANALYSIS OF THE WPV INSTRUMENT**

Among the articles analyzed (Table 1), we identified 14 different instruments including six standardized tools.

The standardized tools are: 1) the Health Sector Workplace Violence questionnaire developed jointly by the International Labor Office, the International Council of Nurses, the WHO and the Public Services International (ILO/ICN/WHO/PSI), 2) the verbal Abuse Questionnaire (VAQ), 3) the Quality of Workplace Care questionnaire (QWC), 4) the revised version of Negative Acts Questionnaire (NAQ-R), 5) the Violent incident form (VIF) and 6) the Massachusetts Nurses Association questionnaire (MNA).

The Arab version of the ILO/ICN/WHO/PSI includes 81 items and assesses all forms of WPV experienced in the last year. It includes the description of the assault. Other parameters assess the possibility of avoiding the incident, its consequences and the investigation of its causes, the identity of the attacker, the consequences for the attacker and the reason why the incident is not reported to others. It also includes items on the satisfaction and how the incident was handled. The third section was dedicated to psychological violence. The participants were also asked to indicate if any specific policies or measures to deal with violence exist or not. This section covers also the options of changes that have occurred during the last 2 years. The fifth section explores the opinions of the participants on factors contributing to WPV.

The Arab version of VAQ-Ar includes the items assessing the form, frequency and severity of VA. It also assesses the emotional experiences of the participants and the behaviors that abused interns have exhibited towards the abuser and themselves. It is composed of 41 items.

The QWC questionnaire consists of three questions. The first asked if the participants had been victims of violence during the past year. The second identifies the sources of violence, and the third question asks whether participants see violence as a problem at work.

The Arab version of NAQ-R contains 22 items assessing the presence of workplace bullying and 12 items.
The VIF tool contains 20 items. It consists of a section dedicated to the identification of the assaulted, a section for the WPV incident estimation, and a section on the identification of the attacker (patients, relatives or friends, colleagues) and the event that preceded the incident. The last section describes the type of assault, the actions taken by the victim and the consequences of the incident. One last open-ended question was added about the measure(s) to prevent WPV based on the participant’s opinions.

The MNA questionnaire contains 40 structured multiple-choice questions. It assesses the prevalence of verbal violence, physical attack and threatening behaviors. The perpetrators as well as precipitating factors for violence are also identified. In addition, a panel of non-standardized tools was identified. These forms which we describe briefly in Table 1, were designed according to the specific objectives of each study.

Standardized scales assessing the consequences of WPV, such as Depression Anxiety Stress Scales (DASS), the Beck Depression Inventory II (BDI-II), the Arab version of the Satisfaction with Life Scale (SWSL), Trait Anxiety Inventory of Spielberger (TSAI) and the Andrew and Withey Job Satisfaction Questionnaire, were combined with standardized or non-standardized tools (Table 1).

4. DISCUSSION

This literature review was carried out with the aim to analyze the status of WPV against healthcare workers in Arab and African countries and to identify an efficient instrument for the monitoring of this phenomenon in our context.

As output, 26 original articles about the WPV perpetrated against healthcare workers in Arab and African countries were analyzed, covering the period lasting from 2002 to 2021. The WPV is a neglected problem in Arab and African countries as evidenced by the number of publications identified. According to our results, more than 50% of original articles about WPV in Arab and African countries were published between 2018 and 2021.

All forms of violence have been reported and all health workers have been affected. The prevalence was ranging from 43.1% in Ethiopia to 92.7% in Nigeria. These data show a high rate of WPV compared to the data of the authors [18]. Our results suggest the setting of a continuous assessment of the WPV against health workers in these countries based on the appropriate instruments.

ILO/ICN/WHO/PSI tool assesses all forms of violence with a detailed description of the circumstances, causes and consequences of WPV. This tool is the widely used in Arab and African countries. Nevertheless, this 81-item questionnaire and the 69-item tool proposed by Alsharari et al. [19], are difficult to use continuously for the WPV follow-up considering the workload, stress and constraints of the healthcare workers. The high number of their items is time-consuming.

The tool used by Maghraby et al. [20], reports sexual harassment in particular, while the instrument proposed by Al-Surimi et al. [21] is restricted to bullying. As a strengthening point, the method of its administration (by personnel email) respects the privacy of the participants and insured the confidentiality and the safety of the data that should lead to a massive participation.

The VAQ, based on 41 items, reports the circumstances of the incident, the emotional consequences and the reactions to WPV. But it is restricted to verbal violence; while, the NAQ-R, a 22 items tool, exclusively reports a description of the nature of bullying without indication of causes, consequences or reactions to WPV.

The QWC, containing 3 questions, reports the incidence of WPV, perpetrators and perception of violence as a problem at work. Nevertheless, it does not allow to distinguish different forms of violence. The consequences and the reactions to WPV are not reported by this tool.

The questionnaire used by El Tantawi et al [22], focused specifically on the knowledge, attitudes and behaviors towards the reporting of WPV according to the participant perceptions. This is the unique tool focusing on the mandated person or organization for reporting WPV, knowledge on laws, and procedures of reporting the incidents of WPV. However, this tool does not assess forms, circumstances or consequences of WPV.

The tool used by Belayachi et al. [17], reported the circumstances and causes of verbal abuse, verbal threat and physical assault. It assessed the emotional state of the victims; but the reactions to WPV are not assessed.

Kennedy and Julie [23] used a qualitative approach to characterize physical and psychological violence and key aspects of WPV. Nevertheless, this method does not allow quantifying the magnitude of the WPV.

Sm et al. [24] proposed the only instrument that documented the witnessed WPV and the feelings about it.

The MNA tool [25], a 40-items questionnaire, assesses all forms of violence and their
precipitating factors. However, it does not include items on the consequences and the reactions to WPV.

**CONCLUSION**

The VIF reported all forms of violence and threats, causes, circumstances, consequences, perpetrators, reactions and reporting of the incident. Among the 20 items, 12 items are specific to the key aspects of the violence in 1-Page checklist. It can be completed in less than 10 minutes. It is the least time-consuming and covers all forms of violence, associated factors and consequences of WPV. It can be used continuously or periodically for the follow-up of WPV. The VIF is the instrument we recommend for use in our context according to the aim of our research.

**COMPETING INTERESTS**

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**AUTHOR CONTRIBUTIONS**

Rouahi N: Conceptualization, Methodology, Formal Analysis, Investigation, Project Administration, Supervision, Data curation, Resources, Validation, Visualization, Writing – Original Draft Preparation, Writing – Review & Editing.

Boussaa S: Investigation, Methodology, Resources, Validation, Visualization, Review & Editing.

Ouma S: Data Curation, Formal Analysis, Resources, Validation.

Benomar N: Investigation, Methodology, Resources, Validation, Review & Editing.

All the co-authors have read and agreed to the contents of this manuscript.

**REFERENCES**


[33] A. Abate, D. Abebaw, A. Birhanu, A. Zerihun, et D. Assefa, «Prevalence and Associated Factors of Violence against Hospital Staff at


Table 1. Presentation of the selected references by design study and instruments assessing WPV against healthcare workers in Arabic and African populations (N=26).

<table>
<thead>
<tr>
<th>Reference</th>
<th>Design study &amp; aims</th>
<th>Population &amp; workplace</th>
<th>Forms of violence</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Albadry et al., [26]</td>
<td>Cross-sectional study from September 1 to October 31, 2018</td>
<td>Security personnel (N=150) University Hospital Egypt</td>
<td>Physical violence: pushing, Emotional violence: verbal abuse, threats</td>
<td>Arabic version of the health sector workplace violence questionnaire developed ILO/ICN/WHO/PSI</td>
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<tr>
<td></td>
<td>Prevalence of WPV during the last year, Circumstances, Perpetrators &amp; Victims</td>
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<tr>
<td>2- Al-Surimi et al., [21]</td>
<td>Cross-sectional study 2018</td>
<td>Patients and Healthcare practioners: physicians, nurses, technicians, administrative, pharmacists (N=1074)</td>
<td>Verbal abuse, Physical harassment</td>
<td>Self-administered questionnaire distributed by e-mail</td>
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<td>Survey victims of WPB &amp; Risk factors</td>
<td>WPB in the past year</td>
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<td></td>
<td>Multi-regional hospitals (N=4)</td>
<td>KSA</td>
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<tr>
<td>3- Shdaifat et al., [27]</td>
<td>Cross-sectional study, 6 months, 2019, VA forms and frequency Psychological disorders</td>
<td>Nursing students (N=54) Teaching Hospital in a province KSA</td>
<td>Verbal Abuse</td>
<td>-Arabic Verbal Abuse Questionnaire (VAQ)</td>
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<td></td>
<td>Association between VA &amp; psychological disorders</td>
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<td>-Arabic version of Depression Anxiety Stress Scales (DASS)</td>
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<td>Nursing students (N=54)</td>
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<td>4- El-Hneiti et al., [28]</td>
<td>Correlational cross-sectional study from September 2015 to January 2016 Prevalence</td>
<td>Nurses (N=485) 3 public hospitals, 3 private hospitals</td>
<td>Threats, Bullying</td>
<td>Questionnaire QWC</td>
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<td>of WPV among nurses &amp; Risk factors</td>
<td>17 healthcare centers Jordan</td>
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<td>5- Makarem et al., [29]</td>
<td>Survey design study Develop an Arabic version of NAQ-R</td>
<td>Shops, banks, travel agencies and restaurants in an area in central Beirut around a tertiary care medical centre</td>
<td>Bullying</td>
<td>-Arabic version of Negative Acts Questionnaire-Revised (NAQ-R),</td>
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<td>6- El Tantawi et al., [22]</td>
<td>Cross-sectional study, April to December 2016</td>
<td>Lebanon</td>
<td>Dentists (N=4506)</td>
<td>To assess dentists’ intention to report suspected exposure to WPV</td>
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<tr>
<td>7- Belayachi et al., [17]</td>
<td>Survey</td>
<td>Emergency physicians (N=60)</td>
<td>To determine the frequency of exposure, characteristics, and psychological impact of violence toward hospital-based emergency physicians</td>
<td>Verbal abuse/Verbal threat/Physical assault</td>
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<tr>
<td>9- Maghraby et al., [20]</td>
<td>Cross-sectional study</td>
<td>Nurses (N= 296)</td>
<td>To assess the magnitude of sexual harassment, its effect on nurses, To identify the predictors of workplace sexual harassment</td>
<td>Sexual harassment</td>
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<td>10- Jaradat et al., [9]</td>
<td>Cross-sectional study</td>
<td>Nurses, (N= 343)</td>
<td>To determine prevalence of WPV To examine associations with psychological distress and job satisfaction</td>
<td>Physical aggression</td>
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<tr>
<td>11- Sm et al., [24]</td>
<td>National cross-sectional survey</td>
<td>Nurses, (N= 5876)</td>
<td>To document prevalence and determinants of WPV</td>
<td>Verbal violence Physical violence</td>
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<td>Study Reference</td>
<td>Study Design</td>
<td>Sample Description</td>
<td>WPV Type</td>
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<td>12- Alsharari et al., [19]</td>
<td>A multicenter descriptive online</td>
<td>Nurses, (N= 849) Emergency of public hospitals in multiple administrative regions January to April 2020 KSA</td>
<td>Physical &amp; Non physical violence</td>
<td>Arabic and English face-to-face tool</td>
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<td>To determine the prevalence, pattern and factors associated with WPV among emergency nurses</td>
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<td>Comprehensively analyze the phenomenon in the physicians’ community to optimize future strategies countering it</td>
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<td>To understand the healthcare workers response to violence &amp; their awareness of a reporting system</td>
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<td>15- Alkorashy &amp; Al Moalad, [25]</td>
<td>Quantitative Cross-sectional study 2019</td>
<td>Nursing personnel (N=370) University hospital, Riyadh KSA</td>
<td>Verbal abuse</td>
<td>Survey questionnaire from the Massachusetts Nurses Association (MNA)</td>
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<td>To determine the prevalence of WPV against nurses Perpetrators &amp; contributing factors</td>
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<td>African non arab population (N =11)</td>
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<td>16- Abate et al., [33]</td>
<td>Cross-sectional study</td>
<td>Hospital staff, (N= 496) Manuel Mental Specialized Hospital Addis Ababa From 1 to 30 November 2019, Ethiopia</td>
<td>Physical violence Verbal violence Sexual violence</td>
<td>ILO/ICN/WHO/PSI tool</td>
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<td>To access prevalence and associated factors of violence against hospital staff</td>
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<td>17- Boafo, [34]</td>
<td>A cross-sectional descriptive survey</td>
<td>Nurses, (N= 592)12 hospitals ( 2 teaching hospitals, 5 regional and 5 district hospitals) September 2013 to April 2014 Ghana</td>
<td>Physical violence Verbal violence Sexual violence</td>
<td>ILO/ICN/WHO/PSI tool</td>
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<td>To investigate the impact of perceived respect and WPV on Ghanaian nurses’ job satisfaction</td>
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<td>Study ID</td>
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<td>18-Boafo et al., [35]</td>
<td>A cross-sectional study</td>
<td>To document the incidence, sources and effects of workplace verbal abuse and sexual harassment against Ghanaian nurses</td>
<td>Nurses and midwives (N= 592), 12 hospitals (2 teaching hospitals, 5 regional and 5 district hospitals) September 2013 to April 2014, Ghana</td>
<td>Verbal abuse Sexual harassment</td>
</tr>
<tr>
<td>19-Khalid et al., [36]</td>
<td>Cross-sectional study</td>
<td>To assess the incidents and factors associated with occupational violence</td>
<td>Pharmacists, Hospital pharmacists, Administration regulatory, Community pharmacies (N= 263) 30 days (February-March 2020), Nigeria</td>
<td>Physical violence Verbal violence</td>
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<td>20-Kennedy &amp; Julie, [23]</td>
<td>A qualitative, exploratory and descriptive study</td>
<td>To explore the interpretation of WPV, reaction to WPV, to describe the effects of WPV, to identify the coping strategies</td>
<td>Nurses (N= 8) Trauma and Emergency Department in the Western Cape South Africa</td>
<td>Physical threats Verbal abuse Psychological violence</td>
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<td>21-Olifestyle et al., [37]</td>
<td>Cross-sectional retrospective survey</td>
<td>To investigate the prevalence and related factors, To identify available sources of support for the victims of WPV</td>
<td>Mental health Staff (N= 201) Sbrana Psychiatric Hospital 4 months (1st of August to 30th of November, 2016) Gaborone Botswana</td>
<td>Physical violence</td>
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<td>22-Okeke &amp; Mabuza, [38]</td>
<td>Descriptive cross-sectional study</td>
<td>To assess the perceptions of health care professionals on safety and security</td>
<td>Health care professionals (N= 181) Odi District Hospital South Africa</td>
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<td>23-Sisawo et al., [39]</td>
<td>Quantitative and qualitative designs</td>
<td>To assess the prevalence, perpetrators and factors associated with WPV</td>
<td>Nurses (N= 219) Public secondary health care facilities from 2 health regions (N= 35) July to September 2014 Gambia</td>
<td>Physical violence Verbal violence Sexual violence</td>
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<td>24-Weldehawaryat et al., [40]</td>
<td>A cross-sectional study</td>
<td>To assess the prevalence of WPV and associated factors</td>
<td>Nurses (N= 348) Selected hospitals and health centers Addis Ababa From February to March 2018, Ethiopia</td>
<td>Physical violence - Verbal abuse - Sexual harassment - Bullying</td>
</tr>
</tbody>
</table>
| 25- Yenealem et al., [41] | Cross-sectional study  
To assess magnitude and predictors of WPV | Health care workers (N= 553)  
From February 21 to March 21, 2016  
Gondar city, Ethiopia | Physical violence  
Verbal violence  
Sexual harassment | ILO/ICN/WHO/PSI tool  
Adapted to Amharic |
|--------------------------|---------------------------------------------|-------------------------------------------------|---------------------------------|-----------------------------|
| 26- Boafo, [42]          | A cross-sectional study  
To examine the impact of workplace violence on nurses’ emigration intentions | Nurses, (N= 592)  
12 public hospitals  
3 teaching hospitals, 9 regional hospitals  
September 2013 to April 2014, Ghana | Physical violence  
Sexual harassment  
Verbal abuse | ILO/ICN/WHO/PSI questionnaire |