



## Original article

## Prevalence and Effect of Workplace Violence against Emergency Nurses at a Tertiary Hospital in Kenya: A Cross-Sectional Study

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## ABSTRACT

**Introduction:** Workplace violence (WPV) is a major occupational and health hazard for nurses. It affects nurses' physical and psychological well-being and impacts health service delivery. We aimed to assess the prevalence and describe the consequences of WPV experienced by nurses working in an emergency department in Kenya.

**Methods:** We conducted a descriptive cross-sectional study among emergency nurses at one of the largest tertiary hospitals in Kenya. We collected data using a structured questionnaire adapted from the 'WPV in the Health Sector, Country Case Studies Research Instruments' questionnaire. We described the prevalence and effects of WPV using frequencies and percentages.

**Results:** Of the 82 participating nurses, 64.6% were female, 57.3% were married and 65.8% were college-educated (65.8%). Participants' mean age was 33.8 years (standard deviation: 6.8 years, range: 23–55). The overall lifetime prevalence of WPV was 81.7% ( $n = 67$ , 95% confidence interval [CI]: 71.6%–88.8%) and the 1-year prevalence was 73.2% ( $n = 63$ , 95% CI: 66.3–84.8%). The main WPV included verbal abuse, physical violence, and sexual harassment. Most incidents were perpetrated by patients and their relatives. No action was taken in 50% of the incidents, but 57.1% of physical violence incidents were reported to the hospital security and 28.6% to supervisors. Perpetrators of physical violence were verbally warned (42.9%) and reported to the hospital security (28.6%).

**Conclusion:** Workplace violence is a significant problem affecting emergency nurses in Kenya. Hospitals should promote workplace safety with zero-tolerance to violence. Nurses should be sensitised on WPV to mitigate violence and supported when they experience WPV.

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## 1. Background

Workplace violence (WPV) is widespread in the health sector [1]. WPV negatively impacts the quality of care [2,3], and increases healthcare costs [4,5]. It is also a major occupational and health hazard for nurses [1,6], and affects their psychological [3,7,8] and social well-being [2,3,9]. Evidence shows that violence in hospitals negatively affects nurses' retention, job security and attitudes towards the profession [3,7,9] and workplace [9].

Worldwide, more than half of nurses have experienced some form of violence. According to the International Council of Nurses, WPV is 'any incident where the staff is abused, threatened or assaulted

at work including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health' [10]. Verbal violence is the most common form of violence in the healthcare context, and over 80% of nurses reported this form of violence in their workplace [1]. Other studies have reported that nurses experienced various forms of violence, including physical assault, bullying, sexual harassment, rape and murder [3,7,9].

The prevalence of WPV differs among countries. In Africa, studies have reported WPV rates as low as 26.7% in Ethiopia [11] and as high as 85% in South Africa [12]. The prevalence of WPV is especially high among nurses working in emergency and psychiatric departments [13–16] who have direct contact with patients

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and their caregivers [13]. High levels of WPV have been attributed to poor communication [17], low work experience, long waiting hours [17–19], burnout [20] anxiety about procedures and nurses not meeting expectations [18,19], lack of violence prevention measures [18], nurses' attitudes [18], understaffing [17] and shortages of drugs and supplies [17]. Most WPV incidents are perpetrated by patients and their relatives [5,18,21].

In Kenya, employers are required to provide a safe working environment [22]. However, there are no clear definitions of WPV or the consequences of WPV for employers or perpetrators. Recently, media reporting of WPV incidents against nurses has increased [23–27]. These incidents include nurses being slapped and verbally abused by a patient [24], hit and strangled by a patient's relatives [25], and being killed by a patient. Despite the rise in reported cases, there is a lack of empirical evidence on the nature and extent of WPV among nurses in Kenya.

This study aimed to evaluate the prevalence of physical and non-physical WPV, and examine nurses' perspectives of the consequences of WPV for themselves and the offender (perpetrator) in the accident and emergency department (ED) of one of the largest national referral hospital in Kenya.

## 2. Methods

### 2.1. Study design and setting

A cross-sectional study was conducted among emergency nurses at one of the largest public referral and teaching hospital in Kenya. The hospital ED offers specialised emergency care to referred and walk-in patients. The ED attends to 110–130 patients each day, who are usually accompanied by two or more relatives. This study targeted all 86 nurses working in the ED. We included all nurses who had worked in the ED for more than 6 months and who consented to participate in this study.

### 2.2. Data collection

We informed potential participants about this study in three departmental meetings and individually. Those who consented to participate completed and returned self-administered questionnaires to the researcher, or left them in a designated place in the nursing station. Data were collected from 1–31 October 2019. This study adopted and modified the English version of the 'WPV in the Health Sector, Country Case Studies Research Instruments' questionnaire developed by the International Labour Office, International Council of Nurses, World Health Organization and Public Service International. The structured questionnaire had three sections: respondents' demographics; frequency and factors relating to violence; and response, reporting and prevention suggestions [10].

### 2.3. Statistical analysis

The outcome measure was the lifetime and 1-year prevalence of WPV (overall and subtypes) among ED nurses. We defined WPV as "any act or conduct where an employee is harmed or threatened in situations correlated with working hence challenging their health and well-being" [10]. WPV subtypes were classified as physical violence or non-physical violence, such as verbal abuse, verbal threats, sexual harassment and psychological stress [6]. Verbal abuse refers to the "intentional use of language, spoken words, or behaviours that humiliate, degrade or show a lack of respect for the dignity and worth of a nurse that creates fear, intimidation and anger in the nurse" [10]. Physical violence is "an intentional act of physical force against a nurse such as beating, kicking, slapping,

stabbing, shooting, pushing, pinching, scratching and biting, which causes physical, sexual, or psychological harm to the nurse" [10]. Verbal threats refer to a promised use of physical power with intent to cause harm that results in a nurse's fear and means the perpetrator gains control of the situation [10]. Sexual harassment is "any unwelcome behaviour of a sexual nature that is offensive, thereby making a nurse uncomfortable and affecting their dignity" [28].

We described the sample characteristics and lifetime prevalence of WPV (overall and subtypes) among ED nurses using frequencies and percentages. Stata version 13.1 (Stata Corp, College Station, Texas, USA) was used for all data analyses.

### 2.4. Ethical considerations

Ethical approval was obtained from the KNH/University of Nairobi Ethics Review Committee, the Aga Khan University Institutional Ethics Review Committee and the National Council for Science, Technology and Innovation, Kenya. All participants provided written informed consent. No personal identifiers were collected, and all information was treated with confidentiality.

## 3. Results

Of the 86 targeted participants, 82 took part in the study yielding a 95.3% response rate. The majority of these participants were female (64.6%), married (57.3%) and college-educated (65.8%) with a mean age was 33.8 years (SD: 6.8 years, range: 23–55) (Table 1). Forty-six of the participants had experienced one incident of WPV while 16 had experienced two incidents and one had experienced three incidents.

### 3.1. Types of violence experienced and associated characteristics

Of the 93 reported WPV incidents, 62 were verbal abuse, 14 were physical violence, 11 were sexual violence and six were verbal threats (Table 1). The overall lifetime prevalence of WPV was 81.7% ( $n = 67$ ; 95% confidence interval [CI]: 71.6%–88.8%), and the 1-year prevalence was 77.8% ( $n = 63$ ; 95% CI: 66.3%–84.8%). The prevalence rates of WPV subtypes were 75.6% ( $n = 62$ , 95% CI: 64.9%–83.8%) for verbal abuse, 17.1% ( $n = 14$ , 95% CI: 10.3%–27.0%) for physical violence, 13.4% ( $n = 11$ , 95% CI: 7.5%–22.9%) for sexual harassment and 7.3% ( $n = 6$ , 95% CI: 3.3%–15.6%) for verbal threats.

### 3.2. Perpetrators of WPV

The main perpetrators of all types of WPV were patients ( $n = 32$ , 46.4%) and their relatives ( $n = 34$ , 49.3%). Patients' relatives perpetrated half of all physical violence ( $n = 7/14$ ) and verbal threats ( $n = 3/6$ ), 54.5% ( $n = 6/11$ ) of sexual harassment and 57.5% ( $n = 35/61$ ) of verbal abuse incidents (Table 1).

### 3.3. Characteristics of WPV

In total, 14 (18%) participants experienced physical violence. Kicking, slapping, pushing, and repelling were the most common forms of physical violence, and resulted in physical injury in 57.1% ( $n = 8/14$ ) of the incidents. Most physical violence incidents occurred during the afternoon ( $n = 7$ , 50%) or night shifts ( $n = 6$ , 42.9%), and in observation ( $n = 5$ , 35.7%), surgical ( $n = 4$ , 28.6%) and monitoring rooms ( $n = 3$ , 21.4%) (Table 2).

Of the 42 participants who experienced verbal abuse, 29 (46.8%) experienced inappropriate, nasty, rude, or hostile behaviour, and 16 (25.8%) were yelled or shouted at. Thirty-five (56.5%) participants reported being verbally abused occasionally, 19 (30.7%) all the time, and eight (12.9%) only once.

**Table 1**  
Respondents characteristics and WPV incidents according to participants' characteristics

Variables	Respondents characteristics (n = 82) n (%)	WPV incidents according to sociodemographic characteristics <sup>†</sup>			
		Physical violence n (%)	Verbal abuse n (%)	Verbal threat n (%)	Sexual harassment n (%)
<b>Lifetime experience of WPV</b>	N = 67 (81.7)	n = 14	n = 62	n = 6	n = 11
<b>WPV in the last 12 months</b>					
Yes	63 (76.8)	13 (92.9)	56 (90.3)	6 (100)	10 (90.9)
No	19 (23.2)	1 (7.1)	6 (9.7)	—	1 (9.1)
<b>Age, years</b>					
<30	34 (41.5)	9 (64.3)	21 (33.9)	5 (83.3)	8 (72.7)
31–40	34 (41.5)	2 (14.3)	29 (46.8)	1 (16.7)	2 (18.2)
41+	14 (17.1)	3 (21.4)	12 (19.4)	—	1 (9.1)
<b>Gender</b>					
Male	29 (35.4)	4 (28.6)	22 (35.5)	3 (50.0)	2 (18.2)
Female	53 (64.6)	10 (71.4)	40 (64.5)	3 (50.0)	9 (81.8)
<b>Education level</b>					
Diploma	54 (65.8)	11 (78.6)	40 (64.5)	2 (33.3)	10 (90.9)
University	28 (34.2)	3 (21.4)	22 (35.5)	4 (66.7)	1 (9.1)
<b>Marital status</b>					
Never married	30 (36.6)	6 (42.9)	20 (32.3)	3 (50.0)	6 (54.5)
Married/cohabiting	47 (57.3)	8 (57.1)	38 (61.3)	3 (50.0)	5 (45.5)
Divorced/widowed/separated	5 (6.1)	—	4 (6.5)	—	—
<b>Number of staff per shift (n = 78)</b>					
1	32 (41.0)	3 (23.1)	20 (33.3)	—	2 (18.2)
2	35 (44.9)	9 (69.2)	29 (48.3)	5 (100)	6 (54.6)
3	11 (14.1)	1 (7.7)	11 (18.3)	—	3 (27.3)
<b>Perpetrators (n = 69)</b>					
Patient	32 (46.4)	7 (50.0)	24 (39.3)	2 (33.3)	4 (36.4)
Patient's relatives	34 (49.3)	7 (50.0)	35 (57.4)	3 (50.0)	6 (54.5)
Patient's friends	3 (4.3)	—	2 (3.3)	1 (16.7)	1 (9.1)
<b>Knows reporting procedures*</b>					
Yes	33 (40.7)	7 (50.0)	27 (43.5)	3 (50.0)	5 (45.5)
No	48 (59.3)	7 (50.0)	35 (56.5)	3 (50.0)	6 (54.5)
<b>Training on management of WPV*</b>					
Yes	14 (17.3)	2 (14.3)	13 (21.0)	1 (16.7)	1 (9.1)
No	67 (82.7)	12 (85.7)	49 (79.0)	5 (83.3)	10 (90.9)

WPV: workplace violence.

\* One missing observation.

† Some nurses experience more than one form of WPV.

Six nurses were verbally threatened with a beating and killing, with two receiving such threats more than once. Two-thirds ( $n = 7$ ) of the 11 nurses who were sexually harassed were subjected to unwanted sexual jokes, stories, questions, or words (Table 2). Only

14 (17.3%) of the participating nurses had been trained on WPV management.

### 3.4. Coping methods

All participants who were verbally threatened felt that the incident could have been prevented, while 35 (57.4%) participants who were verbally abused held this view. No action was taken in almost half of the WPV incidents. Eight (57.1%) physical violence incidents were reported to the hospital security and four (28.6%) were reported to supervisors. The participants did nothing in 67.8%, 16.7% and 18.2% of the verbal abuse, verbal threat, and sexual harassment incidents, respectively (Table 3).

### 3.5. Consequences for the perpetrators

In most incidents, no action was taken against perpetrators of verbal abuse (79%), verbal threats (66.7%) and sexual harassment (81.8%). Perpetrators of physical violence were verbally warned (42.9%) or reported to the hospital security (28.6%) (Table 3).

### 3.6. Effects of WPV on study participants

Study participants stated they were 'extremely' affected by WPV in terms of: becoming super alert (26.9%); feeling disappointment (15.2%); avoiding thinking or talking about it (11%); feeling disgusted (9.8%), helpless (9.7%), shock (8.7%), guilt or shame (8.7%) and powerless (5.8%); having disturbing memories of the attack (5.8%); feeling like everything they did was an effort (5.4%); and experiencing low self-esteem (4.3%) (Supplementary Table 1).

**Table 2**  
Characteristics of workplace violence incidents

<b>Exposure to physical violence, n (%)</b>	<b>n = 14</b>
Kicked, slapped, pushed or repelled	6 (42.9)
Objects were thrown	3 (21.4)
Spit on	3 (21.4)
Scratched and beaten	2 (14.3)
<b>Exposure to verbal abuse, n (%)</b>	<b>n = 62</b>
Experienced inappropriate, nasty, rude, or hostile behaviour	29 (46.8)
Yelled or shouted at	16 (25.8)
Cursed or sworn at	9 (14.5)
Interrupted or not listened to	6 (9.7)
Belittled or humiliated	1 (1.6)
Disdained or ignored	1 (1.6)
<b>Exposure to a verbal threat, n (%)</b>	<b>n = 6</b>
Beating	5 (83.3)
Killing	1 (16.7)
<b>Exposure to sexual harassment, n (%)</b>	<b>n = 11</b>
Subjected to unwanted sexual jokes, stories, questions, or words	7 (63.6)
Subjected to allusive sexual behaviours with the eye, hand, or face	3 (27.3)
Touched on the body	1 (9.1)

**Table 3**  
Responses to the incidents of workplace violence

Response to workplace violence	Physical violence (n = 14) n (%)	Verbal abuse (n = 62) n (%)	Verbal threat (n = 6) n (%)	Sexual harassment (n = 11) n (%)	Any violence* (n = 93) n (%)
Reported to hospital security	8 (57.1)	4 (6.5)	2 (33.3)	—	14 (15.1)
Reported to my supervisor	4 (28.6)	1 (1.6)	1 (16.7)	1 (9.1)	7 (7.5)
Distanced myself and left the scene	2 (14.3)	9 (14.5)	2 (33.3)	6 (54.5)	19 (20.4)
Did nothing	—	42 (67.8)	1 (16.7)	2 (18.2)	45 (48.4)
Reported to a friend/colleague	—	4 (6.5)	—	—	4 (4.4)
Verbally abused them too/put up barriers	—	2 (3.2)	—	2 (18.2)	4 (4.4)
<b>Consequence for attackers</b>					
Nothing	2 (14.3)	49 (79.0)	4 (66.7)	9 (81.8)	64 (68.8)
Verbal warning	6 (42.9)	13 (21.0)	1 (16.7)	2 (18.2)	22 (23.7)
Discontinued care	2 (14.3)	—	1 (16.7)	—	3 (3.2)
Reported to hospital security	4 (28.6)	—	—	—	4 (4.3)

\* More than one action was taken.

#### 4. Discussion

This study showed there was a high prevalence of WPV in the ED of a Kenyan tertiary hospital. More than three-quarters of participants had experienced some form of WPV, with verbal abuse, physical violence and sexual harassment being the most common. The main perpetrators of WPV were patients or their relatives.

The overall one-year prevalence of WPV among participating nurses was 76.8%. This prevalence rate was higher than the global prevalence of WPV (51.7%–66.7%) [1] and that in some other African countries, including Ethiopia (26.7%) [11], Ghana (52.7%) [8] and Gambia (62.1%) [17]. The prevalence of WPV in our study was similar to that in Malawi (61%–79%) [29] but lower than that in South Africa (85%) [12]. Emergency nurses work in high pressure, understaffed settings and have direct contact with ‘highly-stressed’ patients and their relatives, especially as they receive and triage patients for care [13,19], which may result in delayed care and poor communication between nurses and patients [17]. The high prevalence of WPV is a cause of concern that should be urgently addressed because of the impact of WPV on nurses’ personal, professional and psychological well-being [2–4,7–9].

This study found that verbal abuse was the most prevalent form of WPV experienced by nurses working in the ED. A similar pattern was reported in studies among ED nurses in Turkey [30], Palestine [18] and Sabzevar-Iran [21]. Verbal abuse is also the most prevalent form of violence towards female users of public transport in Kenya [31]. Interestingly, our study found a low prevalence of verbal threats compared with other studies [18,30].

The prevalence of sexual harassment (13.8%) in our study was similar to that in Ghana (12.2%) [8] and Turkey (15.9%) [30], but higher than that in Hong-Kong [6], China [32], Iran [21] and Palestine [18]. The prevalence of sexual harassment was also lower than the prevalence of sexual assault in Nairobi (21.3%) [33]. The low prevalence in comparison with Nairobi could be attributed to differences in the study population. Sexual harassment is a punishable offence under Kenya’s Sexual Offences Act (2016) [34] and Employment Act (2007) [22]. The prevalence of physical violence (18%) in this study was similar to that in China (11.8%) [32] Iran (19.6%) [21] and Hong Kong (22.7%) [6], but lower than that of

physical assault in Turkey (41.4%) [30] and Pakistan (53.4%) [35]. Similar to other settings, most physical violence incidents in this study occurred during the afternoon and night shifts [5,36].

Consistent with previous studies, our findings showed that patients and their relatives were the main perpetrators of all types of WPV [5,13,17,18,21,30,37–39]. However, our findings differed from other studies that reported a majority of incidents were perpetrated by patients [5,13,18,30,37] rather than their relatives [17,21,38]. In our setting, patients are generally accompanied to the ED by two to three relatives. Additionally, overcrowding, long waiting time, feeling of lack of caring and ineffective patient-provider communication have been suggested as reasons for WPV perpetrated by patients and their relatives [38,40]. Also, Ramacciati and colleagues [38] identified mental illness, agitation, drunkenness and substance abuse as patients’ pathological conditions at risk of WPV [38]. People have a high expectation of services, but the ED services in the study context are sometimes slow because of overcrowding, inadequate staffing, and limited infrastructure. This means that nurses are also working under high stress and experience burnout increasing their exposure to WPV [20]. In East Africa, nurses also have a poor self-image and believe that the public perceives them as rude, cruel, harsh, and unkind [41].

Our study found that no action was taken against perpetrators following most verbal abuse, verbal threat, and sexual harassment incidents. However, similar to a study in India, most perpetrators of physical violence were verbally warned and reported to the hospital security [5]. Action may not have been taken against the perpetrators because of the perpetrator’s health status, lack of established mechanisms to investigate and manage WPV and potential normalisation of such actions [42–44].

None of the nurses who participated in this study indicated that the incidents were reported to the police. Most studies have found that few cases of WPV are reported to police [1,45,46]. For example, only 7.1% and 9% of the cases were reported to the police in Egypt [45] and five European countries [46] respectively. Importantly, 87.3% of the hospital security personnel in Egypt were also exposed to WPV [45]. We speculate that this could be due to the general negative attitude towards police in the country, lack of training and the lengthy process involved in investigations and charging the perpetrators.

We found that most nurses felt that the incident they experienced could have been prevented, which was similar to a study conducted in Lucknow, India [19]. In our study, almost half of the WPV victims responded to the incident by doing nothing, although some reported the incident to hospital security and supervisors. This was similar to the results of a study conducted in Turkey [30,39] and other European countries [46]. In Malawi, nurses tended to report violent incidents to their seniors [29]. In the public transport sector in Kenya, 36% of commuters that experienced violence also took no action and 32% of the operators reported harassment incidents to police [31]. The inaction and low reporting of such incidents could be attributable to reasons such as lack of training, ignorance about the reporting process, fear, stigma, and poor/lack of established mechanisms [47,48]. Studies have shown that victims of WPV, especially sexual harassment, tend to avoid reporting [4,8]. Repeated violence could also have resulted in normalising of these acts [42–44]. In Ghana, reporting of incidents was considered futile or unimportant, and violence had become normalised as ‘part of the job’; in some cases, nurses did not know where to report an incident [8].

Training of nurses on violence recognition, prevention and management is important to prevent WPV [49]. Training improves nurses’ communication skills, self-efficacy and understanding of clients, avoids escalation and promotes the diffusion of the situation. However, similar to studies conducted in the Gambia [17] and



Saudi Arabia [36], less than one-fifth of the nurses in our study had received any training on WPV. This lack of training was reflected in how the nurses handled the WPV incidents, with most doing nothing and some taking extreme measures such as discontinuing care for that patient [43]. This could be explained by the lack of evidence on the extent of the problem, inadequate implementation of existing guidelines and occupational health and safety departments that are insufficiently or understaffed to implement any guidelines.

Similar to studies from Ghana and Ethiopia [50,51], our study found that more than one-fifth of the nurses had become super alert and avoided thinking or talking about their experience after the incident. However, compared with previous studies, fewer nurses in our sample reported 'repeated disturbing memories or thoughts of the attack'. WPV affects nurses' psychological well-being [3,7,8], resulting in feelings of insecurity [9], stress and depression [4].

#### 4.1. Strengths and limitations

This is the first study to explore the prevalence and effects of WPV among nurses in an ED in Kenya. This study was conducted in one department with a small number of respondents, which limits the generalisability of the findings. However, WPV among emergency nurses is widespread internationally with similarities in experiences that transcend institutional cultural, social, and contextual issues taking on a unique dimension, even in diversity [52]. Additionally, most of our findings were consistent with previous studies but we recommend large-scale, multi-centre studies in both private and public hospitals. This study also assessed lifetime and 1-year prevalence of WPV based on retrospective self-report of incidents, increasing the potential for recall bias. Further studies could triangulate data from existing well-established incident management information systems and retrospective recall of incidents. Finally, our study did not assess the main reasons for the violence, triggers, factors associated with the violence and systems in place to prevent or manage violence in the workplace. Therefore, further studies could explore these areas.

## 5. Conclusion

This study shows that WPV is a significant problem affecting nurses working in the ED setting. Nurses are exposed to various forms of WPV, including verbal abuse, physical violence, sexual harassment, and verbal threats. Patients and their relatives tend to be the main perpetrators of such violence. There is a need to sensitise nurses on WPV, provide on-the-job training on WPV, and establish clear reporting procedures and consequences for perpetrators to mitigate violence. In addition, it is necessary to develop safe workplaces for nurses, along with clear, comprehensive mechanisms to support nurses who have experienced WPV. The implementation of existing laws and workplace policies should be strengthened to develop safe work environments for nurses.

Our study findings provide baseline evidence on the prevalence and effects of WPV in the ED setting, and may act as a catalyst for preventive measures, including strengthening implementation of workplace policies aimed at combating this occupational hazard in Kenya.

#### Conflict of interests

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

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## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.shaw.2021.01.005>.

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