Predictors of Workplace Violence Against Nurses Working at A Tertiary Hospital in Kisumu, Kenya

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ABSTRACT

Context: Workplace violence (WPV) is any act in which a person is abused, threatened, intimidated, or assaulted in their work environment. It could involve physical, verbal, or written threatening behaviour or physical attacks. Workplace violence against nurses is increasingly becoming a major problem globally. Because of the nature of their work, nurses are at increased risk of workplace violence.
Aim: To assess predictors of workplace violence against nurses working at Jaramogi Oginga Odinga Teaching and Referral Hospital.
Methods: The study employed a cross-sectional study design among 184 nurses randomly selected from Jaramogi Oginga Odinga Teaching and Referral Hospital in Kisumu, Kenya. Data were collected using a self-administered questionnaire with questions regarding sociodemographic characteristics, nature of their work, experience with workplace violence, and institutional factors that could be associated with workplace violence.
Results: The nurses had a mean age of 37±9.5 years, with 62% being female. The majority (88%; n=162) were primary care nurses, 2(1.1%) were supervisors, and 20(10.9%) were in senior management. Workplace violence was reported by 70% of respondents working in the general surgery department ($p<0.001$). The presence of safety measures ($p = 0.020$), workplace violence measures ($p<0.001$), and the effectiveness of workplace violence management ($p = 0.009$) were significantly associated with a reduced risk of workplace violence.
Conclusion: The study found a high prevalence of WPV among nurses working at a teaching hospital in Western Kenya. Working in the general surgery department, without adequate safety measures, significantly increased the risk of WPV. There is a need to understand institutional processes, procedures, and operations that reduce the likelihood of workplace violence in other hospital departments and apply these findings to the general surgery unit, where there was a higher prevalence of workplace violence.

Keywords: Hospital, nurses, predictors, violence, workplace

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1. Introduction

Workplace Violence (WPV) refers to any act or threat of physical violence, harassment, intimidation, or threatening, disruptive behavior that occurs at a place of work *(Al-Qadi, 2021; Somani et al., 2021).* Workplace violence in hospitals refers to violent or aggressive incidents that occur in healthcare settings. According to the Health and Safety Executive (HSE), workplace violence is defined as "any incident in which a person is abused, threatened, or assaulted in circumstances relating to their work." *(AbuAlRub & Al-Asmar, 2014; Chen et al., 2018; Jakobsson et al., 2020).*

The workplace violence could include, but is not limited to, a carer bitten by a person with learning disabilities during normal care, an irate visitor verbally abusing a ward manager due to perceived inadequate treatment, a nurse facing verbal abuse and threats from a patient refusing prescribed medication, or a catering assistant being hit by a confused elderly patient. Because of the busy and routine nature of hospitals, there is a high prevalence of workplace violence *(AbuAlRub & Al-Asmar, 2014; Chen et al., 2018; Jakobsson et al., 2020).*

This violence can further be attributed to high-flow and work-intensive departments such as the emergency departments, surgical and medical wards *(Hamdan & Abu Hamra, 2015).* Workplace violence is a significant issue within the healthcare sector that has been on the rise over the past decade, with a notable increase during the COVID-19 pandemic. This alarming trend is commonly witnessed in emergency departments, where incidents of violence have doubled compared to pre-pandemic levels. Workplace violence not only impacts the patient's quality of care but also affects the well-being of healthcare employees *(Wirth et al., 2021).*

Organizational interventions aimed at addressing WPV have shown varying degrees of success, with many failing to produce sustained improvements. There is a tendency by healthcare organizations to oversimplify the causes of

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violence, leading to interventions that primarily focus on individual-level responses like staff education and security modifications *(Wirth et al., 2021).* However, these approaches are insufficient in tackling the full spectrum of factors contributing to WPV *(Kibunja et al., 2021).*

Violence against nurses in the workplace is a significant global issue that has garnered increased attention in recent years *(Al-Qadi, 2021).* Work-related violence is defined as any act in which a person is abused or assaulted in their work environment *(Croke, 2022).* It includes threatening behaviour, verbal or written threats, harassment, verbal abuse, and physical attacks *(Occupational Health and Safety Act (OHSA), 2023).*

Violence and threats of violence are an emerging problem in jobs where workers are in constant contact with clients, the public, and co-workers. Unfortunately, it has been reported that health care workers experience the highest rate of WPV as compared to other sectors, often because nurses on the frontline are more at risk of workplace assault than other health professionals *(Berlanda et al., 2019).*

The nature of nursing work exposes them to an increased risk of work-related violence. High rates of both physical and nonphysical violent events have been reported among nurses working in nursing homes, emergency departments, psychiatric and geriatric departments *(Olashore et al., 2018).* Being male, working at night, and working in an environment with more colleagues have been associated with workplace violence against nurses *(Spector et al., 2014).*

Globally, violence against health care workers, of whom nurses form the highest number, is a growing problem and can severely impact the health care system *(El Ghaziri et al., 2014).* Work-related violence against healthcare professionals is a problem that is occurring with increased frequency in many parts of the world. Because of the nature of their work, nurses are more prone to workplace violence than any other category of healthcare workers *(Magnavita et al., 2020).* Workplace violence harms the physical and psychological well-being of healthcare personnel *(AbuAlRub & Al-Asmar, 2014).*

2. Significance of the study

The problem of workplace violence among nurses is a major issue highlighted mainly in media reports; however, there are limited published studies quantifying the prevalence and predictors. This research gap necessitates a local study to assess its extent and impact on the well-being of the affected nurses. Kenya's healthcare system relies heavily on the competence and capacity of its health workforce. As such, examining WPV among nurses is important for gaining deeper insight and creating focused strategies and policies aimed at minimizing violence, enhancing worker safety, and improving patient care outcomes.

3. Aim of the study

To assess predictors of workplace violence against nurses working at Jaramogi Oginga Odinga Teaching and Referral Hospital. Specifically, individual and institutional determinants of workplace violence, as well as the effect of WPV on nurses' mental well-being.

3.1. Operational definition

Workplace violence was defined as self-reported experiences of physical attack, verbal abuse, bullying, or sexual harassment that occurred in the workplace over the past 12 months (from the time of data collection).

4. Subjects & Methods

4.1. Research Design

This study employed a cross-sectional study design, which collected participant data at a single time point. Cross-sectional designs help determine the *prevalence* of a disease, phenomenon, or opinion in a population, as represented by a study sample. *Prevalence* refers to the proportion of people in a population (or sample) who have a specific attribute or condition at a given time point *(Capili, 2021)***.**

4.2. Study setting

The study was conducted at Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH) in Kisumu-Kenya. It is the fourth largest referral hospital in Kenya. The hospital is situated in a densely populated area and serves as the main teaching and referral hospital in Kisumu County. The hospital receives a high number of patients daily.

4.3. Subjects

Nurses with a minimum of one year of work experience were enrolled. The sample size of 184 was determined objectively using Fisher's formula and randomly selected from the existing master list maintained by the hospital's Chief Nurse's Office. Nurses on annual, sick, or maternity leave were excluded from the study. The sample size for this study was calculated objectively using *Fisher's* formula *(1998)* for population proportions:

$$n = \frac{Z^2\, p\, (1-p)}{d^2}$$

Where:
n= desired sample size (for an infinite population)
Z= standard normal deviate corresponding to 95% confidence level (1.96)
p= estimated proportion of the population with the characteristic of interest (assumed 0.5 for maximum variability since no prior data existed)
d= degree of precision or margin of error (0.05)
Substituting the values:

$$n = \frac{(1.96)^2 \times 0.5 \times (1-0.5)}{(0.05)^2} = 384$$

Because the total population of eligible nurses (those with ≥1 year of experience) was finite, Fisher's formula was adjusted using the finite population correction (FPC):
$n_f = \frac{n}{1+\frac{(n-1)}{N}}$Where:
n_f= adjusted sample size for a finite population
N= total number of eligible nurses in the sampling frame (e.g., 350)

$$n_f = \frac{384}{1 + \frac{(384-1)}{350}} = 183.6 \approx 184$$

4.4. Tools and Data Collection

Data were collected using the following tools:

4.4.1. Self-Administered Questionnaire

This questionnaire asked questions regarding their sociodemographic characteristics, nature of work, experience with workplace violence, and institutional factors that could be associated with workplace violence. This questionnaire was adopted from the validated International Labour Organization, the International Council of Nurses, the World Health Organization, and the Public Services International *(WHO, 2021).*

4.4.2. General Health Questionnaire – 28 (GHQ-28)

The effect of workplace violence on nurses' mental well-being was assessed using the GHQ-28 instrument scores *(Goldberg et al., 1997; Pinto et al., 2018),* which included assessment on somatic symptoms, anxiety/insomnia, social dysfunction, and severe depression. The GHQ-28 questionnaire was also self-administered.

Scoring system

The tool consisted of 28 binary (yes or no) response questions, where a "yes" was scored as one and a "no" as two. A score of 24 and higher was considered as presence of mental illness, while a score of <24 was considered a normal status of well-being.

4.5. Procedures

Ethical approval was obtained from the Institutional Research and Ethics Committees of Masinde Muliro University of Science and Technology (Approval 509099) and the Jaramogi Oginga Odinga Teaching and Referral Hospital (Approval number IERC/JOOTRH/294/20). Additionally, a research license was obtained from the National Commission for Science, Technology, and Innovations (Approval 273909). Lastly, written informed consent was obtained from all participants prior to enrollment.

The study tool adopted was developed and validated by the joint program on workplace violence in the health sector of the International Labour Organization, the International Council of Nurses, the World Health Organization, and Public Services International (ILO/ICN/WHO/PSI Joint Programme). It was aligned with the study objectives and the cultural context of Kenya, and pretested for content reliability and validity at Kisumu County Hospital.

Following sampling of potential study participants, they were approached, and a written informed consent was administered in a private room. The pretested study tools were then handed over to the consented participants for self-completion. The completed questionnaires were reviewed immediately after data collection to ensure all sections were properly filled out. In cases where information was missing or unclear, clarification was obtained directly from the respective participants to maintain data accuracy. Once verified, the responses were coded and systematically keyed into a computerized database for analysis.

4.6. Data analysis

The data obtained were analyzed descriptively (in the form of frequencies and proportions for categorical variables) and inferentially (as means with corresponding standard deviations). The Pearson chi-square test was used to assess a statistically significant association between predictors of WPV and the occurrence of violence. Odds ratios were computed at a 95% confidence interval.

5. Results

Table 1 reveals that the study enrolled 184 nurses, the majority (62.0%) of whom were female, aged 25–34 years (48.9%), married (81.0%), and had attained a diploma level of education (57.6%), all of whom professed the Christian faith.

Table 2 shows that the majority (88%) of the enrolled nurses were primary-care nurses, with approximately one in ten (10.9%) being senior managers. The mean number of years worked was 10.8±9.9, ranging from 1 to 35 years. The mean number of staff per workstation was 5, with a range of 1 to 18. Nearly half (48.9%) worked in general surgery, while 28.8% worked in general medicine. The majority (96.7%) worked in shifts, with less than three-quarters (71.7%) working in an adult care setting. Slightly more than half (51.1%) worked with male patients, compared to 36.4% who worked in mixed-gender settings.

Figure 1 illustrates that 70% of the nurses experienced workplace violence.

Table 3 demonstrates the institutional and individual predictors of workplace violence. Nurses who believed in the presence of safety measures were significantly less likely to experience WPV (OR: 0.3; 95% CI: 0.13–0.84; p=0.020). Similarly, the effectiveness of workplace violence management was found to be protective (OR: 0.3; 95% CI: 0.18–0.65; p=0.009). However, working in the general surgery department compared to other workstations increased the risk of WPV (OR: 9.7; 95% CI: 3.60–27.01; p<0.001).

Table 4 reveals notable patterns across the four domains: Somatic Symptoms, Anxiety/Insomnia, Social Dysfunction, and Severe Depression. In the somatic domain, more than half of the respondents (57.6%) reported feeling perfectly well and in good health, while 54.9% felt the need for a tonic, 51.6% experienced headaches, 45.1% felt tightness or pressure in their heads, and 43.5%felt ill. Within the insomnia and anxiety domain, 40–47% of the nurses reported sleep disturbances, constant strain, or nervousness (38% felt bad temper, 43.5% getting scared or panicking for no reason, nervous and strung-up all the time). Interestingly, the social dysfunction domain showed relatively positive outcomes. A majority of respondents (over 60%) reported managing to stay busy (63%), making decisions effectively (66.3%), and being satisfied with their performance (70.1%). At the same time, 57.1% reported that they are taking longer to do things. Regarding severe depression, the responses reveal that 8.7 had suicidal ideation, 30.4% endorsing depressive thoughts or hopelessness.

Table 5 reveals that nurses who had experienced workplace violence were 10.8 times more likely to have presented with symptoms of mental illness (OR: 10.8; 95% CI: 5.22–22.48; $p<0.0001$) than those who had not. Those who had experienced physical violence (OR: 4.7; 95% CI: 1.72-12.62; $p=0.001$), verbal abuse (OR: 3.9; 95% CI: 2.00-7.89; $p<0.0001$), bullied (OR: 14.9; 95% CI: 1.97-113.41; $p=0.0007$) or sexual violence (OR: 6.7; 95% CI: 2.26-19.76; $p=0.0001$) had higher odds of having manifested with symptoms of mental illness.

Table (1): Frequency and percentage distribution of sociodemographic characteristics of the studied nurses (n=184).

Variables	No.	%
Gender		
Male	70	38.0
Female	114	62.0
Age group in years		
25–34	90	48.9
35–44	49	26.6
45–55	30	16.3
≥55	15	8.2
Mean age ± SD	37.0±9.5	
Range	25.0–59.0	
Median	35.0	
Marital status		
Single	27	14.7
Married	149	81.0
Separated	5	2.7
Widowed	3	1.6
Level of training		
Certificate	16	8.7
Diploma	106	57.6
Degree	62	33.7
Religion		
Christian	184	100.0

Table (2): Frequency and percentage distribution of nurses' working features (n=184).

Variables	No.	%
Job position		
Senior Management	20	10.9
Supervisor	2	1.1
Primary-care nurse	162	88.0
Years of work experience		
Mean±SD	10.8±9.9	
Range	1-35	
Mean number of staff per workstation (Range)	5(1–18)	
Workstation		
Accident and emergency	15	8.1
Ambulatory, ICU, Specialized unit	8	4.4
General surgery	90	48.9
General medicine	53	28.8
Other	18	9.8
Work in shifts		
Yes	178	96.7
No	6	3.3
Type of Patients		
Newborn	2	1.1
Infants	8	4.4
Children	39	21.2
Adolescents	3	1.6
Adults	132	71.7
Gender of patients		
Male	94	51.1
Female	23	12.5
Male / Female	67	36.4

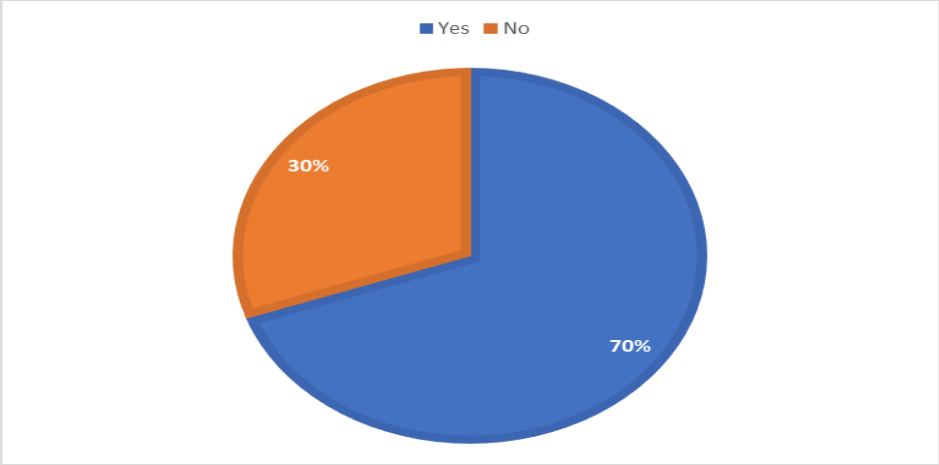

Figure (1): Percentage distribution of prevalence of workplace violence (n=184).

Table (3): Institutional and Individual predictors of workplace violence (n=184).

Predictors	Yes		No		OR (95% CI)	p-value
	No.	%	No.	%		
Presence of safety measures (Yes vs No)	74	40.2	110	59.8	0.3 (0.13-0.84)	0.020
Effectiveness in WPV management (Yes vs No)	69	37.5	115	62.5	0.3 (0.18-0.65)	0.009
Working in general surgery (vs other departments)	90	48.9	94	50.1	9.7 (3.60-27.01)	< 0.001
Age (<35 years)	90	48.9	94	50.1	1.8 (0.75, 4.53)	0.180
Level of Education (Degree vs Diploma/ Certificate)	62	33.7	122	62.3	0.6 (0.23, 1.58)	0.310

Table (4): Frequency and percentage distribution of nurses' general health status (n=184).

Variables	Yes		No	
	No.	%	No.	%
Somatic Symptoms				
Been feeling perfectly well and in good health?	106	57.6	78	42.4
Been feeling in need of a good tonic?	101	54.9	83	45.1
Been feeling run down and out of sorts?	87	47.3	97	52.7
Felt that you are ill?	80	43.5	104	56.5
Have you been experiencing any headaches?	95	51.6	89	48.4
Have you been getting a feeling of tightness or pressure in your head?	83	45.1	101	54.9
Been having hot or cold spells?	64	34.8	120	65.2
Anxiety / Insomnia				
Lost much sleep over worry?	74	40.2	110	59.8
Had difficulty staying asleep once you are off?	74	40.2	110	59.8
Felt constantly under strain?	87	47.3	97	52.7
Been getting edgy and bad-tempered?	70	38.0	114	62.0
Been getting scared or panicky for no good reason?	70	38.0	114	62.0
Found everything getting on top of you?	80	43.5	104	56.5
Been feeling nervous and strung up all the time**?**	80	43.5	104	56.5
Social Dysfunction				
Have you been managing to keep yourself busy and occupied?	116	63.0	68	37.0
Have you been taking longer to do the things you do?	105	57.1	79	42.9
Felt that you were doing things well on the whole?	127	69.0	57	31.0
Been satisfied with the way you have carried out your task?	129	70.1	55	29.9
Felt that you are playing a useful part in things?	121	65.8	63	34.2
Felt capable of making decisions about things?	122	66.3	62	33.7
Been able to enjoy your normal day-to-day activities?	103	56.0	81	44.0
Severe Depression				
Been thinking of yourself as a worthless person?	56	30.4	128	69.6
Felt that life is entirely hopeless?	44	23.9	140	76.1
Felt that life is not worth living?	34	18.5	150	81.5
Thought of the possibility that you might make away with yourself?	29	15.8	155	84.2
Found at times you could not do anything because your nerves were too bad?	27	14.7	157	85.3
Have you ever found yourself wishing you were dead and away from it all?	21	11.4	163	88.6
Found that the idea of taking your own life kept coming into your mind?	16	8.7	168	91.3

Table (5): Effect of workplace violence on well-being (n=184).

Independent variable	Categories	n	Mental well-being score		OR	95% CI	p-value
			≥ 24	< 24			
Experienced workplace violence	Yes	128	81.2	18.8	10.8	5.22 – 22.48	< 0.0001
	No	56	28.6	71.4			
Physical violence	Yes	39	87.2	12.8	4.7	1.72 – 12.62	0.001
	No	145	59.3	40.7			
Verbal abuse	Yes	77	81.8	18.2	3.9	2.00 – 7.89	< 0.0001
	No	107	53.3	46.7			
Bullied	Yes	24	95.8	4.2	14.9	1.97 – 113.41	0.0007
	No	160	60.6	39.4			
Sexual violence	Yes	41	90.2	9.8	6.7	2.26 – 19.76	0.0001
	No	143	58.0	42.0			

6. Discussion

Workplace violence against nurses has become a critical yet often underreported occupational hazard in healthcare settings worldwide. Nurses, as frontline providers, are particularly exposed to physical assaults, verbal abuse, intimidation, and harassment from patients, relatives, or even colleagues. Such experiences not only threaten their physical safety but also impair psychological well-being, reduce job satisfaction, and compromise the quality of patient care *(Amoah et al., 2025)*.

In Kenya, limited institutional mechanisms for reporting and addressing workplace violence, coupled with inadequate staffing and high workload pressures, may exacerbate the problem. Despite growing awareness, there remains a lack of empirical data identifying the predictors of workplace violence in tertiary hospitals, especially in Kisumu County. Understanding these predictors is therefore essential to inform evidence-based policies, guide preventive strategies, and foster safer, more supportive work environments for nurses *(Kibunja et al., 2021).* The study assesses predictors of workplace violence against nurses working at Jaramogi Oginga Odinga Teaching and Referral Hospital. Specifically, individual and institutional determinants of workplace violence, as well as the effect of WPV on nurses' mental well-being.

The findings show that most of the nurses were young, married women with diploma-level training and several years of professional experience. The majority worked as primary-care nurses in general medical and surgical units, typically under a shift system, and cared mainly for adult patients. This profile showcases a stable and experienced nursing workforce that is actively engaged in direct patient care. However, the dominance of shift work and high concentration in general wards may contribute to increased workload and stress, potentially influencing nurses' exposure to workplace challenges such as fatigue and violence. Strengthening staffing balance, professional development, and supportive working conditions could help sustain performance and well-being among this essential group.

The study findings reveal that nearly three-fourths of the participants reported some form of work-related violence. The overall one-year prevalence of work-related violence is close to that reported in Kenya at 76.8%. *(Kibunja et al., 2021)*. This finding is higher than the global prevalence, estimated to be between 51.7% and 66.7% *(Liu et al., 2019).* Lower proportions have also been reported in other African countries, such as Ethiopia, 26.7% *(Tiruneh et al., 2016)*, Ghana, 52.7% *(Boafo & Hancock, 2017),* and Gambia, 62.1% *(Sisawo et al., 2017)*. The high prevalence of workplace violence in the current study could be attributed to the fact that workplace violence is rising in the healthcare industry due to heavy workloads, increasing work pressures, work-related stress, interpersonal conflict, economic disruptions, and social uncertainty *(Ebrahim & Issa, 2018).*

Nurses younger than 35 years were more likely to suffer workplace violence compared to their older colleagues, a statistically significant relationship. Younger nurses were noted to acknowledge violence more readily than their older counterparts. Beyond age, the study also examined the role of educational attainment and professional rank in relation to workplace violence. It was observed that nurses holding certificate or diploma-level qualifications were less likely to experience workplace violence compared to those possessing a bachelor's degree or higher. This inverse relationship could be attributed to various factors, including differences in clinical responsibilities, job expectations, or even the environments in which these different categories of nurses typically work.

Recent evidence supports the current study's findings that younger and more highly educated nurses are at greater risk of workplace violence. For instance, *Friese et al. (2024)* reported that nurses below 35 years were significantly more likely to experience and report violent incidents compared to their older colleagues, reflecting reduced experience and coping capacity. Similarly, *Yuan et al. (2025)* found that younger nurses and those with postgraduate degrees faced higher rates of both verbal and physical aggression, partly due to their increased patient contact and workload in demanding clinical settings. In addition, *O'Brien et al. (2024)* highlighted that nurses in advanced or leadership roles often encounter greater exposure to workplace hostility due to their elevated responsibilities and frequent interactions with distressed patients or families. These recent studies reinforce the observed pattern that age, education level, and professional rank are key predictors of workplace violence among nurses.

There was a statistically significant association between those working in general surgery and workplace violence. Surgical and emergency units usually have severely ill

patients who need nursing care and regular monitoring. This phenomenon creates unnecessary anger and anxiety, leading to violence on the part of patients *(Hamdan & Abu Hamra, 2015; Kitaneh & Hamdan, 2012; Tee et al., 2016).* The majority of healthcare professionals (such as nurses) who work in general hospital wards attend to patients with varying medical and surgical conditions, are exposed to workplace violence compared to their colleagues in other wards *(Jakobsson et al., 2020).*

Equally, where there was effective management of workplace violence, the nurses were 70% less likely to have reported workplace violence. Availability of workplace safety measures and effectiveness in the management of workplace violence significantly reduced the prevalence of workplace violence. Nurses who believed the institution had safety measures were less likely to experience workplace violence.

Although this study did not assess the role of the Occupational Safety and Health Office of JOOTRH in preventing WPV, it was noted that the hospital has an Occupational Safety and Health unit that draws expertise from both the mental health and human resources departments to ensure a reduction in WPV. The findings of a previous study suggest that well-functioning work processes and a violence prevention climate (management support for safety from violence) may mitigate the occurrence of WPV against nurses *(Somani et al., 2021).*

The findings indicate that nurses exhibited mixed levels of psychological well-being across the four domains assessed. In the somatic and anxiety/insomnia domains, a substantial number of respondents reported physical strain and emotional distress, such as headaches, fatigue, tension, and difficulty sleeping—suggesting a moderate level of occupational stress and psychosomatic symptoms likely related to job demands. In contrast, the social dysfunction domain showed favorable outcomes, with most nurses maintaining productivity, effective decision-making, and satisfaction in their work performance, reflecting resilience and coping capacity despite the presence of stressors. However, the severe depression domain revealed concerning signs, with nearly one-third experiencing feelings of hopelessness and a smaller but notable proportion (8.7%) reporting suicidal ideation—an alarming indicator of psychological strain.

These results align with previous studies, which have shown that nurses frequently experience stress-related symptoms due to workload, shift work, and the emotional demands of caregiving *(Cheung & Yip, 2015; Labrague et al., 2020).* Similarly, Al *Maqbali et al. (2021)* found high prevalence rates of insomnia, fatigue, and depressive symptoms among nurses, emphasizing the need for institutional mental health support and interventions to promote psychological well-being in healthcare environments.

The findings of this study reveal that nurses who had experienced workplace violence had a tenfold likelihood of presenting with symptoms related to mental illness compared to those who had not. Furthermore, nurses who had experienced physical, verbal abuse, bullying, or sexual violence increasingly manifested symptoms of mental illness. Overall, all participants who experienced any one form of workplace violence had a greater risk of mental disorders compared with those who had not. These findings are consistent with those reported in previous studies, which noted that workplace violence can have serious short- and long-term implications for the mental health and well-being of those exposed *(De Puy et al., 2015).*

Long-term implications of workplace violence were also reported in a cross-sectional study conducted in Palestinian hospitals, where it was reported that violence led to psychological effects, as about 30% of the exposed revealed fear, anxiety, hopelessness, and feelings of guilt. Additionally, the majority of those who had been exposed to violence indicated intention to quit work, which possibly could complicate job retention and lead to shortages of qualified personnel *(Hamdan & Abu Hamra, 2015).*

Furthermore, in a previous study conducted in Palestine, the authors noted that understaffing, job stress, and low job satisfaction are among possible factors that might lead to aggression towards colleagues and co-workers in Palestinian hospitals. Furthermore, victims of co-worker violence reported a loss of confidence in their clinical abilities, and this subsequently influenced their mental well-being *(Kitaneh & Hamdan, 2012).* Violence meted out upon healthcare workers represents a complex and dangerous occupational hazard, such as mental health challenges. In a study conducted in Italy, workplace violence was associated with job burnout and mental fatigue that may reduce productivity, presence at work, and work engagement and may negatively affect the therapeutic relationship between providers and patients *(Magnavita et al., 2020).*

7. Conclusion

This study reports a high rate of workplace violence among approximately three-quarters of the nurses at Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH). Nurses younger than 35 years, those with advanced training, and working in the general surgery were at increased risk of workplace violence against nurses compared to those who were not or working in other wards. The availability of workplace safety protection measures significantly reduced the likelihood of workplace violence. Other institutional factors that reduced the likelihood of workplace violence were the effectiveness of management of workplace violence against nurses. Finally, experiencing various forms of WPV significantly affected the well-being of the nurses enrolled.

8. Recommendations

There is a need to understand institutional processes, procedures, and operations that reduce the likelihood of workplace violence in other hospital departments and apply these findings to the general surgery unit, where there was a higher prevalence of workplace violence. Nurses in these violence-prone departments should be provided with psychotherapy and other necessary interventions to help them overcome the trauma associated with workplace violence.

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