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Research Article

Determinants of Physical and Verbal Workplace Violence in A Nigerian Tertiary Hospital

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Abstract

Background: Workplace violence (WPV) is a critical occupational hazard that threatens the well-being of healthcare workers (HCWs) and the quality of patient care. In resource-constrained settings like Nigeria, the determinants of physical versus verbal abuse often vary across professional cadres. This study aimed to identify the demographic and occupational predictors of physical and verbal WPV at Enugu State University of Science and Technology (ESUT) Teaching Hospital Parklane, Enugu.

Methods: A cross-sectional descriptive study was conducted among 388 clinical and non-clinical staff selected via stratified proportionate random sampling. Data were collected using a structured questionnaire adapted from the ILO/ICN/WHO/PSI. Analysis involved chi-square tests and multinomial logistic regression to identify independent predictors of violence, with significance set at $p < 0.05$.

Results: Bivariate analysis showed that males reported significantly higher rates of physical (24.7%) and verbal (87.5%) violence than females ($p < 0.05$). Nurses experienced the highest frequency of physical violence (20.3%), while verbal abuse peaked among those aged 50–54 years (20.8%). Multinomial regression (Nagelkerke $R^2 = 0.593$ for physical; 0.586 for verbal) identified age, marital status, and ethnicity as significant independent predictors for both forms of violence. Occupationally, being a nurse, pharmacist, or radiographer significantly predicted physical WPV, while physicians, pharmacists, and radiographers were the primary predictors of verbal abuse ($p < 0.05$).

Conclusion: WPV at ESUT Teaching Hospital is pervasive and influenced by a complex interplay of age, professional role, and marital status. While nurses remain vulnerable to physical assault, diagnostic staff face a high risk of verbal abuse. The findings underscore the need for targeted de-escalation training, enhanced security in adult care units, and a zero-tolerance policy to protect HCWs in tertiary health settings.

Keywords: Workplace Violence, Healthcare Workers, Physical Abuse, Verbal Abuse, Nigeria, Occupational Health.

Introduction

Workplace violence (WPV) has become a significant occupational health and safety concern worldwide, especially among healthcare workers (HCWs), as the World Health Organization has noted that the group is most exposed many times due to their frontline roles in patient care, a high-stress work environment, and close interactions with patients and their relatives. Workplace violence encompasses both physical violence (for example, hitting, pushing, or other assaults) and verbal violence (for example, insults, threats, or harassment) [1].

It has been shown globally that the majority of healthcare workers report at least one episode of workplace violence during their careers, and verbal abuse is almost the most consistently reported. Verbal abuse from global reports commonly affects well over half of healthcare workers more than physical assault, which was reported less but causes far more significant damage. These global patterns were mostly reflected in low- and middle-income countries (LMICs) like Nigeria, where constrained resources, overcrowded facilities and weak reporting or prevention systems often magnify the risk [2].

The healthcare environment in Nigeria has not been spared, as reviews conducted in different geopolitical zones of Nigeria reported high prevalence of verbal abuse among doctors, nurses and other cadres, with physical abuse causing more harm. Emergency departments, outpatient clinics, and other high-throughput service points have been repeatedly put as hotspots for many incidences of verbal abuse, with common triggers such as long waiting hours, unmet expectations, poor communication and perceived poor quality of care. Patients and patients' relatives were the most culprits perpetrating these acts as compared to co-workers, supervisors and other workers from the hospital environment [3]. Determinants of physical and verbal workplace violence identified can be patient-and visitor-related factors, staff and workforce characteristics, organizational and health-system drivers, and environmental, cultural and policy contexts, with each contributing distinct risk pathways [4].

It is therefore of great importance to study the determinants of physical and verbal workplace violence in Enugu State University of Science and Technology (ESUT) Teaching Hospital Parklane Enugu, being a tertiary healthcare and referral center in Enugu metropolis.

Materials and Methods

Study design

A cross-sectional descriptive study on determinants of physical and workplace violence experienced by healthcare workers at ESUT Teaching Hospital, Parklane, Enugu. ESUT Teaching Hospital is a tertiary hospital serving urban and peri-urban populations in Enugu State and neighbouring areas. The hospital provides emergency, surgical, medical, obstetrics/gynaecology, pediatric, and outpatient services and employs a multidisciplinary workforce. This variety of clinical areas and high patient throughput make ESUT Teaching Hospital an appropriate setting to study workplace violence in Nigerian tertiary healthcare.

Study Population

The study population were clinical and non-clinical staff of ESUT Teaching Hospital who have direct and indirect interactions in the work environment and have spent at least 6 months working at the facility before data collection. These staff include, but are not limited to, doctors, nurses, laboratory scientists/technicians, radiographers, pharmacists, physiotherapists, administrative staff, security personnel, orderlies, and the like. Students, visitors, staff on long leave greater than 1 year recently and workers who declined consent were excluded from the study.

Ethical clearance

Before the study started, approval from the ESUT Teaching Hospital Health Research and Ethics Committee was acquired. Every participant signed a written informed consent form after being instructed on the study's goals and given assurances regarding the questionnaire's anonymity, confidentiality, and voluntary nature.

Sample size, data collection and analysis

Sample size was determined using $n = z^2pq/ d^2$, where n is the sample size [5]. The prevalence rate (p) of 64.4 per cent from a Nigerian tertiary hospital study was used [6]. A sample size of 388 was calculated after adding 10% attrition in ESUT Teaching Hospital, Parklane, Enugu. A stratified proportionate random sampling technique was used for data collected. Data was collected using structured, self-administered questionnaire adapted from ILO/ICN/WHO/PSI [7] divided into different sections: sociodemographic characteristics, work characteristics, exposure to violence, incident details, reporting, management response, and consequences, and perceptions of causes and preventive measures. Approval was gotten from the ESUT Teaching Hospital Health Research and Ethics Committee before commencement of the research.

Data was analyzed with Statistical Package for Social Sciences (version 26). Frequencies and proportions were used for categorical variables and mean ± standard deviation for continuous or discrete variables (median ± IQR for non-parametric data). Level of significance was set at $p < 0.05$.

Results

The findings of this research work are presented on tables 1 to 5. The analysis of demographic and job-related char-

acteristics in relation to physical workplace violence (WPV) is presented in Table 1. Sex was significantly associated with physical violence ($\chi^2 = 11.2$, $p = 0.001$), with 24.7% of male workers reporting incidents compared to only 1.1% of females. Profession also showed a strong significant association ($\chi^2 = 20.8$, $p < 0.001$), identifying nurses as the most vulnerable group, with 20.3% experiencing physical violence compared to 3.1% of physicians and 2.6% of other staff. Conversely, age group ($p = 0.55$), marital status ($p = 0.42$), educational level ($p = 0.89$), and years of experience ($p = 0.84$). did not show statistically significant relationships with physical violence in the bivariate analysis.

Multinomial logistic regression (Table 2) explained 59.3% of the variance in physical WPV (Nagelkerke $R^2 = 0.593$). Significant independent predictors included age ($p < 0.001$), marital status ($p = 0.001$), and ethnicity ($p = 0.010$). Occupational roles, specifically nurses ($p = 0.001$), pharmacists ($p < 0.001$), radiographers ($p < 0.001$), and administrative staff ($p < 0.001$), were also significant predictors. Sex was not a significant predictor in the multivariate model.

As shown in Table 3, verbal abuse was significantly associated with age ($p < 0.001$), with the highest reports in the 50–54 age group (20.8%). Males reported significantly more verbal abuse (87.5%) than females (12.5%). Significant associations were also found for marital status ($p = 0.009$) and professional roles, specifically physicians ($p = 0.003$), pharmacists ($p < 0.001$), and radiographers ($p < 0.001$).

The nominal regression model (Table 4) for verbal abuse explained 58.6% of the variance (Nagelkerke $R^2 = 0.586$). Age ($p = 0.001$), sex ($p = 0.013$), marital status ($p = 0.006$), and ethnicity ($p = 0.006$) were identified as significant predictors. Occupationally, physicians ($p = 0.038$), pharmacists ($p = 0.003$), and radiographers ($p < 0.001$) remained significant. Religion did not significantly influence verbal abuse.

Descriptive data (Table 5) indicated that the majority of respondents had 1–10 years of experience and 44.8% were full-time employees. While 73.5% do not work shifts, 45.6% have direct interaction with patients. Patient care was primarily focused on adults (38.1%) and the elderly (27.8%). Involvement in specialized care, such as psychiatric (3.6%) or terminally ill care (6.2%), was relatively low.

Variable	Category	No (n, %)	Yes (n, %)	χ^2 (p-value)
Sex	Male Female	215 (55.4%) 73 (18.8%)	96 (24.7%) 4 (1.1%)	11.2 (0.001)**
Age group	<30 30–39 40–49 50+	154 (39.7%) 80 (20.6%) 38 (9.8%) 15 (3.9%)	52 (13.4%) 28 (7.2%) 14 (3.6%) 7 (1.8%)	1.2 (0.55)
Marital Status	Single Married	167 (43.0%) 120 (30.9%)	56 (14.5%) 45 (11.6%)	0.65 (0.42)
Education	Secondary Diploma Degree & above	22 (5.7%) 123 (31.7%) 142 (36.6%)	7 (1.8%) 41 (10.6%) 53 (13.6%)	0.23 (0.89)
Profession	Nurse Physician Others	224 (57.7%) 33 (8.5%) 32 (7.7%)	79 (20.3%) 12 (3.1%) 10 (2.6%)	20.8 (<0.001)**
Years of Experience	≤5 years 6–10 years >10 years	168 (43.3%) 74 (19.1%) 44 (11.3%)	54 (13.9%) 29 (7.5%) 19 (4.9%)	0.35 (0.84)

Table 1: Factors Associated with Physical Workplace Violence

Variable	Chi-square	df	P-values
Age	64.094	18	0.000
Sex	3.911	2	0.141
Marital Status	26.482	8	0.001
Ethnicity	13.281	4	0.010
Religion	2.29	2	0.318
Who are you? (e.g., staff type)	6.875	4	0.143

Physician (Yes/No)	7.604	2	0.022
Nurse (Yes/No)	13.899	2	0.001
Pharmacist (Yes/No)	20.703	2	0.000
Physiotherapist (Yes/No)	0.524	2	0.77
Radiographer (Yes/No)	48.138	2	0.000
Lab Scientist (Main job)	0.036	2	0.982
Admin/Clerical	29.205	2	0.000
Security	0.36	2	0.835
Kitchen	0	0	—

Likelihood Ratio Chi-square = 183.896, df = 54, p < .001; Pseudo R^2 (Nagelkerke) = 0.593

Table 2: Factors Influencing Physical Workplace Violence (Multinomial Logistic Regression)

Factor	Verbal Abuse: No	Verbal Abuse: Yes	Verbal Abuse: Don't Know	Total	Chi-square (df)	P-value
Age (All)	341 (100.0%)	24 (100.0%)	23 (100.0%)	388	45.141 (18)	0.000 *
Sex	Female: 106 (31.1%) Male: 235 (68.9%)	3 (12.5%) 21 (87.5%)	11 (47.8%) 12 (52.2%)	120 268	6.893 (2)	0.032 *
Marital Status	Single: 81 (23.8%) Married: 193 (56.6%) Separated: 56 (16.4%) Widow(er): 9 (2.6%) Others: 2 (0.6%)	10 (41.7%) 12 (50.0%) 2 (8.3%) 0 (0.0%) 0 (0.0%)	14 (60.9%) 9 (39.1%) 0 (0.0%) 0 (0.0%) 0 (0.0%)	105 214 58 9 2	20.452 (8)	0.009 *
Ethnicity	Igbo: 328 (96.2%) Hausa: 10 (2.9%) Yoruba: 3 (0.9%)	24 (100.0%) 0 (0.0%) 0 (0.0%)	23 (100.0%) 0 (0.0%) 0 (0.0%)	375 10 3	1.854 (4)	0.763
Religion	Christianity: 316 (92.7%) Islam: 25 (7.3%)	24 (100.0%) 0 (0.0%)	23 (100.0%) 0 (0.0%)	363 25	3.683 (2)	0.159
Who Are You?	Hospital: 156 (45.7%) Staff: 129 (37.8%) Patient: 56 (16.4%)	11 (45.8%) 8 (33.3%) 5 (20.8%)	23 (100.0%) 0 (0.0%) 0 (0.0%)	190 137 61	25.885 (4)	0.000 *
Physician	No: 306 (89.7%) Yes: 35 (10.3%)	16 (66.7%) 8 (33.3%)	21 (91.3%) 2 (8.7%)	343 45	11.840 (2)	0.003 *
Nurse	No: 286 (83.9%) Yes: 55 (16.1%)	20 (83.3%) 4 (16.7%)	16 (69.6%) 7 (30.4%)	322 66	3.126 (2)	0.21
Pharmacist	No: 318 (93.3%) Yes: 23 (6.7%)	24 (100.0%) 0 (0.0%)	15 (65.2%) 8 (34.8%)	357 31	25.262 (2)	0.000 *
Physiotherapist	No: 311 (91.2%) Yes: 30 (8.8%)	21 (87.5%) 3 (12.5%)	23 (100.0%) 0 (0.0%)	355 33	2.668 (2)	0.263
Radiographer	No: 331 (97.1%) Yes: 10 (2.9%)	24 (100.0%) 0 (0.0%)	17 (73.9%) 6 (26.1%)	372 16	30.318 (2)	0.000 *

Table 3: Association Between Factors and Verbal Abuse

Factor	Chi-Square	p-value	Likelihood Ratio	R-Square (Nagelkerke)
Age	43.606	0.001	Yes	0.586
Sex	8.737	0.013	Yes	
Marital status	21.537	0.006	Yes	

Ethnicity	14.377	0.006	Yes	
Religion	1.103	0.576	No	
Who Are You (Role)	6.834	0.145	No	
Physician (Yes/No)	6.557	0.038	Yes	
Nurse (Yes/No)	4.954	0.084	No	
Pharmacist (Yes/No)	11.39	0.003	Yes	
Physiotherapist (Yes/No)	0.499	0.779	No	
Radiographer (Yes/No)	28.429	0.000	Yes	
Laboratory Scientist Work Time	0.21	0.900	No	
Administration/Clerical (Yes/No)	1.268	0.53	No	
Security (Yes/No)	0.143	0.931	No	
Kitchen (Yes/No)	0	1	No	

Table 4: Factors influencing verbal violence

Workplace Characteristic	**Frequency**	**Percent**
How many years of work experience in the health sector?		
Under 1 year	63	16.2
1-5 years	47	12.1
6-10 years	61	15.7
11-15 years	45	11.6
16-20 years	20	5.2
Over 20 years	24	6.2
In your main job, do you work?		
Full time	174	44.8
Part time	50	12.9
Temporary/Casual	20	5.2
Do you work in shifts?		
No	285	73.5
Yes	101	26
2 (uncertain response)	2	0.5
What time do you work?		
Between 6pm and 7am	18	4.6
Between 8am and 5pm	241	62.1
Do you interact with patients during your work?		
No	211	54.4
Yes	177	45.6
Do you have routine direct physical contact with patients?		
No	204	52.6
Yes	184	47.4
Newborns		
No	358	92.3
Yes	30	7.7

Infants		
No	351	90.5
Yes	37	9.5
Children		
No	329	84.8
Yes	59	15.2
Adolescents		
No	315	81.2
Yes	73	18.8
Adults		
No	240	61.9
Yes	148	38.1
Elderly		
No	280	72.2
Yes	108	27.8
Sex of the patients you most frequently work with		
1	15	3.9
2	52	13.4
3	162	41.8
Physically disabled		
No	356	91.8
Yes	32	8.2
Mentally disabled		
No	372	95.9
Yes	14	3.6
Don't know	2	0.5
Terminally ill		
No	364	93.8
Yes	24	6.2
HIV/AIDS		
No	375	96.6
Yes	13	3.4
Mother/Child Care		
No	304	78.4
Yes	84	21.6
Geriatric		
No	344	88.7
Yes	44	11.3

Table 5: Percentage distribution of workplace characteristics of workers in ESUT Hospital Parklane, Enugu

Discussion

Workplace violence (WPV) is increasingly recognized as a critical global concern within healthcare settings, manifesting predominantly in physical and verbal abuse. Healthcare workers (HCWs) remain one of the most vulnerable occu-

pational groups due to high-stress environments, intense workloads, and frequent, high-stakes patient interactions [1]. This study at ESUT Teaching Hospital Parklane, Enugu, provides insights into the demographic, occupational, and workplace-related factors influencing these forms of violence.

Bivariate analysis revealed that male workers experienced significantly more physical violence than their female counterparts (Table 1). However, the multinomial regression (Table 2) indicated that gender was not an independent predictor. This suggests that the initial gender disparity is confounded by other variables; specifically, the higher exposure of males may stem from their frequent deployment in high-risk wards or roles requiring physical intervention. In contrast, female staff are often more frequently involved in verbal rather than physical confrontations [6].

Although bivariate analysis showed no significant association between age and physical violence, regression analysis identified age as a strong predictor, with workers under 30 reporting the highest rates. This susceptibility among younger staff aligns with previous findings attributing the risk to limited experience and insufficient conflict de-escalation skills [8]. Furthermore, marital status was a significant predictor, possibly because single HCWs are disproportionately stationed in high-risk departments, whereas married staff may benefit from stronger institutional support networks.

Occupational role was a major determinant, with nurses experiencing more physical violence than physicians. Regression analysis confirmed that being a nurse, pharmacist, radiographer, or administrative staff member significantly predicts physical abuse. This aligns with global literature stating that nurses face the greatest exposure due to their central role in direct caregiving and the enforcement of hospital policies [3]. Interestingly, while physical violence correlated with ethnicity ($p=0.010$), the lack of ethnic diversity in the sample (over 95% Igbo) limits wider comparisons. However, existing research suggests that cultural misunderstandings often exacerbate conflict in patient-staff interactions [2].

Verbal abuse exhibited a strong association with age, particularly among those aged 50–54 years. This contrasts with the trend for physical violence, where younger workers were more vulnerable. Older HCWs may perceive aggressive communication more acutely as abuse, or they may face higher patient-driven expectations [9]. There was also a significant relationship between gender and verbal abuse, with males reporting higher incidence rates. This diverges from global trends where females frequently report higher rates of psychological harassment [10], suggesting a unique cultural dynamic within the Nigerian healthcare context.

Marital status played a significant role, as single staff reported higher levels of verbal abuse compared to married or divorced individuals. This mirrors patterns reported by Aderinto et al. [8], suggesting that marital status may modulate both the exposure to and the likelihood of reporting abuse. While ethnicity was not significant in the chi-square test, it emerged as a predictor in the regression model ($p=0.006$), though religion remained non-significant ($p=0.576$).

In a departure from global trends where nurses report the most verbal abuse [10], this study found that verbal abuse was strongly associated with physicians, pharmacists, and radiographers. This likely reflects local hospital dynamics where diagnostic delays or prescription-related misunderstandings lead to patient frustration and subsequent verbal confrontation.

The data indicate that a significant proportion of HCWs provide care for adults (38.1%) and the elderly (27.8%). These patient groups often involve emotionally charged situations, increasing the risk of aggressive interactions. Consistent with literature on geriatric and terminal care, family members and relatives of these patients are frequent contributors to WPV incidents, particularly in high-pressure clinical environments [11].

Conclusion

This study highlights that workplace violence (WPV) at ESUT Teaching Hospital Parklane is a significant occupational hazard driven by a complex interplay of demographic and professional factors. While physical violence is strongly associated with nursing roles and male gender in bivariate analysis, multivariate modelling reveals that age, marital status, and ethnicity are the primary independent predictors of risk. Verbal abuse is even more pervasive, with older staff and those in diagnostic roles such as pharmacists and radiographers showing unexpected levels of vulnerability.

The findings suggest that the risk of WPV is not uniform; it is concentrated among frontline staff who handle high volumes of adult and geriatric patients. The high explanatory power of the regression models ($R^2 > 58\%$) indicates that the identified determinants are critical for understanding the landscape of violence within the facility. Addressing these factors is essential to preserving the mental and physical well-being of the healthcare workforce.

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