ORGANISATIONAL FACTORS PREDICTING PERCEIVED WORKPLACE VIOLENCE AMONG NURSES IN ONDO AND OSUN STATES, NIGERIA.

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ABSTRACT
Little is known about the organisational antecedents of workplace violence among nurses in healthcare facilities in Nigeria. The aim of this study was to document the organisational factors predicting perceived workplace violence (PWV) among nurses in Ondo and Osun States, Nigeria. Self-report questionnaires were completed by four hundred and fifteen (415) nurses from primary, secondary and tertiary hospitals in Ondo and Osun States. Participants were selected using multistage sampling techniques. Data was collected using a questionnaire containing items on socio-demographic characteristics, PWV (α = 0.90), staffing adequacy (SA) (α = 0.83), administrative support (AS) (α = 0.88), nurse/physician relationship (NPR) (α = 0.89). Data was analysed using multiple regression and One-way ANOVA, at p≤.05 level of significance. Results demonstrated that the mean age was 39.89±12.12 years, 83.1%were females. Staffing adequacy, administrative support and nurse/physician relationship significantly jointly predicted PWV (R^2 = 0.13, $F_{(3,410)}$ = 20.2, p<.01). Nurses in tertiary health centres ($\bar{x}$= 29.45) experience more PWV than nurses in secondary ($\bar{x}$= 27.08) and primary ($\bar{x}$= 25.39) health centres ($F_{(2, 411)}$ = 4.26). Type of hospital moderated the relationship between staff adequacy (ct. = .22), nurses/physician relationship (ct. = .14) and PWV (ΔR^2 = .06, $\Delta F = _{(7,405)}$ = 3.34, p<.01). It was concluded that insufficient staffing and the quality of relationship between nurses and physicians were significant factors exacerbating the levels of workplace violence in the hospitals. The Hospital board in conjunction with psychologists should develop policy to review PWV through psycho-education and Employee Assistant Programme (EAP) in addressing PWV.
Keywords: *Staffing Adequacy, Administrative Support, Nurse-Physician Relationship, Nurses' in Ondo and Osun States, Nigeria.*

INTRODUCTION
Workplace violence is not uncommon in Nigeria work settings. Unfortunately, nursing, a profession that builds its practice on compassion while caring for their patients is not spared from this phenomenon of workplace violence. Studies have reported cases of workplace violence among nurses to occur frequently worldwide (Koh, 2016). Workplace violence is prevalent in healthcare organisations. The most common and explicit types of workplace violence in the hospital setting are reportedly verbal and physical abuse from patients and their relatives. However, many studies have also indicated that nurses can potentially be the perpetrators of workplace violence towards their own colleagues, in what is defined as 'workplace bullying'(Koh, 2016).

The impact of workplace violence has serious repercussions not only on the health of bullied victims but also on the structure and financial spending of the organisation. More importantly, the potential latent impacts on the patients' safety and health is of great concern. Studies have noted that different organisations have some work environment factors that cause an alarming rate of conflict with supervisors, co-workers and patients that often result in violence, such factors include physicians and nurses having poor working relationships, not having the power to exert influence over others to promote high-quality patient care, poor organizational characteristics of a work setting that constrain professional nursing practice, lack of resource and lack of opportunities for nurses advancement (Koh, 2016, Gadegaard, Spector, Zhou, & Che, 2007; Yang, Spector, Chang, Gallant-Roman & Powell, 2012). Other issues are working long hours, having to continually control conditions, hospital overcrowding, repeated request by patients and their companions for special privilege, lack of personnel

among others (Anderson, 2002; Shoghi, Sanjari, Shirazi, Heidari, Salemi & Mirzabeigi, 2008; Teymourzadeh, Rashidian, Arab, Akbari-Sari, &Hakimzadeh, 2014).

Empirical investigations into the risk factors of workplace violence in addition to perceived reasons for workplace violence have also been addressed in some studies. Some studies indicate that risk factors associated with workplace violence may include staffing patterns, stress, tension and frustration, lack of training to recognize or cope with workplace violence. Shift work and demanding workloads, working alone, poor management skills and policies (Royal College Nursing, 2005; International Council of Nurse, 2006; ILO/ICN/WHO/PSI, 2003). Some studies indicate factors such as the job position, working hours, nurse-patient relationship, age, gender and education have an effect on workplace violence (Gerberich, Churan, McGovern, Hansen, Nachreiner, & Geisser et al 2005; Hodgson, Reed, Craig, Murphy, Lehmann, &Belton, et al., 2004; Kwak, Law, Li, Ng, Cheung, .& Fung, et. al., 2006; Mahnaz, Gateme, Sliva., Sedighe & Ghazanfar, et. al., 2008).Since most people view their own behaviour and perceptions as legitimate and moralistic, victims assignment of blame and their account of both behaviours and perception are therefore of central importance.

Based on interviews with victims of workplace violence, the perceived reasons according to Legimann (1993) are four factors.

(1) deficiencies in work design
(2) deficiencies in leadership behaviour
(3) a socially exposed position of the victim
(4) a low moral standard in the department.

To date most research in this area has focused attention on identifying environmental antecedents of workplace violence such as job stressors that may increase an individual vulnerability to workplace violence (American Nurses Association, 2017; Boafo & Hancock, 2017; Cheung, Lee &Yip, 2017).Others have confirmed the resonating influence of dispositional, contextual variables and personality traits such as anger trait to workplace violence (Najafi, Fallahi-Khoshknab, Ahmadi, Dalvandi, & Rahgozar, 2018). Although many researchers agree on the interactions' perspective in investigating individual and environmental variables in predicting behaviour, few have studied both with workplace violence in the same study (Lewis, 2009). However, it is difficult to include all organisational factors which on the basis of theory and research appear to have a reasonable possibility of accounting for a significant proportion of variability in the incidence of workplace violence.

Risk factors identified in this study are staffing adequacy, administrative support and nurse/physician relationship. In this paper, perception of staffing adequacy refers to employment of the required number of nursing staff based on the need to match nurses' competencies with patients' needs for effective delivery and adequate support services (Schmalenberg & Kramer, 2009).Short-staffing has been identified arisk factors as it negatively affects patient care and job related among direct-care nurses (Clarke&Donaldson, 2008). Staffing decisions remain largely outside of nurses' control. The World Health Organization has identified that staffing plans in Nigerian hospital lack enforcement mechanisms in ensuring the ratio 1:2 specified by international standards as Nigeria is among the 57 depicted as 'countries with critical shortagehealth workers nationwide (Obembe, Osungbade, Olumide, Ibrahim and Fawole, 2014). Inadequate staffing has been implicated in increasing waiting time, negative outcome for patients and sometimes violence from patients and their relations (Obembe et al, 2014; Udogwu, 2016).

Nurse administrators'support is necessary for ensuring that hospitals or other healthcare facilities operate in a safe and cost-effective manner. They achieve these through the supervision of nurses, provision of security, investigation of security and violence in workplace (Koh, 2016). In general, nurse managers are responsible for overseeing personnel resources and patient care within a specific nursing unit or division. However, organisations can take a strong stance against workplace bullying, ineffective leadership portrayed by nursing leaders may potentially prevent victims from reporting incidents of workplace violence (Koh, 2016). This may result in escalating cases of workplace violence reported by the nurses.

The third variable is the Nurses/physician relationships. This describes how well nurses and physicians working relationship in the health care settings. Three types have been identified in literature. The first is the "Dr-Nurse Game" which is a manipulative relationship where the nurse was permitted to indirectly suggest changes or modifications in a patient's treatment or care plan only if formal deference was shown to the physician and nurses maintained their subordinate position(Schmalenberg & Kramer, 2009). The second is the abusive-hostile-adversarial nurse-physician relationships. This governed by instances of abusive-hostile relationship with physicians. The third is the collaborative nurse-physician relationships leading to improvements in patient care. The degree and quality of collaboration was a more accurate predictor of patient outcomes than were physicians' perceptions (Schmalenberg& Kramer, 2009). Whatever the direction of this relationship it has been identified to have specific implication for workplace violence for nurses. In the Nigeria settings presumed cordial relationship among nurses and doctors is seen as a conspiracy against the patients.

Workplace violence against nurses has become an occupational psychological problem despite nursing being one of the professions that has high authority and respect in Nigerian society (Abodunri, Adeoye, Adeomi & Akande, 2014; Nigeria Nursing World, 2017; Onyekosor, 2017; Udogwu, 2016). Impact of workplace violence may includes absenteeism, turnover intentions and psychological complaints such as anxiety, depression, sleeping disorders, feelings of desperation and helplessness, tension and nervousness and symptoms reminiscent of post traumatic stress disorder (Abodunri, et al., 2014;Nigeria Nursing World, 2017; Onyekosor, 2017; Udogwu, 2016). Sometimes harm arising from physical violence causes permanent physical problem such as backache, or even the death of a nurse (Abodunri, et al., 2014; Nigeria Nursing World, 2017; Onyekosor, 2017; Udogwu, 2016). Being exposed to problems such as; loss of concentration while performing their tasks, inattention to ethnic guidelines, higher numbers of careless mistakes, missing entire shift on occasion, repeated absenteeism, inattention to patients, dislikes of their job, and refusal to work in stressful works. This may impose significant additional cost on treatment centres and the community (Farrell, Bobrowski & Bobrowski, 2006).

Nigeria is a society that is different from the western countries in terms of level of development and cultural peculiarities such as poor funding by the government, lack of access to social services such as proper sanitation, superstition, longer waiting period, lack of security, insufficient number and uneven distribution of nurses etc. (Abodunri, et. al, 2014; Nigeria Nursing World, 2017; Onyekosor, 2017;Udogwu, 2016) which may increase the incidence of workplace violence. However, organisational factors as predictors of workplace violence against nurses have rarely been documented or cited in sited literature in Nigeria (Abodunri, et. al, 2014;Udogwu, 2016). This may be due to the fact that research on workplace violence is scanty (Abodunri, et. al, 2014;Udogwu, 2016) and more importantly because workplace violence has been under-reported among nurses all over the world because it was perceived as an integral part of the job (Nigeria Nursing World, 2017; Onyekosor, 2017; Udogwu, 2016). Although some studies on nurses have examined workplace violence and its antecedents, it remains unclear which factors are strongest predictors of perceived workplace violence in Nigeria. There is dearth of research on organisational factors in varying health care settings makes this study a rare one in Nigeria. The following objectives will be carried out in this study:

1. Determine the relationship between staffing adequacy, administrative support, nurse physician relationship and perceived workplace violence.
2. The role of the combination of demographic and organizational factors as predictors of perceived workplace violence.
3. Assess the differences in the level of perceived workplace violence across the three types of health care centres.
4. Investigate the moderating effect of type of facility on the relationship between organisational variables and perceived workplace violence.

METHOD

The study design was an ex-post facto research using the cross-sectional method. It was based on factors influencing workplace violence it in some selected health facilities in Osun and Ondo states of south-west Nigeria.The study was based in Ondo and Osun States, Nigeria. Ondo State is one of the six states in south-west, Nigeria. The state which made up of 18 local government \areas have an estimated population of 3.9 million inhabitants. The state has about 800 primary health care facilities, 16 secondary public hospital facilities. \estimated number of employees includes 60 senior doctors (consultants), 190 medical officers, 1475 nurses/and midwives. Osun State is made up of 30 LGAs with 693 Primary Health Care Centres (PHCC).Osun state also have 9 state-owned hospitals. There were two tertiary institutions in the state, the Ladoke Akintola University of Technology Teaching Hospital, Oshogbo (LAUTECH) and the Obafemi Awolowo University Teaching Hospital, Ile-Ife (OAUTHC).

Participants

Four hundred and Fifteen (415) participants participated in the study across the selected hospitals.83.1% were females. The larger percentage were married (81.9%) and 18.1% were singles. The greater number of the respondents were registered nurses (RN) (64.8%), 28.4% were degree holder, 3.4% have master's degree and 2.4% had other qualifications. The larger percentage works on the floor shifts (31.6%), 22.9% works at the critical care unit, 18.3% at the intensive care unit and 12% at the operating room. The multi-stage sampling technique was used to select the sampled for the study. First, purposive sampling was used to select 14 healthcare facilities (two tertiary health care centres, six secondary health care centres and six primary health care centres). Secondly, the sample size was estimated for the population of employees in the 14 centres. Based on documentation from the hospital management board of Ondo and Osun States, the estimated number of employees in the 14 hospitals selected was 1,481. Sample size was calculated using the formula by Araoye (2004) and the results demonstrated as:

$$n = \frac{N}{(1 + N(e)^2)}$$

n = required sample size
N = estimate population (1481)
e = degree of error tolerance (5%)
n = 315

To cater for 10% attrition rate

$$n = \frac{n}{1 = NR}$$, NR = Non-response rate (10%)

n = 350

The sample of size of 350 was generated from the calculation and scaled up to 450; sample size for each hospital was allocated proportionally based on population sizes of each hospital. Thirdly, the researcher adopts purposive sampling technique in selecting the sample from each hospital. This method sampled available and willing participants at the time of study. However, only 415 participants participated in the study across the selected hospitals.

Instrument

The instrument for the study is a structured questionnaire. The questionnaire contain items on socio-demographic variables which include age, sex, marital status, educational qualification, work setting and work experience. Nurses' experience of workplace violence was captured with the 11-item workplace violence scale developed by Adedayo, (2018). The scale was scored on 5 point likert response format (1= never, 2 = rarely, 3 = sometimes, 4 = very often, 5 = always). Sample items include *"Patients/patients relatives insult me when they are asked to stay outside while carrying out procedures", "Patients/patients relatives hiss at me"*

and "Patients/patients relatives use facial expression to insult and disrespect me". The reliability indices was meritorious (α = 0.89; Split half reliability coefficient was 0.64). The scale is made up of two dimensions 'active' and 'passive' workplace violence' dimensions (Adedayo, 2018). Increasing scores on this scale suggests increasing frequent experience of workplace violence.

The Perception of organisational variables was captured using three subscales of the practice environment scale of the Nurses Work Index-Revised (PES-NWI-R) developed by Aiken and Patrician, (2000). The 4-item staffing Adequacy Subscale (α = 0.83) measures the extent to which nurses' unit has sufficient staff to accomplish their work and provide quality care. Sample item include "*the hospital has enough registered nurses on staff provide quality patient care".* 0.81 alpha was reported in the present study. Increasing scores on staffing adequacy scale indicate lack of adequate staff.

Perception of Administrative support scale is a 5-item scale (α = 0.88) that reflected the extent to which nursing administrators/supervisors shows support for nurses' initiative and decision-making. Sample items include *"the hospital has a supervisory staff that is supportive of nurses"*. The present study reported 0.88 Alpha. Increasing scores is an indication of high administrative support. The 3-item perception of Nurse-Physician relationship scale (α = 0.86) measures the quality of working relationship between nurses and physician. Sample item include; *"A lot of team work between nurses and physicians".* 0.90 alpha was reported for the present study. Increasing indicate poor nurse physician relationship. All the three subscales were scored on a five point likert response format (5 = Strongly agree, 4 = Agree, 3 = Rarely agree, 2 = Disagree and 1 = Strongly disagree).

Procedure

The researcher sought the approval of the medical officer in charge of each hospital before embarking on the study. The medical officer or the Nursing officer in charge delegates the Nurse supervisor to solicit the co-operation of the nurses for the study. After selecting the health centres, the researcher purposively sampled the nurses bearing in mind the sample size required in each of the hospitals using sample size calculation. The researcher administered the questionnaires by first seeking the consent of the respondents before distributing the copies of the questionnaires to them. The questionnaires were administered to the nurses at work. The questionnaires were retrieved immediately after completion. Well completed the questionnaires were used in the data analysed.

Statistical Analysis

The data was coded and analysed using SPSS v22.0. The statistical tools utilized include descriptive statistics and inferential statistics and these include Pearson Product Moment Correlation (PPMC), Multiple Regression and Analysis of Variance (ANOVA) at 0.05 level of significance.

RESULTS

Table 1: Descriptive and averaged level of perceived workplace violence based on the independent variable levels or category.

Variables		Perceived workplace violence		
	Level /Categories	Mean	S.D	N
	20 - 29 years	28.06	10.40	82
Age	30 - 39 years	27.85	9.23	161
	40 - 49 years	26.64	8.36	81
	50 - 59 years	28.73	9.31	55
Sex	Male	28.89	9.36	70
	Female	27.74	8.99	345
Marital status	Single	29.60	9.41	75
	Married	27.54	8.95	340
Work setting	Others	26.43	8.55	63
	Intensive care unit	26.21	9.78	76
	Critical Care Unit	28.25	9.33	95
	Floor	29.40	8.75	131
	Operation room	28.00	8.39	50
Educational qualification	SRN	26.50	8.43	4
	RN	27.97	8.91	269
	B.SC	28.36	9.15	118
	M.SC	23.50	11.35	14
	Others	28.80	8.74	10
Type of health facility	Tertiary	29.46	9.18	173
	Secondary	26.96	8.77	224
	Primary	25.39	9.59	18
Staffing Adequacy ratio	Low	24.85	11.49	100
	High	28.91	7.91	315
Administrative support	Low	21.48	10.77	81
	High	29.50	7.84	334
Nurse physician relationship	Low	18.80	9.27	76
	High	29.98	7.65	339
	Total	27.93	9.06	415

Source: Field data and Authors computation 2017

Initial exploratory analysis shows that Nurse above 50 years' ($\bar{x}$= 28.73, SD= 9.31) experience more workplace violence than age categories below 50 years. Males ($\bar{x}$= 28.89, SD= 9.36) experienced more workplace violence than females ($\bar{x}$ = 27.74, SD= 9.31). Unmarried nurses ($\bar{x}$= 27.74, SD= 9.31) were more vulnerable to workplace violence than married nurses ($\bar{x}$= 27.74, SD= 9.31). Respondents working at the floor level (ward and the outpatients clinics) reported the highest mean workplace violence ($\bar{x}$= 27.74, SD= 9.31).

The first objective examined the relationship between staffing adequacy, administrative support, nurse physician relationship and perceived workplace violence this was tested with Pearson correlation analysis:

Table 2: Zero-order correlation showing the relationship between Staffing adequacy, Administrative support, Nurse Physician relationship and Perceived Workplace Violence

Variables	$\bar{x}$	SD	1	2	3	4
1. Perceived workplace violence	28.00	8.97	-	-.21**	.27**	.35**
2. Staffing adequacy	9.88	3.49		-	.81**	.72**
3. Administrative support	17.30	5.52			-	.80**
4. Nurse/Physician relationship	10.39	3.33				-

****Correlation is significant at the 0.01 level (2-tailed).**
***Correlation is significant at the 0.05 level (2-tailed).**
Source: Field data and Authors computation, 2017.

Results in Table 2, reveals that there was significant positive relationship of administrative support (r = .27, *p*<.01) and nurse-physician relationship (r = .35, *p*<.01) with perceived workplace violence. This demonstrate that despite the increasing perceived administrative support, teamwork between the nurses and the physicians there was significant escalating incidence of workplace violence among the nurses in the study. Further, there was significant inverse relationship between staffing adequacy and perceived workplace violence (r = -.21, *p*<.01). Perceived staff adequacy was associated with lower incidence of workplace violence. Nurses who perceived that there was no enough nurses in the hospitals reported more and frequent incidence of workplace violence than nurses who perceived that the staff strength was adequate.

The second objective was to assess if the combination of demographic and organizational factors will jointly independently predict perceived workplace violence. This objective was tested using dummied multiple regression analysis as presented in Table 3.

Table 3: Dummied (categorised) multiple regression analysis showing the influence of organizational and demographic factors on perceived workplace violence

variables	coef.	S.E	β	t	Sig.	R^2	adjR^2	F	Sig.
Age	-0.02	0.03	-0.03	-0.74	0.46				
Sex	-1.80	1.16	-0.08	-1.55	0.12				
Setting									
Others (reference category)									
Intensive care unit	0.63	1.45	0.03	0.44	0.66	0.17	0.15	5.74	.00
Critical care unit	1.82	1.38	0.09	1.32	0.19				
Floor (general outpatient/Wards)	2.79	1.29	0.14	2.16	0.03				
Operation room	1.16	1.64	0.04	0.71	0.48				
Education									
SSCE (reference category)									
Rn	-0.83	4.23	-0.04	-0.20	0.84				
B.sc	-0.81	4.26	-0.04	-0.19	0.85				
M.sc	-3.52	4.73	-0.07	-0.74	0.46				
Others	-0.42	5.02	-0.01	-0.08	0.93				
Type of Hospital									
Primary (reference category)									
Secondary	2.44	0.87	0.14	2.79	0.01				
Tertiary	4.39	2.14	0.10	2.05	0.04				
Staffing adequacy	-0.42	0.21	-0.16	-2.01	0.05				
Administrative support	0.20	0.16	0.12	1.27	0.21				
Nurse physician relationship	1.02	0.21	0.38	4.82	0.00				

Dependent variable: Work Place Violence

Source: Field data and Authors computation, 2017.

The result displayed in Table 3,revealed that staffing adequacy, administrative support and nurse/physician relationship significantly jointly predicted perceived workplace violence (F (15, 398)=5.74, p<.0001, R^2=0.18, Adj R^2 =0.15, RMSE=8.28). This infers that the combination of socio-demographic characteristics, perception of staffing adequacy, administrative support and nurse/physician relationship accounted for 15% of the variance observed in the total variance observed in nurses' perceived workplace violence. Meaning that the presence of staffing adequacy, administrative support and nurse/physician relationship induced about 15% increase in perceived workplace violence in health care centres.

The results in Table 3, also revealed that strength of nurse/physician relationship (β = .38, t=4.82; *p*<.01), low perceived staff adequacy (β = -.16, t=-2.01; *p*=.05), working in a general outpatient/Wards settings(β = .10, t= 2.79,*p*<.01), in a secondary (β = .10, t=2.79,*p*<.05), or tertiary (β = .10, t=2.79,*p*<.05) health facilities were significantly associated with increasing levels of perceived workplace violence. Meaning that increase in perceived workplace violence experienced by the nurses was associated with increase cordial relationship between nurses and physicians in health facilities. The perceived cordial relationship, cooperation and mutual agreement between Nurses and Physicians exposes the nurses to frequent attacks, and victimisation to workplace violence. Perceived cordial

relationship, cooperation and mutual agreement between Nurses and Physicians attracts frequent attacks and exposure to workplace violence as patients were more likely to be violent if they perceive conspiracy. The model reported a 16% unit increase in perceived workplace violence experienced by the nurses due to low perceived staffing adequacy. Further, working in a general outpatient/Wards settings increased the perceived workplace violence by 10%; for a secondary or tertiary health facility by 10% and 16% respectively.

In the third objective, the study assessed the difference in the level of perceived workplace violence across the three types of health care centres using one way ANOVA and the summary of the result is presented in Table 4.

Table 4: Summary of one-way ANOVA showing the influence of type of health centres on work place violence

Source	SS	df	MS	F	P
Between Groups	675.340	2	337.670	4.26	<.05
Within Groups	32553.657	411	79.206		
Total	33228.998	413			
LSD POST HOC ANALYSIS					
Health care centres	N	$\bar{x}$	S.D	1	2	3
Tertiary	173	29.45	9.20	-		
Secondary	223	27.08	8.60	2.37*	-	
Primary	18	25.39	9.59	4.06*	1.69	-

***. The mean difference is significant at the 0.05 level.**

Result demonstrated that there was significant differences in the level of perceived workplace violence across the three types of health care centres (F (2, 411) = 4.26, p<.05). Further, descriptive and post hoc analysis presented in Table 4, revealed that nurses in tertiary health centres ($\bar{x}$= 29.45, SD= 9.20) significantly perceived more workplace violence than those in secondary ($\bar{x}$= 27.08; SD= 8.60) and primary ($\bar{x}$= 25.39, SD= 9.59) health centres.

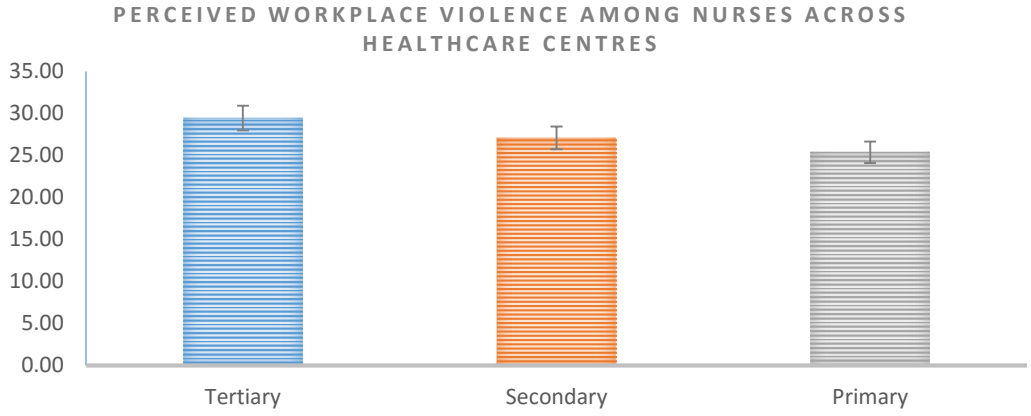

Fig 1: Bar chart showing the average perceived workplace violence experienced across the healthcare facilities.

Nurses in tertiary health centres have the highest perceived workplace violence compared to those in secondary and primary health centres.

The fourth objective was the assessment of the moderating effect of type of facility on the relationship between organisational variables and perceived workplace violence. This objective was tested using moderated multiple regression analysis. The results are presented in Table 5.

Table 5: Summary Table of Multiple Regression Analysis showing the moderating influence of type of health care centre in the relationship of organizational factors with perceived workplace violence

	Model I	Model II

Variables	β	t	P	β	t	P
Staffing adequacy	-.14	-1.78	>.05	-.17	-2.15	>.05
Administrative support	.06	.65	>.05	.10	1.13	>.05
Nurse physician	.37	4.88	<.01	.34	4.55	<.01
Hospital type				-.18	-3.82	<.01
Staffing Adequacy X Hospital type				.22	2.95	<.01
Administrative Support X Hospital type				-.05	-.56	>.05
Nurse-Physician Relat. X Hospital type				-.14	-1.98	<.05
R^2		.18			.24	
$R^2\Delta$		.18			.06	
F		12.89			8.34	
FΔ		12.89			3.34	
Sig.		<.01			<.01	

Staffing adequacy, administrative support, nurse/physician relationship were centred at their means.

Model 2 in Table 5, is a test of moderation; type of health care centre was introduced into the relationship of organizational factors and perceived workplace violence. Results reveal that type of health care centre significantly moderated the relationship organizational factors with perceived workplace violence ($R^2\Delta$= .06, F= (1,405) = 3.34, p = 0.06). Type of hospital moderated the relationship between staff adequacy (ct. = .22), nurses-physician relationship (ct. = .14) and PWV. This infers that the type of health care centre a nurse practices in have a significant influence on how organizational factors determine/influence their perception of workplace violence.

DISCUSSION

The descriptive analysis and post hoc analysis shows that respondents from tertiary health care centre have the highest incidence of perceived workplace violence. This confirms findings which have confirmed that workplace violence vary across different settings (Hegney, Plank & Porker, 2003; Whittington, Shuffleworth & Hill, 2008). The findings revealed that working in the ward or outpatients exposes the nurses to more workplace violence. This is in contrast to the findings of McPaul and Lipscomb (2004) that pointed out that "in the emergency departments, demented elderly patients in medical and geriatric wards, nursing homes and rehabilitation centre there are common sources of verbal and physical violence against nurses'. Some studies also stated that in the emergency departments, nursing homes and psychiatric settings, nurses are more prone to workplace violence than other units (Roakes, 2012).

Previous studies have reported that the prevalence of workplace violence against nurses occur in every setting and varied from 10% to 50% and even up to 87% (Uzun, 2003; Hegney, Plank, & Porker, 2003). Ergun and Karadakovan (2005) posited that the magnitude of workplace violence in various health care sectors may be underestimated. This is because incidence of workplace violence is typically under reported. Most studies with nurses who had experienced workplace violence indicated that the majority opted not to report the incidence. These results demonstrated that perceived cordial relationship, cooperation and mutual agreement between Nurses and Physicians may attract frequent attacks, and exposure to workplace violence as patients were more likely to be aggressive if they perceive conspiracy. This is in contrast to the empirical evidence that effective relationship among health care providers lead to positive outcome including improved information flow, more effective patient interventions, improved safety, enhanced employee morale, increased patient and family satisfaction and decreased length of hospital stay (Shortell et, al, 1994; Zimmerman et al, 1993;). This is not so for the Nigerian as the nurse-Physician relationship is that of cat and mouse relationship. A kind of cosmetic relation unlike that of the developed countries where truthful relationship persist. Yet, these may lead to backlash for the nurses especially in situations where the doctors were perceived to have made liable errors such as coming late to schedule surgery or delay in coming to assess patients medication. Trying to defend the doctors' action may infuriate the family members seeing the nurses' support for the doctors as a cover-up.

There were contrary reports on the effect of staffing adequacy on perceived workplace violence prior research suggest that low staffing levels are related to lower nurse ratings of quality of patient care. Specifically, in a study of hospital nurse across five different countries, researchers found that nurses in poorly staffed hospital (e.g. high patient to staff ratios) with the least administrative support for nursing care were most likely to rate patient quality of care as low (Aiken, Clarke & Sloane, 2002).In another study that examined the effect of California 1999 law mandating minimum staffing levels in hospitals, findings suggested that increased staffing led to better patient outcome (McHugh Kelly, Sloane & Aiken, 2011).However, some studies argue there is little to no relationship between administrative support and organizational outcomes (Cho et al., 2009).Still other researchers have found that administrative support had the counterintuitive effect of exacerbating, rather than mitigating, the negative consequences of workplace violence (Kaufman & Beehr, 1986; Beehr, 1995; Cohen & Wills, 1985). Various substantive and methodological reasons have been suggested to account for the inconsistent findings regarding the effects of support (Cohen & Wills, 1985). An explanation of this is that the cultural based values and beliefs embedded in the nursing profession may inhabit nurses from reporting violence and also not tackling factors responsible for the work violence could further trigger escalation of the workplace violence. For example despite the existence of organisational support, a pervading “white wall of silence” will escalate the incidence of workplace violence as the organisations keep silence and refuses to take action against perpetrators. Lack of actions against perpetrators often induce them to commit greater aggression against victims

Conclusion and Recommendations

Based on the findings, it shows that the prevalence of nurses perceived workplace violence is high as the descriptive analysis is in congruence with findings from earlier studies carried out in Nigeria on nurses’ workplace violence. It was further revealed that perceived workplace violence is highest in the tertiary health centres compared to secondary and primary health care centres. It can also be concluded that organizational factors of staffing adequacy and nurse physician relationship are important factors that explain nurses’ experience of workplace violence. Work setting and type of hospital was predictors of experience of WPV.

Participants in this study had experienced WPV perpetrated by either their patients or their friends and family. As The Hospital boards should develop employees’ assistant programmes (EAP) policies and practices that provide staff with formal and informal counselling and support services. In this way nurses may be enabled to cope with incidence and their psychological recovery will be accelerated (Cembrowicz& Shepherd 1992). These policies and interventions would assist hospitals and health agencies to fulfil occupational health and safety requirements that oblige them to mitigate WPV and support staff following these events. Nursing administrators should become more aware of the personal needs of the victim, as well as the needs of the organisation or the profession. They should specifically consider the relationship between strategies utilised by managers for assisting new nurses to come to terms with aggressive behaviour from a variety of sources. Also, nurses workplace violence is only limited to one dimension or aspect of workplace violence. Other dimensions of workplace violence should be researched into in the Nigerian settings.

REFERENCES

Abodunrin O., Adeoye O. A., Adeomi A. A. & Akande,T. M. (2014) Prevalence and forms of violence against health care professionals in a South-Western city, Nigeria. *Sky Journal of Medicine and Medical Sciences,*2(8):067 – 072.

Adedayo, O. (2018). Individual and organisationalfactors as predictors of nurses'perceivedworkplace violence in Ondo and Osun States, Nigeria. An unpublished Ph.D thesis submitted to the Department of Psychology, Faculty of the Social Science, University of Ibadan.

Aiken, L. H., & Patrician, P. A. (2000). Measuring organizational traits of hospitals: the revised nursing work index. *Nursing Research*, 49(3), 146e153.

Aiken, L.H., Clarke S.P., Sloane, D.M. (2001) Nurses' reports on hospital care in five countries. *Health Affairs* (Millwood); 20(3): 43-53.

Anderson, C. (2002). Workplace violence: Are some nurses more vulnerable? *Issues in Mental Health Nursing*,23, 351–366.

Araoye, M.O. (2004). *Sample size estimation: Research methodology with statistics for health and social sciences.* Ilorin: Nathadex Publisher.

Beehr, T.A. (1995)*Psychological Stress in the Workplace.* Routledge, London.

Boafo, I. M., & Hancock, P. (2017) Workplace Violence Against Nurses: A Cross-Sectional Descriptive Study of Ghanaian Nurses. *SAGE Open*, 7(1), 2158244017701187.

Bowling, N. A. &Beehr, T. A. (2006). Workplace Harassment From the Victim's Perspective: A Theoretical Model and Meta-Analysis. *Journal of Applied Psychology,* 91, 998-1012.

Cembrowicz, S.P., & Shepherd, J.P. (1992) Violence in the accident and emergency department. *Medicine, Science, Law*; 32:118–122.

Clarke S.P., &Donaldson, NE. (2008) Nurse Staffing and Patient Care Quality and Safety. In: Hughes RG, eds *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Rockville (MD): Agency for Healthcare Research and Quality (US); Available from: https://www.ncbi.nlm.nih.gov/books/NBK2676.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98,* 310-357.

Farrell, G. A., Bobrowski, C.,& Bobrowski, P. (2006). Scoping workplace aggression in nursing: Findings from an Australian study. *Journal of Advanced Nursing*, *55*, 778–787.

Gadegaard, C.A. (2015) Interpersonal behavior and risk of workplace violence and threats- sector specific trends, prevention behavior, and the escalation of workplace aggression. PhD dissertation submitted to Department of Psychology, Faculty of Social Sciences, and University of Copenhagen.

Gerberich, S.G., Churan, T.R., McGovern, PM, Hansen H., Nachreiner, M.M.& Geisser M.S. et al (2005). Risk factors for work related assault on nurses. *Epidemiology* 16, 704-705.

Ghasemi, M.,Rezaee M., JonaldiJalan, N., Ashihan, A.F., Izadi M., & Ranjbar R.(2009). Physical violence against Nurses in Hospital*. International Journal of Occupational Hygiene* 1, 43-47.

Hanrahan N.P. (2007) Measuring inpatient psychiatric environments: Psychometric properties of the Practice Environment Scale-Nursing Work Index. *The International Journal of Psychiatric Nursing Research*.;12(3):1521–1528.

Hegney, D., A. Plank, et al. (2003b). "Workplace violence in nursing in Queensland Australia: A self-reported study." *International Journal of Nursing Practice,* 9: 261 - 268.

Hodgson, M.J., Reed, R., Craig, T., Murphy, F., Lehmann, L., &Belton, L., & Warren, N. (2004).Violence in healthcare facilities: Lessons from the Veterans Health Administration. *Journal of Occupational and Environmental Medicine*, 46,1158–1165.

Kaufmann, G. M., & Beehr, T. A. (1986). Interactions between job stressors and social support: Some counterintuitive results. *Journal of Applied Psychology, 71,* 522-526.

Kessler, S. R., Spector, P. E., Chang, C., & Parr, A. D. (2008). Organizational violence and aggression: development of the three-factor violence climate survey. *Work and stress,* 22, 108-124.

Koh W.M.S., (2016) Management of work place bullying in hospital: A review of the use of cognitive rehearsal as an alternative management strategy. *International Journal of Nursing Sciences* 3: 213-222.

Kwak, R.P, Law, Y.K., Li, K.E., Ng Y.C, Cheung, M.H.& Fung, U.H., et al (2006). Prevalence of workplace violence against nurses in Hong Kong. *Hong Kong Medical Journal,* 12, 6-9.

Lake, E. T. (2002). Development of the practice environment scale of the Nursing Work Index. *Research in Nursing and Health*, 25(3), 176 -188.

Lewis, M.A. Nurse bullying, organizational considerations in the maintenance and perpetration of health care bullying cultures. *Journal of Nursing Management*, 2006, 14:52–58.

Liou, S.R., & Cheng,C.Y.,(2009). Using the Practice Environment Scale of the Nursing Work Index on Asian nurses. *Nursing Research*.;58(3):218–225.

Mahnaz, S., Gateme S., Sliva H., Sedighe S. & Ghazanfar, M. (2008). Workplace violence and abuse against nurses in hospitals. *Iran Asian Nursing Research.* 2, 3, 115-127.

McHugh, M.D, Kutney-Lee, A., Cimiotti J.P., Sloane DM, Aiken LH. (2011) Nurses' widespread job dissatisfaction, burnout and frustration with health benefits signal problems for patient care. *Health Affairs* (Millwood);30(2):202–210.

McPhaul, K.M. & Lipscomb, J.A., 2004, 'Workplace violence in health care: recognised but not regulated', *Online Journal of Issues in Nursing* 9(3), 168–185.

Najafi F., Fallahi-Khoshknab M.,Ahmadi F., Dalvandi A.,& Rahgozar, M. (2018) Antecedents and consequences of workplace violence against nurses: A qualitative study. *Journal of Clinical Nursing*.27*:e116–e128.* https://doi.org/10.1111/jocn.13884

Procter, L. (2013) Emotions, power and schooling: the socialisation of 'angry boys'. *Journal of Political Power*, 6, (3) 2013.

Roakes, D.K.,(2012). "Workplace Violence: Emergency Department versus Medical Surgical nurses" .*Nursing Theses and Capstone Projects.* Paper 140.

Royal College of Nursing. (2002). *Working well: A call to employers. A summary of the RCN's Working well survey into the wellbeing and working lives of nurses*. London: RCN.

Royal College of Nursing. (2005).*Past trends future imperfect? A review of the UK nursing labour market in 2004/2005*. London: Royal College of Nursing.

Shoghi M, Sanjari M, Shirazi F, Heidari S, Salemi S, & Mirzabeigi G. (2008)Workplace Violence and Abuse Against Nurses in Hospitals in Iran. *Asian Nursing Research (Korean Society of Nursing Science)* 2008; 2: 184-93. doi: 10.1016/s1976-1317(08)60042-0*)* 2008; 2: 184-93. doi: 10.1016/s1976-1317(08)60042-0

Shortell S.M, Gillies R.R, Anderson DA, Erickson K.M,& Mitchell J.B. (2000) Integrating Health Care Delivery. *Health Forum Journal*. 43:35–9.

Shortell S.M, Gillies R.R, Anderson D.A. (1994).The New World of Managed Care: Creating Organized Delivery Systems. *Health Affairs.*13 (5):46–64.

Spector, P. E., Coulter, M. L., Stockwell, H. G., &Matz, M. W. (2007). Perceived violence climate: A new construct and its relationship to workplace physical violence and verbal aggression, and their potential consequences. *Work and stress, 21,* 117-130.

Spector, P. E., Zhou, Z. E., & Che, X. X. (2014). Nurse exposure to physical and nonphysical violence, bullying, and sexual harassment: A quantitative review. *International Journal of Nursing Studies, 51,* 72-84.

Spence Laschinger, H. K., Wong, C. A., & Grau, A. L. (2012). The influence of authentic leadership on newly graduated nurses' experiences of workplace bullying, burnout and retention outcomes: A cross-sectional study. *International Journal of Nursing Studies*, 49(10), 1266-1276.doi:10.1016/j.ijnurstu.2012.05.012.

Teymourzadeh, E., Rashidian, A., Arab, M., Akbari-Sari, A., & Hakimzadeh, S. (2014). Nurses Exposure to Workplace Violence in a Large Teaching Hospital in Iran. *International Journal of Health Policy and Management*, 3(6), 301-305. doi: 10.15171/ijhpm.2014.98

Udogwu, F. (2016) A Case Study on Violence against Nurses in Nigeria and Recommendations in Reducing the Violence .*South American Journal of Nursing.*

Uzun, O. (2003). "Perceptions and Experiences of Nurses in Turkey about Verbal Abuse in Clinical Settings." *Journal of Nursing Scholarship*. 35(1): 81 -85.

Whittington, R., Shuttleworth, S., & Hill, L. (1996). Violence to staff in a general hospital setting. *Journal of Advanced Nursing*, 24, 326-333.

Yang, L. Q., Spector, P. E., Chang, C. H., Gallant-Roman, M., & Powell, J. (2012). Psychosocial precursors and physical consequences of workplace violence towards nurses: A longitudinal examination with naturally occurring groups in hospital settings. *International Journal of Nursing Studies, 49,* 1091-1102.

Zimmerman, D.R., Karon, S.L, Arling, G., Clark, R.B, Sainforth, F., &Ross, R. (1995). Development and testing of nursing home quality indicators. *Health Care Financing Review*.;16(4):107–127.