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**PREVALENCE AND DETERMINANTS OF WORK PLACE VIOLENCE AMONG CIVIL
SERVANTS IN OSOGBO, NIGERIA**

PREVALENCE AND DETERMINANTS OF WORK PLACE VIOLENCE AMONG CIVIL SERVANTS IN OSOGBO, NIGERIA

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ABSTRACT

Introduction: Violence is a universal phenomenon that occurs virtually in all settings where there is human interaction. The civil service represents a conglomeration of individuals with diverse backgrounds working with government establishments and with varying degrees of interactions. The aim of this study was to assess the prevalence and determinants of workplace violence among civil servants in Osun State.

Methods: This cross-sectional study was conducted among 319 civil servants. Study participants were selected via multistage sampling method. Relevant information was obtained via a semi-structured questionnaire. Pertinent analyses were done using univariate, bivariate and multivariate approaches.

Results: The mean age of the respondents was 38years (± 9.45), with 49.8% of them being females. The overall prevalence of workplace violence was 37%. Verbal abuse (35.1%), was the commonest form of workplace violence experienced. More male respondents perpetrated all forms of violence notably verbal abuse (11.3%) compared to their female counterparts (3.8%). At the logistic regressions stage, stress was statistically significant as the predictive factor for experiencing violence both as a victim and as a perpetrator.

Conclusion: Workplace violence is prevalent among civil servants in Osun State.

Additionally, stress was discovered to be the major factor causing workplace violence. This is probably as a result of poor working conditions. Therefore, the government needs to provide the enabling environment that will improve the working conditions in the civil service.

Key words: Workplace violence, Verbal abuse, Civil Servants, Stress.

INTRODUCTION

Workplaces are meant to be a safe environment where workers and managers work collectively to achieve shared organisational goals.¹ Yet, as in any setting where there is human interactions, some workers are known to engage in violent behaviours.² Globally, violence is one of the leading causes of morbidity as well as mortality among the working class who are usually young adults or middle aged people.³

Workplace Violence (WPV) is well-defined as “any physical attack, threatening behaviour or verbal abuse happening in the work location or the risk of violence against workers”.⁴ WPV has been on the increase in the last few decades, affecting about a million people per year.⁵ The occurrence of WPV is nothing new, but rather, gaining growing recognition due to increased number of violent incidences, and media attention.⁶

WPV falls into four broad categories: Type I - Criminal violence; whereby the perpetrator

has no legitimate business relationship to the workplace or the worker.⁷ Type II - Customer or client; this is violence committed by an assailant who either receives services from or is under the custodial supervision of the affected workplace or the victim.⁸ Type III - Co-worker; violence by an assailant who has some employment-related involvement with the workplace, this could occur among senior or junior colleagues.⁸ Type IV - Domestic violence, this is the type of violence whereby the perpetrator who has no genuine relationship to the business but has a personal relationship with the intended victim such as a family member, boyfriend, or wife - threatens or assaults the victim at the workplace.⁹

WPV takes several forms. Some of the forms recognized in the literature include the following: verbal abuse including threats of violence, physical assault, sexual harassment, and/or abuse, with verbal abuse often being the commonest form of violence.¹⁰ A number of factors (individual, workplace, societal, and/or environmental) have been associated with WPV.¹¹⁻¹³ Regarding individual factors, the personality of the perpetrators comes to play in determining the occurrence of violence at the workplace such as whether an individual is neurotic, introverted, oversensitive, suspicious, or depressive with a tendency to translate psychological grief into psychosomatic tendencies.¹⁴

According to the literature, major factors predicting WPV include stress, hectic working condition and age of colleagues among others.¹⁵ Hectic work surroundings predispose workers to stress which seems to nurture circumstances that make WPV more probable to occur.¹⁶ Environmental or work-related factors that may affect WPV include the leadership or management style as well as the prevailing working conditions.¹⁷ Leadership appears to be an important factor in predicting WPV as less charismatic leaders tend to be less fair and supportive to victims of violence.¹¹

WPV has vast effects on individuals and institutions.¹¹ On the individual part, it can have a major impact on the employees'

physical, emotional, and psychological life.^{12,16} The consequences may include stress disorders, low esteem, depression, fatigue, and poor job commitment and performance which may eventually push them to leave the job.^{11,18} The organization, which may be government otherwise known as civil service in some countries or private institutions, suffer as all these have a huge impact in terms of low productivity, reduction in the number of workforces, and high rate of absenteeism among others.¹¹

This study focused on the staff working in the government sector otherwise known as civil service. The civil service as a concept was borrowed from the British administration to describe a system where government-employed staff are dispersed to departments and ministries in which specific aspects of government work are carried out.⁹ It also refers to the body of permanent officials appointed to assist the political executives in the construction and implementation of government policies, and these officials are called Civil Servants.¹⁵ The civil service is the commonest "employer" of labour in Nigeria¹⁹ and provides the typical work setting of different individuals with varying temperaments, experiences and coping mechanisms. Many studies have looked at WPV in narrower settings, but little or nothing has been documented regarding violence in the civil service, especially in developing countries. This study was conducted to assess WPV among civil servants in Osun state with focus on its prevalence, pattern, and determinants.

METHODS

Study area: The study was carried out among civil servants at the State secretariat, Abeere, Osogbo in Osun State, Nigeria.

Study design: A descriptive cross-sectional study design was used for this study

Sample population: This study was conducted in Osun State civil service which consists of 33 ministries and 28 parastatals or agencies and their associated institutions

across the state. Majority of these ministries and parastatals are located at the State secretariat, Abeere, Osogbo.

Sample size and sampling technique: The sample size was estimated using Leslie Fischer's formula for a single proportion (more than 10,000. the total population =18,653). Estimates of sample size were calculated based on the findings from a similar study which showed a prevalence of 26.7% of WPV.¹⁶ Using a 95% confidence level and 5% margin of error, the required sample size was a minimum of 300 participating civil servants. We added 10% to 300 to make 330 on account of possible incomplete filling of questionnaires; 319 respondents ultimately had complete questionnaires with a response rate of 96.7% and were the eventual study participants.

Participants were selected using a multi-stage sampling technique. In the first stage, out of the 33 ministries and 28 parastatals, a quarter of each arm was utilized resulting in 8 ministries and 7 parastatals which sum up to 15 ministries or parastatals selected through stratified sampling. Two departments were then chosen in each of the selected ministries and parastatals making a total of 30 departments using simple random sampling technique via balloting. From each of the selected departments, study participants were chosen proportionately based on the total population and sex of workers in each department via a simple random sampling after stratification of people in each department into males and females.

Data collection tool & procedure: a semi-structured self-administered questionnaire was adapted for the study based on adequate literature review. The instrument has been previously validated in Nigeria.¹⁷ Prior to data collection, the instrument was pre-tested among civil servants in a local government outside of the study area to ascertain the feasibility of the study and appropriate corrections were made.

Data analysis: The data was analysed using SPSS 23.0. Univariate analysis was done

using frequency tables for socio-demographics characteristics. Bi-variate analysis were done using Chi-square to find the association between socio-demographic characteristics, and other factors and the experience/perpetration of WPV. Multivariate analysis was done using binary logistics regression to identify determinants of WPV using variables that were statistically significant ($P < 0.05$) on the bivariate table.

Variables and their recoding into different variables: The variables were recoded using the following approach: Questions on experience and perpetration of violence were binary i.e. Yes or No. For experience of violence, "Yes" answers were scored 1 and classified as having "experienced violence" while "No" answers were scored 0 and classified as not "experienced violence". This scoring process was also repeated for perpetration of violence.

The outcome measures and their definitions are shown below:

- A. Verbal abuse** - Threats, being shouted at, intimidation etc.
- B. Physical assault without a weapon** - Slaps, punches, kicks, chokes, head butts etc. where the aggressor is attempting to cause physical harm and injury.
- C. Injury via physical assault** - Bruises, cuts, lacerations, swellings, fractures etc. sustained as a result of physical assault.
- D. Threatened with a weapon** - Use of a knife, club or other sharp or pointed objects in a threatening manner, which in itself did not cause physical harm
- E. Assault with a weapon** - use of a knife, stick (club), bottle or other available sharp or pointed objects etc. to cause actual harm e.g. being clubbed or stabbed.
- F. Sexual harassment** - Verbal sexual comments, offensive jokes or gestures, kissing, forced sexual intercourse with or without penetration.

Victim of violence - Was determined if any of the respondent has experienced at least one of the above (A to F) listed forms of violence as a victim.

Perpetrator of violence - Was determined if any of the respondent has experienced at least one of the above (A to F) listed forms of violence as a perpetrator/ offender.

Ethical Consideration: Ethical approval was obtained from the Health Research Ethics Committees (HREC), Osun State University, Osogbo with approval number HREC/18/032. Permission to conduct the study was also obtained through the Head of Service, State government of Osun to all heads (Permanent Secretaries) of the selected ministries and parastatals that were involved in the study. Additionally, participants' consent was sought verbally before proceeding with the data collection. Respondents were told that participation was voluntary and that they will not suffer any consequences if they chose not to participate. All information gathered was kept confidential.

RESULTS

As shown in table I, the male-to-female ratio was nearly 1:1 (Male 50.2 %, Female 49.8%). More than half of the 319 respondents (58.0%) were young adults between the ages of 20-39 years. In the same vein, over two-thirds of the respondents were Christian.

Figure 1 illustrates the prevalence of WPV among respondents where 118(37%) of them have experienced as a victim of one form of WPV or the other.

As shown in figure 2, verbal abuse accounted for the most form of violence experienced 112 (35.1%) followed by physical assault without the use of a weapon 35(11%), sexual harassment 32(10%) and injury via physical assault 17(5.3%).

In terms of pattern of experience, female respondents had experienced more of verbal abuse, physical assault without weapon and had sustained injury from physical assault, 36.5%, 13.2% and 5.7% compared to their male counterparts 33.8%, 8.8% and 5%

Table 1: Socio-demographic characteristics

VARIABLES	FREQUENCY (N= 319)	PERCENTAGE (%)
Sex		
Male	160	50.2
Female	159	49.8
Age -group (Mean = 38 years, Standard Deviation (±) = 9.45, Min = 20, Max = 59)		
Young adults (20-39 years)	185	58.0
Middle aged group (40-49 years)	134	42.0
Marital status		
Currently married	247	77.4
Not currently married	72	22.6
Level of education		
High level of education*	266	83.4
Low level of education**	53	16.6
Religion		
Christianity	206	64.6
Islam	109	34.2
Traditional	4	1.2
Duration of service		
10years and below	191	59.9
11 years and above (longer than 10 years)	128	40.1
Monthly income (Mean = #35,000 naira)		
Below mean income	242	75.9
Above mean income	77	24.1

of respondents (n=319)

*High level education- Tertiary education **Low level education- No formal education, primary and secondary education



secondary education

Figure 1: Prevalence of WPV in the civil service in Osun state (n=319)

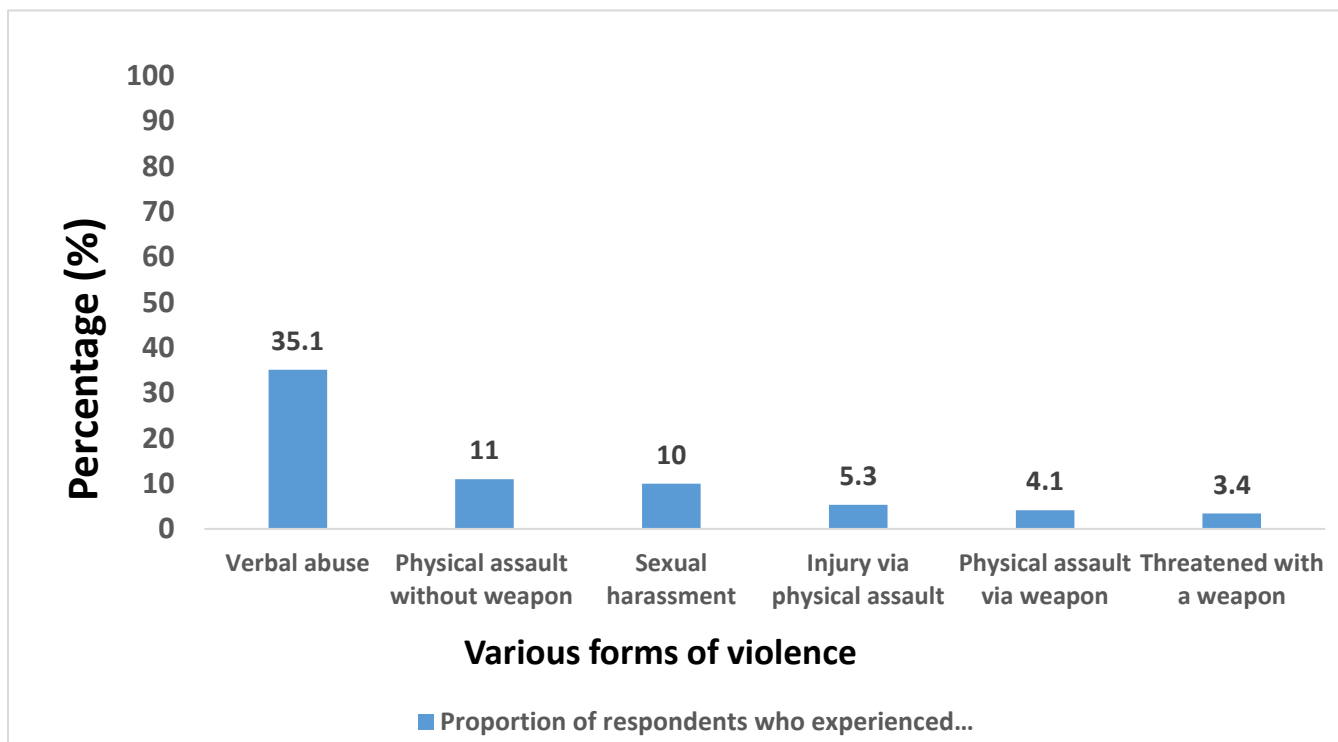


Figure 2: Prevalence of various forms of WPV experienced by respondents (n=118) (Multiple choice allowed)

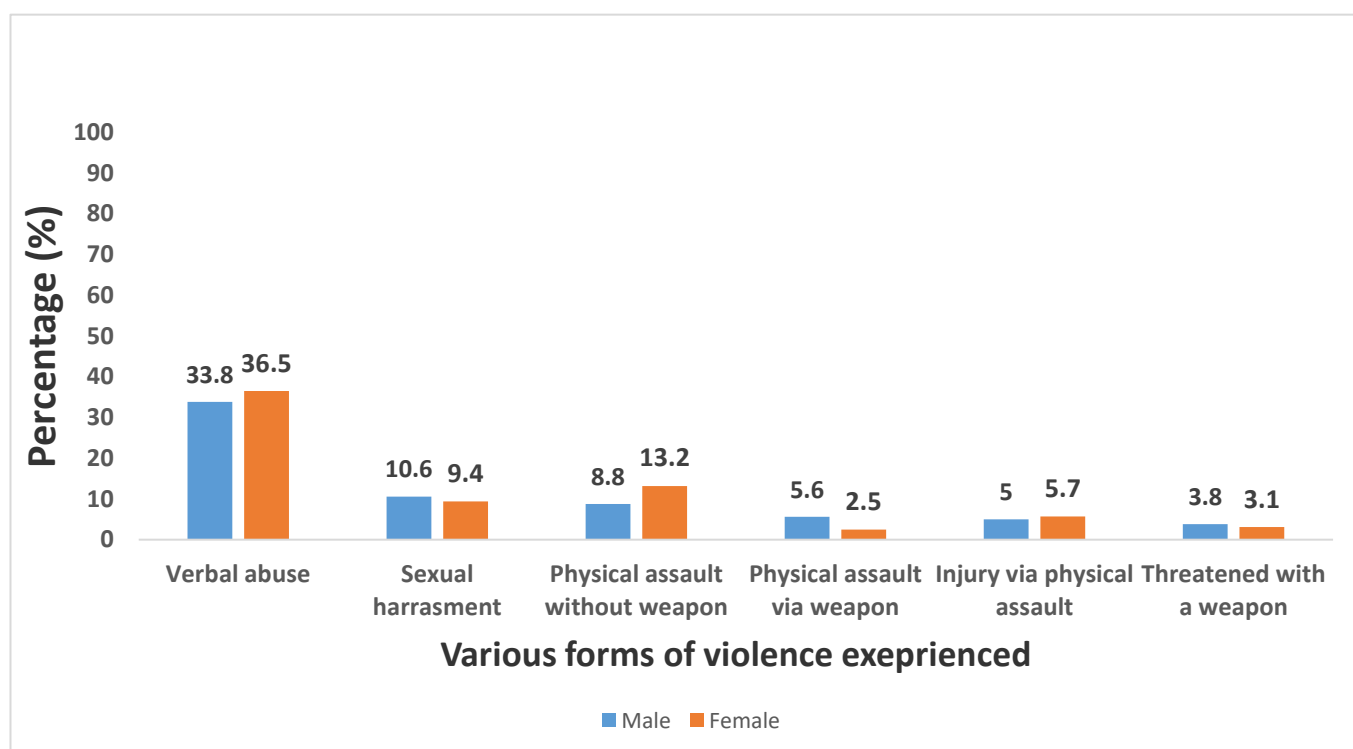


Figure 3: Proportion of male and female who had experienced violence (n=118) (Multiple choice allowed)

respectively. More of the male respondents had experienced sexual harassment, physical assault via weapon and threatened with a weapon, 10.6%, 5.6% and 3.8% compared to the female respondents' 9.4%, 2.5% and 3.1% respectively (figure 3).

With regards to perpetration of violence, verbal abuse was the commonest, 7.5%,

followed by physical assault without use of weapon and sexual harassment with 2.8% and 2.5% respectively. The proportion of those that assaulted victims with a weapon was 1.6%; those that threatened with a weapon was 0.6% while those that caused injury via physical assault was 0.3% respectively (figure 4).

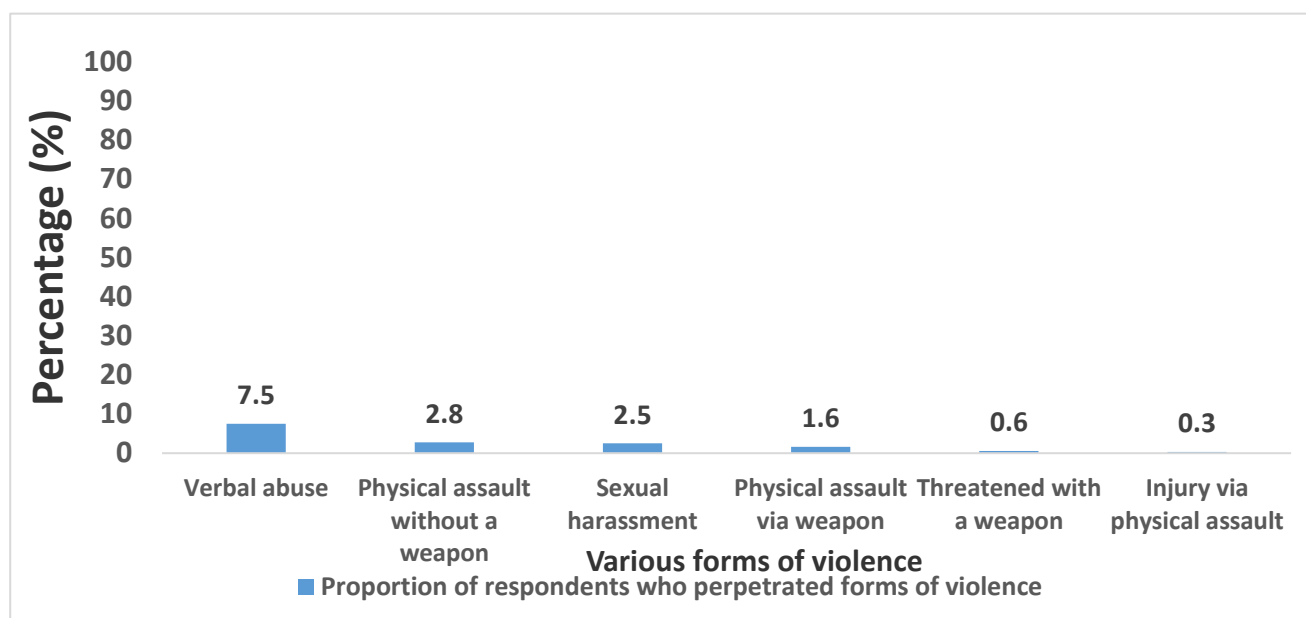


Figure 4: Proportion of perpetrated forms of violence (n=118) (Multiple choice allowed)

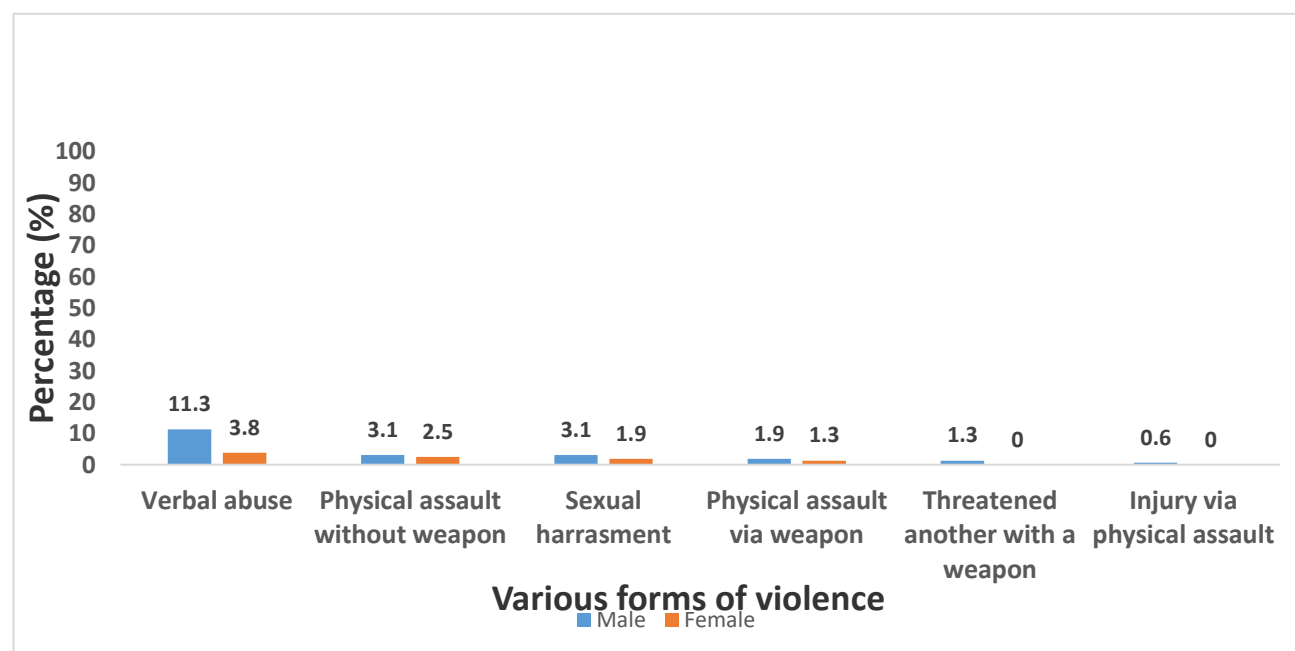


Figure 5: Proportion of male and female who had perpetrated violence (n=118) (Multiple choice allowed)

In terms of pattern, among the respondents' who had perpetrated violence, more of male respondents had perpetrated all the various forms of violence ranging from verbal abuse 11.3%, physical assault without a weapon

3.1%, sexual harassment 3.1% among others compared to their female counterparts with verbal abuse being 3.8%, physical assault without weapon 2.5% and sexual harassment 1.9% among others (figure 5).

Table 2: The relationship between socio-demographic, family, work-related factors, and the experience of violence as a victim (n=319)

Variables	Sub- variables	Experienced violence as victim		Statistical Indices
		YES (%) n=118	NO (%) n=201	
Age-group	Young adults	64 (34.6)	121 (65.4)	$\chi^2 = 1.085$ p = 0.298
	Middle aged people	54 (40.3)	80 (59.7)	
Marital status	Currently married	95 (38.5)	152 (61.5)	$\chi^2 = 1.016$ p = 0.313
	Not currently married	23 (31.9)	49 (68.1)	
Level of education	High level of education	109 (41.0)	157 (59.0)	$\chi^2 = 10.918$ p = 0.001*
	Low level of education	9 (17.0)	44 (83.0)	
Religion	Christianity	81 (39.3)	125 (60.7)	$\chi^2 = 1.893\#$ p = 0.388
	Islam	35 (32.1)	74 (67.9)	
	Traditional	2 (50)	2 (50)	
Duration of service	10 years and below in the civil service	67 (35.1)	124 (64.9)	$\chi^2 = 0.747$ p = 0.388
	11 years and above in the civil service	51 (39.8)	77 (60.2)	
Monthly income	Below the mean income	86 (35.5)	156 (64.5)	$\chi^2 = 0.909$ p = 0.340
	Above the mean income	32 (41.6)	45 (58.4)	
Wearing of skimpy or revealing dress	Yes	11 (30.6)	25 (69.4)	$\chi^2 = 0.721$ p = 0.396
	No	107 (37.8)	176 (62.2)	
Stressed at work	Yes	48 (46.2)	56 (53.8)	$\chi^2 = 5.559$ p = 0.018*
	No	70 (32.6)	145 (67.4)	
Alcohol intake	Yes	15 (44.1)	19 (55.9)	$\chi^2 = 0.829$ p = 0.362
	No	103 (36.1)	182 (63.9)	
Smoking	Yes	13 (32.5)	27 (67.5)	$\chi^2 = 0.396$ p = 0.529
	No	105 (37.6)	174 (62.4)	
Understaffing at workplace	Yes	45 (35.2)	83 (64.8)	$\chi^2 = 309$ p = 0.579
	No	73 (38.2)	118 (61.8)	
Overworked at workplace	Yes	45 (45.9)	53 (54.1)	$\chi^2 = 4.837$ p = 0.028*
	No	73 (33)	148 (67)	
Condition of service	Yes	35 (38)	57 (62)	$\chi^2 = 0.061$ p = 0.804
	No	83 (36.6)	144 (63.4)	
Usually emotionally down	Yes	28 (40.6)	41 (59.4)	$\chi^2 = 0.487$ p = 0.485
	No	90 (36)	160 (64)	
Personal or family challenges	Yes	24 (37.5)	40 (62.5)	$\chi^2 = 0.009$ p = 0.925
	No	94 (36.9)	161 (63.1)	
Work beyond closing hours	Yes	57 (45.2)	69 (54.8)	$\chi^2 = 6.078$ p = 0.014*
	No	61 (31.6)	132 (68.4)	
Regularity of promotion	Yes	36 (40.4)	53 (59.6)	$\chi^2 = 0.634$ p = 0.426
	No	82 (35.7)	148 (64.3)	

* Statistically significant at p<0.05 #-Likelihood ratio used instead of Pearson's because at least one cell had an unexpected value less than five

1 In Table 2, level of education, stressed at
 2 work, overworked at workplace and working
 3 beyond closing hours were all associated with
 4 experience of violence as they all showed
 5 statistically significant association. With
 6 regards to education, 41% of respondents with
 7 high level of education had experienced
 8 violence compared to 17% of those with low
 9 level of education ($p=0.001$). In terms of
 10 stress, 46.2% of those that considered
 11 themselves stressed at work had experienced
 12 various forms of violence compared to only

Table 3: The relationship between socio-demographic, family, work-related and other factors and the experience of violence as a perpetrator (n=319)

Variables	Sub- variables	Perpetrated violence		Statistical Indices
		YES n=31	(%) NO n=288	
Age-group	Young adults	10 (5.4)	175 (94.6)	$\chi^2 = 9.335\#$ $p = 0.002^*$
	Middle aged people	21 (15.7)	113 (84.3)	
Marital status	Currently married	26 (10.5)	221 (89.5)	$\chi^2 = 0.815$ $p = 0.367$
	Not currently married	5 (6.9)	67 (93.1)	
Level of education	High level of education	31 (11.7)	235 (88.3)	$\chi^2 = 6.842\#$ $p = 0.009^*$
	Low level of education	0 (0)	53 (100)	
Religion	Christianity	19 (9.2)	187 (90.8)	$\chi^2 = 19.469\#$ $p < 0.001^*$
	Islam	8 (7.3)	101 (92.7)	
	Traditional	4 (100)	0 (0)	
Duration of service	10 years and below in the civil service	17 (8.9)	174 (91.1)	$\chi^2 = 0.362$ $p = 0.547$
	11 years and above in the civil service	14 (10.9)	114 (89.1)	
Monthly income	Below the mean income	21 (8.7)	221 (91.3)	$\chi^2 = 1.236$ $p = 0.266$
	Above the mean income	10 (13.0)	67 (87.0)	
Wearing of skimpy or revealing dress	Yes	5 (13.9)	31 (86.1)	$\chi^2 = 0.358$ $p = 0.550$
	No	26 (9.2)	257 (90.8)	
Stressed at work	Yes	16 (15.4)	88 (84.6)	$\chi^2 = 5.648\#$ $p = 0.017^*$
	No	15 (7.0)	200 (93.0)	
Alcohol intake	Yes	6 (17.6)	28 (82.4)	$\chi^2 = 1.809$ $p = 0.179$
	No	25 (8.8)	260 (91.2)	
Smoking	Yes	5 (12.5)	35 (87.5)	$\chi^2 = 0.122$ $p = 0.726$
	No	26 (9.3)	253 (90.7)	
Understaffing at workplace	Yes	14 (10.9)	114 (89.1)	$\chi^2 = 0.362$ $p = 0.547$
	No	17 (8.9)	174 (91.1)	
Overworked at workplace	Yes	13 (13.3)	85 (86.7)	$\chi^2 = 2.029$ $p = 0.154$
	No	18 (8.1)	203 (91.9)	
Condition of service	Yes	9 (9.8)	83 (90.2)	$\chi^2 = 0.001$ $p = 0.980$
	No	22 (9.7)	205 (90.3)	
Usually emotionally down/low	Yes	8 (11.6)	61 (88.4)	$\chi^2 = 0.353$ $p = 0.552$
	No	23 (9.2)	227 (90.3)	
Facing personal or family challenges	Yes	10 (15.6)	54 (84.4)	$\chi^2 = 3.184$ $p = 0.074$
	No	21 (8.2)	234 (91.8)	
Work beyond closing hours	Yes	14 (11.1)	112 (88.9)	$\chi^2 = 0.461$ $p = 0.497$
	No	17 (8.8)	176 (91.2)	
Regularity of promotion	Yes	6 (6.7)	83 (93.3)	$\chi^2 = 1.246$ $p = 0.264$
	No	25 (10.9)	205 (89.1)	

* Statistically significant at $p < 0.05$ #-Likelihood ratio used instead of Pearson's because at least one cell has an unexpected value less than five

32.6% in those that do not consider themselves stressed at work ($p=0.018$). Regarding overwork, 45.9% of those that considered themselves overworked had experienced violence compared to only 33.0% in those that do not consider themselves

overworked ($p=0.028$). Concerning working beyond closing hours, 45.2% of those who worked beyond closing hours had experienced violence, compared to 31.6% of those who do not work beyond closing hours ($p=0.014$).

Table 4: Binary logistic regression model for the outcome variables

Variables	Sub- variables	P value	Odd’s ratio	95% Confidence Interval
“experienced violence as a victim” and selected potential predictors.				
				Lower Upper
Level of education	High level of education		1	
	Low level of education	0.002*	0.296	0.138 0.637
Stressed at work	No		1	
	Yes	0.170	0.688	0.403 1.175
Overworked at workplace	No		1	
	Yes	0.226	0.718	0.420 1.228
Work beyond closing hours	No		1	
	Yes	0.076	0.642	0.394 1.048
“experience of violence as a perpetrator” and selected potential predictors.				
Age-group	Middle aged people		1	
	Young adults	0.003*	0.269	0.632 0.925
Level of education	High level education		1	
	Low level of education	0.997	0.220	0.452 5.920
Stressed at work	No		1	
	Yes	0.045*	2.330	5.325 7.632

*Statistically significant $p<0.05$, Significance level was set at 95%

As laid out in Table 3, age-group, level of education, religion, and level of stress at the workplace were all associated with perpetration of violence as they all showed statistically significant association. With regards to age group, only 5.4% of young adults perpetrated violence, compared to 15.7% of middle-aged people ($p=0.002$). In terms of education, 11.7% of respondents with high level of education had perpetrated violence compared to 0.0% of those with low level of education ($p=0.009$). Concerning religion, 100% of the traditionalists had perpetrated violence, compared to lesser proportions of Christians and Muslims, 9.2 and 7.3% respectively ($p<0.001$). Regarding stress, 15.4% of those that considered themselves stressed at work had perpetrated various forms of violence compared to only 7% in those that do not consider themselves stressed at work ($p=0.017$).

For those that experienced violence, lower education status were approximately three times ($1/0.296=3.37$) less likely to be victims of workplace violence compared to those with higher education level ($P=0.002$, CI = 0.138-0.637) (Table 4). For the perpetrators of violence, young adults were approximately four times less likely ($1/0.269 = 3.72$) to perpetrate workplace violence than the middle aged ($P=0.003$, CI = 0.632-0.925). Likewise, those who considered themselves stressed at work were two times more likely to perpetrate workplace violence than those who do not consider themselves stressed at work ($P=0.045$, CI = 5.325-7.632).

For those that experienced violence, lower education status were approximately three times ($1/0.296=3.37$) less likely to be victims of workplace violence compared to those with higher education level ($P=0.002$, CI = 0.138-0.637) (Table 4). For the perpetrators of violence, young adults were approximately four times less likely ($1/0.269 = 3.72$) to perpetrate workplace violence than the middle aged ($P=0.003$, CI = 0.632-0.925). Likewise, those who considered themselves stressed at work were two times more likely to perpetrate workplace violence than those who do not consider themselves stressed at work ($P=0.045$, CI = 5.325-7.632).

DISCUSSION

Violence is a complex and heterogeneous phenomenon that is common at the workplace and its effects on workers cannot be overlooked.^{11,14} Thus, this study focused on the civil servants in Osogbo, Osun State as they form a major part of the workforce in the state.

The overall prevalence of violence in this study was high with over one-third of the respondents having experienced violence; this means at least one out of every three persons in the civil service had been a victim. This prevalence exceeds that of a previous work done in Ethiopia among health care workers where up to 26.7% of the respondents had experienced violence and is lower than the finding of a study done among health workers in Egypt with a prevalence of 56.7%.^{7,16} This could be due to dissimilarities in location of the study as well as the nature of the respondents. Findings from this study showed that verbal abuse happened to be the most prevalent form of violence experienced by the respondents at one point in time or another owing to threats, being shouted at or intimidation, followed by physical assault without weapon. This is similar to a study done among prison workers which also showed that verbal abuse was the highest form of violence experienced, followed by physical assault without weapon.²⁰

In terms of pattern, with regards to sex distribution, more of male respondents had perpetrated all forms of violence in the workplace compared to their female counterparts. This pattern is in conformity with a study that showed that male workers often times appeared to perpetrate this deviant behavior more than the female workers.¹² Culturally, males are generally more aggressive than females and this may account for the predominance of violence in males. One common reason given for this is that many cultures promote male dominance while females are to be submissive and supportive.¹² Thus, violence tendencies in male are seen as masculinity and are often subtly cheered.

With regards to age, respondents in the young adult category were found to have been more of the victims in the civil service which could perhaps be as a result of 'respect for elders' attached to the local culture. The respondents in the middle age category were four times more likely to be perpetrators compared to young adults. This could be explained by the notion that the perpetrator had it in mind that those in this group are young and vulnerable.¹¹ The behavioral characteristics vary from one person to the other and the prevalence in the younger age group can be attributed to lower threshold for insult and pain and less maturity compare to the older age group. This is in line with a study among health workers which showed that perpetration of WPV was higher in older workers.¹² In term of marital status, respondents who were currently married experienced most forms of violence as either perpetrators or victims more than those who were not currently married (such as those who were single or those who were divorced/separated or those who were widowed). This may also have to do with age, as the older are more likely to be married. Respondents' level of education showed that more of those that had higher level of education perpetrate violence compared to those who had low level of education, this was however significant only at the bi-variate analysis.

In terms of experience of violence, using the chi-square test of association and logistic regression, the prevalence of WPV in this study was statistically significant among respondents with high level of education who experienced violence more than those with low-level education (such as those with no formal education, or those with primary or secondary education). However, the study respondents were largely more of those who had high level education. Similar findings have been reported from foreign and local studies that those who have high level of education suffer from different forms of violence with regards to prison and health care workers.^{7,12,19}

Factors that were identified regarding the causes of WPV based on the multi-variate analysis included the age-group, religion, stress at work, level of education, overworked at workplace and working beyond closing hours. Some of these factors have been discussed in the literature.^{19,21}

It is noteworthy that stress is common in work settings and it has been documented in the literature as one of the major factors for WPV.^{5,12,19} The respondents who considered themselves stressed at work were the perpetrators of violence compared to their counterparts who considered themselves otherwise. Stress was also identified by a similar study to be associated with the perpetration or experience of violence.²⁰ This study showed that those who considered themselves stressed at work were two times more likely to perpetrate violence than those who do not consider themselves stressed at work. This is a proof that stress is a major factor that causes WPV. According to the first variable of The Karasek model on stress and WPV, workers who have tight schedules and pace of work, usually work under pressure and could be subjected to any form of violence when demands are not being met.¹¹

One plausible implication of these results is that stress at work certainly predicted deviant behaviors of the perpetrators which is more of psychological than physical. These results, with effective implementation can help tackle major problems like depression which medications may have little or no benefit on, and also reduce the rate of suicides. This study will add value to scientific knowledge and provide platform for future interventions on WPV.

This study has some limitations which future studies should address. The study was conducted among civil servants during their working hours and it was difficult to get their cooperation. For instance, most respondents deliberately did not state their job grade level and as a result of this, the pattern of violence among junior and senior civil servants could not be determined by any form of observation. The study samples were picked from selected

ministries at the State Secretariat; hence, this study needs replication with samples from all sectors of the civil service to allow longitudinal inferences. Moreover, there is also a need to conduct this study among other workers e.g., non-governmental, to broaden the scope covered.

CONCLUSION

Based on the results of the study, we conclude that WPV, of various forms, is a significant problem facing the civil servants in Osun State. The risk factors that were associated with WPV included stress, understaffing, overworking and working beyond closing hours. Our findings indicate that WPV is of public health significance and urgent measures are needed to prevent its occurrence.

Seminars on the causes and effects of WPV to individual and the organisation should be conducted periodically for the newly employed and currently working staffs in the civil service. To reduce stress (resulting from overworking and understaffing) which was found to be the major factor causing WPV, more workers should be employed in or seconded to departments/units that are understaffed.

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AUTHORS' CONTRIBUTIONS

AGO conceived the idea for the study, provided the results and supervised the study. TIA performed the literature search and drafted the introduction and the analysis of the results. OEO drafted the methodology aspect. KSA drafted the narrative of the results. AGO and KSA drafted the discussion and conclusion of the study. AGO and TIA revised and edited the manuscript. All authors read and approved the final version of the manuscript.

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