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Racial and Ethnic Differences in Factors Related to Work Place Violence Victimization

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Abstract

Work place violence (WPV) is a significant public health concern affecting all racial or ethnic groups. This study examined whether different racial/ethnic groups differed in vulnerability to WPV exposure and utilization of resources at the workplace. This cross sectional research focused on White, Black and Asian nursing employees (*N*=2033) employed in four health care institutions in a Mid-Atlantic US metropolitan area. While childhood physical abuse was significantly related to risk for WPV among workers from all racial/ethnic backgrounds, intimate partner abuse was a significant factor for Asians and Whites. Blacks and Asians were found to be less likely than Whites to be knowledgeable about WPV resources or use resources to address WPV. Services to address past trauma, and education and training opportunities for new workers may reduce risk for WPV and promote resource utilization among minority workers.

Keywords

Workplace violence; Racial and ethnic differences; Nurses

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Work place violence (WPV) is a significant public health concern, with a large number of workers experiencing fatal and non-fatal effects of violence (Center for Disease Control and Prevention, 2013). The World Health Organization (WHO) defines WPV as "the intentional use of power, threatened or actual, against another person or against a group, in work-related circumstances, that either results in or has a high degree of likelihood of resulting in injury, death, psychological harm, mal-development, or deprivation" (WHO, 1995 cited in Cooper, & Swanson, 2002). Nurses have been found to have one of the highest rates of WPV compared to other healthcare workers. The perpetrators have been found to be patients followed by patient families, (Campbell et al., 2011; Chen et al., 2013; Hegney, Eley, Plank, Buikstra, & Parker, 2006) and may also include coworkers or supervisors (Demir & Rodwell, 2012).

The prevalence of WPV against nurses has been found to differ by world regions. In a review of 136 articles on 151,347 nurses from 160 samples, the highest rates for physical and sexual abuse at workplace was found in the Anglo region (i.e., US, Canada, Australia, England, Ireland, New Zealand, and Scotland). The most common perpetrators were patients. The highest rates of psychological WPV were found in the Middle East with most common perpetrators being patients' families and friends (e.g., Iran, Iraq, Bahrain, Israel, Jordan, Kuwait, Saudi Arabia and Turkey). Nurses in Asia (i.e., China, Japan, Philippines, Taiwan, and Thailand) had the least exposure to WPV (Spector, Zhou & Xin, 2014). Various factors have been reported as risk factors for WPV among nurses in international settings. For instance, risk factors identified in Asia (i.e., China) are young age (under 30 years), male gender, high education (bachelor's degree or higher), rotating duty or night shift (Pai & Lee 2011; Zeng et al., 2013); in South Africa, discrimination and mistreatment by fellow nurses or senior nurse managers (Khalil, 2009); and inexperience on the job in Australia (Hegney, Plank & Parker, 2003).

In the US, racial/ethnic differences have been noted, with WPV found to be more prevalent among Whites (78%), when compared to Blacks (13%) and Hispanics (15%) (Harrell, 2011). Racial/ethnic variations in WPV can be explained using the social and personal vulnerability framework, according to which social vulnerabilities are contextual factors (e.g., discrimination) and personal vulnerabilities are developmental and environmental factors that differentially and adversely impact various populations (Amaro et al., 2005). For example, discrimination as a social vulnerability can increase the risk for minority groups becoming victims of hate crime. Due to differences in personal and social vulnerabilities, racial/ethnic groups may also differ in their vulnerabilities to WPV victimization. Thus, it is important to consider vulnerability factors that contribute to racial/ethnic differences in exposure to WPV.

Individual vulnerabilities related to WPV exposure includes worker's gender (Findorff, McGovern, Wall, & Gerberich, 2005; Harrell, 2011; Hegney et al., 2006), age (Gillespie, Gates, Miller, & Howard, 2010; Kamchuchat, Chongsuvivatwong, Oncheunjit, Yip, & Sangthong, 2008; Senuzun Ergün, & Karadakovan, 2005), marital status (Harrell, 2011; Kamchuchat et al., 2008) and years of work experience (Child & Mentes, 2010; Hegney et al 2003; Rodwell & Demir, 2012). Ethnic minority status has also been identified as a risk factor for exposure to WPV (e.g., verbal harassment or bullying from fellow nurses or

managers) (Ball, & Pike, 2006; Giga, Hoel, & Lewis, 2008). Further, being foreign born and educated in other countries may increase vulnerability to WPV due to factors such as inability to fit in or to clearly communicate with other team members, ostracized or labeled as aggressive (Choiniere, MacDonell, & Shamonda, 2010).

Relationship vulnerabilities associated with WPV risk include childhood or adult abuse (Anderson, 2002). Abuse experiences may result in adjustment problems such as passive behaviors, aggressiveness, and alterations in risk recognition increasing vulnerability to WPV (Anderson, 2002; Kimerling, Alvarez, Pavao, Kaminski, & Baumrind, 2007). For example, one study revealed that revictimized adults made errors specific to rules that contained social and safety content, suggesting inability to identify potentially dangerous situations. They also showed poorer performance on precautionary rules that were designed to keep one safe from revictimization (DePrince, 2005). Further, research suggests cultural variations may explain differences in meaning attributed to abusive events, coping styles and outcomes of abuse (Clear, Vincent, & Harris, 2006). Thus, racial/ethnic groups may differ in ways that their past abuse experiences affect their future risk for exposure to WPV. Racial/ethnic groups may also differ in use of WPV resources, as racial/ethnic disparities have been previously noted in resource use for abuse experiences and health concerns (El-Khoury et al., 2004; Rodriguez, Valentine, Son, Mohammad, 2009; Sabri et al., 2013). Research is, therefore, needed to examine racial/ethnic differences in risk factors for WPV exposure and use of WPV resources.

Purpose

Our primary purpose was to examine whether differences in the likelihood of reporting WPV among workers of different racial/ethnic backgrounds were attributable to their individual (e.g., age, gender, designation) and relationship characteristics (e.g.., intimate partner abuse (IPA) experiences). We considered factors based on the Haddon matrix framework (Haddon, 1980; Runyan, Zakocs, & Zwerling, 2000) that could be used as the potential targets for interventions: characteristics of victims of WPV from different racial/ethnic groups (host), perpetrators (agent), and the workplace environment and available resources to address WPV (the settings) all of which have an influence on incidents of WPV (Campbell et al., 2011). Further, we examined whether racial/ethnic groups of workers differed in their characteristics of WPV experiences (e.g., type of abuse, frequency, perpetrator type) and resource utilization for WPV. WPV experiences included physical and/or psychological abuse at the workplace and WPV resource utilization included use of formal (e.g., counseling services) and informal resources (e.g., family and friends). The three racial/ethnic groups compared were Whites, Blacks and Asians.

Methods

Sample and Procedures

Data for this cross-sectional research were derived from the Safe at Work Study which examined WPV experiences among personnel employed in four participating health care institutions including three hospitals and one geriatric care center in a Mid-Atlantic US metropolitan area. Respondents were English speaking, ≥ 18 years of age, reported to a

nurse manager, had some patient care responsibility or contact and were employed at the participating hospital for at least 4 weeks prior to assessment. The majority of respondents (90%) completed surveys anonymously on a secure website and the rest via paper versions of the same questionnaire. The sample included 75% (*n*=1515) nurses defined as registered nurses, clinical nurse specialists and nurse practitioners. Twenty-five percent (*n*=518) were other nursing personnel including licensed practical nurses, clinical technicians, clinical or support associates, patient care technicians, and other nursing assistants. The study was approved by the Johns Hopkins Institutional Review Board.

This research focused on 2033 White, Black and Asian participants. We excluded 137 (6.3%) participants who were either missing demographic information or were known to be of other races; the latter could not be analyzed because of their small numbers. Most of the sample was White (64.5%, *n*=1,312), followed by Blacks (24.0%, *n*=487) and Asians (11.5%, *n*=234). Participants included 8.2% males (*n*=167) and 91.8% females (*n*=1866), with a mean age of 39.2 years. More than half of the sample reported completing at least four years of education (64%; *n*=1297). The majority of participants 53.4% (*n*=1082) were married; 13.4% (*n*=271) were formerly married (including 12% divorced/separated, *n*=244; 1.3%, *n*=27 widows) and 33.2% (*n*=673) were unmarried (28.4% single, *n*=575; 4.8%, *n*=98 unmarried couple). Some of the categories for marital status (e.g., single or never married women and women who reported being in a non-marital relationship) were combined because of the small sample sizes in each category for racial/ethnic difference comparison. Twenty nine percent (*n*=592) of participants reported lifetime physical WPV; 27% (*n*=547) reported psychological WPV; and 15.5% (*n*=315) of participants reported experiences of both physical and psychological abuse at the workplace.

Measures

The outcome measures included physical and psychological WPV. *Physical WPV* was defined as the “use of physical force against another person or group, or threat of physical force, that results in physical, sexual or psychological harm” (Campbell et al., 2011). Participants were asked if they ever experienced violence (as described above) at their workplace. Lifetime experiences of *physical WPV* were expressed as a dichotomous variable-ever or never experienced physical WPV. The same approach was taken for experience with *psychological WPV*, which was defined as “verbal abuse, bullying, stalking, or sexual harassment” ((Campbell et al., 2011)p. 83). The independent variables included individual and relationship characteristics.

Individual characteristics included age (continuous variable), gender (dichotomous), marital status (categorical: married, formerly married, and unmarried), length of employment (categorical: one year or less, 2–5 years, 6–10 years, and 11 years or more) and type of profession (dichotomous: nurses versus other personnel in nursing). *Relationship characteristics* included childhood physical abuse, childhood sexual abuse and IPA (all treated as dichotomous based on positive or negative responses). For *childhood physical abuse*, participants were asked: (1) As a child, were you ever physically abused (hit with objects, etc.) by a parent or another adult or caretaker? For *childhood sexual abuse*, participants were asked (2) As a child, did anyone ever touch you in a way you did not wish

to be touched, or force you into any kind of sexual activity? To measure *intimate partner abuse* (IPA), participants were asked if they experienced physical, sexual and/or emotional abuse in the past 5 years.

The variables for bivariate analysis included a) *Characteristics of WPV experiences: Frequency of abuse* was measured using an item- how often participants experienced WPV in the last 12 months (once, 2–4 times, 5–10 times, several times a month, about once a week and daily). To assess for *types of perpetrators*, participants were asked to indicate sources of WPV (e.g., patients, relatives of patient, co-worker). b) *Resources utilization for WPV*: Participants were asked how they responded to WPV and their responses were categorized into formal (e.g., talked to an Employee Assistance Counselor, went to Occupational Injury Clinic) and informal (e.g., told friends/families). Participants who reported only using informal categories and no use of formal resources were classified into the informal group. For *knowledge of resources within the institution*, participants were asked "Do you know your employer's policies and procedures regarding violence in the workplace? (Response categories included yes, no and uncertain).

Race was determined based on a question that asked—"Which of the following best describes your racial or ethnic group?-"White, Black or African American, Asian, Native Hawaiian or other Pacific Islander, American Indian or Alaska Native, Don't know/Not sure, Other (specify)." As mentioned, the population in this study consisted only of those who reported that they were White, Black or African American, or Asian.

Data Analysis

Bivariate analyses using chi-square were conducted to identify racial/ethnic differences in characteristics of abuse, resource utilization and knowledge of WPV resources. Given the large number of Whites in the sample, as compared to Blacks and Asians, three separate sets of multivariate logistic regressions with subsamples of Whites, Blacks and Asians were conducted to explore whether the relationship between individual and relationship characteristics and WPV differed for workers of different racial/ethnic groups. The three dichotomized outcome variables included psychological abuse, physical abuse and both physical and psychological abuse. All covariates were entered simultaneously into each of the multiple regression models. Only variables identified as significant at the $p<.05$ level in the bivariate analyses and those that were theoretically relevant were included in the multivariate models. As the location of employment, such as emergency rooms, elevates the risk for WPV (Campbell et al., 2011; Chen et al., 2013) we controlled for the effects of location of employment in all models. As the obstetrics/gynecology department had the lowest risk of WPV in previous research using the same data (Campbell et al., 2011), it was used as the reference category. Analyses were conducted using SPSS version 19.

Results

Bivariate analyses

Table 1 presents the findings of bivariate analyses. Within racial/ethnic groups, a higher proportion of whites reported WPV. Whites were more likely to report physical (*OR*=2.80),

psychological (*OR*=1.70) and both types of abuse (*OR*=2.71), compared to the other two racial/ethnic groups. Regarding perpetrator types, compared to Whites (91.1%), a higher proportion of respondents within Asians and Black racial backgrounds reported patients as the perpetrators of WPV (see Table 1). There were no significant differences between the racial/ethnic groups on frequency of abuse.

Among victims of WPV, Blacks and Asians were almost 51% less likely than Whites to use formal resources to address WPV (*OR*=0.48–0.49; 15% within groups). Further, compared to Whites, a higher percentage of respondents within Black and Asian backgrounds did not know or were uncertain about employers' policies and procedures regarding WPV. The Asian ethnic groups had the highest within group percentage of respondents who did not know or were uncertain about WPV policies or procedures.

Multivariate analyses

Tables 2, 3 and 4 present the findings of the multivariate logistic regression analyses examining the effects of individual and relationship characteristics on physical, psychological and both types of WPV experiences.

Physical WPV—Among the relationship abuse variables, childhood physical abuse appeared to be a significant risk factor for physical WPV victimization for all racial/ethnic groups. Participants with childhood physical abuse experiences were 1.42–3.27 times more likely to report physical WPV victimization (Whites: *Adj OR*=1.42; Blacks: *Adj OR*=2.51; Asians: *Adj OR*=3.27). However, IPA was only significantly related to physical WPV for White participants. Experience of IPA within the last five years and was associated with increased odds of physical WPV victimization among Whites (*Adj OR*=2.44). Some racial/ethnic differences were also noted in the effects of marital status. Asian participants in former relationships were 11.94 times more likely to be at risk for exposure to physical WPV. Regarding individual characteristics, both White and Black participants who were nurses and were employed in their current position for more than a year (versus one year or less) were at increased odds for experiencing physical WPV. However the type of profession (i.e., whether the respondent was a nurse) and length of employment was not a significant risk factor for Asian participants (See Table 2).

Psychological WPV—While childhood physical abuse had no significant effect on psychological WPV among Whites and Asians, Blacks with childhood physical abuse experiences were at 87% increased odds of reporting psychological abuse at the workplace (*Adj OR*=1.87). Childhood sexual abuse appeared to be a significant factor in psychological WPV victimization for both Blacks and White participants. However, for Asian participants, IPA was the only relationship variable that was associated with an increased likelihood of reporting psychological WPV (*Adj OR*=5.53).

Among the individual level variables, older age, being a nurse and 2–10 years of employment in the current position was associated with increased odds of psychological abuse in the workplace for Whites. While length of employment was not a significant factor for Blacks, Asian participants with 6–10 years of employment were more likely to report psychological abuse than others (*Adj OR*=3.79).

Both Physical and Psychological WPV—For Blacks, childhood trauma (both physical and sexual abuse) was significantly related to them being at risk for both types of WPV (i.e., psychological and physical). For Whites and Asians only IPA appeared to be a significant factor associated with increase in the likelihood of experiencing both types of WPV (Whites: *Adj OR*=1.64; Asians: *Adj OR*=9.96). Among individual factors, White participants' increase in age and 2–10 years in current employment was significantly related to them reporting both physical and psychological abuse. For Blacks and Asians, participants who spent 2–5 years in their current position were significantly more likely to report experiencing both types of abuse at the workplace than other participants.

Discussion

This study examined racial/ethnic differences in factors related to WPV among workers at a large mid-Atlantic Metropolitan health care workplace. The findings suggest that past non-WPV experiences may pose a risk for WPV among workers from all racial/ethnic backgrounds. For instance, childhood physical abuse appeared to be a shared risk factor for physical WPV for workers regardless of racial/ethnic background. While both types of childhood abuse (i.e., physical and sexual) were associated with physical and psychological WPV for Blacks, IPA was a significant factor for Asians and Whites. Thus, past abuse experiences must be considered in WPV risk assessments among all racial/ethnic groups. WPV prevention policies may focus on developing culturally competent WPV risk assessments, and ongoing staff training to identify and manage risky situations at the workplace. Further, counseling services for workers with past childhood and IPA issues can also be beneficial.(Gillespie et al., 2010)

Overall formal WPV resource utilization was low in the sample, similar to previous research which found under-reporting (16%) of WPV among nurses. Reasons for not reporting included the view that WPV is just part of the job and the perception that management would not be responsive (Chapman, Styles, Perry & Combs, 2010). Other identified reasons for not reporting included cultural factors. For instance, in a study, Asian cultural values that placed high emphasis on workplace performance (versus individuals) was associated with acceptance of workplace bullying (Power et al., 2013). In this study, Blacks and Asians were found to be less likely than Whites to use formal WPV resources. This could be attributed to general under-utilization of formal services among ethnic minorities (El-Khoury et al., 2004; Rodriguez et al., 2009; Sabri et al., 2013). Minority workers may also not be aware of all resources at the workplace. Compared to Whites, Blacks and Asians were less likely to be knowledgeable about resources and were more likely to express uncertainty regarding employers' policies and procedures on WPV. Thus, it is important to establish mandatory education and training policies to develop awareness about resources for new workers (including those from minority groups).The influence of marital status on WPV was inconsistent by race. While marital status was insignificant for Blacks and Whites, Asian participants in former intimate partner relationships were at higher risk for WPV victimization. This is consistent with previous research in which formerly married workers experienced higher rates of WPV than married workers (Harrell, 2011). A possible explanation for this is that married individuals may be skilled in working toward agreement with their intimate partners in which they extend these same skills to the workplace

(Gillespie et al., 2010). On the other hand, divorced or separated workers may be less successful in negotiating and interacting with individuals which may result in increased vulnerability to WPV. While it is unclear why marital status is significant for Asians and not for Blacks and Whites cultural considerations should be explored.

Lastly, length of employment was a significant factor in predicting physical WPV among Black and White workers with those employed in their current position for more than a year being at increased odds for experiencing WPV. This is contradictory to previous studies which either reported lack of significance (Chen et al., 2013; Lemelin, Bonin, & Duquette, 2009; Purpora, Blegen, & Stotts, 2012; Tak, Sweeney, Alternan, Baron, & Calvert, 2010) or increased WPV among less experienced staff (Hegney et al., 2003). It could be that there is a curvilinear effect between length of employment with those working less than a year experiencing more violence, those working more than a year experiencing more violence, and those who work more than 15 years experiencing less violence as they move into senior positions. Our finding regarding the significant relationship between length of employment and exposure to WPV may be attributed to our measure of lifetime physical WPV, which did not specify a timeframe for experiences of WPV.

Our study focused on WPV among the three major racial/ethnic groups in the United States. However, we could not account for heterogeneity within the Black and Asian groups. For instance, cultural differences may exist between Caribbean Blacks and Black African Americans, or Chinese and Indians. The low sample size for the Asian group may have decreased our ability to identify differences due to low power. Some of the confidence intervals were very large for the Asian group. Also, the analysis was cross-sectional, which does not allow inferences for causal relationships. Further, all of our measures were self-reported which could result to over or under reporting by workers most sensitive to violence. Our sample comprised mostly females (91.8%). Due to sample size limitations, we could not examine the role of gender as a covariate in analyses. Future research with a more diverse population that includes different gender and racial/ethnic groups is recommended. Finally, the findings can be only generalized to workers in the nursing department and not to other health care professionals. Moreover, the findings cannot be generalized to community, rural or small non research hospital centers. Future research may replicate these findings using other populations. Despite the limitations, this study contributes to understanding of factors related to WPV among different racial/ethnic groups and underutilization of WPV resources among minority groups. As exposure to violence outside the workplace may be related to risk for exposure to WPV, workers with past abuse experiences must be linked to resources to address abuse issues. Additionally, policies must be in place to promote knowledge and awareness about WPV resources among all workers.

Low literacy and numeracy among workers, particularly from minority and immigrant groups, may impact knowledge and use of organizational WPV resources. Workplace policies on WPV must exist and staff member education and training needs to occur using literacy appropriate materials. Workers must be trained in identifying risky situations, handling violent situations, and effective communication strategies. Formalized peer education and mentoring can also play crucial roles in ensuring that workers have the knowledge base, skills, and tools to keep themselves safe (Choiniere et al., 2010).

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Table 1

Racial/ethnic differences in characteristics of workers, violence experiences and resource utilization (N=2033)

	White (N=1312) n (%)	Black (N=487) n (%)	Asian (N=234) n (%)	p-value
Worker Categories				*P*<.001[1]
Registered Nurse	1112 (84.8)	161 (33.1)	202 (86.3)	
Clinical Nurse Specialist	20 (1.5)	2 (0.4)	2 (0.9)	
Nurse Practitioner	12 (0.9)	3 (0.6)	1 (0.4)	
Licensed Practical Nurse	10 (0.8)	7 (1.4)	1 (0.4)	
Clinical Technician	24 (1.8)	19 (3.9)	3 (1.3)	
Clinical Associate	9 (0.7)	66 (13.6)	4 (1.7)	
Support Associate	2 (0.2)	69 (14.2)	3 (1.3)	
Patient Care Technician	45 (3.4)	82 (16.8)	7 (3.0)	
Nurse Associate	26 (2.0)	8 (1.6)	0	
Certified Nursing Assistant	4 (0.3)	21 (4.3)	0	
Certified Medical Assistant	6 (0.5)	6 (1.2)	1 (0.4)	
Others	42 (3.3)	43 (8.8)	10 (4.3)	
Workplace Violence (WPV)				
Types of WPV				*P*<.001
Physical	472 (36.0)	86 (17.7)	34 (14.6)	
Psychological	400 (30.6)	90(18.6)	57 (24.4)	
Both	256 (19.5)	41 (8.4)	18 (7.7)	
Frequency of Physical WPV				ns
Once	61 (19.4)	14 (24.6)	5 (22.7)	
2–4 times	138 (43.8)	21 (36.8)	13 (59.1)	
5+ times	116 (36.8)	22 (38.6)	4 (18.2)	
Frequency of Psychological WPV				ns
Once	51 (17.4)	12 (18.8)	9 (25.0)	
2–4 times	98 (33.4)	19 (29.7)	17 (47.2)	
5+ times	144(49.1)	33 (51.6)	10 (27.8)	
Perpetrator ----Physical WPV				*P*<.001[2]
Patient	1195(91.1)	470 (96.5)	225 (96.2)	
Patient's Relative	83 (6.3)	8 (1.6)	3 (1.3)	
Co-worker/Physician/Supervisor	19 (1.4)	7 (1.4)	6 (2.6)	
General Public	13 (1.0)	0	0	
Intimate Partner or other family member	2 (0.2)	2 (0.4)	0	
Perpetrator ----Psychological WPV				*P*<.001[3]
Patient	1071(81.6)	435 (89.3)	205 (87.6)	
Patient's Relative	68 (5.2)	7 (1.4)	2 (0.9)	
Co-worker/Physician/Supervisor	155 (11.8)	38 (7.8)	26 (11.1)	
General Public	9 (0.7)	2 (0.4)	0	
Intimate Partner or other family member	9 (0.7)	5 (1.0)	1 (0.4)	

	White (N=1312) n (%)	**Black (N=487) n (%)**	**Asian (N=234) n (%)**	**p-value**
Resource Use for WPV				
Type of Resources				*P*<.001
Formal*	349 (26.6)	74 (15.2)	35 (15.0)	
Informal	963 (73.4)	413 (84.8)	199(85.0)	
Knowledge of employer's policies and procedures regarding violence in the workplace				*P*<.001
Yes	1076(82.1)	371 (76.7)	148 63.5)	
No	6 (0.5)	8 (1.7)	10 (4.3)	
Uncertain	228 (17.4)	105 (21.7)	75 (32.2)	
Non-WPV				
Childhood Physical Abuse	219 (16.7)	104 (21.4)	39 (16.7)	ns
Childhood Sexual Abuse	217 (16.6)	110 (22.7)	19 (8.1)	*P<.001*
Intimate Partner Abuse	142 (10.8)	59 (12.1)	12 (5.1)	*P<.05*

*Formal include participants who used formal resources only and those who used both formal and informal resources; Informal include participants who either used informal resources or did not use any resources; Percentages presented are within racial group percentages;

[1]24 cells had expected count less than 5;

[2]6 cells had expected count less than 5;

[3]4 cells had expected count less than 5; "ns" refers to non-significance;

Table 2

Factors related to physical work place violence (N=2033)

	Whites (n=1312)		**Blacks (n=487)**		**Asians (n=234)**	
	Unadjusted OR	***Adjusted OR***	***Unadjusted OR***	***Adjusted OR***	***Unadjusted OR***	***Adjusted OR***
Age (years)	**1.01****	1.01	1.01	0.99	1.01	1.01
Gender Male	**1.86****	1.54	1.13	1.32	0.84	0.91
Marital Status						
Married	1	1	1	1	1	1
Unmarried	0.87	1.03	0.98	1.18	1.71	1.92
Separated/Divorced/Widowed	**1.54***	1.21	1.04	1.11	**15.7****	**11.94***
History of Trauma						
Child physical abuse	**1.63****	**1.42***	**2.35****	**2.51****	**2.92****	**3.27***
Child sexual abuse	1.03	1.02	**1.06***	1.03	1.02	1.01
Intimate partner abuse (5 years)	**1.87*****	**2.44*****	**1.89***	1.99	**6.89****	4.59
Length of Employment (years)						
One year or less	1	1	1	1	1	1
2–5 years	**1.79*****	**2.08****	**2.65***	**5.59****	1.79	2.76
6–10 years	**1.87****	**1.92****	**3.02****	**4.64****	1.50	1.80
11 years or more	**1.63****	**1.79****	**3.07****	**3.42****	1.29	1.38
Nurse	**1.43***	**1.52***	**2.13****	**2.44****	0.76	0.85

Note:

*p=<.05;

**p<.01;

***p<.001;

Significant values are presented in bold;.

[a]Models were adjusted for location of employment

[b]OR=Odds Ratios;

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Table 3

Factors related to psychological work place violence (N=2033)

	Whites (n=1312)		**Blacks (n=487)**		**Asians (n=234)**	
	Unadjusted OR	***Adjusted OR***	***Unadjusted OR***	***Adjusted OR***	***Unadjusted OR***	***Adjusted OR***
Age (years)	**1.03*****	**1.02***	**1.03****	1.03	**1.04***	1.01
Gender Male	0.99	0.81	0.54	0.59	1.09	0.65
Marital Status						
Married	1.00	1.00	1.00	1.00	1.00	1.00
Unmarried	**0.72***	1.01	0.96	1.51	0.75	0.49
Separated/Divorced/Widowed	1.13	0.84	1.45	1.48	1.44	1.33
History of Trauma						
Child physical abuse	**1.56****	1.19	2.14	**1.87***	1.48	1.53
Child sexual abuse	**1.06*****	**1.05****	**1.12*****	**1.11*****	1.04	1.06
Intimate partner abuse (5 years)	1.23	1.45	1.31	1.45	**4.82***	**5.53***
Length of Employment (years)						
One year or less	1.00	1.00	1.00	1.00	1.00	1.00
2–5 years	**2.02*****	**1.56***	**2.03***	1.54	**2.90***	2.82
6–10 years	**1.89****	**1.57***	**2.07***	1.99	2.90	**3.79***
11 years or more	1.34	1.22	1.44	1.15	2.20	2.48
Nurse	**1.65***	**1.56***	1.53	1.63	0.56	0.62

Note:

* p=<.05;

** p<.01;

*** p<.001;

Significant values are presented in bold;

[a] Models were adjusted for location of employment

[b] OR=Odds Ratios;

Table 4

Factors related to both physical and psychological workplace violence (N=2033)

	Whites (n=1312)		**Blacks (n=487)**		**Asians (n=234)**	
	Unadjusted OR	***Adjusted OR***	***Unadjusted OR***	***Adjusted OR***	***Unadjusted OR***	***Adjusted OR***
Age (years)	**1.03*****	**1.02***	**1.04***	1.03	1.03	1.00
Gender Male	1.16	0.84	0.62	0.31	1.48	1.68
Marital Status						
Married	1.00	1.00	1.00	1.00	1.00	1
Unmarried	0.80	1.15	0.59	0.52	1.07	1.34
Separated/Divorced/Widowed	**1.67****	1.30	0.79	0.62	**6.73***	3.85
History of Trauma						
Child physical abuse	**1.59****	1.26	**2.91****	**3.19****	2.06	3.03
Child sexual abuse	**1.05***	1.04	**1.14*****	**1.15****	0.15	0.15
Intimate partner abuse (5 years)	1.42	**1.64***	1.27	1.39	**7.43****	**9.96***
Length of Employment (years)						
One year or less	1	1	1	1	1	1
2–5 years	**2.15*****	**1.86***	2.47	3.34	4.13	5.83
6–10 years	**2.20****	**1.97****	**3.44***	**4.04***	4.71	**14.08***
11 years or more	**1.55***	1.47	2.23	2.38	3.33	4.74
Nurse	1.37	1.35	1.58	0.99	0.46	0.58

Note:

* p=<.05;

** p<.01;

*** p<.001;

Significant values are presented in bold;

^{a}Models were adjusted for location of employment

^{b}OR=Odds Ratios;