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Workplace violence involving radiographers at a state radiology department in Windhoek Namibia

Charné Hattingh *BRad Radiography (D)* | **Caroline Nabasenja** *MTech Radiography* | **Edwin R Daniels** *NDip Rad (D), BTech Radiography (D)* | **Luzanne Kalondo** *MTech Radiography (D)* | **Abel Karera** *MSc Radiography (D)* | **Mondjila Amkongo** *BRad Radiography (D)*

Allied Health Department, University of Namibia

Abstract

The international prevalence of workplace violence (WPV) in the healthcare sector, and isolated cases involving radiographers in a state radiology department in Windhoek, Namibia instigated this research. This study aimed to explore the prevalence of WPV, identify its perpetrators, and determine the emotional state and coping mechanisms of radiographers after WPV incidents. A standardised questionnaire that assessed WPV was distributed to the fifteen radiographers with experience of working night duty. Thirteen questionnaires were returned (response rate = 86.7%). All the respondents had experienced WPV that predominately occurred during night duty. All had experienced verbal abuse (100%) followed by verbal threats (84.6%), sexual harassment (84.6%), and physical assault (46.2%). Causes of WPV included intoxicated patients (100%), long waiting times (61.5%), overcrowding (30.8%), and failure to meet the expectations of patients and their family members (23.1%). WPV perpetrators were mostly patients followed by their family members. The majority of the respondents did not report their respective WPV incidents to the authorities. They were however anxious, disappointed, disgusted and sad after the incidents. They coped by ignoring the incidents or talking to a colleague or family member. The high prevalence of WPV, and its negative implications, requires employers to devise measures to prevent its re-occurrence.

Keywords verbal abuse, healthcare sector, physical assault, intoxication, overcrowding

INTRODUCTION

Over the past decade, workplace violence (WPV) has been reported worldwide, with prevalence above 40% reported in Brazil (46.7%), Thailand (54%), South Africa (61%) China (62.4%), Bulgaria (75.8%),[1] and India (75%).[2] Additionally, WPV incidences have been recorded in South Africa and China, ranging from 9.6 to 17.8%[3] and increased by factor of 11, respectively.[4]

WPV is defined as "incidences where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health".[5] It is categorised as physical (beating, kicking, slapping, stabbing, shooting, sexual abuse, pushing, biting and pinching) and psychological (verbal abuse, bullying, mobbing, harassment and threats).[5,6] However these categories may overlap leading to inaccurate classification[7] of the different forms of violence. In developing and transition countries, more than 50% of healthcare workers experience at least one incident of physical or psychological violence.[8]

In the healthcare setting, risk factors for WPV include poor security, inadequate lighting, night shifts, stress, overcrowding, receiving bad news related to diagnosis or prognosis, low socioeconomic status, presence of weapons, ineffective communication, perceived lack of empathy and enforcement of visiting hours.[9-12] WPV perpetrators may include colleagues, supervisors, patients, families and visitors.[13] It may have a negative effect on job performance, resulting in reduced job satisfaction and fear.[14-15] Internationally, strategies have been devised to prevent WPV and support victims.[16] In Namibia, Section 39 A of the Namibian Labour Act of 2007[17] makes provision for a safe working environment. However, the implementation of this legislation is employer dependant. Due to the nature of their work, radiographers interact with patients of varying physical, mental and emotional states; these expose them to increased risk of WPV. There have been isolated cases of WPV observed in a state radiology department in Windhoek. This study explored WPV involving radiographers at a state radiology department in Windhoek, Namibia.

MATERIALS AND METHODS

A quantitative descriptive research design was used to conduct a study at one state radiology department in Windhoek. The population included all radiographers (n=17) working night duty. Due to the relatively small size of the population, further sampling would have had the potential to distort the results. As such, all in the population were adopted as the sample. The questionnaire was piloted on two radiographers who were excluded from final data analysis.

Permission and ethics approval to conduct the research was sought and granted from the School of Nursing, University of Namibia; the Ministry of Health and Social Services of Namibia (MoHSS); and the principal radiographer of the radiology department. Participation was voluntary following signed informed consent. Respondents' anonymity was maintained using unique study identifiers.

A questionnaire, comprising open, closed, and multiple response questions, was used (Table 1). The data collected included demographics; prevalence and types of WPV; reporting and action by authorities; and coping mechanisms adopted by the radiographers who participated in this study. The questionnaire was completed during routine working hours. Data were

Table 1. Questionnaire

Age:								
Gender:	**Male**				**Female**			
Years of employment:								
Years of working night duty:								
Duration on night duty per shift:								
Have you been exposed to WPV:	**Yes**				**No**			
Have you ever been exposed to any physical assault? For example:	Being kicked	Slapped	Pushed	Beaten	Assaulted with a weapon (knife, sharp object)	Projectiles thrown at you	Spit on	Other
Exposure to any form of verbal abuse? For example:	Yelled at	Cursed or sworn at	Humiliated	Deliberately ignored when giving instructions	Other			
Exposure to verbal threats, for example:	Killing	Beating	Frightened later outside	Other				
Exposure to sexual harassment, for example:	Subjected to unwanted sexual jokes	Sexual behaviours (eyes, hands, face)	Received unwanted phone calls or text messages	Private parts of patient was shown to you unwillingly	Touched by the patients in an unsatisfying manner	Other		
Who was the perpetrator?	Patient	Patient's family members	Visitor	Colleagues	Other			
Most common time of workplace violence:	8:00 - 14:00	14:00 - 20:00	20:00 - 08:00	Other				
Time of the month when WPV is most frequent:	Beginning of the month	Middle of the month	Month end	During public/private holidays	Other			
Did you report the violence to any of the authorities? If yes, please indicate to whom?								
Was there any actions taken by the hospital authorities to investigate the reported case? If yes, please indicate what was done.								
Reason why violence that occurred:	Long waiting times	Overcrowding	Patient and family members' expectations not met	Under the influence of substances (smoking, alcohol, drugs)	Other			
Could workplace violence have been prevented? Please explain how:								
The emotions experienced after workplace violence occurred:	Sad	Heartbroken	Afraid	Disgust	Anxiety	Disappointment	Failure	Guilt or shame	Other
How did or do you cope after the workplace violence?								

collected in September 2017 and analysed using IBM SPSS Statistics version 24 (IBM Corp, Released 2016).

RESULTS

Thirteen of 15 distributed questionnaires were completed giving a response rate of 86.7%. Two male and 11 female radiographers (respondents) completed the questionnaire. Their ages ranged from 23 to above 30 years. Number of years of working night duty: one to four years (69.2%, n=9), five to nine years (23.1%, n=3), and >10 years (7.7%, n=1). Table 2 shows rostered night duty hours.

• *Types of WPV*

All respondents were exposed to some form of WPV. They were allowed to select multiple responses. Physical abuse, verbal abuse, verbal threats and sexual harassment were selected by 6, 13, 11 and 11 respondents, respectively. The forms of WPV were further categorised. As shown in Table 3, cursing (92.3%) and unwanted sexual jokes (90.9%) were ranked highest; inappropriate exposure of private parts was ranked the lowest (18.2%). The main perpetrators of WPV were patients (100%),family members (76.9%),and visitors (7.7%).

• *Time of WPV*

Incidences of WPV in terms of times in the day and night are illustrated in Table 4. Also presented is time of month when WPV occurs. In this study, WPV frequently occurred between 20:00 and 08:00, as well as at the end of the month.

• *Causes of WPV*

Causes of WPV: intoxicated patients (100%), long waiting times (61.5%), overcrowding (30.8%) and failure to meet patients' and family members' expectations (23.1%). The majority (69.2%) of WPV incidents were not reported. Of those reported, 75% were to supervisors and 25% to police. Of the reported cases, 50% were attended to by the authorities who removed the perpetrator from the department (25%) and stationed a security guard at the department's entrance (25%). Nine (69.2%) respondents indicated that WPV incidents could have been prevented; four (30.8%) indicated otherwise. The respondents highlighted that WPV incidents could have been prevented by stationing security personnel in the X-ray department, alcohol detoxification and scheduling more male staff during times when WPV is most likely to occur.

• *Emotions experienced after a WPV incident*

Table 5 shows the emotions experienced by the participating radiographers after a WPV incident. The majority (53.8%) felt anxious; 7.7% felt guilty or ashamed.

Table 2. Hours worked on night duty

NUMBER OF HOURS WORKED DURING A NIGHT DUTY PER SHIFT	FREQUENCY N (%)
5 to 8 hours	1 (7.7%)
9 to 15 hours	8 (61.5%)
16 to 24 hours	2 (15.4%)
24 and above hours	2 (15.4%)

Table 3. Types of WPV

FORMS OF WPV	TYPES OF WPV	RESPONSE	
		n	%
Physical assault	Kicked, slapped, pushed	3	50
	Projectiles thrown	3	50
	Spit on	3	50
Verbal abuse	Yelled at	10	76.9
	Cursed or sworn at	12	92.3
	Humiliated	7	53.8
	Deliberately ignored	9	69.2
	Other	1	7.7
Verbal threats	Killing	3	27.3
	Beating	9	81.8
	Other	2	18.2
Sexual harassment	Unwanted sexual jokes	10	90.9
	Subject to sexual behaviours	5	45.5
	Private part of perpetrator shown	2	18.2
	Touching by the perpetrator in an unsatisfying manner	4	36.4

Table 4. Times of WPV

TIME WHEN WPV OCCURS		RESPONSE	
		n	%
Time of day and night	08:00 to 14:00	3	23.1
	14:00 to 20:00	4	30.8
	20:00 to 08:00	12	92.3
Time of the month	Beginning of month	2	15.4
	Middle of month	1	7.7
	Month end	12	92.3
	Public/private holidays	6	46.2

Table 5. Emotions experienced after the occurrence of WPV

EMOTIONS	RESPONSE	
	n	%
Sad	5	38.5%
Heartbroken	2	15.4%
Afraid	5	38.5%
Disgust	6	46.2%
Anxiety	7	53.8%
Disappointment	6	46.2%
Guilt or shame	1	7.7%
Other	2	15.4%

Table 6. Percentages of prevalence and types of WPV in the literature and this study

TYPE OF VIOLENCE	NAMIBIA*	EGYPT[21]	TAIWAN[22]	HONG KONG[19]	UK[20]	IRELAND[24]
WPV prevalence	100	79.8	46.13	61	94	63
Verbal abuse	100	98.7	65.64**	96.7	34.5	55
Verbal threats	84.6	46.7		34.07	24.1	>3%
Physical abuse	46.2	38.7	21.79	20.88	13.8	8
Sexual harassment	84.6	1.3	10.34	3.23	-	-

**current study, **percentage of both verbal abuse and verbal threats*

• *Coping mechanism*

Two (15.4%) did not indicate their coping mechanism. The results of those who indicated a coping mechanism were: 72.7% acted as if nothing had happened, and 27.3% spoke to colleagues and family members about the incident.

DISCUSSION

The prevalence of WPV worldwide is well documented[18-25] with almost a quarter occurring in the healthcare sector.[26] Campbell and colleagues[27] reported that healthcare workers were involved in at least one incident of physical or psychological violence during their professional lifetime. The current study showed that all of the radiographers who completed the questionnaire had been victims of WPV. This is similar to previous studies of WPV involving radiographers in Hong Kong,[19] UK,[20] Egypt,[21] Taiwan,[22] Australia,[23] Ireland,[24] and Nigeria,[25] where WPV ranged from 46.13% to 94%. In these studies, verbal abuse was ranked highest followed by verbal threats, physical assault, and then sexual harassment;[19-21] except in Ireland where physical abuse was higher than verbal threats[24] as shown in Table 6.

Sexual harassment had a high prevalence in the current study. This may be attributed to lack of awareness of what constitutes sexual harassment among the perpetrators and the radiographers in this study. For example, both may not have been aware that unwanted sexual jokes constitute sexual harassment. This lack of awareness by either party may result in the offense going unreported until it is brought to the attention of the victim. The Namibia Labour Act (No 11 of 2007, Section 5 subsection 7(b))[17] describes sexual harassment in the context of employer-employee relations which may be difficult to interpret in terms of radiographers and patients. It states that the victim must inform the perpetrator that their actions are offensive and the latter should reasonably realise that their conduct is unacceptable. A radiographer's primary role is to obtain diagnostic images to aid patient management. This role may supersede informing a patient that his/her actions are interpreted as sexual harassment.

In this study, WPV predominantly occurred after hours (i.e. between 20:00 and 08:00) as well as at the end of the month. These findings are in keeping with a trend reported by Crilly and colleagues.[28] At the research site in this study, only two radiographers are rostered for duty during these times. This rostering is maintained even at the end of the month when there is a high influx of emergency cases especially motor vehicle accidents victims, intoxicated patients, gunshot and stab wounds which may result in long waiting hours, overcrowding and failure to meet patients' and family members' expectations as reported in this study. The study site is the only public referral hospital serving patients from all over Windhoek which may result in overcrowding. Previous studies have reported understaffing (54.67%[19]; 72.3%[21]; 13.97%[22]), long waiting times (81.33%[19]; 67%[21]; 21.55%[22]), alcoholism (46.64%[19]; 19.70%[22]; 27%[28]) and failure to meet patients' and family members' expectations (10.7%)[11] as risk factors for WPV. Literature includes other risk factors such as drug abuse,[19,28] security staff shortage, miscommunication, working alone,[21] receiving bad news related to diagnosis or prognosis, presence of weapons and gang activities.[11]

Patients and their relatives have been listed in the in the literature as the main perpetrators of WPV; 43.84% to 97.73%, and 43.62% to 100%, respectively.[19,21,22,24] Such trends were also reported in this study. These trends may be attributed to the change in emotional state of patients and their family members due to pain, anxiety and frustration, which then manifest as abusive and violent behaviour.[18,19,21,23] WPV can also be initiated by fellow radiographers, members of the healthcare team and supervisors.[19,21] Such findings were not reported in this study.

COPING MECHANISM

In this study, 69.2% of the respondents did not report the occurrence of WPV compared with 18.8% in a similar study in Ghana.[12] The literature reports that healthcare workers sometimes accept WPV, especially non-physical, as part of the job.[29] It is important that cases of WPV are reported in order for authorities to implement measures that ensure the safety and wellbeing of employees at work. Far fewer WPV cases were reported in this study (30.8%) compared to 67.9% cases reported in Ghana.[12] Of those reported in this study, only 15.4% were attended to by the authorities. This lack of attention from authorities may in turn affect the case reporting rate. The majority of the radiographers who participated in this study coped with WPV by ignoring the situation. Some confided in colleagues and family members. They experienced negative emotions similar to those reported by Abbas and Selim.[21] Such emotions have been found to affect job performance and satisfaction of employees.[21]

CONCLUSION

This study reported a high prevalence of WPV with verbal abuse being the most common. WPV was frequently experienced during night duty and at the end of the month. The majority of the incidences were unreported with little done for the reported cases. The aftermath of WPV resulted in negative emotions and bracketing of the incidents. It is therefore imperative that employers train employees on how to recognise and prevent WPV. WPV

policies should be developed and implemented to prevent, report and manage such incidents. A study on WPV preventative measures should be undertaken.

LIMITATIONS

The study was conducted at one state radiology department. Potential respondents were purposively selected. The results can therefore not be generalised to other radiographers in Namibia. In addition, the sample was small and there were 11 females and two males, therefore the effect of gender on WPV could not be assessed.

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CONFLICT OF INTEREST

None

CONTRIBUTIONS OF EACH AUTHOR

CH was the main researcher; MA and CN supervised the study; CH was responsible for data capturing and presentation of the results; AK assisted with interpretation of the results; ED, LK, AK, MA, CN provided critical comments and recommendations regarding literature review and drafted the manuscript.

REFERENCES

1. Di Martino VWorkplace violence in the health sector: country case studies Brazil, Bulgaria, Lebanon, Portugal, South Africa, Thailand and an additional Australian study: synthesis report. 2002. [cited 2018 September 3]. Available from: http://www.who.int/violence_injury_prevention/injury/en/WVsynthesisreport.pdf
2. Kar SP. Addressing underlying causes of violence against doctors in India. Lancet 2017; 389: 1979-1980.
3. Steinman S. Workplace violence in the health sector. Country case study: South Africa. Geneva: International Labour Organisation/International Council of Nurses/WHO/Public Services International Joint Programme Working Paper. 2003.
4. Xing K ,Zhang X , Jiao M, Cui Y ,Lu Y , Liu J, Zhang J, Zhao Y , Zhao Y, Li Y, Liang L , Kang Z ,Wu Q, Yin M. Concern about workplace violence and its risk factors in Chinese township hospitals: a cross-sectional study. International Journal of Environmental Research and Public Health 2016; 13(8):811. doi: 10.3390/ijerph13080811.
5. World Health Organisation. Joint programme on workplace violence in the health sector. Framework guidelines addressing workplace violence in the health sector. Geneva, Switzerland: International Labour Office. 2002.
6. European Foundation for the Improvement of Living and Working Conditions. Physical and psychological violence at the workplace. Dublin. 2013
7. Di Martino V, Hoel H, Cooper CL. Preventing violence and harassment in the workplace (Report). European Foundation for the Improvement of Living and Working Conditions.2003.
8. Sisawo EJ, Yacine SY, Ouédraogo A, Huang S. Workplace violence against nurses in the Gambia: mixed methods design. BMC Health Service Research 2017; 17(311). doi 10.1186/s12913-017-2258-4.
9. Aytac S, Bozkurt V, Bayram N, Yildiz S, Aytac M. Workplace violence: a study of Turkish workers. International Journal of Occupational Safety and Ergonomics 2011; 17(4):385-402.
10. Abdellah RF, Salama KM. Prevalence and risk factors of workplace violence against health care workers in emergency department in Ismailia, Egypt. Pan African Medical Journal 2017; 26:21. doi:10.11604/pamj.2017.26.21.10837
11. Phillips JP. Workplace violence against health care workers in the United States. NEJM2016; 374: 1661-1669.
12. Boafo IM, Hancock P. Workplace Violence against nurses: a cross-sectional descriptive study of Ghanaian nurses. SAGE Open 2017: 1-9.
13. McPhaul KM, Lipscomb JA. Workplace violence in health care: recognised but not regulated. Online Journal of Issues in Nursing 2004; 9(3):7.
14. Lin W, Wu J, Yuan L, Zhang S , Jing M , Zhang H , Luo J , Lei Y, Wang P. Workplace violence and job performance among community healthcare workers in China: the mediator role of quality of life . International Journal of Environmental Research and Public Health 2015; 12:14872-14556. doi:10.3390/ijerph121114872
15. Baydin A, Erenler AK. Workplace violence in emergency department and its effects on emergency staff. International Journal of Emergency Mental Health 2014; 16(2): 288-290.
16. Occupational Safety and Health Administration (OSHA). Guidelines for preventing workplace violence for health care and social service workers. Washington, DC: US Department of Labor, Occupational Safety and Health Administration, OSHA 3148-1996.
17. Namibia. The Labour Act of 2007. Act 11 of 2007. Government Gazette, 3971: 1-122, December 31, 2007.
18. Abbas MA, Fiala LA, Abdel Rahman AG, Fahim AE. Epidemiology of workplace violence against nursing staff in Ismailia Governorate Egypt. Journal Egypt Public Health Association 2010; 85(1-2): 29-43.
19. Ng K, Yeung J, Cheung I, Chung A, White P. Workplace violence – a survey of diagnostic radiographers working in public hospitals in Hong Kong. Journal of Occupational Health 2009; 51: 355-363.
20. Rogers H, Bowditch C. Radiographers' experience of violence and aggression in a major South Wales accident and emergency department. Unpublished poster presented at UK Radiological congress; 2012 June 25th-27th; Manchester, UK.
21. Abbas RA, Selim SF. Workplace violence – a survey of diagnostic radiographers in Ismailia Governorate Egypt. Journal of American Science 2011; 7(6): 1049-1058.
22. Tung Y-T, Lin C-H, Li S-Y, Huang T-K. Workplace violence involving radiographers and its relevant factors in Taiwan. J Radiol Sci 2015; 40(3): 81-87.
23. Caruana E. Radiographers at risk of assault. Australian Institute of Radiography 2005; 52(2): 15-17.
24. Healy J, Brennan PC, Costolloe JP. Violence at work: a major radiographic issue. Radiography 2002; 8: 85-90
25. Ikamaise VC, Archibong BC, Okpaleke MS, Paulinus SO. Workplace violence against radiographers in Lagos, Nigeria. Nigerian Journal of Medical Imaging and Radiation Therapy 2016; 5(1): 41-43.
26. Talas MS, Kocaöz S, Akgüç S. A survey of violence against staff working in the emergency department in Ankara, Turkey. Asian Nursing Research 2011; 5(4): 197-203.
27. Campbell JC, Messing JT, Kub J, Agnew J, Fitzgerald S, Fowler B, Sheridan D, Lindauer C, Deaton J, Bolyard R. Workplace violence: prevalence and risk factors in the safe at work study. Journal of Occupational and Environmental Medicine 2011; 53(1): 82-89.
28. Crilly J, Chaboyer W, Creedy D. Violence towards emergency department nurses by patients. Accident and Emergency Nursing2004; 12: 67-73.
29. Hogarth KM, Beattie J, Morphet J. Nurses' attitudes towards the reporting of violence in the emergency department. Australasian Emergency Nursing Journal 2016; 19: 75-81.