

Association of Healthcare Workers Characteristics with Exposure to any form of Violence at the Hospitals of Karachi

JAI DEV MAHESHWARI¹, SYEDA AMBER ZAIDI², KIRAN KHAN³, NASIMA IQBAL⁴, SYED MOHSIN TURAB⁵, RUQAYA NANGREJO⁶

¹Lecturer, Department of Community Medicine, Shaheed Mohtarma Benazir Bhutto Medical College, Lyari, Karachi, Pakistan.

²Assistant Professor, Department of Pharmacology, Hamdard College of Medicine & Dentistry, Hamdard University, Karachi, Pakistan

³Associate Professor, Department of Community Medicine, Iqra Medical and Dental College, Iqra University, Karachi, Pakistan.

⁴Assistant Professor, Department of Pathology, Baqai Medical College, Baqai University, Karachi, Pakistan.

⁵Professor, Department of Pharmacology, Hamdard College of Medicine & Dentistry, Hamdard University, Karachi, Pakistan.

⁶Associate Professor, Department of Physiology, Baqai Medical College, Baqai University, Karachi, Pakistan

Corresponding author: Jai Dev Maheshwari, Email: jaidevmaheshwari83@gmail.com, Cell: 03332696909

ABSTRACT

Objectives: To determine the prevalence and association of healthcare provider characteristics with exposure to any form of violence. To determine the frequency of change of workplace due to violence among medical doctors.

Methods: The study was conducted at three Karachi government hospitals. Anyone who worked in outpatient, ward, or emergency department units of any age or gender was eligible to participate in the study. Surveys were conducted using a WHO-validated questionnaire, which included questions about exposure to violence and socio-demographic information.

Results: Out of 300 people 52.7% were females and 47.3% were males. Chief Medical Officer /Medical Officers were twelve times more expected to be exposed to workplace violence than house officers. 26% of medical doctors had previously changed jobs. However, 19% of medical doctors had changed their workplace due to workplace violence.

Conclusion: Violence of any kind was more common in doctors over the age of 35, and men were more vulnerable to violence. CMO/MO were more likely to engage in any form of violence than the rest of the profession. Last but not least, the frequency of medical doctors changing jobs due to violence was low.

Keywords: workplace violence, healthcare workers, medical doctors, house officer, chief medical officer.

INTRODUCTION

Violence against medical personnel, particularly medical doctors, is one of the factors that have a direct or indirect impact on a patient's management and the advancement of the healthcare system. This critical factor should always be kept in mind when developing a good healthcare framework. The World Health Organization (WHO) defines workplace violence (WPV) as "incidents where staff is 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^(1, 2)."

There is violence in all workplaces, but health care workers are especially susceptible. Because this workforce comprise predominantly female, the gender aspect of the problem is very visible^(3, 4).

Workplace violence is on the rise since decades, but now it is affecting the healthcare professions the most. The repercussions of workplace violence have a major influence on the overall competency and productivity of hospital-care systems. The access to health care is jeopardized if insufficient workforce, such as health workers, feel threatened⁽³⁾. The International Association for Healthcare Security and Safety conducted a crime survey in 2014 and discovered that violent acts in the US healthcare system risen by 25% between 2012 and 2013^(5, 6). Every year, nearly 24,000 physical assaults occur in the workplace, with nearly 75% involving healthcare providers⁽⁷⁾.

Doctors have faced dangers and physical attack in hospitals and other healthcare facilities in both developed and underdeveloped countries. The ideas and practice of "medical science" are sometimes adapted to be "pro-Western" and secular, that isn't always praised in conservative and religious circles, as seen in attacks on health workers and polio vaccinators in Pakistan's North-Western region⁽⁷⁻¹⁰⁾.

Healthcare workers who are subjected to workplace violence face severe consequences⁽¹¹⁾. Longitudinal research from Finland shows that physical violence increases the purpose of physicians to leave, whereas both bullying and physical violence affect employee satisfaction⁽¹²⁾.

The public sectors of Karachi has reported little information about the characteristics of healthcare professionals who are more susceptible to WPV. Given the large number of workers in the health-care sector, the majority of whom are women. This study will provide a comprehensive baseline of workplace violence

associations, indicating which classes of healthcare professionals are more vulnerable to WPV, and will assist concerned bodies in initiating and beginning to shape strategies.

MATERIAL AND METHODS

It was a health care system based cross-sectional survey. The data was gathered from three public hospitals of Karachi (JPMC, Civil Hospital, Sindh Government Lyari General Hospital Karachi). After the approval of the project, data was collected from December 2016 to March 2017. The sample size of 300 cases with a 5% margin of error, an 80% power of test, taking prevalence of any form of violence among healthcare professionals was estimated to be 74%. Convenient sampling technique was administered. For collection of data, both male and female doctors having any part of age were included in the survey. Locum tenens doctors were not included, doctors who collaborated with non-governmental institutions were not allowed to participate were excluded. For data assembly, a valid WHO constructed survey was used⁽¹³⁾ which has formerly been used to distinguish WPV among Pakistani health-care specialists^(14, 15). It comprised of queries about experience to violence, diverse forms of violence, and how the person involved felt following his or her exposure to a violent environment.

The data was compiled and analysed using SPSS version 21. The frequencies and percentages of all category variables were provided. Chi-square and Fisher's exact test was applied. The related influence of independent variables on any kind of violence was examined using univariate and multivariate binary logistic regression, with the results provided as crude odds ratios and adjusted odds ratios. A p-value of 0.05 was considered significant.

RESULTS

Table 1 shows the individual characteristics of those who have been exposed to workplace violence in the past year. Using the binary logistic regression analysis, Table 2 shows the odds ratios and 95 percent confidence intervals for the exposure to any violence with the respondent's individual characteristics, both unadjusted and adjusted. All factors included in the univariate analysis were included in a multivariate adjusted regression model, which showed that only the occupation determined to be substantially related with any workplace violence was significant.

for further information, please refer to Table 2. Table 3 shows that approximately 26% of doctors have relocated in the past.

Table 1 : Individual characteristics with exposure to any violence (n=300)

Characteristics		Exposure to any violence in last 12 months				p-value
		Yes		No		
		n	(%)	n	(%)	
Age	22-35 years	131	(70.1)	56	(29.9)	0.030
	> 35 years	92	(81.4)	21	(18.6)	
Sex	Female	112	(70.9)	46	(29.1)	0.185
	Male	111	(78.2)	31	(21.8)	
Profession	Physician	38	(79.2)	10	(20.8)	< 0.001
	Surgeon	51	(81.0)	12	(19.0)	
	PG resident	48	(75.0)	16	(25.0)	
	CMO/MO	51	(92.7)	4	(7.3)	
Work experience	HO	35	(50.0)	35	(50.0)	< 0.001
	≤ 5 years	95	(64.6)	52	(35.4)	
Job status	> 5 years	128	(83.7)	25	(16.3)	0.047
	Part time/temporary	9	(52.9)	8	(47.1)	
Working environment	Full time	214	(75.6)	69	(24.4)	0.248
	Peeds	62	(69.7)	27	(30.3)	
	Adults	161	(76.3)	50	(23.7)	

P-value calculated using Chi-square/Fisher's Exact test.

Table 2: Logistic regression: Association of individual characteristics with exposure to any violence (n=300)

Characteristics		Exposure to any violence in last 12 months			
		cOR (95% CI)	p-value	aOR (95% CI)	p-value
Age	22-30	1		1	
	31-40	2.86 (1.55-5.27)	<0.001	0.66 (0.24-1.82)	0.43
	40+	1.96 (0.97-3.97)	0.06	0.36 (0.09-1.36)	0.13
Sex	Female	1		1	
	Male	1.47 (0.86-2.48)	0.15	1.36 (0.77-2.40)	0.28
Profession	HO	1		1	
	CMO/MO	12.75 (4.15-39.09)	<0.001	12.42 (3.07-50.22)	<0.001
	PG resident	3.00 (1.43-6.25)	0.003	3.01 (1.24-7.29)	0.01
	Physician	3.80 (1.64-8.79)	0.002	4.30 (0.96-19.10)	0.05
Work experience	Surgeon	4.25 (1.94-9.31)	<0.001	4.05 (0.99-16.55)	0.05
	≤ 5 years	1		1	
Job status	> 5 years	2.80 (1.62-4.83)	<0.001	1.84 (0.66-5.16)	0.24
	Part time/temporary	1		1	
Working environment	Full time	2.75 (1.02-7.42)	0.04	1.34 (0.43-4.19)	0.61
	Peeds	1		1	
	Adults	1.40 (0.80-2.43)	0.23	1.37 (0.73-2.54)	0.31

cOR: crude odds ratios
aOR: adjusted odds ratio, adjusted for all study variables those had p-value<0.25 in univariate analysis.

Table 3: Frequency of change of workplace among medical doctors

	N	%
Have you change your work place		
Yes	79	26.3
No	221	73.7
Change of work place due to violence		
Yes	57	19.0
No	243	81.0

DISCUSSION

Community healthcare professionals in Pakistan (72.5%), and the United States (75.0%) have reported experiencing workplace violence, which is consistent with our findings⁽¹⁷⁾. Physical aggression against healthcare workers, on the other hand, has been reported in most studies to range between 7% and 11%, with our study finding 9.69%⁽¹⁸⁻²¹⁾.

In our study, male health-care professionals were slightly more likely than female counterparts to experience WPV, however no association was significantly observed which is consistent with other Chinese studies⁽²²⁾ but not like the majority of other studies⁽²³⁻²⁵⁾. The reason may be male dominance and respect to females in our culture, the other point of view may be male doctor's deal with more emergency cases as compared to female doctor's. However, current study indicated that female participants are more exposed to the sexual violence as compared to male; the reason may be illiteracy, poverty, cultural/social trend and also poor law and order situation

Our research also found that CMO/MO had reported experiencing more workplace violence (92.7 percent), preceded by surgeons (81.0 percent) and physicians (79.2 percent), and that practitioners with more over 5 years of experience (83.7 percent) and full-time personnel (75.6 percent) reported a high proportion of any violence in the workplace in the previous year. Similarly, a study conducted in SUDAN also revealed that medical officers had the increased prevalence (65%), preceded by house officers (62.7%) and registrars (61%) (p-value = 0.02). However, a similar study found that specialists experienced less workplace violence and consultants did not experience any workplace violence. All who collaborated in shifts were significantly more vulnerable (63%)⁽²⁶⁾.

In our study, we discovered that HCWs with more than 5 years of experience experienced more violence than those with less than 5 years of experience. This could be due to the fact that experienced doctors have more exposure and opportunities to deal with patients than those with less experience. Anazi et al. discovered in a study conducted in Saudi Arabia that HCWs with more than ten years of practice seem more than twice as probable as those with less than five years of experience to face violence⁽²⁷⁾. Another study, however, found that employees who have worked in the emergency unit for more than 5 years face less violence than their colleagues. It could be attributed to the fact that HCWs with more years of experience and who were older than 30 years of age became more solution oriented enough to adapt to social events and extreme circumstances, and because they had

adequate communication abilities⁽²⁸⁾. Contrary findings were obtained through a study conducted in Nepal found that part-time nurses are subjected to more violence than full-time employees⁽²⁹⁾.

In our study, we discovered that adult department HCWs were more vulnerable to workplace violence than Paediatric ward HCWs. A study mentioned that because of the violence where they worked, 6.3% of nurses considered switching jobs (3.3 percent to a different department and 3% to a different hospital⁽⁵⁾).

The limitation was that some participants did not provide true data regarding violence because of management issue likewise some female participants did not reporting the actual data for harassment due to family issues.

CONCLUSION

WPV continues to be a major concern for Pakistan's healthcare system. In this study, the prevalence of WPV infection among healthcare workers in Karachi was found to be high, and many related factors were discovered. Any type of violence, according to the findings, is more common in practitioners over the age of 35, and male genders are more vulnerable to violence than female genders. Medical officers and chief medical officers were discovered to be among the most vulnerable professions. Last but not least, the frequency of medical doctors changing jobs due to violence was low.

REFERENCES

1. Kumari A, Kaur T, Ranjan P, Chopra S, Sarkar S, Baitha U. Workplace violence against doctors: characteristics, risk factors, and mitigation strategies. *Journal of postgraduate medicine*. 2020;66(3):149.
2. Daher M. World report on violence and health. *Le Journal medical libanais The Lebanese medical journal*. 2003;51(2):59-63.
3. Chappell D, Di Martino V. Violence at work: International Labour Organization; 2006.
4. Kitaneh M, Hamdan M. Workplace violence against physicians and nurses in Palestinian public hospitals: a cross-sectional study. *BMC health services research*. 2012;12(1):1-9.
5. Speroni KG, Fitch T, Dawson E, Dugan L, Atherton M. Incidence and cost of nurse workplace violence perpetrated by hospital patients or patient visitors. *Journal of emergency nursing*. 2014;40(3):218-28.
6. Smith TA. What every healthcare facility should do now to reduce the potential for workplace violence. *Journal of healthcare protection management: publication of the International Association for Hospital Security*. 2016;32(1):41-7.
7. Phillips JP. Workplace violence against health care workers in the United States. *New England journal of medicine*. 2016;374(17):1661-9.
8. Zafar H, Jawad A, Shamim MS, Memon AA, Hameed A, Effendi MS, et al. Terrorist bombings: medical response in a developing country. *Journal of the Pakistan Medical Association*. 2011;61(6):561.
9. Umer M, Sepah YJ, Shahpurwala MM, Zafar H. Suicide bombings: process of care of mass casualties in the developing world. *Disasters*. 2009;33(4):809-21.
10. Chotani HA, Razzak JA, Luby SP. Patterns of violence in Karachi, Pakistan. *Injury Prevention*. 2002;8(1):57-9.
11. Newman CJ, De Vries DH, Kanakuzze JdA, Ngendahimana G. Workplace violence and gender discrimination in Rwanda's health workforce: Increasing safety and gender equality. *Human resources for health*. 2011;9(1):1-13.
12. Heponiemi T, Kouvonen A, Virtanen M, Vänskä J, Elovainio M. The prospective effects of workplace violence on physicians' job

satisfaction and turnover intentions: the buffering effect of job control. *BMC health services research*. 2014;14(1):1-8.

13. Organization WH. World Health Organization Workplace Violence Questionnaire. 2003.
14. Jafree SR. Workplace violence against women nurses working in two public sector hospitals of Lahore, Pakistan. *Nursing outlook*. 2017;65(4):420-7.
15. Khan MN, Haq ZU, Khan M, Wali S, Baddia F, Rasul S, et al. Prevalence and determinants of violence against health care in the metropolitan city of Peshawar: a cross sectional study. *BMC public health*. 2021;21(1):1-11.
16. Zafar W, Siddiqui E, Ejaz K, Shehzad MU, Khan UR, Jamali S, et al. Health care personnel and workplace violence in the emergency departments of a volatile metropolis: results from Karachi, Pakistan. *The Journal of emergency medicine*. 2013;45(5):761-72.
17. Behnam M, Tillotson RD, Davis SM, Hobbs GR. Violence in the emergency department: a national survey of emergency medicine residents and attending physicians. *The Journal of emergency medicine*. 2011;40(5):565-79.
18. Muzembo BA, Mbutshu LH, Ngatu NR, Malonga KF, Eitoku M, Hirota R, et al. Workplace violence towards Congolese health care workers: a survey of 436 healthcare facilities in Katanga province, Democratic Republic of Congo. *Journal of occupational health*. 2014;14-0111-OA.
19. Gascón S, Martínez-Jarreta B, González-Andrade JF, Santed MÁ, Casalod Y, Rueda MÁ. Aggression towards health care workers in Spain: a multi-facility study to evaluate the distribution of growing violence among professionals, health facilities and departments. *International journal of occupational and environmental health*. 2009;15(1):29-35.
20. Magnavita N, Heponiemi T. Violence towards health care workers in a Public Health Care Facility in Italy: a repeated cross-sectional study. *BMC health services research*. 2012;12(1):1-9.
21. Roche M, Diers D, Duffield C, Catling-Paull C. Violence toward nurses, the work environment, and patient outcomes. *Journal of Nursing Scholarship*. 2010;42(1):13-22.
22. Chen S, Lin S, Ruan Q, Li H, Wu S. Workplace violence and its effect on burnout and turnover attempt among Chinese medical staff. *Archives of environmental & occupational health*. 2016;71(6):330-7.
23. Ferri P, Silvestri M, Artoni C, Di Lorenzo R. Workplace violence in different settings and among various health professionals in an Italian general hospital: a cross-sectional study. *Psychology research and behavior management*. 2016;9:263.
24. Fisekovic MB, Trajkovic GZ, Bjegovic-Mikanovic VM, Terzic-Supic ZJ. Does workplace violence exist in primary health care? Evidence from Serbia. *The European Journal of Public Health*. 2015;25(4):693-8.
25. Mantzouranis G, Faffiora E, Bampalis VG, Christopoulou I. Assessment and analysis of workplace violence in a Greek tertiary hospital. *Archives of environmental & occupational health*. 2015;70(5):256-64.
26. Elamin MM, Hamza SB, Abbasher K, Idris KE, Abdallah YA, Muhmmmed KAA, et al. Workplace Violence Against Doctors in Khartoum State, Sudan, 2020. *Sudan Journal of Medical Sciences*. 2021;16(2).
27. Al Anazi RB, AlQahtani SM, Mohamad AE, Hammad SM, Khleif H. Violence against health-care workers in governmental health facilities in Arar City, Saudi Arabia. *The Scientific World Journal*. 2020;2020.
28. Ghareeb NS, El-Shafei DA, Eladl AM. Workplace violence among healthcare workers during COVID-19 pandemic in a Jordanian governmental hospital: the tip of the iceberg. *Environmental Science and Pollution Research*. 2021:1-9.
29. Pandey M, Bhandari TR, Dangal G. Workplace violence and its associated factors among nurses. *Journal of Nepal Health Research Council*. 2017;15(3):235-41.