Research Article

Workplace Violence Against Doctors in Public Teaching Hospitals in Pakistan: A Cross-Sectional Study Evaluating the Contributing Factors

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Abstract

Background: Workplace violence (WPV) is any act or threat of physical violence, harassment or disruptive behaviour occurring in a workplace, involving workers and clients alike. Violence directed against doctors has been a pressing issue plaguing our public hospital settings in this decade, with surveys reporting 56-80% incidence globally.

Objective: To evaluate factors contributing to workplace violence against doctors in public teaching hospitals of Lahore, Pakistan.

Methods: This cross-sectional study was conducted in six public teaching hospitals of Lahore. Workplace violence was assessed using a validated questionnaire that measured physical violence, verbal abuse, and sexual harassment experienced by doctors in the past 12 months. The sample size, calculated using the Raosoft calculator with a 5.5% margin of error and a 95% confidence interval, comprised 247 doctors selected through non-probability sampling. Data analysis was performed using SPSS version 27. Descriptive statistics were calculated for all variables. The Chi-square test was applied to analyse associations between gender, job titles and workplace violence, with $p<0.05$ considered significant.

Results: Among 247 respondents, 48.6% experienced workplace violence, with verbal abuse being predominant (85%). Males reported a significantly higher violence exposure compared to females ($p<0.001$). Key contributing factors included overcrowding (56.2%), long waiting times (81.37%), and death of patients (84.21%). Environmental factors like lack of accountability (54.25%) and insufficient staff (54.66%) were notable contributors.

Conclusion: Workplace violence against doctors in public teaching hospitals is significantly associated with environmental, patient-related, and systemic factors. Implications for current practice include the need for improved infrastructure, better security protocols, and enhanced patient communication systems. Future research should focus on evaluating intervention strategies across multiple healthcare settings in Pakistan.

Keywords | Workplace Violence, doctors, public hospitals, contributing factors, safety.

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Introduction

Violence directed against doctors has been a pressing issue plaguing our public hospital settings in this decade. Workplace violence, WPV, as defined by OSHA, is "any act or threat of physical violence, harassment or disruptive behaviour occurring in a workplace, involving workers and clients alike".[1] Workplace violence is the act or threat of violence. It ranges from verbal abuse to physical assaults directed toward people at work or on duty. Violence can occur in any workplace and among any type of worker.[2] In hospital settings, WPV involving doctors and healthcare personnel has been alarmingly on the rise. This prevalence is evidenced by a survey reporting 56-80% incidence of WPV against doctors all across the world.[3] Similarly, a study conducted across 4 large cities and 12 districts in 3 provinces of Pakistan reported 38.4% of the involved doctors as having experienced WPV in the past 6 months.[4] Violence as a response to physician error or ineffective communication with patients has become commonplace in our public hospitals. A need for alleviating these acts of WPV, whether verbal, physical or

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mental, towards doctors has arisen; especially since it has been declared a public health priority (resolution WHA 49.25) in the policies of the forty-ninth world health assembly held in Geneva in 1996.[5]

According to a recent comprehensive analysis, 61% of healthcare workers reported having experienced some kind of workplace violence in the past year. A growing tendency has been noted in Asian nations (19.6-25%)[6] where over 50% of doctors have faced verbal and physical violence at the hands of their patients.[7] Failure to meet patients and companion expectations (56.1%), poor communication (55%), human mistake (53.7%), unexpected result (42.6%) and inadequate treatment (35%) were the top five causes of violence recorded.[8] Physical assaults, intimidation, and bullying are examples of common violent crimes. Studies conducted in Pakistan suggest the prevalence of physical violence ranged from 11.9%-16.5% and verbal violence from 72.5%-93.2%. The emergency department was the most common site of violence in the hospitals.[8] Precise record-keeping of a violent incident can yield pertinent data for planning intervention and preventative strategies.[7] Under-reporting of the cases plays a major role in the day by day increasing eases of WPV. An additional obstacle is the lack of established protocols for reporting violent incidents and no incentives to report violent incidents.[9]

Previous studies in Pakistan have explored the prevalence and general causes of violence against doctors. However, there is limited research specifically examining the detailed contributing factors in public hospital settings. Based on a previous study by Imran et al.[10] which reported 73.8% prevalence of workplace violence in public hospitals in Lahore, this study aims to evaluate factors contributing to workplace violence against doctors in public hospitals of Lahore, Pakistan. Understanding these factors is crucial for healthcare administrators and policymakers to develop evidence-based interventions.

Methods

The research was conducted as a cross-sectional study from February 2024 to September 2024 in six public teaching hospitals of Lahore with the sample population taken to be doctors employed in this setting. The sample size was estimated to be 247, calculated using Raosoft.com, keeping a 5.5% margin of error, 95% confidence interval, and a response distribution of 73.8% based on Imran et al.'s study of workplace violence in public healthcare facilities in Lahore.[10,11] A non-probability sampling technique was used for data collection.

According to the inclusion criteria, any medically certified doctor who came in direct interaction with the patients during the last 12 months before the study, was included in the study. Doctors employed in military healthcare institutions, healthcare workforce other than doctors (nurses, technicians, etc.), medical students and doctors who did not give consent were excluded from the study.

The data collection tool was a validated questionnaire adapted from Kumar et al.'s study on workplace violence in hospitals.[12] The questionnaire was distributed through an online platform and was filled out with informed consent of the physicians. Its use for purely academic purposes was affirmed. Complete, above-board, and anonymous filling in of the questionnaire was ensured. Incomplete and unreliable filled forms were not considered.

The first section (Section A) of the questionnaire dealt with independent variables consisting of the age, gender, workplace experience, and other relevant demographic and professional characteristics of the concerned physician. The second part (Section B) of the survey dealt with the personal experience of the physician in encountering and dealing with instances of WPV in the form of (yes/no) questions as a binary response; whether they had felt unsafe at work, had experienced WPV, and if so, was it verbal, physical or sexual. The third section (Section C) of the questionnaire consisted of questions dealing with dependent variables, starting with subjective opinions of the doctor regarding constituents of WPV and factors contributing to WPV including but not limited to physical environmental factors, contributing events, inadequate medical care, employee attitudes, and deficiencies in medical training.

The questionnaire required 5-10 minutes to complete. Incomplete questionnaires were not included in the study. All respondents were informed of the study's purpose and method. All the respondents participated in the investigation after voluntarily agreeing to fill out the anonymous questionnaire and were explained research objectives and confidentiality. The respondents understood the purpose, method, and use of the collected data.

Data was compiled with the help of Microsoft Excel and analyzed using SPSS version 27. Descriptive statistics (frequencies, percentages) were calculated for all categorical variables. Chi-square test was applied to analyze associations between gender, job titles, and workplace violence experiences. A p-value <0.05 was considered statistically significant.

Results

The analysis revealed that 48.6% (95% CI: 42.3-54.9%) of participants experienced workplace violence in the past 12 months. Verbal abuse was the predominant form, affecting 85.8% (95% CI: 78.4-91.2%) of those who experienced violence. Male physicians reported significantly higher rates

Table 1: *Demographic Characteristics of the Study Population*

	Frequency	Percentage (%)		Frequency	Percentage (%)
Gender			**Department/Specialty**		
Male	118	47.8	Cardiology	12	4.9
Female	129	52.2	Dermatology	2	.8
Total	247	100.0	Emergency Medicine	23	9.3
			ENT	10	4.0
Age (in years)			Gynaecology	3	1.2
Below 20	0	0	Medicine	151	61.1
21-30	184	74.5	Neurosurgery	2	.8
31-40	39	15.8	Paediatrics	11	4.5
41 and above	24	9.7	Pulmonology	5	2.0
Total	247	100.0	Radiology	4	1.6
			Surgery	24	9.7
Job Title:					
Fellow	48	19.4	**Years of Professional Experience**		
House Officer	69	27.9	<5	204	82.6
Medical Officer	77	31.2	>15	4	1.6
Physician	40	16.2	11-15	6	2.4
Resident	13	5.3	5-10	33	13.4

Table 2: *Stratification of Workplace Violence Incidence Among Doctors by Gender and Professional Role*

	GENDER				PROFESSIONAL ROLE						
	Female	**Male**	**Total**	***p* value**	**Fellow**	**House Officer**	**Medical Officer**	**Physi-cian**	**Resi-dent**	**Total**	***P* value**
1. Do you feel safe at work?											
No	35	29	64		6	25	19	11	3	64	
Yes	94	89	183		42	44	58	29	10	183	
Total	129	118	247	0.647	48	69	77	40	13	247	0.075
2. Have you ever experienced WPV in professional capacity?											
No	82	45	127(51.4%)		25	36	35	23	8	127(51.4%)	
Yes	47	73	120(48.6%)		23	33	42	17	5	120(48.6%)	
Total	129	118	247	**<0.001**	48	69	77	40	13	247	0.691
3. Type(s) of violence experienced:											
	76	35	111		22	27	31	23	8	111	
Physical assault	4	9	13		3	3	4	3	0	13	
Sexual harassment or assault	0	2	2		0	2	0	0	0	2	
Verbal abuse	41	62	103		19	32	35	12	5	103	
Verbal abuse + Physical assault	8	10	18		4	5	7	2	0	18	
Total	129	118	247	**<0.001**	48	69	77	40	13	247	0.658
4. Frequency of WPV experienced in last 12 month:											
	35	15	50		14	12	15	9	0	50	
Never	30	16	46		5	11	10	14	6	46	
Often	3	19	22		7	8	7	0	0	22	
Rarely	35	36	71		9	22	28	8	4	71	
Sometimes	26	32	58		13	16	17	9	3	58	
Total	129	118	247	**<0.001**	48	69	77	40	13	247	0.013

of exposure to violence (61.9%, 95% CI: 52.7-70.4%) compared to female physicians (36.4%, 95% CI: 28.2-45.2%, $p < 0.001$).

Table 1 presents the demographic characteristics of the study population, showing a balanced gender distribution with slightly more female participants (52.2%). The majority of respondents were early-career professionals, with 74.5% in the age group 21-30 years.

Table 2 illustrates the stratification of workplace violence by gender and professional role. A significant gender difference was observed in violence exposure ($\chi^2 = 15.42$, $df = 1$, $p<0.001$), with male physicians reporting higher rates across all types

Table 3: *Key Factors Contributing to Workplace Violence Against Doctors*

Factors contributing to Workplace Violence (WPV) against doctors:					
1. Environmental factors			**4. Events contributing to WPV:**		
	Frequency	**Percentage**		**Frequency**	**Percentage**
Overcrowding	139	56.2	Death of the patient	208	84.21
More noise level	48	19.43	Missing patients	39	15.79
High Temperature	53	21.46	Sexual harassment/assault	74	29.96
Unhygienic conditions	50	20.24	Thefts	42	17.00
Poor quality of food	26	10.53	Damage to property	62	25.10
Poor lighting	31	12.55	**5.Possible problems in Doctors' attitude contributing to WPV:**		
Lack of privacy	77	31.17	Not willing to question unidentified or suspicious persons	92	37.25
Lack of accountability	134	54.25	Not willing to report unidentified or suspicious items	70	28.34
Lack of consequences	75	30.36	Not aware of policies to communicate incidents to authorities	0	0.0
Lack of Patient education	138	55.87	Not understanding duties and responsibilities	110	44.53
Moral values of a person	51	20.65	Not reporting threatening or harassing acts towards self/fellow employees	94	38.06
2. Patient-related processes			Rude behaviour of the employees	111	44.94
Long waiting times	201	81.37	**6.Deficiencies in Doctors' Training contributing to WPV**		
Medication errors	52	21.05		**Insufficient**	**Absent**
Delays due to inefficient staff	104	42.1	Training to handle aggressive/violent patients/visitors	107 (43.3%)	140 (56.7%)
Delay in emergency care	114	46.15	Training to identify patients/visitors who may have assaultive behaviour	126 (51.0%)	121 (49.0%)
Shortage of medical staff and lack of security	135	54.66	Training in self-defense	134 (54.3%)	113 (45.7%)
Shortage of medical staff and lack of security	34	13.76	Communication between security officers and other employees	113 (45.7%)	134 (54.3%)
3. Patient-related factors contributing to the potentially violent situation			Importance of reporting and documenting disturbing incidents	104 (42.1%)	143 (57.9%)
Delay in care due to equipment malfunction	132	53.44	Separate psychological support/counselling for assaulted staff	153 (61.9%)	94 (38.1%)
Medication related delays (unavailable, expired drugs)	113	45.75			
Unavailability of facilities	160	64.78			

of violence.

Table 3 outlines the contributing factors to workplace violence, highlighting that environmental factors such as overcrowding (56.2%, 95% CI: 49.8-62.4%) and lack of accountability (54.25%, 95% CI: 47.9-60.5%) were major contributors. Patient-related processes, particularly long waiting times (81.37%, 95% CI: 75.9-85.9%), emerged as the most significant factor in this category.

Discussion

The study revealed that 48.6% of the participating doctors experienced workplace violence in public teaching hospitals in Lahore, Pakistan, with male physicians reporting significantly higher rates. The predominance of verbal abuse (85.8%) aligns with previous studies in the region.[3,13] The higher prevalence among male physicians ($p<0.001$) suggests gender-specific risk patterns that warrant further investigation.

The prevalence rate in this study aligns with WHO global estimates, which indicate that 8-38% of health workers suffer physical violence at some point in their careers, with many more experiencing verbal aggression.[14] Our findings are comparable to rates reported in other developing nations but lower than some regional estimates. For instance studies indicate a 66% prevalence physical violence in public hospitals in China.[15] In tertiary care settings in India, there is a reported prevalence of 75% of physical violence, whereas the average prevalence in Eastern Mediterranean Region is 54%.[16,17]

This variation reflects different healthcare system structures and sociocultural contexts. Pakistan's position in the WHO Eastern Mediterranean Region, with only 11.6 physicians per 10,000 population (compared to the WHO recommended 23/10,000),[18] highlights the systemic understaffing that contributes to violence risk.

Environmental and systemic factors emerged as significant contributors to workplace violence. Overcrowding (56.2%) reflects the fundamental infrastructure challenges. Long waiting times (81.37%) indicate systemic inefficiencies and staff shortages (54.66%) align with WHO regional healthcare worker density data[18]

The inadequacy of violence prevention training (56.7% reporting insufficient training) in handling aggressive patients represents a critical systemic weakness. This aligns with Kumari et al.'s emphasis on the importance of de-escalation training.[7] The study also revealed significant gaps in incident reporting systems, with 57.9% noting insufficient emphasis on documentation. This underreporting trend matches findings by Caruso et al., who identified it as a persistent challenge in addressing workplace violence.[9]

The relationship between workplace violence and healthcare quality deserves attention. As noted by Sun et al., violence against healthcare workers correlates with decreased mental health outcomes among doctors, potentially creating a cycle of deteriorating patient-doctor relationships and healthcare quality.[19,20]

Based on the findings of this study, a multi-dimensional approach is recommended. Immediate interventions should prioritize infrastructure improvements, including patient flow management systems and dedicated security posts, along with staffing reforms to optimize worker-to-patient ratios and establish rapid response teams. Long-term strategies should focus on strengthening the legislative framework to enhance legal protections and implement mandatory reporting systems. Simultaneously, healthcare reforms should aim to meet WHO workforce density standards and expand primary healthcare networks. At the institutional level, hospital administrators are advised to implement comprehensive security measures, such as surveillance systems and visitor management protocols, and to provide regular de-escalation training and psychological support services for staff. Enhancing healthcare delivery should include establishing clear communication protocols for wait times, offering multilingual patient navigation systems, and promoting continuous quality improvement through regular safety audits and satisfaction surveys. This integrated approach- combining immediate practical solutions with long-term systemic reforms- provides a sustainable framework for safer healthcare environments in resource-constrained settings.

The study limitations include the use of convenience sampling, which may affect the generalizability of the findings, and the cross-sectional design, which restricts the ability to draw causal inferences. Focusing on a single city also limits the geographical scope of the results. The predominance of early-career physicians in the sample may have influenced certain outcomes. Potential underreporting of sexual harassment due to stigma may further impact data validity. The study's focus on public healthcare settings in Lahore restricts the applicability of the findings to other regions or private healthcare institutions.

Conclusion

This analysis of workplace violence against doctors in public teaching hospitals in Lahore, Pakistan reveals critical patterns that require urgent attention. The findings highlight the urgent need for comprehensive, system-wide interventions to create a safer and more supportive environment for healthcare professionals in Pakistan and similar contexts.

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Authors Contribution:

RMK, MRF: Involved in conceptualization of study

MRF, HI, HN, HJ, MAB: Involved in data collection

RMK, MRF, HI, HN, HJ, MAB: Involved in manuscript writing

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