Prevalence and Determinants of Workplace Violence Against Resident Doctors: A Cross-Sectional Study in a Tertiary Care Teaching Hospital, Gujarat, India

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Abstract:

Introduction: Workplace violence (WPV) against health sector personnel has become an alarming phenomenon worldwide. The largest online survey conducted by the Indian Medical Association in the year 2017 noted that violence against doctors can be a dominant stressor among doctors. **Objectives:** To estimate the prevalence and describe various determinants of workplace violence against resident doctors. **Methods:** A cross-sectional study was conducted from April to October 2023 at tertiary care teaching hospital, Surendranagar, Gujarat which was selected by convenient sampling. Resident doctors (N = 189) from all the departments who were willing to participate were interviewed personally using a pre-designed, pre-tested, semi-structured questionnaire. The Descriptive and Inferential statistics were used. **Results:** The prevalence of WPV among resident doctors during the past 12 months was 41.26%. Most incidents were psychological in nature (75.64%), primarily perpetrated by patients' relatives (62.82%), and occurred predominantly in emergency departments (55.13%). Out of all victims of WPV, only 34.62% had reported to authority. The common reasons for WPV found were lack of adequate security personnel (56.61%), prolonged duty hours and excessive workload (55.56%), and unrealistic expectations by the patient/relatives (55.03%). Most participants believed that sufficient security personnel (61.38%) and strengthening of existing law (58.20%) could prevent WPV. The study found a highly statistically significant association between the resident doctor's branch and WPV. **Conclusions:** Nearly half of the resident doctors experienced WPV, mainly due to inadequate security, excessive workload, and unrealistic patient/relatives' expectations. However, only one-third reported the incidents, highlighting the need for effective redressal mechanisms.

Keywords: Cross-Sectional Studies, Gujarat, Physical violence, Psychological violence, Tertiary care teaching hospital, Workplace violence

Introduction:

Workplace violence (WPV) has become an alarming phenomenon worldwide. Workers in the health profession are especially vulnerable to WPV. According to WHO, WPV is defined as "Incidents 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."[1] Up to 38% of healthcare workers experience physical violence during their careers. Additionally, in disaster or conflict settings, they may be specifically targeted in acts of collective or politically motivated violence.[2]

The Indian Medical Association (IMA) conducted the largest online survey in 2017, which found that 80% of doctors in the country are stressed out in their

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profession, and violence against doctors is one of the major contributors to this stress. The study reported that the prevalence of fear of violence among doctors was 46.3%.[3]

Over the past decade, WPV against healthcare workers in India has been a persistent, systemic, and expanding issue. However, violence has increased even more since the COVID-19 pandemic, making India one of the unsafe nations for medical professionals. The number of assaults against healthcare workers in India has increased dramatically from 49 in 2017 to 155 in 2020, according to data from the Safeguarding Health in Conflict Coalition.[4] Existing literature also indicates that first-line physicians or training residents experience the highest rates of WPV.[5] According to Indian studies, the prevalence of WPV ranged from 40.8% to 78%.[5-8]

The central and state governments are making ongoing attempts to address this issue. However, WPV continues to get worse.[9] Although research has been done in several Indian states, Gujarat has so far produced relatively few works of literature. Therefore, we have conducted the study to estimate the prevalence and describe various determinants of WPV against resident doctors.

Methods:

A Cross-sectional study was conducted among resident doctors of a tertiary care teaching hospital in Surendranagar Gujarat, which was selected by a convenient sampling technique. All resident doctors (N = 211) currently working during the study period from April to October 2023 were included in the study by complete enumeration method (census method). The resident doctors who were not willing to participate in the study were excluded. Every study participant was informed about the purpose and entire process of the study in the local language (Gujarati), and their written consent was taken.

Data collection was done by Personal interview using a pre-designed, pre-tested, semi-structured questionnaire (WPV in the Health Sector by WHO) with appropriate modifications.[10] In-depth interviews of victims who have not reported WPV are conducted to find out to revealed underlying reasons. Content Validity Index (CVI) was used to assess the content validity of the questionnaire through a non-face-to-face approach. An online content validation form was sent to eight experts with clear instructions to facilitate the content validation process. The CVI for our questionnaire items was 0.94, indicating high content validity (minimum acceptable limit of 0.78).

The study Questionnaire contains sociodemographic details and determinants of WPV, such as type, frequency, place, perpetrators, reporting, precursor reasons, and perceived preventive measures.

Data were entered in Microsoft Excel version 2021. The Descriptive (Mean, SD, Percentage, etc.) and Inferential (Chi-Square test, Fisher exact test) statistics were analysed using the Statistical Package for Social Sciences (SPSS) version 26. Prior approval was taken from the Institutional Ethics Committee before the study was initiated.

Result:

In the present study, out of 211 resident doctors at tertiary care teaching hospital in Surendranagar, 189 participated. The mean age of study participants was 26.82 ± 1.67 years. Among them, 107 (56.61%) were male and 82 (43.38%) were female.

Figure 1 depicts that out of the total, 78 (41.26%) of study participants have experienced the WPV in the past one year. The psychological WPV was experienced by 59 (75.64%) of victims, while 2 (2.56%) were physically abused, and 17 (21.79%) had experienced both types of WPV. (Figure 1)

Figure 1: Prevalence of WPV against resident doctors in the past one year (N = 189) & Type of WPV (N = 78)

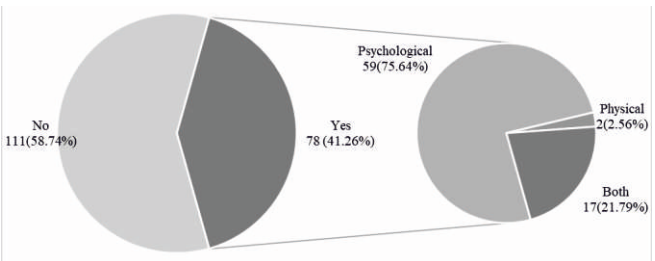

Table 1 : Association of socio-demographic characteristics with WPV. (N = 189)

Variable	WPV		Total, n (%)	χ^2 (p-value)
	Yes (78), n (%)	No (100), n (%)		
Gender				
Female	30 (38.46)	52 (46.85)	82 (43.39)	1.31 (0.252)
Male	48 (61.54)	59 (53.15)	107 (56.61)	
Branch				
Basic Sciences	6 (7.69)	38 (34.23)	44 (23.28)	18.41 (0.0001)
Medicine & Allied	42 (53.84)	46 (41.44)	88 (46.58)	
Surgery & Allied	30 (38.46)	27 (24.32)	57 (30.16)	
Designation				
1st year resident doctor	19 (24.36)	37 (33.33)	56 (29.63)	4.93 (0.176)
2nd year resident doctor	30 (38.46)	29 (26.12)	59 (31.22)	
3rd year resident doctor	19 (24.36)	35 (31.53)	54 (28.57)	
Senior resident doctor	10 (12.82)	10 (9.01)	20 (10.58)	

Table 2 : Characteristics of Workplace violence (N=78)

Variable	n (%)
Frequency in the Last Year	
1	2 (2.56)
2	14 (17.95)
3	8 (10.26)
4	6 (7.69)
≥5	48 (61.54)
Place of WPV*	
Emergency Department	43 (55.13)
Ward	32 (41.03)
ICU	22 (28.21)
OPD	20 (25.64)
Department	17 (21.79)
Resident Rooms	16 (20.51)
College	5 (6.41)
OT	5 (6.41)
Laboratory	2 (2.56)
Time of WPV	
Day Hours	27 (34.62)
Night Hours	27 (34.62)
Both	24 (30.77)
Type of Perpetrator*	
Relatives of the Patient	49 (62.82)
Senior	45 (57.69)
Patients Themselves	18 (23.08)
Other Hospital Staff	14 (17.95)
General Population	9 (11.54)
Colleagues	7 (8.97)
Juniors	2 (2.56)

*Multiple responses were collected

Figure 2: Name of reporting authority for workplace violence (N= 27)

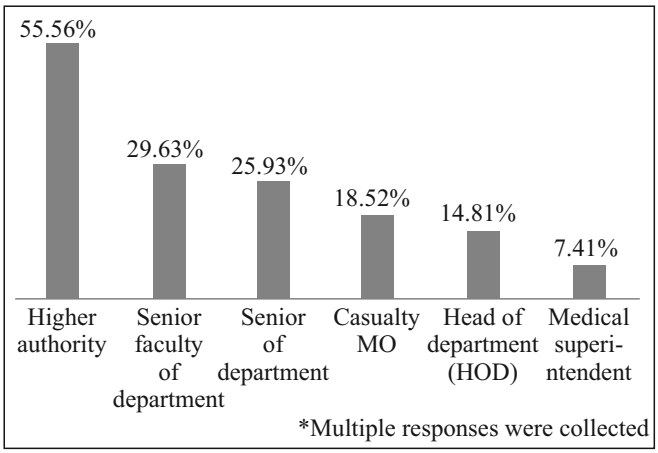

Figure 3: Reasons for not reporting the Workplace violence (N = 51)

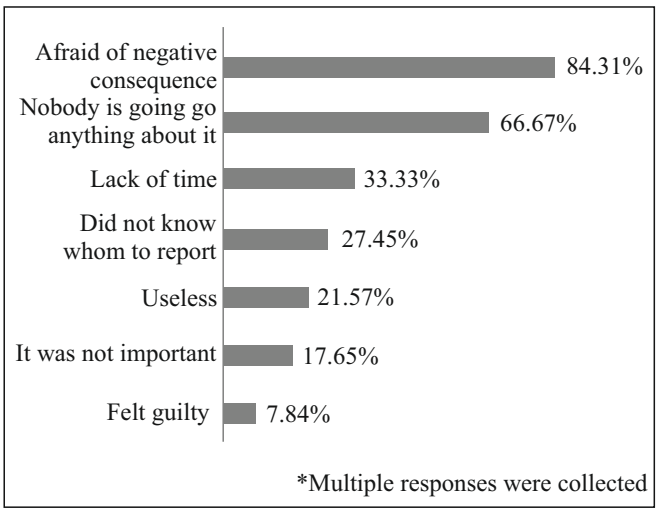

Table 2 : Precursors for Workplace violence. (N = 189)

Precursors*	n (%)
Lack of adequate security personnel	107 (56.61)
Prolonged duty hours and excessive workload	105 (55.56)
Unrealistic expectations by patients/relatives	104 (55.03)
Deficient implementation of legislation/laws	65 (34.39)
Patient overload	55 (29.10)
Perpetrator under the influence of alcohol	54 (28.57)
Psychological issues in patients/relatives	49 (25.93)
Longer waiting periods	41 (21.69)
Delay in treatment initiation	37 (19.58)
Poor communication by doctors	36 (19.05)
Other (e.g., senior's ego, facility issues)	33 (17.46)

*Multiple responses were collected

Table 3 : Perceived preventive measures for Workplace violence (N = 189)

Preventive Measure*	n (%)
An adequate number of security personnel	116 (61.38)
Strengthening of existing law	110 (58.20)
Protocol for reporting WPV and further action	88 (46.56)
Restricting the number of visitors and visiting hours	73 (38.62)
An adequate number of medical professionals	69 (36.51)
Proper management of patients	62 (32.80)
Availability of a counsellor	61 (32.28)
Improving infrastructure	56 (29.63)
Other (e.g., anti-ragging committee, fixed duty hours)	10 (5.29)

*Multiple responses were collected

Out of total study participants 44 (23.28%) was working in basic sciences, while 88 (46.58%) in Medicine & allied, and 57 (30.16%) in Surgery & allied branches. As for their current level of training, 56 (29.63%) were first-year residents, 59 (31.22%) were in their second year, 54 (28.57%) were in their third year, and 20 (10.58%) were senior residents. (Table 1).

Table 1 shows the association of sociodemographic characteristics with WPV, in which the branch of the resident doctor was found highly statistically significant association with WPV, while the gender and year of residency (designation) did not show a statistical association.

The present study found that 48 (61.54%) victims have faced $\geq$5 WPV in the past one year, followed by 14 (17.95%) victims who have faced twice in the past one year. Around 43 (55.13%) of victims had faced WPV at the emergency department, followed by 32 (41.03%) in wards. The perpetrators of WPV were Relatives of patients in 49 (62.82%), followed by Seniors in 45 (57.69%), and Patients themselves in 18 (23.08%). (Table 2)

In present study, only 27 (34.62%) victims had reported the WPV. Out of them 15 (55.56%) was reported to the Higher authority of the institute, followed by 8 (29.63%) to the senior faculty of the department. In-

depth interviews of victims who have not reported WPV (51) revealed that 43 (84.31%) of them are Afraid of negative consequences, and 34 (66.67%) believe that nobody is going to do anything about it. (Figure 2,3)

Out of total study participants 107 (56.61%) were mentioned Lack of adequate security personnel as precursor reason for WPV while 105 (55.56%) were answered Prolonged duty hours and excessive workload also Unrealistic expectation by the patient/relatives was mentioned by 104 (55.03%) study participants. (Table 3)

Adequate number of security personnel, strengthening of existing law, and developing a protocol for reporting WPV and for further action were the suggested preventive measures for WPV by 116 (61.38%), 110 (58.20%), and 88 (46.56%) of study participants, respectively. (Table 4)

Discussion:

Workplace violence is an increasingly recognized occupational hazard among healthcare professionals globally, particularly for resident doctors. The present study found that 41.26% of resident doctors reported experiencing WPV. This finding aligns with a study by Anand et al[7] in Delhi, which reports a prevalence of 40.8%. Several study across India finds the prevalence slightly higher than our study, like 55.6% in Sharma et al.[6], 69.5% in Singh et al.[8], 54.6% in Grover et al.[5] and 78.26% Ori et al.[11]

Regarding associated factors, although designation did not show a statistically significant association, a significant correlation was observed between the branch of specialization and WPV ($p < 0.001$), with medicine and allied branches being more affected. This is consistent with the findings by Singh et al.[8], who reported higher WPV rates among frontline departments such as emergency medicine. Similarly, Grover et al.[5] found that younger, less experienced doctors were more vulnerable to violence, which parallels the trend observed in our data, though not statistically significant.

The most common type of violence reported in this study was psychological or verbal abuse (75.64%), while physical violence was less frequently encountered. This is consistent with studies conducted in the emergency department (ED) of Morocco reported verbal violence in 77% of cases[12] , Anand et al.[7] (75.4%), Kumar et al.[13] (67%) and Gadapati et al[14] (41.6%).

The majority of victims of WPV were from Medicine and allied branches (53.84%) in our study, which coincides with the study result of Grover et al.[5] (68.3%) and Kumar et al.[15] (51.4).

Present study also identified the emergency department (55.13%) as the most common location for WPV. Similar findings were observed in the multicentric study in Uttar Pradesh by Singh et al.[8]. Relatives of patients (62.82%) were the most common perpetrators of WPV in this study. This is in agreement with studies by Grover et al.[5] (51.7%) and Anand et al.[7] (53.6%).

In the present study, only 34.62% of victims had reported the WPV; out of these, 55.56% were reported to the Higher authority of the institute. 65.38% of victims had not reported the WPV, and the major reason behind this was being Afraid of negative consequences (84.31%) and believing that nobody was going to do anything about it (66.67%). Which was in contrast with the study by Grover et al.[5], which found that 38.9% did not report incidents, primarily due to lack of time (52.0%), and due to the belief that reporting was useless (52.0%), and thought that reporting would be a hassle (41.3%).

In terms of precipitating factors, present study findings show that lack of adequate security personnel (56.61%), prolonged duty hours and excessive workload (55.56%), and unrealistic expectations of patients and relatives (55.03%) were the most cited reasons. These results echo those reported by Sharma et al.[6] in Gujarat and Anand et al.[7]. In Delhi, both highlighted overburdened systems and unmet patient expectations as key triggers for violence.

Adequate number of security personnel, strengthening of existing law, and developing a protocol for reporting WPV and for further action were the suggested preventive measures for WPV by 61.38%, 58.20%, and 46.56% of study participants, respectively, in the present study. This was aligned with the result of the study by Singh et al.[8] which shows more hospital staff (56.3%), better management of the system (50.8%), security and law (48.1%), and more medicine supply (31.1%) can prevent the WPV.

Conclusion:

This study highlights that WPV is a significant concern among resident doctors working in a tertiary care teaching hospital in Gujarat, with a prevalence of 41.26%. The majority of incidents were psychological or verbal, and most frequently occurred in the emergency department. Patients relatives were identified as the primary perpetrators. Despite the concerning frequency of such events, only one-third of the affected doctors reported the incidents, indicating substantial under-reporting, likely due to fear of negative consequences and lack of effective institutional redressal mechanisms. Contributing factors included inadequate security, excessive workload, and unrealistic expectations from patients or their relatives. Although there was no significant association between WPV and gender or designation, residents working in medicine and allied branches were more frequently affected.

Recommendations:

Based on the findings, Lack of adequate security personnel and Prolonged duty hours and excessive workload are major reasons for WPV. So, strengthening laws, Adequate number of medical professional and enforcing hospital policies for mandatory incident reporting and healthcare worker protection is essential. Adequate security personnel should be deployed in high-risk areas like emergency departments and wards. Optimizing duty hours are also necessary.

Finally, future studies should include other stakeholders such as nurses, laboratory staff, and administrative personnel to develop a more comprehensive understanding of WPV in healthcare settings.

Limitations:

Being a single-centre study conducted by convenient sampling in one tertiary care hospital, the results may not be generalizable to other institutions or regions. The cross-sectional study prevents the establishment of causal relationships. Additionally, recall bias or under-reporting, particularly problematic in the case of verbal or minor incidents. Study includes the resident doctors perspective which is lack in patient and relative side perspective and study also not included other stakeholder such as nurses, laboratory staff, and administrative personnel.

Declaration

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Conflict of Interest: Nil

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