

A Study of Workplace Violence Experienced by Doctors and Associated Risk Factors in a Tertiary Care Hospital of South Delhi, India

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ABSTRACT

Introduction: The increasing incidences of violence against doctors in their workplaces are an important reason for stress among these healthcare workers. Many incidences of workplace violence against doctors have been reported in the past and are also being continuously reported from different parts of the country as well as the world.

Aim: To determine the prevalence of workplace violence among doctors and to study the associated risk factors in a tertiary care hospital of Delhi, India.

Material and Methods: A cross-sectional study was conducted using a self-administered semi-structured questionnaire. The contents were: data related to the workplace, incidences at work, violence prevention policy of the institution, reporting of incidences and follow-up, education and training for violence management. A total of 151 doctors participated in the study.

Results: Total participants in the study were 151. The mean

age of study participants was 26.73±4.24 years. Almost half (47.02%; 44.56% of males and 50.84% of females) of the doctors reported having an experience of violence during work hours in past 12 months. Among the cases, 39.4% were reported from Department of Obstetrics and Gynaecology while Surgery, Medicine and other departments reported 29.6%, 26.8% and 4.2% respectively. Patients or their relatives were perpetrators in most of the cases. Maximum (87.3%) of the reported cases were of verbal violence while 8.6% of the cases were of physical violence. Younger doctors with less work experience were more prone to physical violence. Regarding the time of violence, 35.1% of such cases occurred during afternoon while 30.1% of them took place at night.

Conclusion: A large number of doctors had experienced violence in past 12 months in a tertiary care hospital of South Delhi, India. Verbal violence came out to be most common form of violence experienced by the doctors. Afternoon or night hours were the timings when majority of such cases were reported.

Keywords: Health care workers, Physical violence, Verbal violence

INTRODUCTION

A variety of emotions can be witnessed in a health care setting in a very small time that ranges from the joy of being blessed with a baby to lamenting the loss of a loved one. But with the changing world, hospitals have also fallen prey to increasing commercialization. Increasing out of pocket expenditure has hampered the relationship between the doctor and the patients. National health policy draft 2015 depicted increasing number of households facing catastrophic expenditures due to health costs (18% of all households in 2011-12 as compared to 15% in 2004-05) [1]. So, violence (verbal, physical and emotional type) within the hospitals has been recognised as a significant issue for health service providers in developing countries where the individuals are supposed to pay for their own health expenses which can be abnormally high many a times. But, the problem is just not limited to developing countries, the incidence of violence is significantly high even in the developed and prosperous nations where health is a state subject and money is not a problem [2]. The increasing awareness of the patients, increased availability of information through the modern means of information and technology and easy approachability of the courts, have made the conditions of the healthcare professionals pitiable and such beneficiaries tend to take healthcare workers for granted resulting in increased clashes between them. Violence in hospitals also fit into the broad definition of workplace violence which can be defined 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 [3]. The World Health Organization (WHO) initiated a global campaign for violence prevention [4]. It has been estimated that health care staff are the professionals at highest risk of violence in their workplace [5]. Healthcare workers are nearly four

times more likely to be injured and require time away from work as a result of Work Place Violence (WPV) than all workers in the private sector combined [6].

Such violence usually occurs because a doctor often deals with a person when he/she is in a stressful and emotionally taxing situation. This subject of violence is of concern because it has a negative impact on psychological and physical well-being of health professionals, the quality of health care and health organization as a whole. Higher rates of burnout, low self-esteem and self-destructive aggression are among the usual symptoms [7]. The most significant work-related violence in the health care system is Patient and Visitor Violence (PVV) [8,9]. PVV is considered to be any verbal, non-verbal or physical behaviour that is threatening to others or to property, as well as physical behaviour that harms others or damages property [10]. Extensive efforts have been made to understand PVV in psychiatric settings; however, less effort has been given in general health care settings [11]. There is scarcity regarding the risk factors associated with violence between doctors and patients in hospital settings.

So, the present study aimed at examining the types of violence experienced by doctors in various departments along with the possible causes and to determine the effects on job performance, the handling of the incident and the potential recommendations for the prevention of violence.

MATERIALS AND METHODS

A cross-sectional study was conducted in Vardhman Mahavir Medical College and Safdarjung Hospital (VMMC & SJH), a tertiary care government hospital located in South district of Delhi, India over a period of 1 month in January 2016.

The study population included doctors involved in direct interaction with patients: postgraduate students, junior residents and senior residents along with interns (with an experience greater than 6 months). Under graduate students, faculties, doctors in non-clinical branches (i.e., Anatomy, Biochemistry, Physiology, Pharmacology, Microbiology, and Forensic medicine), doctors on vacations and leaves during the study period and doctors who did not volunteer to participate in the study were excluded from the study.

There were 492 eligible participants in our hospital during the period of study. The sample size was calculated to be 145 considering the prevalence of violence to be 54.9% [12] with confidence level of 95% and 15% allowable error. (Applying the formula $n = 4pq/L^2$, where p is prevalence, q=p-1 & L is the allowable error). But, 192 agreed to take part in our study and were purposively approached at their workplaces (wards, out-patients departments etc.,) so that all the departments were covered during the study. Few participants did not return the questionnaires and the final sample size obtained was 151 (response rate: 79%).

The purpose of the study was informed to each participant and they were also informed of the fact that each of them was free to withdraw any time. Assurance was given to them concerning confidentiality. A written informed consent was obtained from each participant. After this, they were handed over a pre tested self-administered semi-structured questionnaire with 49 questions under broad headings such as data related to the workplace, incidences at work, violence prevention policy of the institution, reporting of incidences and follow-up, education and training for violence management. The questionnaire was distributed to the participants by investigators during the interview, which was collected the next day. The content validity of the questionnaire was examined prior to initiation of the study. Content validity index was found to be 0.93. Cronbach's alpha coefficient was 0.76. The study protocol was reviewed and approved by the medical superintendent of the hospital and the principal of the medical college.

Standard definitions adopted from WHO were used to define the types of violence, according to which physical violence was described as the use of physical force against another person or group that results in physical, sexual or psychological harm. This includes beating, kicking, slapping, stabbing, shooting, pushing, biting and pinching. Intentional use of power, including threat of physical force, against another person or group that can result in harm to physical, mental, spiritual, moral or social development was labelled as emotional violence and includes bullying/mobbing, harassment and threats [13]. Similarly verbal violence (also known as reviling or "verbal bullying") was defined as a negative defining statement told to the victim or about the victim, or by withholding any response, thereby defining the target as non-existent [14].

STATISTICAL ANALYSIS

Data was compiled on a MS-Excel sheet and was analysed using appropriate statistical tests (chi-square test, Fisher-exact test) with the help of IBM SPSS (Statistical Package for Social Services) Statistics for Windows (IBM Corp. Released 2012, Version 21.0. Armonk, NY: IBM Corp). The p-value of <0.05 was considered to be statistically significant.

RESULTS

Out of 151 study participants, 14 (9.27%) did not mention their age, so the mean age of remaining study participants was 26.73±4.24 years. Ninety two (61%) of the participants were males, 59 (39%) were females. Eighty eight (58%) participants were unmarried, 50 (33.12%) had a work experience between 6months and 3years (i.e., this group included mostly interns, house surgeon, postgraduate students and medical officers). One hundred thirty-five (90%) among

Gender	Yes	No	Total
Male	41 (44.56)	51 (55.43)	92 (100)
Female	30 (50.84)	29 (49.16)	59 (100)
Total	71 (47.02)	80 (52.98)	151(100)

[Table/Fig-1]: Distribution of doctors experiencing violence in last 12 months according to gender.
(Figures in parentheses indicate percentages)
p-value = 0.50 (non-significant)

Age Group	Physical violence		Verbal violence		Emotional violence	
	Yes	No	Yes	No	Yes	No
20-25 (n=58)	5 (8.6)	53 (91.4)	22 (37.9)	36 (62.1)	2 (3.4)	56 (96.6)
Above 25 (n=79)	0 (00)	79(100)	32 (40.5)	47 (59.5)	7 (8.9)	72 (91.1)
p-value	0.012		0.86		0.30	

[Table/Fig-2]: Distribution of doctors who experienced different type of violence reported in different age groups (N=137).
(Figures in parentheses indicate percentages)

Department	Yes	No	Total
Medicine & allied branches	19 (51.4)	18 (48.6)	37 (100)
Surgery & allied branches	21 (42.9)	28 (57.1)	49 (100)
Obstetrics & Gynaecology	28 (59.6)	19 (40.4)	47 (100)
Emergency/Radio-diagnosis /Para-clinical	3 (16.7)	15 (83.3)	18 (100)
Total	71	80	151

[Table/Fig-3]: Distribution of doctors according to departments experiencing violence in last 12 months.
(Figures in parentheses indicate percentages)
p-value: 0.017

the study participants have worked in night shifts in the last one year for one or more times.

Prevalence and type of violence

Almost half, i.e., 71(47.02%) of the doctors reported having an experience of violence during work hours in the preceding 12 months. The proportion of female doctors (51%) who suffered was higher than the male doctors (45%) as depicted in [Table/Fig-1]. Ninety percent (90%) amongst them considered it as a typical incidence of workplace violence as described in the beginning of the study.

The association of type of violence with age of the respondent doctors was assessed among 137 study participants who reported their age [Table/Fig-2]. A small number of respondents i.e., 14(9.27%) who did not disclose their age but also had a history of violence were excluded from this table.

On applying chi square or Fisher's-exact test to different types of violence separately, it was observed that age was not significantly associated with verbal and emotional violence (p-value>0.05) but the younger doctors were more likely to report physical violence. (p-value= 0.012).

Study of occurrence of violence in various departments revealed that Department of Obstetrics and Gynecology had most number i.e., 28 (59.6%) of respondents experiencing any form of violence in last 12 months followed by the medical departments (including General Medicine, Psychiatry, Paediatrics, Dermatology and Physical medicine and Rehabilitation) with 19 (51.4%) participants and surgical departments that included General surgery, Orthopedics, ENT and Ophthalmology having 21 (42.9%); and other Departments like Casualty, Radiology, Forensic medicine and Pathology with 3 (16.7%) participants giving such a response [Table/Fig-3]. This distribution was also observed to be statistically significant (p-value 0.017) after applying chi-square test.

We further distributed the different type of violent episodes according to departments [Table/Fig-4] and it was observed that verbal violence was the most common type of violence (n=62, 87.3%) reported from all departments followed by emotional violence (n=11,

Department	Physical Violence	Verbal Violence	Emotional Violence
Medicine & allied branches (n=19)	2(10.5)	15 (78.9)	6 (31.6)
Surgery & allied branches (n=21)	2(9.5)	18 (85.7)	4 (19)
Obstetrics & Gynaecology (n=28)	2(7.1)	26 (92.9)	1(3.6)
Emergency/Radio-diagnosis /Para-clinical (n=3)	0	3 (100)	0
Total (N=71)	6 (8.5)	62 (87.3)	11 (15.5)
p-value	0.924	0.482	0.056

[Table/Fig-4]: Distribution of type of violence reported from different departments. (Figures in parentheses indicate percentages)
There were multiple responses from single respondent present.

Causes of violence	n (%)
Long Waiting Periods	111 (73.5%)
Delays in Medical care provision	69 (45.7%)
Violation of visiting hours	63 (41.7%)
Patients' dissatisfaction with nursing/medical care	62 (41.1%)
Psychological problems	58 (38.4%)
Delays in nursing care provision	55 (36.4%)
Denial of patient's admission in the hospital	47 (31.1%)
Others	07 (4.6%)

[Table/Fig-5]: Perceived causes of violence according to doctors (N=151).
* Multiple responses from single respondent present.

15.5%) and physical violence (n=6, 8.5%) being the least reported type of violence from all departments. No doctor from Emergency, Radiology or other non-clinical departments reported any incident of physical violence.

Maximum events of violence took place after the main OPD hours i.e., 9 AM to 1 PM either in the afternoon (35.1%) or during the night shifts (30.1%). In most of the cases of violence, the perpetrators were either patients or their relatives. Only 2(2.8%) of such incidents took place outside the hospital (on the way back home, in the cafeteria) while remaining were reported to occur within hospital premises. We also wanted to enquire if white coat worn by doctors during the duty hours (except the Paediatrics department) have any impact on decreasing the prevalence of violence. But 60 (85%) of the respondents recalled that they were wearing white coat during the last incidence of violence faced by them.

Perceived causes of violence

Most of the respondents (73.5%) perceived long waiting periods as a cause of violence followed by delayed medical provision, violation of visiting hours and patient's dissatisfaction with nursing staff and other causes as depicted in [Table/Fig-5]. Doctors also explained that while patients are very casual about their disease until complications arises, they get impatient and violent once they reach hospital. Many doctors (56.45%) were of the opinion that patient's relatives also create such situations intentionally to evade the hospital bills.

Handling of the incident

A total of 58 (81.7%) of the respondents were encouraged (mostly by their colleagues), to report any incidence of violence to the competent authority while 13 (18.3%) were deterred to do so either by some of their own colleagues or by their seniors and in some cases even by the parents and were asked to stay silent in the name of prestige of the institution, to avoid wastage of time and not to hamper the academics. Among those who were encouraged 46 (79.3%) could do so without any fear of repression. Seventy-five percent (75%) i.e., 53 doctors said they were offered defusing, 12 (17%) said they were not offered so while 6 (8%) did not answer. Only 14.6% agreed

that the head of the unit took the notice of the incidence and talked to the concerned authorities regarding the matter. No police enquiry was initiated as reported by the respondents.

Consequences on job performance

Three-fourths (75.8%) of the doctors interviewed, admitted that any kind of violence during the duty hours affected their state of mind which in turn had an impact on their studies, duties and personal life. Only 5% said they were now used to this kind of behavior and it didnot bother them much. Correlation analysis showed negative correlation of frequency of violence episodes with experience in the health field. (r^2 : -0.861, $p<0.05$).

Prevention of violence and its management

Among the participants, who faced incidents of any kind of violence 56 (78.9%) participants believed that these incidents could have been prevented. About 92(61.3%) respondents were not aware of any violence prevention policy at their workplace, 45(30%) said they had no idea whether it exists or not, while only 13 (8.7%) knew of the existence of any such policy at their workplace.

Among 151 participants only six (6.4%) said that they had received some kind of training for recognizing and preventing workplace violence, 142 (90.4%) said they never received any such training while 3(3.2%) did not answer. Out of 6 who received training, 5 said they were trained once a year and among them 4 said the training was adequate. All these participants were from the Department of Psychiatry where conflict management is a part of their curriculum, but on probing, all of them denied attending any special training program for management of workplace violence outside their department.

Among measures suggested by participants to counter such incidents, increase in security and increase in staff/doctors were suggested by 61(40.4%) and 31(20.5%) doctors respectively. Fifteen (10%) of them suggested to restrict visiting hours for relatives of the patients. Improving communication, proper compliance with the standard operating procedures, vigilant management and proper infrastructure were suggested by 6(4%) participants each. One patient-one attendant policy, strict security personal surveillance needed before, during and after the attack that helps the residents feel safer in their workplaces, not leaving junior doctors alone, training of security personals and patient relative counselling were other suggestions given by respondents to prevent incidents of violence against doctors.

DISCUSSION

This study tried to elucidate the various aspects related to episodes of violence encountered by the doctors during their working hours. This study is different from the others as we focussed only on the doctors working in tertiary care health facility where there is high patient load and low doctor-patient ratio. Also, the hospital caters mostly to the patients who are referred from the adjoining states and are seriously ill and most of them need specialized care involving specialists and super specialists. Paucity of perishable and non-perishable resources adds high stress among the patients and attendants and leads to frequent episodes of open confrontation between doctors and patients in many cases. Despite the best efforts, the frequency of episodes where doctors fall prey to violence has recently started increasing [12].

The response rate of our study was 79%, indicating that the study population was propelled to participate in a research, on an issue of cardinal significance to them. The reason of non-response was the high patient load in the OPD, wards and emergency department.

A study reported that the mental health service personnel are at highest risk of violence [15]. In our study we observed that Emergency/

Radio-diagnosis/Para-clinical departments had minimum proportion of individuals (16.7%) who had experienced a violence episode as they have better security measures as compared to other departments and they have an equally high chance of confrontations during working hours, as evident from the responses depicted in [Table/ Fig-3]. Alexander and Fraser also studied occupational violence in an Australian healthcare setting and found no statistically significant differences among different allied health professional disciplines [16].

Type of violence has always been an important factor of interest. In our study about 87.32% of the incidents were of verbal violence while 8.4% were of physical violence. These results are comparable to a study by Jegu Ori et al., conducted among postgraduate students of tertiary care hospital of Manipur and another study among British Physicians, where verbal abuse was more frequent as compared to physical violence [17-19]. But the higher proportions of verbal abuse as compared to physical and other kind of violence is not a universal phenomenon as depicted from the study conducted by J Farooq et al., where majority of the cases (52.2%) were of physical assault and verbal abuse was found among 43.5% of the cases [20]. The reason for verbal abuse turning into a physical one can be explained by the lack of safety measures in the hospital premises where the patients or their relatives feel dominant when they are more in numbers compared to the staff on duty as commonly seen in evening and night shifts.

Involvement of either patients or their attendants as perpetrators of violence was another important result we found in our study as 84.5% incidents had involvement of both. This finding was similar to the results observed by J. Farooq et al., (81.8%) [20].

A variety of causes responsible for instigating a violent episode have been revealed in different studies. Study by T Ciluz, et al., (Israel) observed that the most common causes of violence were long waiting time (46.2%), dissatisfaction with treatment (15.4%) and disagreement with the physician (10.3%) [21,22]. Koukia E et al., (Greece) also observed violation of visiting hours by the visitor (88.8%), long waiting periods 86.4%), visitors' psychological problems (83.2%), and smoking prohibition in the waiting areas (82.4%) as the precipitating factors [23].

Similarly, long waiting periods (73.5%), delayed medical provision (45.6%), violation of visiting hours and patient's dissatisfaction with nursing care (41%), psychological stress (38.4%) and denial of hospital admission due to limited availability of beds in the wards (31.1%) were pointed out to be possible causes of violence in our study.

Most of the times, these incidents are overlooked, but in the long run increases the level of dissatisfaction among the healthcare workers. Farooq J et al., reported that the formal preliminary investigation was done in 47.8% episodes of violence, detailed enquiry in 13% and non-formal investigation done in 13% episodes [20]. Effective measures were not taken to avoid future instances of violence in 82.6% cases, whereas, some steps were taken in 13% cases. Similarly, 75% of the doctors who participated in our study said they were offered defusing and only 14.6% agreed that the head of the unit took the notice of the incidence and talked to the concerned authorities regarding the matter. This calls for a need of setting up of violence management committees which should meet regularly and where each and every case of violence that had occurred in the institution since the last meeting should be discussed and effective remedial measures should be suggested with proper follow-up to ensure compliance.

Our study also points towards the unmet need of training for effectively handling stressful situations without instigating any violent episodes as 78.9% of the participants were of the opinion that these incidents could have been prevented. Similar results were seen in the study by Koukia E et al., where health care staff reported that they lack the knowledge and the skills to handle violent visitors.

Proper training would make them more confident and equipped to deal with particularly stressed patient and/ or attendants [23].

LIMITATION

The study was conducted in a tertiary care government hospital with a small sample size, though it was statistically justified. A similar study can be done with a bigger sample size, by taking equal number of participants in all the departments. We can also include participants from the non-clinical departments. We should involve doctors working in both the government and private hospitals. This will help us to elucidate different factors that are responsible for episodes of violence in government and private hospitals as they are also not spared.

CONCLUSION

It is important that healthcare workers are protected from the risks and incidence of occupational violence both for their own health and safety and to protect the continuity and quality of healthcare services provided to the community. Workplace violence is definitely not a part of the job.

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