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Original Research Article

Prevalence and determinants of violence against healthcare workers in multiple settings: a cross sectional study

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ABSTRACT

Background: The quality of clinical care hinges on the doctor-patient relationship. The murder of Dr. Vandana Das highlights the urgent need to address violence against healthcare workers (HCWs). This study aimed to ascertain the prevalence of violence among HCWs, examine reporting mechanisms, and comprehend the repercussions of such incidents.
Methods: A cross-sectional study was conducted among HCWs at Pushpagiri Medical College Hospital and Taluk headquarters hospital, Pulinkunnu. A semi-structured questionnaire derived from surveys on workplace violence in the health sector by PSI (Public Services International), ILO (International Labour Office), ICN (International Council of Nurses), and WHO was used to measure violence.
Results: Among 185 participants, 150 were from private settings and 35 from government settings. In government settings, 14.3% experienced physical violence, and 31.4% faced verbal violence. In private settings, 9.3% encountered physical violence, 39.3% experienced verbal violence, and 2.7% reported sexual harassment. Incidents of physical violence were more frequent among HCWs with 6-10 years of experience and those working with adult patients. Verbal violence was more common among staff working in shifts and with adult and elderly patients.
Conclusions: Verbal violence was the most prevalent, affecting 37% of HCWs, often from patients' relatives or bystanders. Contributing factors included staff shortages, patient non-compliance, long waiting times, communication issues, and work overload. Addressing violence against HCWs requires improved staffing, communication, security measures, and stringent legislation to safeguard HCWs' well-being and patient care quality

Keywords: Healthcare personnels, Physical violence, Sexual harassments, Verbal abuse

INTRODUCTION

Violence, as defined by the World Health Organization (WHO), involves the intentional use of physical force or power that may result in harm, injury, psychological distress, or deprivation.[1] In the workplace, this includes abuse, threats, or assaults that endanger staff safety, well-being, or health.[1] Healthcare workers (HCWs) are particularly vulnerable to such incidents.[1] The issue of violence against HCWs is a global concern and was recognized as a major public health problem by the World Health Assembly in 1996.[2] Trust in the doctor-patient relationship is crucial for effective healthcare, but violence against HCWs undermines this trust and the quality of care. Various studies have highlighted the prevalence and determinants of this violence in different settings. Research in Peshawar, Pakistan, demonstrated a significant prevalence of violence against HCWs.[1] Similar findings have been reported in studies from Pakistan, India and other regions utilizing diverse methodologies such as cross-sectional studies

questionnaires, mixed-methods, and risk factor analyses.[1-6]

The murder of Dr. Vandana Das emphasizes the urgent need to address violence against HCWs. The consequences of such violence extend beyond immediate trauma, leading to reduced quality of care, increased absenteeism, and HCWs leaving the profession. This exacerbates healthcare worker shortages, particularly in developing countries, increasing healthcare costs and compromising access to primary care.[5]

It is estimated that 70-80% of assaults on HCWs go unreported. This study aimed to explore the prevalence of violence among HCWs, assess existing reporting mechanisms, and understand the impact on their personal and professional lives. The study sought to fill a critical knowledge gap and provide policymakers with evidence-based measures to prevent and control violence against HCWs. Objectives include assessing the prevalence and patterns of workplace violence, exploring associations with demographic and job characteristics, identifying contributing factors, and proposing measures to reduce such incidents.

METHODS

This research employed a cross-sectional study design to investigate the prevalence and determinants of violence among healthcare workers in a tertiary care hospital located within Thiruvalla Municipality and a secondary care hospital located within Pulinkunnu panchayat. The study duration spanned three months (from December 16, 2023 till March 16, 2024), initiated upon receiving approval from the institutional ethics committee. The study population encompassed a diverse group of healthcare professionals, including doctors, nurses, paramedics, and support staff such as ambulance drivers and security personnel. Stratified sampling was utilized to ensure a representative selection from various subgroups within the healthcare workforce. Specifically, participants were categorized based on professional roles, departments, or other pertinent characteristics. Random selection was then applied within each stratum until the total sample size of 185 participants was achieved. Inclusive criteria comprised all healthcare workers within the selected hospitals, while exclusion criteria were applied to those who did not provide consent or submitted incomplete questionnaire responses. The data collection instrument employed was a pre-designed semi-structured self-administered questionnaire, adapted from international survey tools on workplace violence. Consent forms were administered to participants prior to questionnaire completion. Ethical considerations were rigorously observed throughout the study. Written informed consent was obtained from all participants after a comprehensive explanation of the questionnaire's nature and purpose, ensuring anonymity. Participation in the survey was entirely voluntary and unrelated to professional duties. Approval from the institutional ethics committee (IEC) was secured, and all procedures adhered strictly to relevant ethical guidelines and regulations. The participant distribution comprised 150 individuals from private healthcare settings and 35 from government healthcare settings. This approach facilitated an exploration of workplace violence across different settings, enhancing the study's ability to capture the nuances associated with healthcare work environments.

RESULTS

A total of 185 participants meeting initial inclusion criteria were enrolled, with 35 participants hailing from the medical sector and 150 from the private sector.

Table 1: Characteristics of study subjects.

	Government (n=35)	Private (n=150)
	N (%)	N (%)
Age (years)		
25-34	8 (22.9)	97 (64.7)
35-44	12 (34.3)	29 (19.3)
45-54	13 (37.1)	15 (10)
55-64	2 (5.7)	7 (4.7)
>65 years	0 (0)	2 (1.3)
Gender		
Male	11 (31.4)	51 (34)
Female	24 (68.6)	99 (66)
Year of experience		
1-5	8 (22.9)	53 (35.3)
11-15	7 (20)	12 (8)
16-20	4 (11.4)	5 (3.3)
6-10	9 (25.7)	46 (30.7)
Over 20	4 (11.4)	9 (6)
Under 1 year	3 (8.6)	25 (16.7)

Table 2: workplace violence among government and private sector.

	Government (n=35)	Private (n=150)
	N (%)	N (%)
Physically attacked in your workplace (Past 1 year)		
Yes	5 (14.3)	14 (9.3)
No	30 (85.7)	136 (90.7)
Have you witnessed incidents of physical violence in your workplace (past 1 year)		
Yes	4 (11.4)	9 (6)
No	1 (2.9)	5 (3.3)
Verbally abused in your workplace (past 1 year)		
Yes	11 (31.4)	59 (39.3)
No	24 (68.6)	91 (60.7)
Sexually attacked in your workplace (past 1 year)		
Yes	0 (0)	4 (2.7)
No	35 (100)	146 (97.3)

Table 3: Distinctions between the government and private sectors.

	Government (n=35)	Private (n=150)
	N (%)	N (%)
How worried about violence in current place		
1 (Not worried)	6 (17.1)	41 (27.3)
2	3 (8.6)	23 (15.3)
3	12 (34.3)	53 (35.3)
4	6 (17.1)	21 (14)
5 (Very worried)	8 (22.9)	12 (8)
How often have you experienced physical violence		
About once in month	0 (0)	2 (1.3)
Once in 6 months	4 (11.4)	5 (3.3)
Once in a year	1 (2.9)	7 (4.7)
How did you respond to the incident (physical violence)		
Reported to senior staff	0 (0)	4 (2.7)
Told the person to stop	3 (8.6)	2 (1.3)
Took no action	0 (0)	4 (2.7)
Tried to defend myself physically	1 (2.9)	4 (2.7)
Responded legally	1 (2.9)	0 (0)
How often have you been verbally abused (past 1 year)		
All the time	1 (2.9)	5 (3.3)
Sometimes	9 (25.7)	47 (31.3)
Once	1 (2.9)	7 (4.7)
Do you consider this to be a typical incident of verbal abuse		
Yes	9 (25.7)	47 (31.3)
No	2 (5.7)	12 (8)
How did you respond the verbal abuse		
Report to senior staff	2 (5.7)	31 (20.7)
sought help from union	1 (2.9)	0 (0)
Told the person to stop	5 (14.3)	8 (5.3)
Took no action	3 (8.6)	10 (6.7)
Told a colleague	0 (0)	9 (6)
Warned the abuser	0 (0)	1 (0.7)
How often have you been sexually harassed (Past 1 year)		
Once	0 (0)	1 (0.7)
Sometimes	0 (0)	3 (2)

Table 4: Analysis of various relationships in the study- government setting.

Variables	Analysis type	P value	Result
Male gender and physical attack in workplace	Pearson's chi- square test for the association	0.026	Significant relationship
Working in shifts and verbal abuse	Pearson's chi- square test for the association	1.00	No significant relationship
Female gender and experiencing verbal abuse	Pearson's chi- square test for the association	1.00	No significant relationship
Work experience (1-5 years) and physical violence	Pearson's chi- square test for the association	0.278	No significant realtionship
Work shifts and verbal abuse	Pearson's chi- square test for the association	1.00	No significant relation ship

In the private sector, the age group of 25 to 34 years emerged as the most prevalent, constituting 64.7% of the participants. Conversely, the government sector showcased a distinct demographic profile, with the age group of 45 to 54 years being the most frequent, representing 37.1% of the participants. The study

revealed a higher prevalence of females in both the government and private sectors, comprising 68.6% and 66% of the respective participant pools. Among the healthcare professionals surveyed, physicians emerged as the most predominant group in both sectors, followed closely by nurses. These findings underscore the significant representation of female healthcare workers and the central role of physicians across governmental and private healthcare sectors. The findings reveal notable distinctions between the government and private sectors regarding workforce demographics, experiences, and concerns. Notably, a considerable portion (22.9%) in the government sector expresses concern about workplace violence, contrasting with the private sector, where 27.3% exhibit no apprehension. Shift work was prevalent in both sectors, with 62.9% in government and 58.7% in private sectors engaged in such schedules. Adult patient care was a primary responsibility, with 34.3% and 31.3% of workers in government and private sectors, respectively, primarily attending to this demographic. Moreover, time allocation towards medicine-related tasks was substantial, with 11.4% and 18.7% of workers in government and private sectors, respectively, primarily engaged in these activities.

Table 5: Analysis of various relationships in the study- private setting.

Variables	Analysis type	P value	Result
Work experience (1-5 years) - physical violence	Pearson's chi- square test for the association	0.020	Significant relationship
Adult patient/client - physical violence	Pearson's chi- square test for the association	0.003	Significant relationship
Work shifts and verbal abuse	Pearson's chi- square test for the association	0.013	Significant relationship
Adult patient/client and verbal abuse	Pearson's chi- square test for the association	0.046	Significant relationship
Adult patient/client and sexual attack	Pearson's chi- square test for the association	0.002	Significant relationship

Despite concerns about violence, both sectors emphasize reporting mechanisms, with management providing significant support. However, instances of physical attacks were reported, affecting 14.3% of government sector workers and 9.3% of those in the private sector over the past year. Of particular concern is the occurrence of attacks involving weapons, affecting 0.7% of affected individuals. These findings underscore the importance of addressing safety concerns and promoting a secure working environment across both government and private healthcare sectors.

In the public sector, employees encounter aggression from patients at a rate of 14.3%, while in the private sector, this figure drops to 2%. Additionally, 7.3% of public sector workers experience attacks from relatives. Of those in the public sector, 14.3% feel that these incidents could not have been prevented, compared to only 3.3% in the private sector.

In the public sector, violent incidents generally do not lead to formal treatment, whereas in the private sector, about 1.3% of cases require formal treatment, resulting in affected individuals taking time off from work. Satisfaction with management and police readiness to investigate incidents stands at 5.7% among government sector employees and 3.3% among those in the private sector. This sentiment is echoed by union members as well. In the government sector, the primary repercussion faced was the issuance of verbal warnings by management, with a reported percentage of 8.6%. Conversely, in the private sector, incidents led to reporting to the police for investigation or action against the attacker. Both government and private sectors attributed the attacks largely to long waiting times, with reported percentages of 5.7% and 3.3%, respectively.

Among participants, 2.9% in the government sector and 1.3% in the private sector expressed extreme distress over abuse. Similarly, 5.7% in the government sector and 1.3% in the private sector reported experiencing extremely disturbing thoughts related to the abuse. Following incidents, 2.9% in the government sector and 2% in the private sector feel extremely vigilant. In the government sector, 17.1% of participants face verbal abuse from patients' relatives, compared to 26.7% in the private sector. Additionally, 21.3% of participants believe the incident could have been prevented, with 14.3% from the government sector expressing this sentiment.

In the government sector, 17.1% of participants reported experiencing verbal abuse without any subsequent action taken, whereas in the private sector, this figure stands at 25.3%. Conversely, in the government sector, management and the union took action against the abuse, with 9.4% stating that management intervened. In both sectors, incidents of verbal abuse resulted in verbal warnings issued against the perpetrator.

Under the government sector there was a statistically significant relationship between male gender and physical attack in workplace as the p value was 0.026 ($p>0.05$).

There was no significant relationship between working in shifts and verbal abuse (p=1), female gender and experiencing verbal abuse (p=1), work experience (1-5 years) and physical violence (p=0.278), work shifts and verbal abuse (p=1). Under the private sector there were statistically significant relationships between work experience (1-5 years) and physical violence (p=0.020), adult patient/client and physical violence (0.003), adult patient/client and verbal abuse (p=0.013), adult patient/client and verbal abuse (p=0.046), adult patient/client and sexual attack (p=0.002).

DISCUSSION

This research employed a cross-sectional study design to investigate the prevalence and determinants of violence among healthcare workers in a tertiary and secondary care hospital located within a municipality and a panchayat. We explored associations between violence exposure and demographic/job characteristics, identifying contributing factors to workplace violence, and proposing measures to reduce such incidents.

Attacks in workplace

The prevalence of all kinds of attacks in the study settings over the past year throws light on the magnitude of workplace violence in healthcare centres. The prevalence of violence in government settings was found to be 45.7% and 51.3% in private settings. The government health personnel physically attacked were 14.3%, and the private sector was 9.3%. If we look at verbal abuse, it was 31.4% across the government and 39.3% in the private sector. There were no sexual attacks reported in the government sector, and 2.7% were reported in the private sector. As we can see in our study, the most common form was verbal abuse, similar to a study conducted in Sagar, India.[7] The high incidence of verbal abuse may be due to the sudden flow of dissatisfaction and frustration with the whole situation, with healthcare professionals as the victims. The major perpetrators were patients in government settings, 25.7% in government and 10.0% in private. Relatives were the foremost perpetrators in the private sector, 34.0% and 17.1% in government. According to various studies, it was the relatives or the patient escorts are the major perpetrators in both government and private settings, except one study shows patients were the perpetrators of verbal and emotional violence.[7-9] Trust and communication are essential in the relationship between healthcare workers (HCWs) and patients, particularly when relatives become spokespersons during emergencies.[10] However, in dire situations, this relationship can break down due to staffing shortages, the nature of the disease, infrastructure limitations, and resource constraints. In a resource-limited country like India, frontline workers are often not responsible for unfortunate incidents but the blame lies with policymakers and administrators who don't provide enough infrastructure and amend the policies to post enough staff.[11] Yet, proper communication between HCWs and the understanding public is essential for addressing these challenges.

Associations with sociodemographic factors and job characteristics

In the government setting, the male gender is associated with physical violence, which is similar to the postgraduate student study in Manipur.[9] In the private setting, healthcare workers with 1-5 years of work experience were associated with physical violence. Lesser years of work experience may hinder patient management, or the mob thinks it's acceptable to misbehave with young HCWs, which has happened in another setting in south Delhi.[12] Those who were dealing with adult patients experienced physical, verbal and sexual attacks. Adult patient departments are prone to violence due to power dynamics and the outspoken nature of adults. This aligns with a study in south Delhi, where adult departments experienced higher levels of violence.[12] Healthcare workers working in shifts were associated with verbal abuse. Healthcare workers (HCWs) working in shifts, primarily in understaffed inpatient departments during night shifts, face more abuse compared to those with fixed daytime schedules in outpatient departments, likely due to the reduced staff presence at night.[13] All study participants are concerned about workplace violence, with most being 'moderately worried', making it alarming and sad to work in such an environment. Constant worry in healthcare workplaces, where emergency decisions are crucial, can lead to mental health problems, resulting in poor decision-making and potential system failure.[14,15] A study in eastern India found that over half of the participants experienced loss of self-esteem, feelings of shame, and stress-related issues after workplace violence. This led to a decrease in handling surgical and emergency cases and an increase in referrals and investigations.[16]

Factors responsible and contributing to violent events

The study tried to evaluate many factors, but the major factors found were long waiting hours and lack of staff in government settings; along with these factors, the death of a patient was a significant factor in private settings. The study respondents responded that the lack of staff in private settings and alcohol and drug intake by patients and bystanders in government settings were the most prevalent contributing factors. Government hospitals face severe staff shortages, deficient infrastructure, unmanageable patient loads, inconsistent quality of services, and high out-of-pocket expenses for patients.[17] In Kerala, the outdated staff patterns are being addressed with importance to provide better services. The Aardram Mission has been launched in the health sector to make government hospitals people-friendly by improving their basic infrastructure and services. It will be implemented in three stages across Government Medical College Hospitals, District Hospitals, Taluk Hospitals, and Primary Health Centres. Additionally, integrating digital

measures aims to reduce time loss and overcrowding in hospitals, further mitigating potential triggers for workplace violence.[18,19] In private hospitals financial issues exacerbate issues.[20] The findings remain similar across all settings, and the significant issues identified were lack of literacy and morality among patients and their relatives, poor communication, unexpected death, unexpected complication, extended hospital stay, staff shortage, unexpected bills, lack of trust, delayed treatment, a severe condition of patients, drug addiction among patients or their relatives, history of personality disorders among patients or their relatives, overcrowding in hospitals, frequent shortage of medicine and other supplies and poor working conditions of doctors.[7,10,12,21-23]

Responses of victims following violent incident

Most of them responded informally by informing a senior staff and telling the person to stop. Some of them took no action also. Previous studies found that only a few were tackled legally, even after informing the authorities.[8]

Reasons for non-reporting

Reporting after an incident is extremely important, but some felt it was unimportant, and some felt the procedure was time-consuming. The reasons found in similar studies are mainly the notion of "no action will be taken" as the HCWs seen in previous incidents against the perpetrators and the involvement of local people.[24] The low reporting is established as the lack of awareness about the reporting mechanism in a similar study.[25]

Recommendations for prevention of violence

The government setting respondents recommend increasing safety and security, increasing healthcare workers, especially males and overall public awareness will prevent violence, and in the private setting, increasing healthcare workers and proper communication and interaction would help reduce workplace violence incidents. There is a crucial need for strong collaboration, support, and commitment from both top management and workers to ensure their safety. Key measures include transferring clients or patients with a history of violence to secure facilities, installing protective barriers, metal detectors, and alarm systems, creating safe patient and visitor areas with clear exits, and implementing zero-tolerance and workplace violence response policies. Additionally, conflict resolution training, mandatory reporting protocol and systems, frequent sensitization on reporting protocols, and ensuring employees do not work alone are essential. Post-incident procedures such as trauma counselling, employee legal assistance programs, and safety and health training to make staff aware of potential hazards and protection methods are also essential.[27-29] The Kerala Healthcare Service Persons and Healthcare Service Institutions (Prevention of Violence and Damage to Property) Amendment Bill 2023 gives hope to the HCWs in Kerala to work with confidence.[30] Such laws should be enforced diligently to establish a safer workspace for all healthcare workers.

Limitations are the type of hospitals selected to compare were not at the same levels, but one was a medical college and the other was a Taluk hospital. The government health personnel were less in number, compared to the private centre.

CONCLUSION

The findings from this study highlight the urgent need for comprehensive strategies to protect healthcare workers from violence in both government and private healthcare settings. By identifying significant associations between demographic factors, job characteristics, and exposure to violence, this research contributes valuable insights for policymakers aiming to improve workplace safety in healthcare. Enhanced communication between healthcare workers, patients, and relatives, along with better staffing and resource allocation, can help rebuild trust in the doctor-patient relationship and reduce the occurrence of violence in healthcare environments.

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