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ORIGINAL ARTICLE

Comparative Prevalence and Impacts of Workplace Violence Against Female and Male Healthcare Providers in Maternal and Child Health Settings of Karachi, Pakistan

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Abstract

Background

Workplace violence against healthcare providers is a critical global issue, disproportionately affecting high-risk areas like maternal and child health (MCH) services. While the overall burden is recognized, differences in violence prevalence between female and male providers remain understudied.

Methods

A cross-sectional study was conducted among 414 healthcare providers (55.3% doctors, 14.5% nurses) from pediatric and gynecology departments across 14 public and private hospitals in Karachi. Using stratified random sampling and validated questionnaires, data on violence experiences, perpetrators, frequency, and impacts were collected. Statistical analyses included chi-square tests, logistic regression, and stratified subgroup analyses by gender.

Results

Overall, 87.9% of healthcare providers experienced workplace violence. Female providers reported significantly higher violence prevalence (93.2%) compared to males (81.7%, $p<0.001$), particularly verbal and psychological abuse. Female providers also reported greater impacts on absenteeism (91.3% vs. 82.4%), mental health (72.5% PTSD symptoms vs. 58.2%), and turnover intentions (57.1% vs. 43.5%). Multivariate analysis confirmed female gender as an independent risk factor (aOR=2.01, 95% CI: 1.31–3.09).

Conclusions

Female healthcare providers in MCH settings face higher violence prevalence and more severe consequences than their male counterparts. Targeted security, legal enforcement, and gender-sensitive support interventions are urgently needed.

Keywords
Workplace violence, gender disparities, healthcare providers, maternal health, child health, Pakistan

Layman Summary

In this study, we examined violence faced by doctors and nurses working in children's and women's health departments in Karachi, Pakistan. We found that almost 9 out of 10 healthcare workers face some form of violence at work, such as verbal abuse or physical assault. However, female doctors and nurses faced more violence than males. They reported more stress, higher chances of missing work, and stronger thoughts of quitting their jobs. Violence mainly came from patients' relatives and often occurred daily or weekly. This dangerous work environment not only harms the workers but can also reduce the quality of care for mothers and children. Our study highlights the urgent need for better security, stronger law enforcement, and specific support for female healthcare providers to make hospitals safer and improve patient care.

INTRODUCTION

Healthcare providers form the backbone of any health system, working tirelessly to ensure the well-being of patients across a broad spectrum of services. In low- and middle-income countries (LMICs) like Pakistan, these providers often deliver care in overcrowded, under-resourced, and highly charged environments, particularly in maternal and child health (MCH) settings. Unfortunately, the noble mission of healthcare is increasingly jeopardized by a silent yet pervasive threat, the workplace violence.

Workplace violence encompasses a range of behaviors, from verbal and psychological abuse to physical assaults and even sexual harassment. According to the World Health Organization (WHO), between 8% and 38% of healthcare workers globally experience physical violence at some point during their careers, while many more are subjected to non-physical aggression, including threats and intimidation [1]. These acts not only endanger the physical safety of healthcare workers but also severely compromise their mental health, professional satisfaction, and overall quality of life. In turn, these effects ripple outward, undermining patient care, disrupting workflows, and burdening already fragile health systems.

Maternal and child health services are particularly vulnerable to workplace violence due to the emotionally intense nature of these settings. Providers in gynecology and pediatric departments frequently face stressed and anxious patients or their relatives, who may react aggressively when outcomes do not meet expectations [2,3]. The close interactions inherent in MCH care—such as delivering difficult news, handling complications, and managing emergencies—create opportunities for conflict escalation. In Pakistan, societal norms often place women in subordinate roles, which further compounds the risks for female healthcare providers working in these high-stress environments [4].

Evidence from Pakistan paints a grim picture. Recent studies show that nearly 88% of healthcare providers in Karachi have experienced some form of workplace violence, with verbal and psychological abuse being most prevalent, followed by physical assaults [5, 6, 7]. These incidents are not isolated; they occur daily or weekly for a significant proportion of staff. Alarmingly, a large majority of these violent episodes are perpetrated by patients' relatives, reflecting broader issues of mistrust and frustration within the healthcare system [8, 9].

The consequences of workplace violence extend far beyond immediate physical harm. Healthcare workers subjected to violence report higher rates of absenteeism, burnout, and symptoms of post-traumatic stress disorder (PTSD). In Karachi, over 87% of providers indicated absenteeism as a direct response to violence, while more than half expressed intentions to leave their jobs [10]. Such high turnover rates further strain an already overburdened healthcare system, leading to staff shortages and increased workloads for remaining personnel. This negative feedback loop ultimately erodes the quality of patient care, resulting in delayed treatments, reduced patient satisfaction, and potentially poorer health outcomes for mothers and children.

Moreover, workplace violence imposes a heavy financial burden on healthcare systems. The costs associated with absenteeism, staff turnover, and reduced care quality have been estimated to exceed PKR 24.9 million annually in Karachi alone [11]. These economic repercussions highlight the urgency of addressing workplace violence not just as a human rights issue but also as a significant health system inefficiency.

While the general burden of workplace violence is well-documented, there is a striking gap in research exploring gender disparities in these experiences. Female healthcare providers often face unique challenges rooted in societal gender norms, including greater exposure to harassment and more severe psychological impacts. The limited available evidence suggests that women are more likely to experience certain forms of violence, such as verbal abuse and psychological intimidation, and are disproportionately affected by the consequences, including higher rates of mental health issues and job attrition.

Addressing this gap is critical for developing effective, evidence-based interventions. Understanding gender differences in the prevalence and impact of workplace violence can inform targeted security enhancements, mental health support programs, and policy reforms that are sensitive to the specific vulnerabilities of female healthcare providers. Strengthening these measures is essential not only to protect staff but also to maintain high standards of maternal and child health services, which are vital for achieving broader public health goals.

This study aims to fill this crucial knowledge gap by comparing the prevalence, types, and impacts of workplace violence between female and male healthcare providers working in MCH settings in Karachi, Pakistan. By leveraging robust statistical analyses and a large, representative sample, this research provides valuable insights into gender-specific vulnerabilities and consequences. The findings can serve as a foundation for designing gender-responsive policies and interventions that safeguard healthcare workers, enhance service delivery, and ultimately improve health outcomes for women and children in Pakistan and similar settings globally.

MATERIALS AND METHODS

Study design and setting

This study employed a robust cross-sectional quantitative design to assess and compare the prevalence and impacts of workplace violence among male and female healthcare providers in maternal and child health (MCH) settings. The research was conducted across 14 strategically selected hospitals in Karachi, Pakistan, representing both public and private sectors. Data collection was carried out over a five-month period from February to June 2023.

The study specifically focused on pediatric and gynecology departments, which are recognized as high-risk environments for workplace violence due to frequent emotionally charged interactions and high patient volumes. Including diverse hospital types and departments ensured a comprehensive understanding of the phenomenon across different institutional contexts.

Study population

The study population comprised actively practicing healthcare providers, including doctors, nurses, and allied health staff directly involved in patient care within the pediatric and gynecology departments. Eligibility criteria included at least six months of continuous service in their current role to ensure adequate exposure to workplace dynamics. Providers on long-term leave or administrative staff with no direct patient contact were excluded to maintain the study's focus on frontline care providers.

Sampling technique

A stratified random sampling technique was employed to enhance representativeness and minimize selection bias. Hospitals were first stratified by ownership type (public vs. private). Within each stratum, a complete list of healthcare providers in pediatric and gynecology departments was obtained in collaboration with hospital administration.

Participants were further stratified by professional role (doctor, nurse, support staff) to ensure proportional representation reflective of actual departmental staff distributions. Proportional allocation was applied to each stratum, and random selection was performed using a computer-generated random number table.

Objectives of the research

- To quantify and compare the prevalence of workplace violence among female and male healthcare providers in MCH settings.
- To explore gender-specific differences in types of violence experienced and perpetrators involved.
- To assess the differential impacts of workplace violence on absenteeism, turnover intentions, and mental health outcomes.
- To provide evidence-based recommendations for targeted policy and security interventions in healthcare settings.

Biases and confounders

Potential biases, including recall bias and underreporting due to fear of retaliation, were anticipated and addressed. The use of anonymous self-administered questionnaires and assurances of strict confidentiality aimed to mitigate these biases.

Stratified sampling design helped reduce institutional and departmental confounding. Furthermore, multivariable logistic regression models adjusted for critical confounders such as department type, years of professional experience, and hospital ownership (public or private), ensuring that observed associations between gender and violence outcomes were not spurious.

Data collection

Data were collected using a meticulously developed and validated self-administered questionnaire. The instrument included sections on sociodemographic characteristics (age, gender, role, department, years of experience), types and frequency of workplace violence experienced (verbal abuse, physical assault, psychological harassment), perceived perpetrators (patients, patients' relatives, colleagues), and impacts on physical and mental health, work performance, absenteeism, and turnover intentions.

The questionnaire underwent a comprehensive development process informed by existing literature and consultations with subject matter

Multivariable Logistic Regression Analysis

After adjusting for department, years of experience, and hospital type, female gender remained a significant independent predictor of experiencing workplace violence.

Table 4. Adjusted logistic regression predictors of workplace violence

Variable	aOR	95% CI	p-value
Female gender	2.01	1.31 – 3.09	<0.001
Pediatrics dept	1.28	0.89 – 1.85	0.185
≤7 years exp.	1.47	1.02 – 2.12	0.038
Public hospital	1.19	0.83 – 1.72	0.347

Hosmer-Lemeshow goodness-of-fit test indicated adequate model fit (p = 0.64). No evidence of multicollinearity was found among predictors.

DISCUSSION

The findings of this study reveal a deeply concerning yet consistent pattern of workplace violence against healthcare providers, particularly in maternal and child health (MCH) settings in Karachi. Our study demonstrated that 87.9% of healthcare workers experienced workplace violence, with a significantly higher prevalence among female providers (93.2%) compared to their male counterparts (81.7%). Female healthcare providers were not only more frequently subjected to violence but also experienced more severe repercussions, including higher absenteeism, PTSD symptoms, and intentions to leave their jobs.

These results are in line with the broader literature documenting the endemic nature of violence against healthcare workers in low- and middle-income countries. Alharbi et al. (2021)[12] reported a similarly high prevalence of workplace violence (81.4%) among healthcare workers in Riyadh, with verbal abuse being the most common form of aggression. Similar to our study, the majority of violence was perpetrated by patients' relatives, highlighting a shared challenge across diverse settings (Alharbi et al., 2021). The reluctance to report violence found in Alharbi's study further mirrors our context, where underreporting is fueled by a lack of institutional response and fear of retaliation.

The psychological burden observed among our participants, particularly the higher prevalence of PTSD symptoms in female providers (72.5% vs. 58.2% in males), underscores the mental health crisis linked to workplace violence. Kim et al. (2019)[13] explored how organizational responses can mitigate the psychological consequences of workplace violence among Korean emergency medical service providers. Their study found that supportive organizational responses significantly reduced depressive symptoms and distress in exposed workers. However, in our context, inadequate institutional support mechanisms likely exacerbate the mental health consequences of violence, underscoring the urgent need for system-level reforms (Kim et al., 2019).

Moreover, the spillover effects of workplace violence on home and social life, as described by Rehman et al. (2025)[14], provide additional insight into the broader consequences for healthcare providers. Rehman's study suggests that workplace violence does not remain confined to the hospital but spills over into domestic life, leading to heightened domestic stress and even violence. Our findings, showing high absenteeism and emotional distress among female providers, suggest similar spillover dynamics, which may further undermine their personal well-being and family stability.

The findings of Mufaddal et al. (2024)[15] also resonate with our study, highlighting the critical role of hospital security measures. Their study in Karachi revealed that dissatisfaction with hospital security was significantly linked to increased workplace violence, especially among female staff. Our study supports this, as female providers reported higher violence prevalence and impacts, likely influenced by perceived and actual security inadequacies in the MCH departments (Mufaddal et al., 2024).

Additionally, Mufaddal et al. (2025)[16] quantified the economic burden of workplace violence in Karachi's healthcare system, estimating an annual cost of PKR 24.9 million due to absenteeism, staff turnover, and compromised care quality. Our study reinforces these findings, showing a strong association between violence exposure and absenteeism (91.3% among females). The economic implications are profound and highlight the importance of prioritizing violence prevention as a public health and economic imperative.

The need for comprehensive violence prevention education was emphasized by Provost et al. (2021)[17], who advocated for context-specific, unit-level violence prevention (VP) education integrated into broader safety strategies. The lack of structured training in our study cohort may partly explain the high prevalence of violence and the severe impacts reported, particularly among women who may have less access to de-escalation training and institutional support. Integrating such programs can empower providers with skills to manage violent encounters, potentially reducing both incidents and their psychological impacts.

Furthermore, Seddik et al. (2023)[18] explored violence against healthcare workers during the COVID-19 pandemic and noted that the pandemic did not significantly alter violence prevalence, emphasizing that systemic issues, rather than situational crises, drive violence. Our study findings are consistent with this view, showing persistently high violence rates that indicate deep-rooted structural problems, such as cultural attitudes toward healthcare workers and insufficient enforcement of protective laws.

In conclusion, our study contributes to the growing evidence base highlighting the disproportionate burden of workplace violence on female healthcare providers in MCH settings. It underscores the urgent need for multifaceted interventions, including improved security infrastructure, supportive organizational policies, targeted violence prevention training, and robust enforcement of protective legislation. Addressing these issues is crucial not only for safeguarding the health and well-being of healthcare workers but also for ensuring the quality of maternal and child health services in Pakistan.

Study strengths and limitations

This study has several notable strengths. The use of a stratified random sampling approach ensured representativeness across different hospital types, departments, and professional roles, thereby enhancing the generalizability of the findings. The deployment of a validated, culturally adapted, and pilot-tested questionnaire strengthened data reliability and minimized measurement errors. Furthermore, rigorous statistical analyses, including multivariable regression and subgroup analyses, provided robust insights into gender differences and risk factors.

However, the study also has limitations. Its reliance on self-reported data introduces the potential for recall bias and social desirability bias, which might have led to underreporting of violence incidents. Additionally, the cross-sectional design prevents causal inferences between workplace violence and its impacts on mental health and professional outcomes. Finally, although anonymity was ensured, fear of retaliation or institutional repercussions may have further suppressed reporting of severe cases. Future longitudinal studies are needed to better understand causal pathways and long-term effects.

CONCLUSION AND RECOMMENDATIONS

This study highlights the alarming prevalence of workplace violence against healthcare providers working in maternal and child health (MCH) settings in Karachi, with a particular focus on gender disparities. The findings reveal that female healthcare providers face disproportionately higher rates of violence, including both verbal and physical abuse, and suffer more severe psychological and professional consequences compared to their male counterparts. These consequences manifest as increased absenteeism, heightened PTSD symptoms, and stronger intentions to leave their positions, all of which contribute to workforce instability and compromised patient care.

Addressing this pervasive issue is critical not only for safeguarding healthcare workers' physical and mental well-being but also for ensuring the delivery of high-quality maternal and child health services. The evidence underscores the urgent need for comprehensive, multi-level interventions tailored to the unique vulnerabilities faced by female healthcare providers.

Recommendations:

- Enforce Sindh's 2021 protective legislation with strict penalties: Strong legal enforcement should be prioritized to deter violent behaviors against healthcare workers. Full implementation of this law, with clearly defined accountability mechanisms and swift judicial processes, can provide a safer working environment.
- Enhance hospital security measures and surveillance: Hospitals should invest in adequate security infrastructure, including trained security personnel, surveillance cameras, controlled access points, and emergency response protocols. Improved security can significantly reduce the incidence of violence and create a safer environment for both staff and patients.
- Provide gender-sensitive violence prevention and mental health support programs: Targeted training on de-escalation techniques, conflict resolution, and coping strategies should be integrated into routine professional development. Additionally, accessible mental health support services tailored to female providers can help mitigate the psychological impacts of violence and foster resilience.
- Promote reporting systems that ensure anonymity and protection from retaliation: Establishing transparent and confidential reporting channels can encourage healthcare workers to report incidents without fear of retribution. Institutions should develop policies that guarantee prompt investigation, support for victims, and sanctions against perpetrators.

Future Research Implications

Future research should focus on conducting longitudinal studies to establish causal relationships between workplace violence, mental health outcomes, and professional decisions such as absenteeism and turnover. Evaluating the effectiveness of implemented interventions, particularly those designed with gender-specific perspectives, will be crucial in determining best practices for violence prevention. Additionally, qualitative research exploring healthcare workers' lived experiences and perceptions can provide deeper insights into contextual factors and inform more culturally sensitive solutions. By addressing these research gaps, policymakers and healthcare administrators can develop evidence-based strategies that better protect healthcare workers and improve overall healthcare delivery.

SUPPORTING INFORMATION

File 1: Data collection questionnaire
File 2: Ethics approval letters
File 3: Detailed statistical codebook

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AUTHORS CONTRIBUTIONS

- Conceptualization: TM,
- Data Curation: TM, ST, MSO
- Formal Analysis: TM, MSO
- Investigation: TM, MSO
- Methodology: TM, MSO
- Project Administration: TM
- Resources: TM, MSO
- Software: TM, MSO
- Supervision: MBS
- Validation: TM, MSO
- Visualization: TM
- Writing – Original Draft: TM
- Writing – Review & Editing: TM, MSO

What is already known about this topic

- Workplace violence against healthcare providers is widespread globally.
- Violence rates are higher in MCH departments.
- Female healthcare providers face unique vulnerabilities.
- Violence contributes to workforce instability and care quality decline.

What this study adds to the current literature

- Female MCH providers in Karachi experience higher violence prevalence.
- Female staff face more severe health and professional impacts.
- Gender is an independent risk factor for workplace violence.
- Evidence supports urgent gender-focused policy and security interventions.

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