PDF version

Shiraz Shaikh,[1] Hamid Shahzad,[2] Mirwais Khan,[3] Lubna Baig,[1] Seemin Jamali,[4] Ibrahim Hashmi,[1]
Athar Hussain,[1]
Uzma Qadri,[1]
Lubna Mazharullah[1]
and Samina Zaib[1]

[1]Department Public Health, APPNA Institute of Public Health, Jinnah Sind Medical University Karachi, Pakistan. [2]Emergency Department, Lady Reading Hospital, Peshawar, Pakistan. [3]Health Care in Danger (HCiD) Initiative, International Committee of the Red Cross, Islamabad, Pakistan.
[4]Emergency Department, Jinnah Postgraduate Medical Center, Karachi, Pakistan.
(Correspondence to: Shiraz Shaikh: shiraz.shaikh@jsmu.edu.pk)

Abstract

Background: Violence against health care workers has been widely reported in Pakistan.

Aims: This study, from September 2019 to April 2020, aimed to determine the effect of low-cost interventions to reduce violent events in two tertiary-care emergency departments in Karachi and Peshawar, Pakistan.

Methods. In phase one, a surveillance system was established in each department and information on violent events was recorded for three months. In phase two, low-cost interventions designed to reduce violent events were introduced, e.g. awareness-raising material on violence for patients, training for health care workers and visitor identification cards. Violent events were then recorded for another three months and the percentage difference in number of violent events was calculated.

Results: In Karachi, 256 violent events occurred before the intervention and 225 after the intervention, a 12.1% reduction. Physical violence events decreased significantly by 42.9% (P = 0.044). The number of events perpetrated by health care workers decreased by 61.9% (P = 0.016) while those perpetrated by patients decreased only by 5.7% (P = 0.538). In Peshawar, 90 violent events occurred before the intervention and 45 events after, a 50.0% reduction (P = 0.009). The number of events perpetrated by health care workers was the same in both phases. Events perpetrated by patients or their companions decreased significantly by 59.72% (P = 0.001).

Conclusion: Violence against health care workers can be reduced significantly by improving their prevention and de-escalation skills. Client educational interventions, supplemented with hospital regulations and patient guidance, can also help reduce the incidence of violent events.

Key words: health personnel, violence, emergency service, hospital, Pakistan

Citation: Shaikh S; Shahzad H; Khan M; Baig L; Jamali S; Hashmi I; et al. Effect of low-cost interventions to reduce the incidence of violent events in two public sector tertiary-care emergency departments, Pakistan. East Mediterr Health J. 2022; 28(2):144–151. https://doi.org/10.26719/emhj.22.026

Received: 07/01/21; accepted: 15/06/21

Copyright © World Health Organization (WHO) 2022. Open Access. Some rights reserved. This work is available under the CC BY-NC-SA 3.0 IGO license (https://creativecommons.org/licenses/by-nc-sa/3.0/igo)

Introduction

Violence was declared a major public health problem in the Forty-Ninth World Health Assembly in 1996 (1). Almost one fourth of workplace violence occurs in the health care sector and emergency care is the subsector most affected by violence in the workplace (2). Fear of

violence affects the performance of health care providers and decreases their responsiveness to patients' health care needs (3). The major causes of violence reported include poor resources (shortage of staff, high patient flow, unavailability of medicines), emotional reaction to a serious health condition or adverse outcomes, poor quality of care (long waiting time, dissatisfaction with care), irresponsible behaviour of clients (overcrowding, unreasonable expectations) and lack of institutional policies (4–8).

In Pakistan, violence against health care workers has been widely reported by the print and electronic media. A large scale multicity study in Pakistan in 2019 found that about one third of all health care providers had experienced some kind of violence in the past six months and the emergency department was the most vulnerable in hospitals (9). Another study in Pakistan identified areas of intervention to prevent and de-escalate violence based on security assessment in some hospitals, which include health care worker training, patient education, enhancement of resources, improvement in quality of services and better security policies (10). While some interventions related to enhancing resources and facilities require substantial financial investment, others related to improving policies and changing behaviours can be implemented at low costs. This study in 2019 aimed to (i) introduce low-cost interventions to tackle violence against health care workers based on the recommendations of previous studies and (ii) gather evidence on the effectiveness of these interventions by establishing a violence surveillance system.

Methods

This was a pre–post quasi-experimental study carried out in the emergency departments of two public sector tertiary-care hospitals in two large cities of Pakistan, Karachi and Peshawar. The two hospitals selected have the largest emergency units in the provinces of Sindh and Khyber Pakhtunkhwa with average patient inflow of 1500 to 2000 patients a day and staff of 400–500 health care workers.

In the first phase, a surveillance system was establi-shed and information on violent events was gathered for three months. A violent event was defined as the experience of any verbal abuse (abusive language, shouted at or threatened), physical abuse (hitting, beating, pushing, throwing anything or attacking with any weapon) or damage to a facility (vandalizing any equipment or infrastructure). Software was developed to gather and record information on all violent events. This included information on the nature of the violent event (verbal or physical violence or damage to a facility), reason for the event, perpetrator of the event, person affected by event, and diagnosis of the patient. The possible responses to all the variables were coded based on findings of previous research (4,5) and an option for any other response was left open-ended. Three surveillance officers with a minimum qualification of a graduate degree were trained to record the information at all times, day and night. All the forms filled were printed and saved as hard copies. Back-up files of soft copies were maintained on a hard drive.

During phase 2, three different sets of low-cost interventions addressing client-related, provider-related and policy-related causes of violence against health care workers were introduced in both hospitals.

Client-related interventions included: awareness pamphlets and posters on the rights and responsibilities of patients, their companions and health care workers; warning posters on zero tolerance for violence; and awareness videos educating patients on trusting health care workers and following their advice played continuously on two newly installed television screens. Their content design was informed by baseline focus group discussions on the perceptions of health care workers, patients and companions.

Provider-related interventions included training for health care workers. Training was for two hours and comprised of four modules that focused on de-escalation, communication and information-sharing skills, coping with post-traumatic stress, and knowing the rights and responsibilities of health care workers. The training was delivered through participatory teaching methods including group discussions, videos and role play. All health care workers responsible for patient care, including doctors, paramedics and security guards, in the emergency department were trained in groups of 15 to 20. The training was conducted by master trainers of the health care in danger project.

The policy-related interventions in Karachi included: briefing health care workers on how to respond to violent events and seek help by calling security, as there was no procedure before the intervention on whom to inform in case of any event; the introduction of visitor identification (ID) cards to ensure restricted access; and training management staff on sharing information about waiting time and the progress of patients. However, in Karachi the policy-related interventions could not be implemented. There was resistance by management staff on being trained and sharing protocols on sharing information about waiting times and the progress of patients because of high work load. The management thought it was impractical to introduce visitor ID cards in an understaffed setting. Some of the security interventions that were already in place included continuous video monitoring and the presence of a security check-point near the emergency department for early response to any violent event. There was no triage system in the setting.

In Peshawar, all policy-related interventions including briefing health care workers on how to respond to violent events and seek help, introduction of visitor ID cards and training management staff on sharing information about waiting times and the progress of patients were

implemented. Some of the security interventions that were already in place included continuous video monitoring, a triage system which guided patients on waiting times and their treatment plan, and a panic alarm system for health care workers to seek help from security if required. Following the introduction of interventions in 2 weeks, surveillance continued for another 3 months.

Statistical analysis

The main outcome indicator was the number of violent events reported before and after the intervention, i.e. number of overall violent events three months before and three months after the intervention. The incidence of violent events before and after the intervention was based on assessed different characteristics of the violence. This included change in number of verbal and physical events, change in the number of events according to different perpetrators, victims, sites, timing, reasons and seriousness of the patient's condition based on diagnosis. We used the SALT (sort, assess, lifesaving intervention, treatment and/or transport) method of triage to classify the patients as those requiring immediate, minimal or delayed care (11). Causes of violence were classified as events happening due to: (i) irresponsible behaviour of patients or their companions (i.e. overcrowding, not following instructions, demand for care of personal choice); (ii) poor quality of care (delay in care, unavailability of staff, mistake in care); (iii) emotional reaction to serious health condition or adverse outcome; (iv) lack of resources (medicines and equipment); (v) impolite behaviour of health care worker; and (vi) conflict between health care workers.

We calculated the change in overall incidence of violence and incidence based on different characteristics of the violent event as percentage change in number of events. Percentage change in the incidence of events was calculated by comparing two person-time rates before and after the interventions using the mid-P exact test. The 95% confidence interval (CI) was reported for the percentage change. Open Epi software was used to compare the differences.

Ethical approval

The Institutional Review Board of Jinnah Sindh Medical University approved the study (IRB No: JSMU/IRB/2019/261). The names of the hospitals have been kept confidential at their request.

Results

Table 1 shows the change in the overall number of events before and after the intervention based on the type of violence. In Karachi, violent events decreased overall by –12.1% after the intervention but this was not statistically significantly (P = 0.157). However, physical violence events decreased significantly by –42.9% (P = 0.044). In Peshawar, violent events decreased significantly overall by –50% (P = 0.009). Verbal violence decreased significantly by –47.7% (P

= 0.003) and physical violence decreased by –57.9% P = 0.035).

Table 2 shows the change in number of violent events according to characteristics of the event in Karachi. After the intervention, the number of violent events perpetrated by health care workers decreased significantly (–61.9%; P = 0.016) while those perpetrated by patients or companions decreased slightly but not significantly (–5.6%; P = 0.538). The number of violent events with administrative staff and doctors as victims increased by 31.2% and 24.7%, respectively, but these differences were not statistically significant. For nurses and guards as victims, the number of violent events decreased significantly after the intervention by –34.4% (P = 0.032) and –32.6% (P = 0.015), respectively. The number of events happening in the outpatient department increased (+42.8%) though this was not statistically significant, while the number of events happening at the gate decreased significantly (–58%; P = 0.001). The number of violent events that occurred when patients required immediate care because of the seriousness of their condition increased significantly after the intervention (+24%; P = 0.039) but decreased significantly when patients' conditions required only minimal care (–44%; P =0.001).

Table 3 shows the changes in number of events according to different characteristics in Peshawar. The number of violent events perpetrated by health care workers remained the same before and after the intervention, while the number of violent events perpetrated by patients or companions decreased significantly by –59.72% (P = 0.001). The number of violent events happening in the afternoon decreased significantly by –62.5% (P = 0.001). The number of violent events that occurred when patients required immediate care because of the seriousness of their condition decreased significantly after the intervention (–63.4%; P = 0.004). The number also decreased significantly when patients' conditions required only minimal care (–59.3%; P =0.009).

Table 4 shows the number of violent events before and after the intervention based on the reasons for the violence. In Karachi, there were decreases in violent events due to quality of care and lack of resources but these were not statistically significant. In Peshawar, violent events due to irresponsible behaviour of patients or their companions and quality of care decreased significantly by –62.9% (P = 0.001) and –78.26% (P = 0.005), respectively.

Discussion

This is the first time that data were collected by establishing a continuous surveillance system on violent events in health facilities in Pakistan, therefore, the estimates are likely to be accurate. Usually, violent events in the workplace are under-reported in survey-based estimates (12).

In Karachi, there was a small but statistically insignificant reduction in violent events overall before and after the intervention. However, physical violence events decreased significantly. In Peshawar, there was a significant reduction in all violent events and both forms of violence. This suggests that the interventions were more effective in Peshawar than Karachi. The main reason for this difference could be the well established triage system already in place in Peshawar and the guidance given to patients at the information counter. There was a plan to train receptionists in Karachi on how to provide guidance to patient companions on waiting times, process of care and to introduce visitor ID cards, but this intervention was not implemented because the hospital was unwilling to adopt these interventions due to the high patient numbers. The absence of a triage and guidance system as the reason for the difference is further supported by the fact that violent events increased significantly with patients requiring immediate care in Karachi while such events decreased significantly in Peshawar. Other research suggests that multi-component interventions are effective in reducing violent events significantly. A large randomized controlled trial in 2017 on combined environmental, administrative and behaviour change strategies in the United States of America in 20 intervention hospital departments and 21 control hospital departments showed a 52% significant difference in violent events between intervention and control departments (13). A 2019 study in the ophthalmic emergency department of a university hospital in France attempted to address long waiting times and lack of information through implementation of a computerized triage algorithm. This was linked to a waiting room patient call system, signage to help patients navigate the department, educational messages broadcast in the waiting room, the presence of a mediator and video surveillance. The results showed a 53% decrease in the violence rate in the first month of the intervention (14). The study also showed that patient-perpetrated violence decreased significantly. A study of nurses in an Iranian emergency department evaluated an intervention that helped in sharing information with the patient companions on patients' condition and waiting times, as well as debriefing sessions. It found that verbal violence decreased significantly by one third (15).

In our study, physical violence events decreased at both sites. This may be due to improved ability of health care workers to de-escalate violence. Previous studies have also shown positive effects of training health care workers in communication and de-escalation skills. For example, the introduction of a programme to prevent and manage aggressive behaviour at a tertiary referral centre in Canada showed a 60% significant reduction in verbal and physical violence at three months of follow-up (16). Studies have also shown that training health care workers in communication and de-escalation skills decreases their perception of aggression against them and increases their confidence in dealing with aggression (17,18). However, in our study, violent events perpetrated by health care workers remained unchanged in Peshawar. This could be due to an increase in violent events between health care workers as a result of a policy change in the job structure of doctors during the study period.

Violent events perpetrated by patient companions decreased significantly in Karachi but not in

Peshawar. This is supported by the fact that violent events as a result of irresponsible behaviour of companions decreased significantly in Peshawar but not in Karachi. These results can be explained by the fact that in Karachi, client-centred interventions were mainly educational and did not include improvement in guidance to the patients, information-sharing and information on the waiting time to expect. It is likely that in emergency situations, educational interventions will have a greater effect when supplemented by interventions to facilitate patients' visits as in the case of Peshawar.

Regarding site and timing of the violent events, in Peshawar, violent events decreased at all sites and at all times of the day but these changes were only significant for events in doctors' duty room and in the afternoon. In Karachi, violent events decreased at all sites and at all times of the day but these changes were only significant for events at the gate. This finding in Karachi could be due to warning posters and awareness videos at the entrance to the emergency department. Moreover, reduction of violent events in Karachi was during the morning and afternoon compared with night time. This could be because there are fewer guards during night shifts

While some reactive aggression due to the patient's condition or adverse outcome is unavoidable, other aspects of patient behaviour can be improved through interventions to facilitate patients' visits and regulatory interventions.

Our study has some limitations. This was a quasi-experimental pre–post longitudinal study without randomization into intervention and control groups. However, the expense associated with hiring staff for continuous surveillance made it impossible to conduct a multicentre study with control settings. Similarly, due to a limited budget, the duration of the study was six months, i.e. three months baseline and three months post-intervention data gathering. Therefore, it was not possible to adjust the trends for changes in situation and seasons. The client-facilitated interventions were not fully implemented in Karachi because of the practical considerations mentioned earlier.

Our results showed a visible benefit of training health care workers in communication and de-escalation skills in both settings. This calls for institutionalization of de-escalation training in all the hospitals in Pakistan and similar countries, especially in emergency departments. The fact that the educational component aimed to influence the behaviour of patients and their companions did not produce the desired results in Karachi but was effective in Peshawar may be because patient and companion behaviour is influenced more by the quality of care and assistance they received. Therefore, triage and information counters to provide information to patients on the process of care and waiting times should be introduced in all emergency units

and their effects studied over time. Dedicated staff should be hired for this purpose and data on violent events in these hospitals should be recorded.

Acknowledgement

We thank our data collectors who monitored the violence events at both facilities.

Funding: This study was conducted under the framework of the Healthcare in Danger Initiative of the International Red Cross and Red Crescent Movement for protection of health care against violence.

Competing interests: None declared.

Effets des interventions à faible coût visant à réduire l'incidence d'événements de violence dans deux services d'urgence publics de soins tertiaires au Pakistan

Résumé

Contexte : La violence à l'encontre des agents de santé a été largement signalée au Pakistan.

Objectifs : La présente étude, menée de septembre 2019 à avril 2020, avait pour objectif de déterminer les effets des interventions à faible coût visant à réduire les événements de violence dans deux services d'urgence de soins tertiaires à Karachi et Peshawar (Pakistan).

Méthodes : Lors de la première phase, un système de surveillance a été installé dans chaque service et les informations sur les événements de violence ont été enregistrées pendant trois mois. Au cours de la deuxième phase, des interventions à faible coût visant à réduire les événements de violence ont été introduites, notamment par le biais de matériels de sensibilisation à la violence destinés aux patients, de formations pour les agents de santé et de badges d'identification pour les visiteurs. Les événements de violence ont ensuite été enregistrés pendant trois mois supplémentaires et la différence en pourcentage du nombre de ces événements a été calculée.

Résultats : À Karachi, 256 événements de violence se sont produits avant la mise en place de l'intervention et 225 après, soit une baisse de 12,1 %. Les événements de violence physique ont connu une baisse significative de 42,9 % (p = 0,044). Le nombre d'événements perpétrés par des agents de santé a été réduit de 61,9 % (p = 0,016) tandis que ceux causés par des patients n'ont baissé que de 5,7 % (p = 0,538). À Peshawar, 90 événements de violence se sont produits avant la mise en place de l'intervention et 45 après, soit une baisse de 50,0 % (p = 0,009). Le nombre d'événements perpétrés par des agents de santé était le même au cours des deux phases. Les événements causés par des patients ou leurs accompagnants ont connu une baisse significative de 59,72 % (p = 0,001).

Conclusion : La violence à l'encontre des agents de santé peut être réduite de manière significative en améliorant leurs compétences en matière de prévention et de désamorçage. Les interventions éducatives destinées aux patients, accompagnées de réglementations hospitalières et de conseils aux patients, peuvent également permettre de réduire l'incidence des événements de violence.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] 225 [illegible] 256 [illegible] : 42.9% [illegible] .12.1% [illegible] .(0.044 = [illegible] 61.9% [illegible] (0.016 = [illegible] 90 [illegible] .(0.538 = [illegible] 5.7% [illegible] .(0.009 = [illegible] 50.0 [illegible] 45 [illegible] .(0.001 = [illegible] 59.72% [illegible]

[illegible] : [illegible] .

References

1. Violence: a public health priority. Global Consultation on Violence and Health, Geneva, 2–3 December 1996. Geneva: World Health Organization; 1996.
2. Guidelines on coping with violence in the workplace, Geneva: International Council of Nurses; 1999 (https://static1.squarespace.com/static/579770cd197aea84455d6908/t/57d86302d1758e16f4e0f072/1473798914990/guideline_violence.pdf, accessed 6 September 2021).
3. Rosenthal LJ, Byerly A, Taylor AD, Martinovich Z. Impact and prevalence of physical and verbal violence toward healthcare workers. Psychosomatics. 2018;59(6):584–90. https://doi.org/10.1016/j.psym.2018.04.007
4. Hamdan M, Abu Hamra A. Workplace violence towards workers in the emergency departments of Palestinian hospitals: a cross-sectional study. Hum Resour Health. 2015;13:28. https://doi.org/10.1186/s12960-015-0018-2
5. Algwaiz WM, Alghanim SA. Violence exposure among health care professionals in Saudi public hospitals. A preliminary investigation. Saudi Med J. 2012;33(1):76–82
6. Kumar M, Verma M, Das T, Pardeshi G, Kishore J, Padmanandan A. A study of workplace violence experienced by doctors and associated risk factors in a tertiary care hospital of south Delhi, India. J Clin Diagn Res. 2016;10(11):LC06–10. https://doi.org/10.7860/JCDR/2016/22306.8895
7. Tohidnia MR, Rostami R, Moradi Ghomshei S, Moradi S, Abbasi Azizi S. Incidence rate of physical and verbal violence inflicted by patient and their companions on the radiology department staff of educational hospitals of medical university, Kermanshah, 2017. Radiol Med. 2019;124(1):14–8. https://doi.org/10.1007/s11547-018-0933-0
8. Baig LA, Shaikh S, Polkowski M, Ali SK, Jamali S, Mazharullah L, et al. Violence against health care providers: a mixed-methods study from Karachi, Pakistan. J Emerg Med. 2018;54(4):558–66. https://doi.org/10.1016/j.jemermed.2017.12.047
9. Shaikh S, Baig LA, Hashmi I, Khan M, Jamali S, Khan MN, et al. The magnitude and

determinants of violence against healthcare workers in Pakistan. BMJ Glob Health. 2020;5(4):e002112. https://doi.org/10.1136/bmjgh-2019-002112

10. Shaikh S, Baig LA, Hashmi I, Polkowski M. Findings from Healthcare in Danger Project: Pakistan security assessment of a public and private tertiary care hospital in Karachi: gaps and way forward. J Pak Med Assoc. 2018;68(11):1672–81.

11. SALT mass casualty triage: concept endorsed by the American College of Emergency Physicians, American College of Surgeons Committee on Trauma, American Trauma Society, National Association of EMS Physicians, National Disaster Life Support Education Consortium, and State and Territorial Injury Prevention Directors Association. Disaster Med Public Health Prep. 2008;2(4):245–6. https://doi.org/10.1097/DMP.0b013e31818d191e

12. Arnetz JE, Hamblin L, Ager J, Luborsky M, Upfal MJ, Russell J, et al. Underreporting of workplace violence: comparison of self-report and actual documentation of hospital incidents. Workplace Health Saf. 2015;63(5):200–10. https://doi.org/10.1177/2165079915574684

13. Arnetz JE, Hamblin L, Russell J, Upfal MJ, Luborsky M, Janisse J, et al. Preventing patient-to-worker violence in hospitals: outcome of a randomized controlled intervention. J Occup Environ Med. 2017;59(1):18–27. https://doi.org/10.1097/JOM.0000000000000909

14. Touzet S, Occelli P, Denis A, Cornut PL, Fassier JB, Le Pogam MA, et al. Impact of a comprehensive prevention programme aimed at reducing incivility and verbal violence against healthcare workers in a French ophthalmic emergency department: an interrupted time-series study. BMJ Open. 2019;9(9):e031054. https://doi.org/10.1136/bmjopen-2019-031054

15. Hemati-Esmaeili M, Heshmati-Nabavi F, Pouresmail Z, Mazlom S, Reihani H. Educational and managerial policy making to reduce workplace violence against nurses: an action research study. Iran J Nurs Midwifery Res. 2018;23(6):478–85. https://doi.org/10.4103/ijnmr.IJNMR_77_17

16. Fernandes CM, Raboud JM, Christenson JM, Bouthillette F, Bullock L, Ouellet L, et al. The effect of an education program on violence in the emergency department. Ann Emerg Med. 2002;39(1):47–55. https://doi.org/10.1067/mem.2002.121202

17. Swain N, Gale C. A communication skills intervention for community healthcare workers reduces perceived patient aggression: a pretest–post-test study. Int J Nurs Stud. 2014;51(9):1241–5. https://doi.org/10.1016/j.ijnurstu.2014.01.016

18. Baig L, Tanzil S, Shaikh S, Hashmi I, Khan MA, Polkowski M. Effectiveness of training on de-escalation of violence and management of aggressive behavior faced by health care providers in a public sector hospital of Karachi. Pak J Med Sci. 2018;34(2):294–9. https://doi.org/10.12669/pjms.342.14432

Thursday 11th of July 2024 02:33:25 AM