RESEARCH ARTICLE

# De-escalation training's impact on nurses facing workplace violence in public and private hospitals in Pakistan: A quasi-experimental study

Zohra Imran[1], Sineer Micah[2], Sumaira Panjwani[3], Ihsan Ullah[4]

## Abstract

**Objective:** To assess the effectiveness of de-escalation training among nurses exposed to workplace violence in hospitals.

**Method:** The quasi-experimental study was conducted at the private-sector Ziauddin Hospital and the public-sector Dr Ruth K.M. Pfau Civil Hospital, Karachi, from June to December 2022, and comprised nurses aged 20-50 years with a minimum of six months of professional experience who had faced exposure to workplace violence in the preceding two months. The subjects were randomised into intervention group A and control group B. Those in group A received de-escalation training, while their counterparts in group B engaged in infrequent discussions. De-escalation training was delivered through a one-day workshop. Nurses' self-attributed confidence levels were measured at baseline and two months post-training using the Confidence Coping with Patient Aggression instrument. Data was analysed using SPSS 22.

**Result:** Of the 131 subjects, 95(72.5%) were females, 36(27.5%) were males and 102(77.9%) were aged 20-30 years. There were 67(51.1%) subjects from the public-sector facility and 64(48.9%) were from the private-sector entity. There were 67(51.1%) subjects n group A and 64(48.9%) in group B. De-escalation training proved significantly effective both in private and public hospital settings compared to baseline scores ($p<0.05$) and the control group ($p<0.05$).

**Conclusion:** Among the nurses exposed to workplace violence, de-escalation training was successful in boosting the confidence level of the nurses.

**Keywords:** Workplace violence, De-escalation training, Nurses, Violence, Healthcare providers. (JPMA 75: 1725; 2025)

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## Introduction

Workplace violence (WPV) in the healthcare sector is a pervasive and critical issue that affects healthcare providers (HCPs) globally, particularly nurses who are often on the front lines of patient care. In 1996, the 49th World Health Assembly declared violence against healthcare workers as a major public health issue that is commonly found in almost every healthcare organisation around the world.[1] WPV encompasses a range of behaviours, including physical assaults, verbal abuse, threats and bullying, which can have severe physical and psychological impacts on victims. The prevalence of WPV in healthcare settings has garnered increasing attention due to its implications for both individual HCPs and the overall healthcare system's functionality and safety.[2] Globally, WPV prevalence is 61.9%.[3] Among the types of violence committed against HCPs, verbal abuse (57.6%) was the most common, while threats (33.2%) and sexual harassment (12.4%) were the other forms of violence taking place in the healthcare sector.[3] The impact of WPV on nurses is profound. It can lead to a range of negative outcomes, including physical injuries, psychological trauma, decreased job satisfaction, and burnout. Nurses who experience WPV are more likely to report higher levels of stress, anxiety and depression, which can affect their ability to provide quality care to patients. Additionally, the fear of violence can result in increased absenteeism, higher turnover rates, and reluctance among potential candidates to pursue nursing as a career.[2,4,5]

In Pakistan, the situation is particularly concerning due to a combination of socio-cultural, economic and systemic factors that contribute to the prevalence of WPV in both public and private healthcare settings. Studies have shown that Pakistani nurses frequently encounter violence from patients, their families and even colleagues. These incidents are often underreported due to fear of retaliation, lack of support from the administration, and cultural norms that discourage speaking out against such abuse.[6] Rehan et al. in 2023 conducted a systematic review, revealing that WPV against HCPs in Pakistan ranges from 25% to 100% across various settings. The study underscored WPV as a serious occupational hazard, and urged the authorities to implement protective policies and conduct large-scale surveys to address the growing concern.[7] According to a study in India, the main reasons for violent behaviour among patients were reported to be over-expectations from the medical staff, and lack of literacy among the patients. It was stated that most of the violent behaviour

[1-3]Ziauddin University, Karachi, Pakistan; [4]Aga Khan University Hospital, Karachi, Pakistan.

**Correspondence:** Ihsan Ullah. e-mail: Ihsanullahkmu@gmail.com

ORCID ID: 0000-0001-8724-2624

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was seen in the paediatrics department by the patients' caretakers.[8] Focussed group interviews revealed that WPV increased fear and dissatisfaction among the nurses and there was a huge urge for intervention training to prevent and deal with WPV.[9]

De-escalation training has been identified as an effective intervention to mitigate WPV. This training equips healthcare workers with the skills to recognise early signs of aggression, employ communication strategies to defuse potentially violent situations, and implement safe conflict resolution techniques. Such training programmes have been associated with improved confidence in handling aggressive behaviour, reduced incidence of WPV, and enhanced workplace safety.[10]

The reasons behind WPV have been identified as poor facilities, heavy workload, lack of training to deal with aggression, and ineffective means to prevent WPV.[11]

Moreover a study has demonstrated the effectiveness of de-escalation training in reducing WPV and improving the confidence and skills of HCPs.[12] Similarly, a study reported that emergency department staff who received de-escalation training experienced fewer violent incidents and felt better prepared to handle aggression.[13] Despite the proven benefits of de-escalation training in various international contexts, there appears to be a lack of research on its effectiveness in the Pakistani healthcare setting. The current study was planned to fill the gap in literature by assessing assess the effectiveness of de-escalation training among nurses exposed to WPV in Pakistani hospitals.

## Subjects and Methods

The quasi-experimental study was conducted at the private-sector Ziauddin Hospital and the public-sector Dr Ruth K.M. Pfau Civil Hospital, Karachi, from June to December 2022. The Ziauddin Hospital (North Campus) is a 400-bed private facility with about 400 nurses, while the Civil Hospital is a 900-bed public hospital with well over 400 nurses.

After approval from the ethics review board of both the institutions, the sample size was calculated using G*Power software.[14] The effect size was calculated through pre- and post-intervention difference in mean confidence score i.e., 3.57 (27.49-23.92), and the assumed standard deviation was 10. In addition, a 95% confidence level and 5% absolute precision were considered for sample size calculation along with 80% power. The sample size was inflated by 10% to cover for possible dropout. The sample was raised using non-probability convenience sampling technique. Those included were nurses at various levels, including nurse managers, head nurses, senior nurses and novice nurses in inpatient departments, aged 20-50 years with a minimum of six months of professional experience who had faced exposure to WPV in the preceding two months. Those not holding a valid Pakistan Nursing Council (PNC) license, not regularly employed, and those working in outpatient departments (OPDs) were excluded. After taking written informed consent from all the selected participants, they were non-randomly assigned to the intervention group A and control group B based on their departments and duty schedules to ensure feasibility within the hospital settings. Those in group A received de-escalation training, while their counterparts in group B engaged in infrequent discussions. Both the groups were further divided into public-sector A1 and B1, and private sector A2 and B2.

Data was collected by using Urdu and English pre-training validated and adapted Thackrey's (1987) Confidence in Coping with Patient Aggression Instrument (CCPAI). which is a 10-item questionnaire designed to standardise subjective responses to specific questions.[15] The CCPAI is a 10-item questionnaire designed to standardize subjective responses to specific questions. It measures the confidence of staff in managing aggressive and violent patients, and multiple studies have demonstrated a significant increase in staff confidence following de-escalation training.[16] The instrument measures the confidence of staff in managing aggressive and violent patients, and studies using the CCPAI have demonstrated a significant increase in confidence among staff in managing aggressive and violent patients following de-escalation training (Thackrey, 1987).[16] The adapted questionnaire consisted of closed-ended questions divided into three sections. Section one included items related to the demographic characteristics of the participants. Section two focussed on participants' experiences with violence they had encountered. The third section comprised 10 confidence-related questions, with scores 1-4 indicating low confidence, 5-7 indicating moderate confidence, and 8-11 indicating high confidence.[17,18]

Subgroups A1 and A2 were given de-escalation training in the form of 4-hour workshop that was based on a single-day training. This was provided to the participants by the principal investigator. Subgroups B1 and B2 were provided with sporadic discussions regarding ways to reduce WPV in hospitals. Finally, the results were compared between intervention and control groups in public and private hospitals after the intervention using the same questionnaire.

The implementation phase of the de-escalation training consisted of five modules (Annexure). The training,

**Annexure:** De-escalation training modules.

**Module 1: Understanding Violence and Stress**
- To develop an understanding of the role of the International Committee of the Red Cross (ICRC) and the Health Care in Danger (HCID) project
- To discuss the research findings regarding violence against healthcare
- To discuss types of violence in healthcare settings
- To identify factors that lead to violence in different healthcare settings
- To discuss the effect of violence on healthcare professionals and its management

**Module 3: Patient Communication Protocol**
- To realize the importance of communication and professional behaviour in averting/de-escalating violent situations
- To demonstrate effective communication skills with patients, healthcare teams, and peers
- To demonstrate breaking bad news

**Module 2: Escalation and De-escalation**
- To identify the warning signs of impending violence
- To identify elements in given situations that lead to violence
- To discuss strategies that would help de-escalate situations that otherwise may turn violent
- To practice behaviours that would prevent violent situations from happening or de-escalate violent situations

**Module 4: Post- Traumatic Stress Disorder (PTSD)**
- To identify signs and symptoms of stress and Post-Traumatic Stress Disorder (PTSD) resulting from violence
- To identify effective recovery mechanisms and to manage PTSD

**Module 5: Rights and Responsibilities of Health Care Providers in Violent Situations)**
- To discuss his/her rights and responsibilities in violent situations.
- To identify provisions available in the constitution of Pakistan to protect health care providers from acts of violence.
- To discuss interventions that should be implemented at the institutional level for preventing violence."

delivered separately at private and public hospitals, consisted of multiple teaching strategies, like brainstorming and video-based learning on different scenarios related to de-escalation of violence in healthcare settings. De-escalation training handbooks were also provided to the participants.

Data was analysed using SPSS 22. Data normality was assessed using the Shapiro-Wilk test. Parametric tests, including the paired t-test and independent t-test, were used accordingly. Non-parametric tests, including the Wilcoxon signed-rank test and Wilcoxon rank-sum test, were used as appropriate. Descriptive statistics included mean±standard deviation (SD) for continuous variables, and frequencies with percentages for categorical variables. Chi-square test was used to assess association between demographic variables and the occurrence of violence in both public and private hospitals. Standardised effect sizes, such as Cohen's d, were calculated, particularly for paired pre-post comparisons, to provide a more comprehensive understanding of the impact of the de-escalation training intervention and to strengthen the overall rigour of the statistical analysis. P<0.05 was considered significant.

## Results

Of the 131 subjects, 95(72.5%) were females and 36(27.5%) were males, while 102(77.9%) were aged 20-30 years and 59(45%) had work experience 1-5 years. There were 67(51.1%) subjects from the public-sector facility and

**Table-1:** Patients' baseline characteristics (n=160).

| Variable | **Population** (n=131) n (%) | **Public** (n=67) n (%) | **Private** (n=64) n (%) |
|---|---|---|---|
| **Gender** | | | |
| - Male | 36 (27.5) | 14 (20.9) | 22 (34.4) |
| - Female | 95 (72.5) | 53 (79.1) | 42 (65.6) |
| **Designation** | | | |
| - Nursing Manager | 7 (5.3) | 4 (6.0) | 3 (4.7) |
| - Head Nurse | 22 (16.8) | 13 (19.4) | 9 (14.1) |
| - Senior Staff | 67 (51.1) | 39 (58.2) | 28 (43.8) |
| - Novice Nurse | 31 (23.7) | 8 (11.9) | 23 (35.9) |
| - Other Instructors | 6 (4.6) | 3 (4.5) | 3 (4.7) |
| **Work Experience** (years) | | | |
| - 1-5 | 59 (45.0) | 30 (44.8) | 29 (45.3) |
| - 5-10 | 33 (25.2) | 21 (31.3) | 12 (18.8) |
| - 11-15 | 7 (5.3) | 4 (6.0) | 3 (4.7) |
| - 16-20 | 3 (2.3) | 2 (3.0) | 1 (1.6) |
| - 21-25 | 0 (0) | 0 (0) | 0 (0) |
| - 26-30 | 5 (3.8) | 4 (6.0) | 1 (1.6) |
| - 31-35 | 2 (1.5) | 2 (3.0) | 0 (0) |
| - 36-40 | 2 (1.5) | 2 (3.0) | 0 (0) |
| **Age** (years) | | | |
| - 18-20 | 1 (0.8) | 1 (1.5) | 0 (0) |
| - 20-30 | 102 (77.9) | 47 (70.1) | 55 (85.9) |
| - 31-40 | 14 (10.7) | 8 (11.9) | 6 (9.4) |
| - 41-50 | 5 (3.8) | 4 (6.0) | 1 (1.6) |
| - 51-60 | 9 (6.9) | 7 (10.4) | 2 (3.1) |

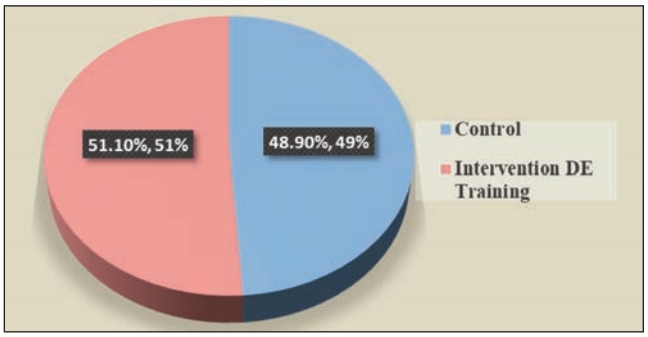


**Figure-1:** Hospital settings distribution of training (n=131).

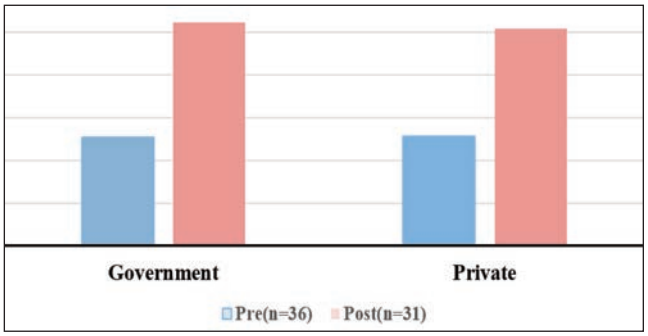


**Figure-2:** Comparison of mean pre- and post-intervention scores on de-escalation training among nurses working in government and private hospitals (Pre: n=36; Post: n=31).

**Table-2:** Comparison of exposure to workplace violence between nurses at public and private hospitals (n=131).

| | **public** (n=67) n (%) | **private** (n=64) n (%) | ***p*-value** |
|---|---|---|---|
| 1. Last two-month experience of violence? | | | |
| Experience | 11(16.4) | 25(39.1) | |
| Witnessed | 8(12) | 15(23.4) | <0.001 |
| Experience and witnessed both | 48(71.6) | 24(37.5) | |
| 2. Experienced any incident of verbal or physical violence (during last two months)? | | | |
| 1 experienced one time | 14(20.9) | 10(15.6) | |
| 2 experienced twice time | 22(32.8) | 11(17.2) | |
| 3 experienced three time | 6(9.0) | 5(7.8) | |
| 4 experienced fourth time | 4(6.0) | 2(3.1) | 0.123 |
| 5 experienced fifth time | 2(3.0) | 3(4.7) | |
| 6 experienced six time | 1(1.5) | 3(4.7) | |
| 7 experienced seven time | 1(1.5) | 2(3.1) | |
| 8 experienced eight time | 2(3.0) | 1(1.6) | |
| 9 experienced nine and more | 15(22.4) | 27(42.2) | |
| Relationship or contact with aggressor | | | |
| Attendants | 0(0) | 26(40.6) | |
| Patients | 40(59.7) | 26(40.6) | <0.001 |
| Patients and attendants | 27(40.3) | 12(18.8) | |
| Verbally abuse | | | |
| No | 26(38.8) | 9(14.1) | 0.001 |
| Yes | 41(61.2) | 55(85.9) | |
| Beaten | | | |
| No | 51(76.1) | 51(79.7) | 0.39 |
| Yes | 16(23.9) | 13(20.3) | |
| Push and pull | | | |
| No | 41(61.2) | 41(64.1) | 0.437 |
| Yes | 26(38.8) | 23(35.9) | |
| Thrown | | | |
| No | 42(62.7) | 59(92.2) | <0.001 |
| Yes | 25(37.3) | 5(7.8) | |
| Threaten | | | |
| No | 37(55.2) | 53(82.8) | 0.001 |
| Yes | 30(44.8) | 11(17.2) | |
| Damage to personal belongings | | | |
| No | 57(85.1) | 60(93.8) | 0.092 |
| Yes | 10(14.9) | 4(6.3) | |

64(48.9%) were from the private-sector entity (Table 1).

There were 67(51.1%) subjects in group A and 64(48.9%) in group B (Figure 1). Incidents of verbal abuse were found more in the private hospital 55(85.9%), while incidents of damage to personal belongings, throwing and threatening were observed more in the public hospital ($p$<0.001) (Table 2).

De-escalation training proved significantly effective in both private and public hospital settings compared to baseline scores ($p$<0.05) (Table 3), and compared to the control group ($p$<0.05) (Table 4). In addition as illustrated in Figure 2, the mean post-intervention scores significantly improved in both government and private hospital nurses compared to their respective pre-intervention scores.

There was a significant difference in terms of confidence scores between control group 10.64±4.03 and intervention group 25.79±3.26 ($p$<0.001) (Table 5).

The mean confidence score in the public hospital improved from 12.69±2.93 at the baseline to 26.11±3.32 post-intervention, and the corresponding values for the private hospital were 12.8±4.6 and 25.42±3.21 ($p$<0.001) (Table 6).

## Discussion

The quasi-experimental study was planned to evaluate the effectiveness of de-escalation training on nurses exposed to WPV. A study in China explored a similar topic, shedding light on the importance of these aspects within training workshops.[19] Additional skills identified in the literature include problem-solving, critical thinking, ensuring quality patient care, fostering a positive attitude towards managing aggression, and cultivating confidence in handling aggressive incidents.[20-22]

The current findings indicate that 72(55%) nurses both experienced and witnessed WPV, 36(27.5%) nurses only experienced incidents of WPV, whereas 23(17.6%) nurses were witness of violence in workplace. These findings affirmed the findings from previous studies conducted in Lahore, Pakistan,[23] demonstrating evidence of a high frequency of violence. Other findings include the frequency of having experienced verbal or physical violence 42(32.1%). In contrast, a study[24] in the United States indicated that nurses faced high exposure to verbal and physical violence at their workplace. The present study also revealed that 59% of he nurses faced WPV by patients they were attending, 40.6% by the patients' attendants, and 40.3% by both the patients and attendants. These findings are in line with earlier studies.[25,26]

In the current study, the type of WPV was beating 22.90%, pushed 37.40), thrown at 22.90%, verbal abuse 73.28%, threat 31.28%, and damage to personal belongings 10.68%. Thee reults were in line with earlier studies,[27,28]

The current study found a significant increase in the confidence level of nurses after the de-escalation training in both public and private healthcare settings. These findings concur with those of a study that focussed only on public hospitals in Karachi.[29] Post-training scores regarding confidence levels have been higher because of better skills to deal with aggressive patients and their relatives.[19,29] The de-escalation training had a positive impact on the perception of nurses in the current sample, which was reported earlier as well.[13,29,30]

The positive result showed that skill-building, empathy development, and self-efficacy support violence prevention and de-escalation,[31,32] which increases nurses' confidence level at workplace.[33] Nurses have described the

**Table-3:** Effectiveness of de-escalation training in government and private hospitals (n=67).

| n (%) | | **Public** (n=36) | | **private** (n=31) | |
|---|---|---|---|---|---|
| | | **Pre** | **Post** | **Pre** | **Post** |
| 1. Comfort in working with an aggressive patient | Low | 26(72.2) | 0(0) | 17(54.8) | 1(3.2) |
| | Moderate | 7(19.4) | 22(61.1) | 10(32.3) | 17(54.8) |
| | High | 3(8.3) | 14(38.9) | 4(12.9) | 13(41.9) |
| | *p*-value | <0.001 | <0.001 | | |
| 2. Present level of training for handling psychological aggression | Low | 17(47.2) | 0(0) | 13(41.9) | 0(0) |
| | Moderate | 16(44.4) | 5(13.9) | 13(41.9) | 2(6.5) |
| | High | 3(8.3) | 31(86.1) | 5(16.1) | 29(93.5) |
| | *p*-value | <0.001 | <0.001 | | |
| 3. Ability to intervene physically with an aggressive patient | Low | 18(50) | 0(0) | 16(51.6) | 0(0) |
| | Moderate | 16(44.4) | 16(44.4) | 12(38.7) | 16(51.6) |
| | High | 2(5.6) | 20(55.6) | 3(9.7) | 15(48.4) |
| | *p*-value | <0.001 | <0.001 | | |
| 4. Self-assurance in the presence of an aggressive patients | Low | 4(11.1) | 0(0) | 15(48.4) | 1(3.2) |
| | Moderate | 29(80.6) | 17(47.2) | 13(41.9) | 13(41.9) |
| | High | 3(8.3) | 19(52.8) | 3(9.7) | 17(54.8) |
| | *p*-value | <0.001 | <0.001 | | |
| 5. Ability to intervene psychologically with an aggressive patient | Low | 12(33.3) | 1(2.8) | 16(51.6) | 0(0) |
| | Moderate | 21(58.3) | 16(44.4) | 11(35.5) | 16(51.6) |
| | High | 3(8.3) | 19(52.8) | 4(12.9) | 15(48.4) |
| | *p*-value | <0.001 | <0.001 | | |
| 6. Present level of training for handling physical aggression | Low | 24(66.7) | 0(0) | 16(51.6) | 0(0) |
| | Moderate | 11(30.6) | 14(38.9) | 11(35.5) | 18(58.1) |
| | High | 1(2.8) | 22(61.1) | 4(12.9) | 13(41.9) |
| | *p*-value | <0.001 | <0.001 | | |
| 7. Safety feeling around an aggressive patient | Low | 24(66.7) | 1(2.8) | 20(64.5) | 1(3.2) |
| | Moderate | 11(30.6) | 17(47.2) | 8(25.8) | 16(51.6) |
| | High | 1(2.8) | 18(50) | 3(9.7) | 14(45.2) |
| | *p*-value | <0.001 | <0.001 | | |
| 8. Effectiveness of techniques that you know for dealing with aggression | Low | 21(58.3) | 1(2.8) | 13(41.9) | 0(0) |
| | Moderate | 13(36.1) | 4(11.1) | 14(45.2) | 2(6.5) |
| | High | 2(5.6) | 31(86.1) | 4(12.9) | 29(93.5) |
| | *p*-value | <0.001 | <0.001 | | |
| 9. Ability to meet the needs of an aggressive patient | Low | 19(52.8) | 1(2.8) | 15(48.4) | 0(0) |
| | Moderate | 14(38.9) | 13(36.1) | 13(41.9) | 16(51.6) |
| | High | 3(8.3) | 22(61.1) | 3(9.7) | 15(48.4) |
| | *p*-value | <0.001 | <0.001 | | |
| 10. Ability to protect yourself physically from an aggressive patient | Low | 21(58.3) | 0(0) | 16(51.6) | 0(0) |
| | Moderate | 11(30.6) | 8(22.2) | 11(35.5) | 20(64.5) |
| | High | 4(11.1) | 28(77.8) | 4(12.9) | 11(35.5) |
| | *p*-value | <0.001 | <0.001 | | |

training as helpful in coping with aggressive patients.[25,30]

De-escalation training in the current study was significantly effective in both private and public hospital settings compared to baseline scores ($p<0.05$) and compared to the control group ($p<0.05$). Similar results have been reported earlier.[5,30,34]

In the current study, the mean confidence score among nurses in the public hospital improved from 12.69±2.93 at the baseline to 26.11±3.32 post-intervention, while the corresponding values for nurses in the private hospital were 12.8±4.6 and 25.42±3.21 ($p<0.001$). Studies have reported overall improvement in terms of confidence scores of intervention groups compared to control groups.[18,35]

The current study has several strengths regarding the evaluation of the effectiveness of de-escalation training with 131 subjects of the only nursing population exposed to WPV in Pakistan.[29] The use of validated and structured questionnaire is also a strength of the study. The sample comprised nurses at all levels having different lengths of professional experience. Besides, the training was imparted by principal investigator after earning a Master Trainer certification. Another strength of the study is the use of a handbook prepared by a team of the International

**Table-4:** Effectiveness of the intervention between the vases and the controls (n=131).

| | n (%) | | *p*-value |
|---|---|---|---|
| | **Intervention** (n=67) | **Control** (n=64) | |
| 1. Comfort in working with an aggressive patient | | | |
| Low | 1(1.5) | 49(76.6) | |
| Moderate | 39(58.2) | 12(18.8) | <0.001 |
| High | 27(40.3) | 3(4.7) | |
| 2. Present level of training for handling psychological aggression | | | |
| Low | 0(0) | 46(71.9) | |
| Moderate | 7(10.4) | 15(23.4) | <0.001 |
| High | 60(89.6) | 3(4.7) | |
| 3. Ability to intervene physically with an aggressive patient | | | |
| Low | 0(0) | 50(78.1) | |
| Moderate | 32(47.8) | 9(14.1) | <0.001 |
| High | 35(52.2) | 5(7.8) | |
| 4. Self-Assurance in the presence of an aggressive patients | | | |
| Low | 1(1.5) | 48(75.0) | |
| Moderate | 30(44.8) | 13(20.3) | <0.001 |
| High | 36(53.7) | 3(4.7) | |
| 5. Ability to intervene psychologically with an aggressive patient | | | |
| Low | 1(1.5) | 51(79.7) | |
| Moderate | 32(47.8) | 10(15.6) | <0.001 |
| High | 34(50.7) | 3(4.7) | |
| 6. Present level of training for handling physical aggression | | | |
| Low | 0(0) | 50(78.1) | |
| Moderate | 32(47.8) | 9(14.1) | <0.001 |
| High | 35(52.2) | 5(7.8) | |
| 7. Safety feeling around an aggressive patient | | | |
| Low | 2(3) | 48(75) | |
| Moderate | 33(49.3) | 13(20.3) | <0.001 |
| High | 32(47.8) | 3(4.7) | |
| 8. Effectiveness of techniques that you know for dealing with aggression | | | |
| Low | 1(1.5) | 50(78.1) | |
| Moderate | 6(9) | 11(17.2) | <0.001 |
| High | 60(89.6) | 3(4.7) | |
| 9. Ability to meet the needs of an aggressive patient | | | |
| Low | 1(1.5) | 46(71.9) | |
| Moderate | 29(43.3) | 13(20.3) | <0.001 |
| High | 37(55.2) | 5(7.8) | |
| 10. Ability to protect yourself physically from an aggressive patient | | | |
| Low | 0(0) | 47(73.4) | <0.001 |
| Moderate | 28(41.8) | 15(23.4) | |
| High | 39(58.2) | 2(3.1) | |

**Table-5:** Intergroup comparison of mean confidence scores.

| **Population** (n=131) | **Mean±SD** | | *p*-value |
|---|---|---|---|
| | Control Training (n=64) | Intervention Training (n=67) | |
| Confidence Score | 10.64±4.03 | 25.79±3.26 | <0.001 |

**Table-6:** Comparison of baseline and post-training confidence scores in public and private hospitals.

| **Hospital** (n=67) | **Pre**(n=36) | **Post** (n=31) | *p*-value |
|---|---|---|---|
| Government | 12.69±2.93 | 26.11±3.32 | <0.001 |
| Private | 12.8±4.6 | 25.42±3.21 | <0.001 |

Committee of the Red Cross (ICRC).[29]

However, the current study also has limitations as the sample was raised fro one public-sector and one private-sector tertiary care hospital. Besides, the participants suggested that training should be conducted in short sessions of 1-2 hours as attending 4-hour sessions was difficult to manage during duty hours. Multi-centre randomised control trials (RCTs) with a larger sample size are needed to validate the current findings.

In the light of the findings, however, de-escalation training should be an ongoing intervention, with refresher training. Nursing supervisors and managers need to be trained so that they may conduct de-escalation training in hospital settings, catering to a larger number of nursing staff. The participants from both public and private hospitals recommended that de-escalation training must be institutionalised and included as part of the medical and nursing curriculum at the undergraduate level.

## Conclusion

De-escalation training was found to be useful in boosting nurses' self-assurance in handling aggressive patients and their families. The necessity for institutionalised de-escalation of violence training for nurses must be upgraded. Employees of both public and private hospitals must be able to build a strong therapeutic bond with patients for de-escalation to be successful.

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**Author Contribution:**

**ZI:** Study design, data collection and final approval.

**SM:** Study design and final approval.

**SP:** Data analysis, literature review, statistical analysis, interpretation, writing, review and final approval.

**IU:** Literature review, statistical analysis, interpretation, writing, review and final approval.