

Impact of Peer Support Programs on Reducing Burnout among Nurses

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Received: 05-07-2026,

Revised: 11-09-2026,

Accepted: 19-09-2026,

Published: 30-09-2026

ABSTRACT

Background: Burnout among nurses has emerged as a critical occupational health concern worldwide, particularly in high-stress environments. Nurses are responsible for providing continuous, complex, and life-saving care to critically ill patients, which requires high levels of clinical expertise, emotional resilience, and quick decision-making.

Methodology: A quasi-experimental one-group pretest–posttest design was conducted among 34 ICU nurses at Aziz Bhatti Shaheed Teaching Hospital, Gujrat, from February to May 2026. Participants were selected using a stratified random sampling technique based on predefined inclusion and exclusion criteria. Baseline burnout levels were assessed using a demographic questionnaire and the Maslach Burnout Inventory (MBI). Following the pretest, nurses participated in a structured peer support program comprising group discussions, guided peer meetings, stress-sharing activities, coping strategies, teamwork, and peer-to-peer counseling sessions. After completion of the intervention, burnout was reassessed using the same MBI. Data were analyzed using SPSS. Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to summarize the data, while the Shapiro–Wilk test assessed normality. A paired t-test was applied to compare pre- and post-intervention burnout scores, with a p-value of ≤ 0.05 considered statistically significant.

Results: A total of 34 ICU nurses participated in the study. The majority were aged 31–35 years (29.4%), male (67.6%), single (41.2%), held a BSN degree (44.1%), and had 1–5 years of professional experience (41.2%). Following the peer support program, burnout levels improved across all dimensions of the Maslach Burnout Inventory. The proportion of nurses with low emotional exhaustion increased from 20.6% to 100%, while low depersonalization increased from 26.5% to 85.3%. Personal accomplishment also improved, with 29.4% of participants achieving a moderate level after the intervention compared with none at baseline. Overall, the proportion of nurses with low burnout increased from 82.4% before the intervention to 97.1% after the intervention. The mean burnout score decreased from 1.18 ± 0.39 pre-intervention to 1.03 ± 0.17 post-intervention, and the reduction was statistically significant ($p = 0.05$), indicating that the peer support program effectively reduced burnout among nurses.

Conclusion: The structured peer support program was effective in reducing burnout among ICU nurses by improving emotional exhaustion, depersonalization, and personal accomplishment. The intervention significantly decreased overall burnout levels, highlighting the value of peer support as a practical and cost-effective strategy for promoting nurses' psychological well-being and enhancing workforce resilience in hospital settings.

Keywords: Burnout, Peer Support Program, Intensive Care Unit (ICU) Nurses, Maslach Burnout Inventory

How to cite this article: Kanwal H, Inam R, Qayyum N, Nisar M, Sana M. Impact of Peer Support Programs on Reducing Burnout Among Nurses. 2026;16(86s): 178-182; DOI: 10.25258/ijddt.16.86s.21

INTRODUCTION

Burnout among nurses has emerged as a critical occupational health concern worldwide, particularly in high-stress environments. Nurses are responsible for providing continuous, complex, and life-saving care to critically ill patients, which requires high levels of clinical expertise, emotional resilience, and quick decision-making (Saravanan, Nisar, Zhang, Masud, & Sasangohar, 2023). The demanding nature of ICU work exposes nurses to prolonged stress, heavy workloads, frequent exposure to patient suffering and death, and ethical dilemmas, all of which contribute significantly to burnout (Villagrancia et

al., 2025). Burnout is generally described as a psychological syndrome characterized by emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment. It not only affects the mental and physical well-being of nurses but also compromises the quality of patient care, increases the risk of errors, and contributes to job dissatisfaction and turnover (Mathew, John, & Vazhakkalayil Ramachandran, 2025).

Globally, studies have shown that ICU nurses are among the most vulnerable healthcare professionals to burnout due to the intensity and complexity of their work environment (Oner, Cokelek, Caliskan, & Duygulu, 2025).

Factors such as staff shortages, long working hours, shift duties, inadequate resources, and lack of emotional support further intensify stress levels in critical care settings (Quesada-Puga et al., 2024). In developing countries like Pakistan, these challenges are often more severe due to limited healthcare resources, increased patient load, and insufficient staffing ratios (Majeed et al., 2025).

Research has identified various interventions to address burnout among nurses, including stress management programs, mindfulness training, counseling services, and organizational changes aimed at improving working conditions. Among these, peer support programs have gained increasing attention as a cost-effective and practical approach to reduce burnout (Cohen, Pignata, Bezak, Tie, & Childs, 2023). Peer support involves structured or informal interactions among colleagues where nurses share experiences, provide emotional support, and discuss coping strategies. Such programs help reduce feelings of isolation, improve communication, and foster a sense of teamwork and belonging in high-pressure environments like ICUs (Jiménez-García & Flor-Martínez, 2026).

Evidence from international studies suggests that peer support can play a significant role in improving nurses' psychological well-being and reducing burnout levels (Simms et al., 2023). However, despite growing recognition of its benefits, peer support is not widely implemented in many healthcare settings, particularly in low- and middle-income countries (Villagrancia et al., 2025). Given the increasing burden of burnout and its negative impact on both healthcare providers and patient outcomes, there is a strong need to explore effective interventions that are feasible and sustainable within hospital settings (Fernandes, Barros, & Baylina, 2025). Therefore, this study aims to evaluate the impact of a peer support program on reducing burnout among ICU nurses. The findings of this study will contribute to the development of evidence-based strategies to enhance nurse well-being, improve retention, and ensure the delivery of safe and high-quality patient care in critical care environments.

MATERIAL AND METHODS

A quasi-experimental one-group pretest–posttest study was conducted among 34 ICU nurses at Aziz Bhatti Shaheed Teaching Hospital, Gujrat, from February to May 2026. Participants were selected using a stratified random sampling technique based on predefined inclusion and exclusion criteria. After obtaining informed consent, baseline data were collected using a demographic questionnaire and the Maslach Burnout Inventory (MBI). A structured peer support program focusing on emotional support, stress sharing, coping strategies, teamwork, and peer-to-peer counseling was then implemented through guided group discussions and interactive sessions. Following completion of the intervention, the MBI was administered again as a post-test. Data were analyzed using SPSS, with descriptive statistics used to summarize participant characteristics and burnout scores. The

Shapiro–Wilk test was used to assess normality, and a paired t-test was applied to compare pre- and post-intervention burnout scores. A p-value ≤ 0.05 was considered statistically significant. Ethical approval, informed consent, confidentiality, anonymity, and the right to withdraw were ensured throughout the study.

RESULTS

Table 1

Demographics characteristics

Demographic Variables	Category	Frequency (f)	Percentage (%)
Age	20–25 Year	7	20.6
	26–30 Year	7	20.6
	31–35 Year	10	29.4
	36 - 40 Year	7	20.6
	> 40 Tear	3	8.8
Gender	Male	23	67.6
	Female	11	32.4
Marital Status	Single	14	41.2
	Married	13	38.2
	Divorced	5	14.7
	Widowed	2	5.9
Qualification	Diploma in Nursing	8	23.5
	BSN	15	44.1
	Post RN BSN	11	32.4
Experience	<1 year	4	11.8
	1–5 years	14	41.2
	6–10 years	11	32.4
	>10 years	5	14.7

Table 1 shows the demographic characteristics of the 34 ICU nurses included in the study. Regarding age, the highest proportion of participants (29.4%) were aged 31–35 years, while 20.6% were aged 20–25, 26–30, and 36–40 years each. Only 8.8% of participants were above 40 years of age. Regarding gender, the majority were male (67.6%), while 32.4% were female. In terms of marital status, 41.2% were single, 38.2% were married, 14.7% were divorced, and 5.9% were widowed. Regarding educational qualification, 44.1% had a BSN degree, 32.4% had a Post RN BSN, and 23.5% held a Diploma in Nursing. Concerning professional experience, the largest proportion (41.2%) had 1–5 years of experience, followed by 32.4% with 6–10 years, 14.7% with more than 10 years, and 11.8% with less than 1 year of experience.

Table 2

Pre and post-intervention Emotional Exhaustion among nurses

Level of Emotional Exhaustion	Pre-Intervention Emotional Exhaustion		Post-Intervention Emotional Exhaustion	
	Frequency	Percent	Frequency	Percent
Low Emotional Exhaustion	7	20.6	34	100.0

Moderate Emotional Exhaustion	26	76.5	0	0
High Emotional Exhaustion	1	2.9	0	0

Table 2 presents the levels of emotional exhaustion among nurses before and after the peer support intervention. In the pre-intervention assessment, the majority of nurses (76.5%) had moderate emotional exhaustion, while 20.6% had low emotional exhaustion and 2.9% had high emotional exhaustion. In the post-intervention assessment, all nurses (100%) were categorized as having low emotional exhaustion, while none had moderate or high emotional exhaustion. These findings indicate a marked improvement in the level of emotional exhaustion following the peer support intervention.

Table 3

Pre and post-intervention Depersonalization among nurses

Level of Depersonalization	Pre-Intervention Depersonalization		Post-Intervention Depersonalization	
	Frequency	Percent	Frequency	Percent
Low Depersonalization	9	26.5	29	85.3
Moderate Depersonalization	25	73.5	5	14.7

Table 3 presents the levels of depersonalization among nurses before and after the peer support intervention. In the pre-intervention assessment, the majority of nurses (73.5%) had moderate depersonalization, while 26.5% had low depersonalization. In the post-intervention assessment, 85.3% of nurses had low depersonalization, whereas 14.7% had moderate depersonalization. Overall, the findings show a considerable reduction in depersonalization following the peer support intervention.

Table 4

Pre and post-intervention Personal Accomplishment among nurses

Level of Personal Accomplishment	Pre-Intervention Personal Accomplishment		Post-Intervention Personal Accomplishment	
	Frequency	Percent	Frequency	Percent
Low Personal Accomplishment	34	100.0	24	70.6
Moderate Personal Accomplishment	0	0	10	29.4

Table 4 presents the levels of personal accomplishment among nurses before and after the peer support

intervention. In the pre-intervention assessment, all nurses (100%) had low personal accomplishment. In the post-intervention assessment, 70.6% of nurses remained in the low personal accomplishment category, while 29.4% showed a moderate level of personal accomplishment. Overall, the findings indicate an improvement in personal accomplishment following the peer support intervention.

Table 5

Comparison of burnout among nurses before and after intervention

Variable	Pre-Intervention Mean (SD)	Post-Intervention Mean (SD)	p-value
Burnout	1.1765(0.38695)	1.0294 (0.17150)	0.05

Table 5 shows that the mean burnout score decreased from 1.18 ± 0.39 before the intervention to 1.03 ± 0.17 after the intervention. The difference was statistically significant ($p = 0.05$), indicating an improvement in burnout levels following the intervention.

DISCUSSION

The present study evaluated the effect of a nurse-led intervention on burnout among nurses. The demographic findings showed that the majority of participants were between 31–35 years of age (29.4%), followed by equal proportions of nurses aged 20–25, 26–30, and 36–40 years (20.6% each). These findings indicate that the study population primarily consisted of young and middle-aged nurses, representing the active workforce in clinical settings. Similar age distributions have been reported in previous nursing burnout studies, where most participants were between 25 and 40 years of age because this age group constitutes the largest proportion of the nursing workforce (Woo et al., 2020; Gómez-Urquiza et al., 2017). Younger nurses are often reported to experience greater occupational stress due to heavy workloads, shift duties, and adaptation to demanding clinical environments.

Regarding gender, 67.6% of participants were male, while 32.4% were female. This finding differs from many international studies where females constitute the majority of the nursing workforce. For example, Woo et al. (2020), in their systematic review, reported that most burnout studies involved predominantly female nurses because nursing remains a female-dominated profession worldwide. However, the present findings may reflect the staffing pattern of the selected healthcare setting, where a higher proportion of male nurses were employed. Similar gender distributions have also been reported in studies conducted in Pakistan and the Middle East, particularly in emergency and critical care departments where male nurses are more frequently represented (Aldossary et al., 2021).

The majority of participants (44.1%) held a BSN degree, while 32.4% had a Post RN BSN qualification. These findings suggest that most nurses possessed undergraduate professional education, which is consistent with the increasing trend toward bachelor's-level nursing education in Pakistan. Previous studies have shown that

nurses with higher educational qualifications demonstrate greater clinical competence, improved coping strategies, and better professional resilience, which may positively influence burnout management (Dall'Ora et al., 2020).

Regarding professional experience, most nurses (41.2%) had 1–5 years of clinical experience, followed by 32.4% with 6–10 years of experience. These findings are comparable to those reported by Kelly et al. (2021), who found that nurses with fewer years of experience were more vulnerable to occupational stress and emotional exhaustion because of increased workload, limited clinical confidence, and adjustment to professional responsibilities. Less experienced nurses often require additional organizational support and stress-management interventions to prevent burnout.

Before the intervention, the majority of nurses (76.5%) demonstrated moderate emotional exhaustion, while only 20.6% had low emotional exhaustion and 2.9% experienced high emotional exhaustion. Emotional exhaustion is recognized as the core dimension of burnout and reflects feelings of being emotionally overextended by work demands. Similar findings have been reported in several international studies where moderate-to-high emotional exhaustion was common among hospital nurses due to increasing patient acuity, staff shortages, and workload pressures (Woo et al., 2020; Dall'Ora et al., 2020). Following the intervention, all participants (100%) demonstrated low emotional exhaustion, indicating a substantial improvement. This finding supports previous intervention studies demonstrating that mindfulness-based stress reduction, resilience training, and nurse-led wellness programs significantly reduce emotional exhaustion among nurses (Luken & Sammons, 2016; Ghawadra et al., 2020).

The findings also demonstrated that before the intervention, 73.5% of nurses experienced moderate depersonalization, whereas after the intervention 85.3% demonstrated low depersonalization. Depersonalization reflects emotional detachment and negative attitudes toward patients and colleagues. Previous studies have similarly reported moderate levels of depersonalization among nurses working in high-stress clinical environments such as emergency departments and intensive care units (Maslach & Leiter, 2016). Recent intervention studies have shown that stress-management education, mindfulness training, and resilience-building programs significantly reduce depersonalization by improving emotional regulation and interpersonal relationships among healthcare professionals (Ghawadra et al., 2020; Suleiman-Martos et al., 2021). Therefore, the present findings are consistent with existing evidence demonstrating the positive impact of structured interventions on reducing depersonalization.

Regarding personal accomplishment, all nurses (100%) reported low personal accomplishment before the intervention, whereas after the intervention 29.4% achieved moderate personal accomplishment. Although most participants remained in the low category, the improvement observed following the intervention suggests that educational and supportive strategies may enhance

nurses' confidence, competence, and professional satisfaction. Similar improvements have been reported in previous intervention studies where mindfulness programs, resilience training, and continuing professional development significantly improved nurses' perceptions of personal accomplishment and professional efficacy (Luken & Sammons, 2016; Ghawadra et al., 2020). However, the relatively modest improvement observed in the present study may indicate that enhancing personal accomplishment requires longer-term organizational support and repeated interventions.

The overall burnout findings further support the effectiveness of the intervention. Before the intervention, 82.4% of nurses had low burnout and 17.6% had moderate burnout. After the intervention, the proportion of nurses with low burnout increased to 97.1%, while only 2.9% remained in the moderate burnout category. Although baseline burnout was already relatively low, the intervention produced additional improvements. These findings are consistent with systematic reviews by Woo et al. (2020) and Panagioti et al. (2017), which concluded that organizational and individual-level interventions, including stress-management education, mindfulness, resilience training, and psychological support, effectively reduce burnout among healthcare professionals. Similarly, recent meta-analyses have demonstrated that structured educational interventions improve nurses' psychological well-being, reduce burnout symptoms, and enhance job satisfaction (Suleiman-Martos et al., 2021).

Overall, the findings of the present study support the growing body of evidence indicating that nurse-led educational and supportive interventions effectively reduce burnout by decreasing emotional exhaustion and depersonalization while improving personal accomplishment. These results highlight the importance of incorporating regular stress-management training, resilience-building programs, and continuing professional development into healthcare organizations to promote nurses' psychological well-being, improve workforce retention, and ultimately enhance the quality of patient care.

CONCLUSION

The findings of this study demonstrate that the nurse-led intervention was effective in reducing burnout among nurses. Before the intervention, most participants experienced moderate emotional exhaustion and depersonalization, while all nurses reported low personal accomplishment. Following the intervention, emotional exhaustion decreased substantially, with all participants demonstrating low emotional exhaustion. Similarly, depersonalization improved markedly, as the majority of nurses shifted to the low depersonalization category. Personal accomplishment also improved, with nearly one-third of the participants achieving a moderate level after the intervention. Overall burnout levels showed a positive change, with the proportion of nurses experiencing low burnout increasing from 82.4% before the intervention to 97.1% after the intervention. These findings indicate that

the nurse-led intervention effectively enhanced nurses' psychological well-being by reducing burnout and its related dimensions. The study highlights the importance of

implementing regular nurse-led stress management and well-being programs to promote a healthier nursing workforce and improve the quality of patient care.

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