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Original Research Article

MITIGATING MORAL DISTRESS AND ENHANCING RESILIENCE OF BS NURSING STUDENTS THROUGH SIMULATION- BASED TRAINING WORKSHOPS

Article History:

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Abstract: ***Objective:*** To analyze whether simulation-based ethics training workshops impact Bachelor of Science in Nursing students 'level of moral distress and resilience. Study Design: pretest-posttest quasi-experimental study design. Place and Duration of study: The study was conducted at Bahria Town School of Nursing in Lahore, Pakistan, from July 2025 to December of 2025. ***Methods***: A quasi-experimental one-group pretest–posttest design was employed to conduct the study. About 32 final-year nursing students were selected and participated in weekly structured simulation-based ethics courses for sixteen weeks in succession. The Rushton Moral Resilience Scale-16 (RMRS-16) was used to measure moral resilience both before and after the intervention, while the Moral Distress Scale for Nursing Students was employed to assess moral distress. The Wilcoxon signed-rank test was used to analyze the data. Statistical significance was considered as a p-value of less than 0.05. ***Results:*** The pre-intervention mean intensity of moral distress was 138.47 ± 23.18, which decreased to 114.84 ± 23.68 after the intervention. The pre-intervention frequency of moral distress was 141.63 ± 26.50, which decreased to 101.13 ± 24.41 after the intervention. The mean resilience before and after the intervention was 46.91 ± 5.61 and 50.03 ± 4.65, respectively. ***Conclusion:*** The results show that nursing students' moral distress is effectively mitigated and their moral resilience is enhanced by simulation-based workshops. Students can be better prepared for ethical dilemmas in clinical practice by incorporating such courses into undergraduate nursing programs.

Keywords: Moral distress, moral resilience, simulation-based training, nursing students, ethics education.

INTRODUCTION

Although nursing institutions teach students about ethical standards like autonomy, patient rights, advocacy, and collaboration with colleagues, and other professional issues but inadequate support and supervision in the clinical setting often prevent nursing students from applying these ethical standards with actual patients .This discrepancy frequently leads to moral distress (MD), which occurs when one knows what the morally right action is but is hindered by institutional, procedural, or societal restrictions, making it impossible to choose the ethically correct course of action1. It is particularly concerning that one study reported a relatively high level of moral distress, with 75% of nursing students experiencing varied degrees of it 2. Moreover some hospital policies that put staff interests ahead of patients' needs, a lack of clinical practice exposure, a lack of confidence, poor professional judgment, inappropriate or

inadequate care, distrust of colleagues' skills, treatment choices that disregard the patient's desires, and negative attitudes toward patients and/or their families and a lack of ethical knowledge and training, and a discrepancy between theory and practice are all examples of situations that cause moral distress in nursing students. inappropriate or inadequate care, distrust of colleagues' skills, treatment choices that disregard the patient's desires, and negative attitudes toward patients and/or their families3, 4

Furthermore, moral distress manifests in physical, psychological, and behavioral symptoms, including anxiety, loss of enthusiasm, inability to provide quality care, burnout, disappointment with future career prospects, and an increased likelihood of leaving the profession3.

To address this challenge, strengthening resilience protective factors—personal and social abilities that enable a person to maintain or restore integrity in response to moral complexity, confusion, distress, or setbacks—becomes essential. Though these skills come from a person's own strengths and beliefs, they can be improved and developed through resilience training programs that incorporate mindfulness meditation, ethics education, morally challenging situation simulations, healthy work environments, and techniques for stress and relaxation. 5Furthermore, it has been observed that students often struggle to identify and successfully handle morally difficult situations. This restriction can result from inadequate ethics instruction in nursing schools. 6

Nursing students in Pakistan are usually taught ethics through lectures on ethical theories, principles, and strategies for dealing with moral dilemmas; however, these theoretical classes, written tests, and assignments do not sufficiently prepare students for professional or interpersonal practice in the real world. 7. In reality, successful moral distress management requires practical skills and competencies.8 These helpful skills can be developed by systematic reflection, the application and integration of recently taught ethical principles, and the simulation of stressful events.

Incorporating simulation to teach nursing ethics is a powerful pedagogical strategy for adding moral dilemmas to nursing courses.

This approach allows nursing students to encounter unfamiliar circumstances, generate new concepts, and make morally sound choices.

Although static case studies and class discussions can also be used for this, simulation is unique because it can produce realistic circumstances that elicit the same feelings and emotions that students are likely to feel in clinical settings.

Despite being understudied, this strategy for reducing moral distress and building resilience in nursing students has a lot of potential.

Simulation-based practice sessions can foster critical thinking, facilitate morally sound decision-making, and promote assertive expression, all of which may reduce students' levels of moral distress 9.

Given these observations, it is necessary to evaluate the impact of nursing ethics teaching methodologies on the level of moral distress and resilience among nursing students. Moreover, the results of the literature review conducted for this study consistently highlighted the need to transform existing educational modalities in order to better prepare students for the ethical realities of clinical practice. The objective of this study is to evaluate the impact of participation in an ethical education workshop, incorporating simulation-based experiences (SBE), on the level of moral distress and resilience of BSN students.

Results from this study may provide recommendations for nursing education that can enhance quality of ethical education in nursing, that prepare more ethically competent and resilient nurses in future, which will further improve patient care and satisfaction and will eventually uplift image of nursing in Pakistan.

Material and Methods

A quasi-experimental one-group pretest–posttest design was employed to conduct the study. A total of 32 final-year Bachelor of Science in Nursing (BSN) students were selected through a convenience sampling technique. The study included both male and female students who were regularly attending classes and actively participating in hospital-based clinical rotations as part of their academic curriculum, while students who were absent, had not yet started clinical practice, or had diagnosed mental health conditions were excluded. Ethical approval was obtained, and the study was conducted in accordance with the principles of the Declaration of Helsinki. The intervention comprised a 16-week simulation-based ethics training program centered on the educational module "Speaking Up with Integrity," developed by Cynda Rushton and her team, based on concepts from Giving Voice to Values: How to Speak Your Mind When You Know What's Right by Mary Gentile. During Weeks 1–2, participants attended introductory sessions involving PowerPoint presentations and interactive discussions on integrity, moral distress, emotional intelligence, personal values, and moral resilience. In Weeks 3–10, four workshops were conducted to develop communication skills for assertive, value-based interactions in ethically challenging situations. In Week 11, the first simulation phase included pre-briefing followed by paired role-play scenarios, where participants

practiced expressing values and responding to resistance, followed by group debriefing using the PEARLS framework and individual reflection. From Weeks 12–15, progressive role-play sessions were conducted using the same structured approach to reinforce learning. A booster session in Week 16 focused on reviewing key concepts, strengthening moral resilience, and practicing mindfulness and relaxation techniques. Data were collected before and after the intervention using validated tools, including the Moral Distress Scale for Nursing Students (41 items) and the Rushton Moral Resilience Scale-16 (RMRS-16), along with demographic variables such as age and gender. Data analysis was performed using the Statistical Package for Social Sciences (SPSS) version 29.0. Descriptive statistics were used to summarize participant characteristics, and normality was assessed using the Shapiro–Wilk test, which indicated non-normal data distribution. Therefore, the Wilcoxon Signed-Rank Test was applied to compare pre- and post-intervention scores for moral distress and moral resilience, with mean and standard deviation reported, and statistical significance set at $p < 0.05$.

RESULTS

Table 1. Demographic characteristics

Variable	Category	Frequency	Percentage
Age (Years)	Mean ± S.D	22.59 ± 0.97	-
Gender	Male	20	62.50%
	Female	12	37.50%

Table 1 presents the demographic characteristics of the participants. The mean age of the students was 22.59 ± 0.97 years, indicating that most participants were of a similar age group. Regarding gender distribution, the majority of participants were male (62.5%), while 37.5% were female. This shows that male students were more represented in the study compared to female students.

Table 2: Frequency of Moral Distress Among Study Participants: Pre- and Post-Intervention Comparison

Variable	Category	Pre-intervention f (%)	Post-Intervention f (%)
Moral Distress Frequency	Less Frequent	5 (15.6%)	5 (15.6%)
	Moderately Frequent	12 (37.5%)	19 (59.4%)
	Most Frequent	15 (46.9%)	8 (25.0%)

Table 2 shows the frequency of moral distress before and after the intervention. Before the intervention, most participants reported high frequency distress (46.9%), which decreased to 25.0% after the intervention. Meanwhile, moderate distress increased from 37.5% to 59.4%, and low distress remained the same (15.6%). Overall, the results indicate a reduction in higher levels of moral distress.

Table 3 : Intensity of Moral Distress among Study Participants

Variable	Category	Pre Intervention f (%)	Post Intervention f (%)
Moral Distress Intensity	Mild	7 (21.8%)	9 (28.2%)
	Moderate	9 (28.2%)	16 (50.0%)
	Severe	16 (50.0%)	7 (21.8%)

Table 3 shows the intensity of moral distress before and after the intervention. Initially, 50.0% of participants experienced severe distress, which decreased to 21.8% after the intervention. Meanwhile, moderate distress increased from 28.2% to 50.0%, and mild distress increased from 21.8% to 28.2%. Overall, the findings indicate a reduction in severe moral distress.

Table 4. Resilience Level among Study Participants

Variable	Category	Pre Intervention f (%)	Post Intervention f (%)
Resilience Level	Low resilience	5 (15.6%)	2 (6.2%)
	Average resilience	12 (37.5%)	14 (43.8%)
	High resilience	15 (46.9%)	16 (50.0%)

Table 4 shows the resilience levels before and after the intervention. The proportion of participants with low resilience decreased from 15.6% to 6.2%, while average resilience increased from 37.5% to 43.8%. Additionally, high resilience slightly increased from 46.9% to 50.0%. Overall, the results indicate an improvement in resilience among participants after the intervention.

DISCUSSION

Demographic Characteristics

In contrast to earlier studies that showed primarily female samples e.g., 85.4% females in Dalton, 20239, this study featured a male majority (62.5%).

This could possibly be a result of recent changes in Pakistani culture and enrollment that encourage more men to pursue nursing careers.

In line with Iranian study findings (mean 23.0 ± 1.7 years; Janatolmakan et al., 20213), the mean age of the undergraduate group was 22.59 ± 0.97 years (range 21–24), which was younger than U.S. studies that included nontraditional students (e.g., 21–43 years in Dalton, 20239; 23–60 years in Forte et al., 202410).

Frequency and Intensity of Moral Distress

The pre-intervention mean intensity of moral distress was 138.47 ± 23.18, which decreased to 114.84 ± 23.68 after the intervention. The pre-intervention frequency of moral distress was 141.63 ± 26.50, which decreased to 101.13 ± 24.41 after the intervention. This reduction continued in spite of continuing ethical issues, demonstrating that the intervention lessened emotional impact rather than resolved moral conundrums.

These findings demonstrate that by providing opportunities for handling ethical challenges in supervised environments, simulation-based ethics education successfully alleviates moral distress in undergraduate nursing students.

Research demonstrates that moral distress continues in the absence of intervention (Janatolmakan et al., 20213), proving that it can be addressed with the use of structured approaches.

The current results partially agree with those of Dalton (2023)9, who found no statistically significant improvement in the overall perceived moral distress levels .Though the results were not statistically significant, Dalton's study did show a trend toward recovery, with the final follow-up showing the lowest mean moral distress levels. The current study builds on earlier research by examining moral distress using both frequency and intensity-based measures, demonstrating that this dual approach can be used to identify statistically significant changes.

Additionally, a study by Forte et al. (2024)10 supports the current findings, as more than half of the students said the ethics simulation helped them deal with moral distress in real-life situations.

Likewise, Honkavuo (2021)11 found that nursing students thought ethics simulations were very similar to actual clinical scenarios. Additionally, during simulation, students showed increased ethical sensitivity to microethical issues, according to Sedgwick, Yanicki, and Pijl (2020)6.

Students are better prepared to manage the psychological and emotional impacts of real-world ethical conflicts through repeated practice in a safe, supportive setting. This further supports simulation's function as an educational tool that helps students to prepare for the difficult ethical issues they will encounter in clinical practice.

The intensity reduction likely stems from experiential learning, boosting awareness, confidence, and handling of ethical conflicts (Honkavuo, 2021)11.

Level of Moral Resilience The mean resilience scores in this study increased from 46.91 ± 5.61 to 50.03 ± 4.65 ($p = .005$). This result is consistent with research from a multi-site trial conducted in Canada that showed that including simulation scenarios improved nursing students' self-efficacy and self-perceived resilience (Ménard et al., 2025)12.

Similar findings were found in a study that investigated a high-fidelity simulation for mass-casualty preparedness and major trauma, where more than 90% of students felt emotionally prepared, 91% said they were more mentally prepared to handle

major incidents, and over 85% said they were more mentally resilient (Newton & Smith, 2024)7. Additionally, a study conducted in the United States revealed that participating students had a greater understanding of moral distress concepts and how to deal with them in professional situations 5similarly While empathy and critical thinking were shown to improve in another quasi-experimental study on simulated problem-based learning in nursing ethics, moral sensitivity—a key component of moral resilience—was not significantly improved13. Further many studies, including those that included simulation elements, showed no significant pre-to-post changes, highlighting potential limitations due to factors like intervention duration, sample size, or contextual variables. As mentioned in a systematic review of interventions to mitigate moral distress .14

The current study's post-intervention redistribution, which shows a decrease in low-resilience categories and an increase in average and high-resilience categories, highlights how effective the workshop is at enhancing students' adaptive skills for handling moral and academic dilemmas.

Furthermore, a contrasting study results inform that there were no statistically significant differences in moral resilience scores between the intervention and control groups in a study assessing high-fidelity ethical simulations in prelicensure nursing programs (Forte et al., 2025)10.

This contradictory result highlights the need for additional study to identify the circumstances in which simulation-based techniques best promote moral resilience, especially in culturally and educationally diverse settings.

Conclusion

In final-year BS Nursing students, simulation-based ethical workshops dramatically decreased the frequency and severity of moral distress while slightly increasing moral resilience.

These findings highlight simulation as a safe, experiential tool for practicing ethical decision-making and reflection, better preparing students for clinical ethical challenges by building skills and emotional resilience. One practical and economical way to encourage ethical competence and well-being is to incorporate such training into undergraduate nursing courses. This study strengthens the body of evidence in favor of simulation in nursing education and emphasizes the need for more studies on the long-term impacts, faculty training, and institutional support in order to improve patient care, professional satisfaction, and ethical readiness.

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