ORIGINAL ARTICLE e-ISSN: 2349-0659 p-ISSN; 2350-0964

Psychological Distress among Bone Marrow Transplant Nurses: A Cross-Sectional Study from a Tertiary Care Medical College Hospital

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Abstract

Background: Bone marrow transplant (BMT) nurses have an innate exposure to psychological distress because they are frequently challenged with ethical issues and deaths while providing critical care. Although they are more prone to psychological distress, there is paucity of data addressing it. This study addresses this research gap by evaluating bone marrow transplant nurses' psychological distress. Method: A descriptive, cross sectional study was conducted using a questionnaire survey to examine whether bone marrow transplant nurses self reported psychological distress was associated with their work and it was measured using DASS21 scale to assess depression, anxiety, and stress. The sample was drawn from a population of nurses (n=28) who worked in Pediatric and Adult BMT units of a tertiary Hospital. Results: The statistical sample of the study consisted of 28 nurses. The response rate was 100%. The majority of nurses were males (60.71%). The mean age was 32.4 years and the mean years of experience was 8.14 years. Spearman's rank correlation coefficient (ρ\rho) is 1. The rankings for Depression, Anxiety, and Stress are identical across the categories, which suggests that the staff's level of Depression, Anxiety, and Stress are perfectly aligned. Conclusion: Psychological distress is a common issue among bone marrow transplant nurses, stemming from the emotional and physical challenges of caring for critically ill patients. This distress can lead to significant consequences for both nurses and patients, including burnout, decreased quality of care, and high turnover rates.

Keywords: Bone Marrow Transplant, Psychological distress, Nurses

Asian Pac. J. Health Sci., (2025); DOI: 10.21276/apjhs.2025.12.2.05

Introduction

Bone marrow transplant (BMT) nurses have an innate exposure to psychological distress because they are frequently challenged with ethical issues and deaths while providing critical care.[1] The distress experienced by these nurses is well documented and is caused by job dissatisfaction, increased workload, and nearly absent organizational support.[2]

The highly intensive care, exposure to harmful chemotherapy, and the immense pressure to provide extended life and improve quality of life can be quite psychologically disturbing for BMT nurses, thus increasing the likelihood of lower work-related quality of life. Increased levels of stress in the workplace led the American Psychological Association to predict a looming public health crisis. Death, conflict with other nurses, and lack of organizational support are significant factors.

Although BMT nurses are more prone to psychological distress, there is a paucity of data addressing this distress. Addressing the issue could form the basis of the development of psychosocial interventions to improve coping and increase resilience against psychological distress among BMT nurses. Finding measures to improve psychological functioning in these nurses is important because quality nursing care is linked to better patient care and outcomes.

This study addresses this research gap by evaluating BMT nurses' psychological distress (depression, anxiety, stress, and post-traumatic stress disorder).

Methods

A descriptive, cross-sectional study was conducted using a questionnaire survey to examine whether BMT nurses' self-reported psychological distress was associated with their work, and it was measured using the depression anxiety stress scale-21 (DASS-21) to assess depression, anxiety, and stress.

The sample was drawn from a population of nurses (n = 28) who worked in pediatric and adult BMT units of Mahatma Gandhi Medical College and Hospital.

Data Collection

All nurses in the BMT units were contacted personally to participate in the survey. The principal investigator sent a WhatsApp invitation containing a link to the study information sheet and survey.

The study information sheet outlined the objectives and risks, emphasizing that participation was voluntary and anonymous.

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How to cite this article: Malhotra S, Marwah P, Jagawat T. Psychological Distress among Bone Marrow Transplant Nurses: A Cross-Sectional Study from a Tertiary Care Medical College Hospital. Asian Pac. J. Health Sci., 2025;12(2):17-19.

Source of support: Nil.

Conflicts of interest: None.

Received: 05-01-2025 **Revised:** 17-02-2025 **Accepted:** 01-03-2025

Table 1: Demographic details of the participating population *n*=28

Demographic details	*Number*	*Percentage*
Male	17	60.71
Female	11	39.28
25–30 years	15	53.57
36–40 years	13	46.42
1–5 years of experience	6	21.42
5–10 years of experience	12	42.85
>10 years of experience	10	35.71
Full-time employment	28	100
Part-time Employment	0	0

The institutional review board of the participating institution approved an informed consent waiver because this was a minimal-risk study. Survey completion by the participants implied consent.

Approval from the Institutional Ethics Committee was obtained to undertake the survey.

Measures

Predictor variables

The 21-item DASS-21, a shorter version of the DASS-42, measures depression, anxiety, and stress using a four-point Likert scale ranging from 0 to 9 did not apply to me at all to[3] (applied to me very much).[4]

The total scores range from 0 to 126, with higher scores indicating more severe negative emotional distress.

The DASS-21 has high internal consistency and reliability in assessments of healthcare workers.[5,6]

Demographic details

Nurse-level characteristics, including age, sex, years of nursing experience, and employment status were collected.

Results

The statistical sample of the study consisted of 28 nurses. The response rate was 100%. The majority of nurses were males (60.71%). The mean age was 32.4 years, and the mean years of experience were 8.14 years. All the nurses were on full-time employment. Except for the in-charges, all worked on rotating shifts (Table 1).

Based on the findings of Table 2, Spearman's rank correlation coefficient (ρ\rho) is 1.

In this case, it means that the rankings for depression, anxiety, and stress are identical across the categories, which suggests that the staff's levels of depression, anxiety, and stress are perfectly aligned.

This implies that the ranks of depression, anxiety, and stress are in the same order for all categories, meaning the individuals experiencing a higher level of one condition (e.g., severe depression) are also experiencing higher levels of the other conditions (e.g., severe anxiety and stress).

Discussion

BMT nurses operate in a demanding and emotionally taxing environment, where they provide essential care to patients undergoing critical, life-saving procedures. The complexity and intensity of this treatment expose BMT nurses to various stressors that can greatly affect their mental health. This discussion delves into the sources of psychological distress among BMT nurses, its potential effects, and strategies for coping with these challenges, drawing on recent literature.

Table 2: Overall prevalence of depression, anxiety, and stress levels among bone marrow transplant staff in a tertiary medical college hospital *n*=28

Variables	*Frequency*	*Percentage*
Depression level		
Normal	2	7.14
Mild	15	53.58
Moderate	8	28.57
Severe	2	7.14
Extremely severe	1	3.57
Anxiety level		
Normal	2	7.14
Mild	15	53.58
Moderate	7	25
Severe	2	7.14
Extremely severe	2	7.14
Stress level		
Normal	2	7.14
Mild	13	46.43
Moderate	9	32.15
Severe	3	10.71
Extremely severe	1	3.57

Sources of Psychological Distress

Multiple factors contribute to the psychological distress experienced by BMT nurses. Primarily, the emotional toll of caring for patients with severe and often terminal conditions can result in burnout, compassion fatigue, and heightened anxiety.[7] The intricate nature of BMT procedures demands that nurses possess specialized knowledge and skills. However, the critical aspect of their work, coupled with the uncertainty surrounding patient outcomes, amplifies stress levels.[8]

Moreover, the dynamics of patient interactions can add to psychological strain. BMT nurses frequently develop strong emotional connections with their patients, many of whom endure lengthy hospital stays and face uncertain futures. This bond can foster feelings of helplessness, especially when patients encounter complications or pass away.[9] Research has shown that nurses caring for patients in life-threatening situations are susceptible to vicarious traumatization, experiencing emotional distress from witnessing their patients' suffering.[10]

Work-related stressors, such as understaffing, extended shifts, and high patient-to-nurse ratios, further intensify these emotional challenges. These conditions lead to increased physical and mental fatigue, which can compromise the quality of care provided to patients and raise the risk of burnout.[11] The emotional burden intensifies when nurses feel that their institutions do not provide adequate support for their mental health and coping mechanisms.[12]

Consequences of Psychological Distress

The psychological distress faced by BMT nurses can lead to serious repercussions for both the individuals and the health-care system. Chronic stress and burnout are linked to various physical health issues, including insomnia, headaches, and gastrointestinal problems.[13] Nurses experiencing burnout may also suffer from emotional exhaustion, depersonalization, and

a reduced sense of personal achievement, which can lower their job satisfaction and raise turnover rates.[14] Moreover, the quality of care that nurses provide can be adversely affected by psychological distress. When nurses are emotionally drained or disengaged, they may find it challenging to offer compassionate care or pay attention to the details necessary in high-pressure settings such as BMT units.[10] As a result, patients might face delays in care, miscommunication, or treatment errors, all of which can jeopardize their outcomes.

Furthermore, psychological distress among nurses can foster a toxic work environment, which can harm team dynamics. A lack of emotional support from colleagues and a high-stress environment can impede effective communication, collaboration, and problem-solving, leading to increased distress and burnout among staff.[9]

Given the significant impact of psychological distress on BMT nurses, it is essential to implement strategies that enhance mental health and well-being. One effective approach is to offer comprehensive support services, including counseling, stress management workshops, and peer support groups, to assist nurses in managing the emotional demands of their roles.[12] Regular debriefing sessions following particularly challenging patient interactions can also create a space for nurses to process their emotions in a constructive way.[10]

Establishing a supportive work environment is vital for reducing stress and preventing burnout. Ensuring that nurses have access to sufficient staffing, manageable workloads, and opportunities for professional growth can alleviate the physical and emotional strain of the job.[13] In addition, promoting a culture of open communication where nurses feel comfortable discussing their emotional challenges can help normalize mental health issues and diminish stigma.[11]

Institutional support for self-care is equally important. Encouraging nurses to prioritize their well-being through exercise, adequate rest, and time off is crucial for maintaining their mental health. Research indicates that organizations that provide resources for self-care and work-life balance are more likely to retain their staff and prevent burnout.[14]

Conclusion

Psychological distress is a common issue among BMT nurses, stemming from the emotional and physical challenges of caring for critically ill patients. This distress can lead to significant consequences for both nurses and patients, including burnout, decreased quality of care, and high turnover rates. To alleviate these effects, health-care institutions must establish support systems, promote work-life balance, and cultivate a culture of mental health awareness to assist BMT nurses in managing the demands of their profession. By addressing these challenges, it is possible to enhance the well-being of both nurses and patients.

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