

A Cross-Sectional Study to Assess the Prevalence of Burnout Syndrome among Nurses Working in Critical Care Units of a Quaternary Care Hospital in a Metropolitan City

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Abstract: *This study aims to assess the prevalence of burnout syndrome among nurses working in critical care units. A cross-sectional study to assess the prevalence of burnout syndrome among nurses working in critical care units of a quaternary care hospital in a metropolitan city. The sampling technique used was nonprobability purposive sampling. The tool consists of questionnaires to assess demographic data and a modified Copenhagen burnout inventory which consisted of 20 items. The results related to burnout score were seen that majority of the nurses, 53.3%, were having moderate level of burnout, whereas only 20% were having severe level of burnout and 26.6% had mild burnout. It was seen that there was a significant association of demographic variable, years of experience ($p=0.007\%$) according to chi square test.*

Keywords: Burnout syndrome, critical care unit, Nursing, Years of experience

I. INTRODUCTION

Nurses in critical care units are frequently exposed to high-stress situations, emotional trauma, and extended work hours, making them especially vulnerable to burnout syndrome. Burnout syndrome, characterized by emotional exhaustion, depersonalization, and a reduced sense of personal efficacy, is increasingly prevalent among nurses in critical care settings due to the intense demands and complexities of patient care. Burnout syndrome is a significant occupational hazard among nurses, particularly those working in critical care settings, where the high-intensity environment, emotional demands, and workload contribute to increased stress and psychological fatigue. Burnout is related to physical disorders such as respiratory, heart, and intestinal pathology, headaches, type 2 diabetes, hypercholesterolemia, prolonged fatigue, and muscle pain [5]. Burnout has also a negative effect on mental health causing depressive and anxiety symptoms, alcohol consumption, insomnia, and even suicidal ideas.

Burnout syndrome is a common psychological response to prolonged occupational stress, particularly among nurses working in critical care units. These healthcare professionals are frequently exposed to high patient acuity, emotional strain, ethical dilemmas, and demanding workloads, all of which contribute to physical and emotional exhaustion. This study aims to assess the prevalence and contributing factors of burnout syndrome among nurses in critical care settings and to explore its impact on their professional performance and overall well-being. Burnout among critical care nurses is a growing concern worldwide, as prolonged exposure to stressful conditions and life-threatening situations places these professionals at high risk for emotional exhaustion and reduced personal accomplishment. Therefore, the purpose of this subset analysis study to examine the prevalence of burnout syndrome among nurses working in critical care area.

E Cishahayo et al (2017) The descriptive cross-sectional study found high level of burnout among 61.7% of the participants under study. A quantitative approach was adopted. Sixty nurses were involved in the study, and they were selected using a total population sampling strategy. A self-administered questionnaire and Maslach Burnout Inventory Human Service Survey were used to collect data. Data were analysed using SPSS version 21.0. High workload and intention to leave were associated with burnout ($P < 0.05$). Burnout was measured by high Emotional Exhaustion (EE) 29 (48.3%), high Depersonalization (DP) 15 (25%) and low Personal Accomplishment (PA) 30 (50%). The high level



of burnout identified among ICU and emergency department nurses is mainly associated with high workload and intention to leave the work within the next 12 months.

Statement of the Problem

“A cross-sectional study to assess the prevalence of burnout syndrome among nurses working in critical care units of a quaternary care hospital in a metropolitan city”

Objectives of the Study

- To assess the prevalence of burnout syndrome among nurses working in critical care units.
- To establish association between burnout syndrome with selected demographic variables

II. METHODOLOGY

H1 – There is significant association between selected demographic variables and burnout score.

The research method adopted for this study was descriptive cross-sectional design to assess the prevalence of burnout conducted among nurses working in intensive care units (ICUs), emergency departments, and high-dependence units of selected hospitals. Data were collected using a standardized burnout inventory tool, and results were analysed to identify the levels and dimensions of burnout namely emotional exhaustion, depersonalization, and reduced personal accomplishment. The study was conducted at Army Hospital (R&R), a super speciality hospital with advanced facilities, specifically in the critical care units (Medical and Surgical ICU, PICU, ICCU, CSICU). Data was collected from nurses in these units, focusing on their qualities and characteristics. The research variable was the prevalence of burnout among nurses in critical care. The tool used in the study is modified Copenhagen Burnout Inventory (CBI) which consisted of 20 items. The final score was calculated on the following aspects

No burnout	<20%
Mild burnout	21-40%
Moderate burnout	41-60%
Severe burnout	61-80%
Very severe burnout	>80%

III. RESULTS AND DISCUSSION

Descriptive and inferential statistics were analyzed for the data analysis.

The data obtained from the study subjects were analyzed and interpreted in terms of objectives of the study. The findings reveal that the mean score was 49.16 and SD score was 5.13.

Burnout score	Frequency	Percentage (%)	Mean	SD
No burnout (<20%)	0	0	49.16	5.13
Mild burnout (21-40%)	8	26.7		
Moderate burnout (41-60%)	16	53.3		
Severe burnout (61-80%)	6	20		
Very severe burnout (>80%)	0	0		

Table 1: Distribution of subjects as per burnout score.

The scores of the represents the assessment of prevalence of burnout scores of samples were 49.16(+/-1.84). Majority of the nurses 16(53.3%) had moderate burnout. Whereas 8 (26.6%) nurses had mild burnout and 6 (20%) nurses had severe burnout.

The important findings related to demographic variables of the research explained are:

- Maximum number of subjects (56.7%) belongs to the age group of 21-30 years. 46.6% of the subjects were having years of service less than 5 years.
- It was observed that about 93.3% were interested in critical care units.
- More than half subjects (70%) had distances less than 5 km from home to workplace.



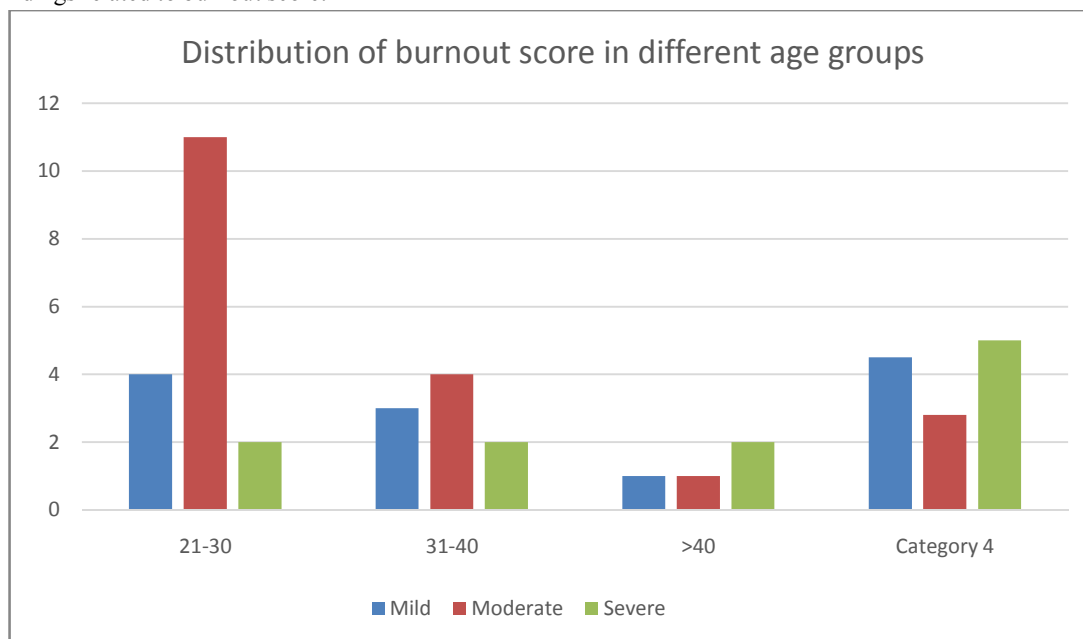
- It was seen that the majority (83.3%) of subjects belonged to nuclear family.
- 33.3% of the subjects belong to the income group of 0.5-1 lakh per month

It was evident from this study findings that all the nurses had some varying level of burnout syndrome. The burn out level is affected by years of service of service and qualification this implication has vital concern to nursing practice, nursing education, nursing administration and nursing research.

Although by no means alone, those in the caring professions are at a higher risk of burn out. The nature of all caring professions is giving, and the needs of others are endless. The result of the study was very valuable to identify the relation between years of service and burnout.

All the nursing staff should be made aware about the signs and symptoms of burnout syndrome. Good interpersonal relationship to be build among nurses and seek their help at times of stress. Senior nurse should divide work among junior nurses and make them responsible and the nurses should know to utilize manpower and facilities effectively.

The findings related to burnout score:



It was seen that majority of the nurses ,53.3% were having moderate level of burnout, whereas only 20% were having severe level of burnout and 26.6%had mild burnout. Association of selected demographic variables i.e. age, years of experience and specialization with level of burnout. It was seen that there was significant association of demographic variable, years of experience ($p=0.007\%$) according to chi square test.

Association of burnout with selected variables. $n=30$, Table value 9.49

Variables	df	P value	X^2	Inference
Age	4	0.438	3.76	NS
Years of Experience		0.007	13.89	S
Specialization		0.09	4.8047	NS

Table 2: Distribution of burnout score association with selected variables.

IV. CONCLUSION

According to this study, the first objective was to assess the prevalence of burnout syndrome among nurses working in critical care units. In the present study it was found that majority of the subjects (53.3%) had moderate level of burnout whereas 26.7% subjects had mild and only 20% were having severe level of burnout. The present study findings are similar to the study done by Delwin Millan Villarante et al (2024) Critical care nurses (CCN) experience a higher level



of stress and burnout than nurses in other specialties. About 50% of CCNs are mildly stressed and almost 20% are moderately stressed. Prolonged periods of stress can lead to burnout, which has been shown to have deleterious effects on quality and patient safety. Two hundred and seventy nurses responded to the survey. The mean PSS score in the study population was 18.5 (SD = 6.4), indicating moderate stress. The mean CBI score was 61.9 (SD = 16.5), indicating moderate burnout. This study has demonstrated the relationship between the health of the work environment and burnout among critical care nurses. It is imperative that healthcare organizations evaluate and implement strategies to optimize the health of the work environment to mitigate burnout and its negative sequelae on the nurse, patient, and system.

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