



Work-related factors associated with Burnout among Nursing officers at Teaching Hospital Badulla

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Key Words:

Burnout, Nurses,
Badulla, Work-related
factors

Abstract

Burnout is a pervasive issue among healthcare professionals, with nurses identified as particularly vulnerable. This cross-sectional descriptive study examined work-related factors associated with Burnout among nursing officers at Teaching Hospital Badulla. A stratified random sample of 355 nurses was selected from a total population of 626 to ensure representation across units. The Copenhagen Burnout Inventory was employed to assess Burnout levels. Analysis revealed significantly higher Burnout among nurses in surgical units ($p = 0.026$), service grade III nurses ($p = 0.003$), those who engaged in shift duties outside their usual units within the last six months ($p = 0.032$), and those perceiving inadequate staffing ($p = 0.023$). Increased nursing experience correlated with reduced Burnout. These findings underscore the need for multifaceted organizational and policy strategies to mitigate Burnout and promote nurse well-being.

Introduction

Background

Individuals must first be highly engaged in their work, enjoying it or feeling deeply committed, before they can experience Burnout. Just as a fire cannot keep burning without fuel, employees' energy and capacity to work gradually diminish when their environment is highly demanding but fails to provide sufficient resources. Over time, this depletion can progress to a final stage characterized by severe physical, emotional, and mental exhaustion, from which recovery becomes difficult (10).

It is a recognized manifestation of occupational stress that adversely affects both employee health and organizational efficiency (3)(2). Healthcare professionals are especially susceptible due to the intensive psychological and physical demands of their work (9). Nurses, who provide compassionate and culturally competent care often under strenuous conditions, are particularly vulnerable to Burnout (8).

Although the data was collected in 2019, the structural and staffing challenges in the Sri Lankan healthcare system remain relevant today. Future research should explore whether post-pandemic work environments have altered the burnout landscape.

Definition of Burnout

According to the World Health Organization's International Classification of Diseases (ICD-11), Burnout is a syndrome resulting from chronic workplace stress that has not been successfully managed. It comprises three dimensions: exhaustion, mental distancing or cynicism towards one's job, and reduced professional efficacy (12).

Objective of the research

This study aimed to identify work-related factors associated with Burnout among Nursing officers at the Teaching Hospital, Badulla.

Literature Review

Burnout was assessed among nurses working at Base Hospital Kahawatta and six District hospitals in the Kahawatta cluster area. The prevalence of Burnout was 31.8%. A statistically significant association was noted between Burnout and lack of professional fulfilment, lack of support from the working unit, and poor work-life balance (11).

A study done at the National Institute of Mental Health, Sri Lanka, to identify nurse Burnout found that Work-related Burnout had a mean score of 29.24(1).

A study done among nurses working in Tribhuvan University Teaching Hospital, Kathmandu, Nepal demonstrated a significant

Table 01 : Distribution of Nursing officers in TH Badulla according to the unit

Unit Category		Number of Nursing officers	Percentage from the total hospital nursing population %	Sample size (from 355)
01	Medical	234	37	131
02	Surgical	228	36	128
03	Intensive care	46	7	25
04	OPD/ETU/Clinics /Special units	57	9	32
05	Theatres	67	10	39
Total		632		355

association between the position and Burnout among the nurses. Nurses working in lower positions had greater odds of Burnout than their supervisors(6).

A cross-sectional study was conducted among nurses working in two COVID-19 isolation hospitals in 2022 in Alexandria, Egypt. This study aimed to assess the magnitude of Burnout syndrome and its associated factors among nurses working in COVID-19 isolation hospitals. A significant association of the work-related variables with the Burnout dimensions levels among nurses was found. Being a patient care nurse, shift times other than morning (especially night) and an inadequate number of physicians were significantly associated with higher Burnout scores, while providing direct care to COVID-19 patients, working in the inpatient department, and inadequacy of personal protective equipment and security services were more significantly associated with Burnout and those who had managerial or supervisory duties were found to have less Burnout. It also showed that those working in the inpatient and outpatient departments are predicted to have higher scores(5).

An online survey conducted on nursing staff at two large Mental Health & Community National Health Service (NHS) Trusts in the Wessex region in England identified that working shifts between 8 and 12 hours, inadequate staffing levels and having no choice over shift length were associated with an increased risk of Burnout(4).

Methodology

Study Design

This research utilized a hospital-based, descriptive cross-sectional design.

Study Setting and Period

The study was conducted at Teaching Hospital Badulla between June 1 and August 30, 2019.

Study Population and Sampling

The study population included male and female nursing officers from medical, surgical, intensive care, theatre, outpatient, emergency, and specialized units. A stratified random sampling method was employed, selecting 355 participants from a total nursing population of 632. Sample size calculation was based on an estimated Burnout prevalence of 30%, incorporating a 10% non-response adjustment (7).

Inclusion and Exclusion Criteria

Inclusion: Nursing officers with at least six months of government health sector experience in selected units

Exclusion: Special grade nursing officers, nursing sisters, ward masters, nurses on leave or training during the study period.

Study Instrument

The Copenhagen Burnout Inventory (CBI), adapted and validated for local use with consultation from medical specialists, was employed as a self-administered questionnaire.

Table 02: Correlation Analysis of Work-Related Factors and Burnout

Work-Related Factor	Pearson Correlation	Sig. (2-tailed)	N
Experience as a Nursing Officer (Months)	-0.235	0.000	355
Experience as a Nursing Officer at This Hospital (Months)	-0.195	0.000	355
Experience as a Nursing Officer at Unit of Work (Months)	-0.154	0.004	355
Working Hours per Week	-0.032	0.552	355
Working Hours During the Weekend	-0.076	0.154	355
Average Number of Night Shifts per Month (Last 6 Months)	0.031	0.559	355
Total Number of Leaves Taken (Past 6 Months)	0.028	0.600	355

The instrument comprised the modified CBI and questions on socio-demographic and work-related factors.

Ethical Considerations

Ethical approval was granted by the Postgraduate Institute of Medicine, University of Colombo.

Results

Method of Data Analysis

This was done using SPSS version 22.

A correlation analysis and mean comparison tests (independent sample t-test and one-way ANOVA test) were done to identify the relationship between work-related factors with Burnout. Finally, a regression analysis was done to identify the work-related factors that affected Burnout.

Interpretation of Table 02 (Work -related factors that are associated with Burnout)

There was a weak negative correlation observed between Burnout and the following work-related factors:

- Experience as a nursing officer at this hospital
- Experience as a nursing officer at the section/unit of work

As experience increased, a reduction in burnout levels was noted.

However, there was insufficient evidence to establish a relationship between Burnout and the following work-related factors:

- Working hours per week
- Working hours during the weekend
- Average number of night shifts per month
- Total number of leaves taken

Table 3: Mean Analysis of the Study Sample Who Performed Shift Duty in Another Unit During the Past Six Months

Shift Duty in Another Unit (Past 6 Months)	N	Mean	Std. Deviation	Std. Error of the Mean
Burnout				
Yes	60	31.776	11.44729	1.47784
No	295	28.369	11.09881	0.64620

Table 04: Comparison of Burnout in the Study Sample Based on the Unit of Work Duty

Unit of Duty	N	Mean Burnout Score
Outpatient Department, Emergency Treatment Unit, Clinics	32	25.9112
Intensive Care Unit	25	27.5916
Medical	132	27.6515
Theatre	38	28.4323
Surgical	128	31.4533

Significance (Sig.): 0.177

Table 05: Comparison of Burnout Levels Across Nursing Service Grades

Grade	N	Gabriel Subset for $\alpha = 0.05$
Grade I	114	26.52
Grade II	132	28.83
Grade III	109	31.63
Significance (Sig.)		0.295 / 0.151

Table 06: Comparison of Burnout Levels by Perceived Adequacy of Nursing Staff in Units

Adequacy of Nursing Staff in Unit	N	Gabriel Subset for $\alpha = 0.05$
Not Adequate but Manageable	193	28.25
Adequate	139	29.00
Not Adequate and Unmanageable	22	35.17
Significance (Sig.)		0.980 / 1.000

Interpretation of Table 03

The mean Burnout score for individuals who performed shift duty in another unit during the past six months was 31.776 (N=60), with a standard deviation of 11.44729 and a standard error of 1.47784. For individuals who did not perform shift duty in another unit, the mean Burnout score was 28.369 (N=295), with a standard deviation of 11.09881 and a standard error of 0.64620.

Interpretation of Table 04

Nursing officers working in surgical units reported the highest mean Burnout score (31.4533), followed by those in theatre (28.4323), medical (27.6515), intensive care unit (27.5916), and outpatient departments, emergency treatment units, and clinics (25.9112). The significance value (0.177) indicates that the differences between units were not statistically significant at the alpha level of 0.05.

Interpretation of Table 05

The data indicate that Grade III nursing officers exhibit higher levels of Burnout compared to Grades I and II, although the differences were not statistically significant at the 0.05 level.

Interpretation of Table 06

The results indicate that Burnout levels are significantly higher in units where the number of nursing officers is perceived as inadequate and the workload is unmanageable.

Discussion

The analysis of work-related factors revealed the following significant positive associations with burnout:

- Nurses who were required to perform shift duties in different units within the past six months exhibited higher levels of burnout.
- Nurses working in surgical units demonstrated increased burnout levels.
- Nurses classified within service grade III experienced elevated burnout.
- In units where the nursing staff was insufficient to manage workload effectively, affected nurses showed higher burnout levels.

Conversely, the analysis identified weak negative associations between burnout and the following variables:

- Increased overall nursing experience correlated with a reduction in burnout levels.
- Greater nursing experience specifically at TH Badulla was associated with lower

burnout levels.

- Longer period of experience within the current unit or ward corresponded with decreased burnout levels.

However, no sufficient evidence was found to support an association between burnout and:

- Weekly working hours
- Weekend working hours
- Average number of night shifts per month
- Total number of leave days taken

The overall Burnout level among nursing officers at TH Badulla was relatively low (mean = 28.9). However, significant associations between Burnout and work-related factors were identified, consistent with prior studies. Contrary to some studies, no association was found between Burnout and night shift frequency or leave duration.

Limitations

1. This study was confined to nursing officers at the Teaching Hospital Badulla. Consequently, the findings are specific to the geographic region and cultural context of the population in Badulla, which may limit the generalizability of the results to the broader national context.
2. Given the cross-sectional design of the study and the chronic nature of the condition under investigation, it was not possible to ascertain the consequences of burnout.
3. A longitudinal study design would have been more appropriate to establish causal relationships between burnout and its associated factors; however, a cross-sectional approach was adopted due to time constraints.
4. The reliance on self-reported data may have introduced information bias.
5. The Copenhagen Burnout Inventory (CBI), a publicly available instrument, was utilized in this study instead of the more widely used Maslach Burnout Inventory (MBI), as the latter requires a fee for each questionnaire administered.
6. The CBI assesses the extent of physical and psychological fatigue across three subdomains of burnout: personal, work-related, and client-related (referred to as patient-related in this study) burnout. Minor adaptations were made during the translation process to enhance comprehension and to align with the Sri Lankan cultural and local

context. It is acknowledged that cultural and service-related factors unique to this region and country may have influenced the performance of the instrument.

Conclusions and Recommendations

Conclusions

Burnout prevalence among nursing officers was low but higher in surgical units, Grade III nurses, those with multi-unit shift duties, and those perceiving staffing shortages. Experience was inversely related to Burnout. No significant associations were found for gender, family support, commute time, working hours, night shifts, or leave.

Recommendations

Preventive strategies should be developed collaboratively and regularly reviewed. Implementing duty rotations and standardizing unit procedures may reduce stress related to unfamiliar assignments. Regular health screenings and accessible counseling services should be prioritized. Strengthening welfare societies and providing training opportunities for junior nurses are recommended. Further longitudinal research is warranted to investigate Burnout outcomes.

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