

The prevalence and associated factors of burnout among nurses working at Base and District Hospitals in Kahawatta cluster area: A descriptive cross-sectional study

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Abstract

Background

Burnout has a detrimental effect on nurses' physical and psychosocial well-being, which may, in turn, lead to compromised patient care. Hence, it is of high importance to understand the prevalence and associated factors of burnout among nurses.

Objectives

To assess the prevalence and associated factors of burnout among nurses working at Base Hospital Kahawatta and six District hospitals in the Kahawatta cluster area.

Methods

A descriptive cross-sectional study was carried out among nurses employed at Base Hospital Kahawatta and six District Hospitals in the cluster area. A self-administered questionnaire on socio-demographic data was administered to all the nurses who consented to participate in the study. The participants were screened for burnout using the Professional Fulfilment Index (PFI). Out of 180 nurses employed in these hospitals, 170 completed the study. The prevalence of burnout and professional fulfilment was calculated using the IBM SPSS version 24. The Chi-square test and

independent-sample t-test were used to evaluate the associations of burnout. A type I error of 0.05 was considered in all significance analyses.

Results

The prevalence of burnout among nurses was 31.8% (95% CI: 24.8-39.3). Most of the study participants were female nurses (n=165, 97.1%), married (n=163, 95.9%), with a mean age of 39.1 years (SD=7.3). Of 170 respondents, 47.6% (95% CI: 39.9-55.4) reported a lack of professional fulfilment. A statistically significant association was noted between burnout and lack of professional fulfilment ($p=0.000$), lack of support from the working unit ($p=0.010$), and poor work-life balance ($p=0.028$).

Conclusion

This study reported that nearly one-third of nurses experienced burnout. Lack of professional fulfilment, a less supportive workplace and poor work-life balance were significantly associated with burnout in this study population. This highlights the importance of raising awareness and introducing preventive measures of burnout among nurses.

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Introduction

The high prevalence of burnout among healthcare workers is multifactorial, including personal characteristics, sociocultural influences, and organisational structure (1).

Nurses play a pivotal role, accounting for 60% of the global medical workforce (2). They are working long hours, making them vulnerable to burnout compared to doctors (3). The prevalence of burnout among nurses varies widely according to the work setting (4).

Identifiable risk factors for burnout among nurses include excessive workload, insufficient accomplishments, lack of appreciation, lack of supportive work colleagues, unfairness in the workplace and poor work-life balance (5,6).

Higher rates of burnout have a detrimental effect on patient safety and quality of care, increasing the chances of absenteeism and leaving the nursing profession prematurely (7). Burnout is also a risk factor for cardiovascular, cerebrovascular diseases and depression (8).

The prevalence of burnout is higher in low and middle-income countries (LMICs), compared to developed countries, given the differences in demand on healthcare services, culture, support system and workplace ethics (3). Hence, research on burnout in LMICs is important to understand the prevalence, associated factors and effective interventions of burnout.

Healthcare services in Sri Lanka are publicly funded. The nurses in peripheral healthcare facilities function with inadequate resources and a high patient load, resulting in a higher level of work-related stress (8).

There are only a few research studies published on burnout among healthcare staff, especially nurses working in peripheral healthcare settings in Sri Lanka. We considered it a high priority to understand the prevalence and associated factors of burnout among nurses in Sri Lankan peripheral healthcare settings, which are very useful for policymakers to design appropriate screening, preventive and early intervention strategies. This study was designed to assess the prevalence of burnout and associated factors among nurses working at Base and District hospitals in the Kahawatta cluster area.

Methodology

Study design

This is a descriptive cross-sectional study. The study was conducted at Base Hospital Kahawatta and all the District Hospitals in the Kahawatta cluster area, namely, District Hospitals Rakwana, Godakawela, Endana, Palmadulla, Hunuwala and Madampe.

Study population

The study population was the nurses who are attached to the Base and District Hospital in the Kahawatta cluster area. During the study period, from June to August 2024, 147 nurses were working at Base Hospital Kahawatta, and 33 nurses were at other institutions, with a total of 180. Further, 16 nurses had received approved leave from the Ministry of Health, whereas 9 of them were on maternity leave, and 7 of them were on local or overseas leave. Since January 2024, 5 nurses have vacated their posts without prior notice or approved leave.

Study sample

A recently published meta-analysis reported the prevalence of burnout among nurses to be 11.3%, and our study sample was calculated as 196 accordingly (1). However, at the time of the study, only 180 nurses were employed at the Base and District hospitals. Therefore, the entire population of nurses currently working in the above hospitals were recruited to the study.

Study instruments

The self-administered questionnaire was designed in accordance with the objectives of the study after reviewing previous similar studies. It was comprised of socio-demographic, employment, health and psychosocial stressors-related details.

The prevalence of burnout was measured by the Stanford Professional Fulfilment Index (PFI), which is a 16-item tool developed especially to assess burnout and the level of professional fulfilment among medical professionals (9).

The component of burnout was assessed based on work exhaustion and interpersonal disengagement. Studies reported that the burnout component of the Professional Fulfilment Index (PFI) correlates with the Maslach Burnout Inventory (MBI), and the professional fulfilment component is correlated with the quality of life (9). PFI is in the public domain and permitted to be used for research or non-profit purposes.

The questionnaire and the screening tools were in English language, as the study population were nurses who were competent in the language, after completing their basic nursing degree in English.

Data collection

Pre-testing of the data collection form was carried out among a population of nurses working in Base Hospitals Balangoda and Kalawana, two peripheral hospitals close to the Kahawatta cluster area, and modifications were made based on the findings.

The data collection was carried out using the printed formats of the self-administered questionnaire and PFI.

Data analysis

Descriptive statistics in the form of means, standard deviations, and percentages were calculated using the Statistical Package for the Social Sciences (SPSS). Chi-square test and independent sample t-test were used to determine the associations between burnout and sociodemographic, health, employment and other factors. The significance was considered at $p < 0.05$ in all analyses.

Ethical considerations

The written informed consent was obtained from all the study participants prior to enrolment in the study. Ethical approval was obtained from the ethics review committee of the Faculty of Medicine, University of Sabaragamuwa, Sri Lanka, while administrative permission was granted by the relevant authorities of the Base and District hospitals and the Provincial/ Regional directors of health

services. Nursing officers screened positive for burnout were offered psychological counselling by the mental health team at Base Hospital Kahawatta.

Results

Among 147 nurses employed at Base Hospital Kahawatta, 138 nurses completed the questionnaire with a response rate of 93%. There were 33 nurses attached to the district hospital, and 22 of them completed the

study with a response rate of 66.7%. While 8 of the nurses did not respond, 2 responses were excluded at the time of data analysis, as they were incomplete. A total of 170 responses were included in the study.

The age of the study participants ranged from 27 to 59 years, with a mean age of 39.1 years (SD=7.3). A greater majority of the nurses were females (n=165, 97.1%), and were married (n=163, 95.9%).

Table 1. Sociodemographic, health-related and employment-related data of the study population		
Variable		n (%)
Gender	Male	5 (2.9)
	Female	165 (97.1)
Civil status	Single	7 (4.1)
	Married	163 (95.9)
Having children	Yes	143 (84.1)
	No	27 (15.9)
Having children < 12 years of age	Yes	104 (72.7)
	No	39 (27.3)
Adequate child support	Yes	114 (79.7)
	No	29 (20.3)
History of medical illness	Yes	27 (15.9)
	No	143 (84.1)
History of psychiatric illness	Yes	4 (2.4)
	No	166 (97.6)
Family history of psychiatric illness	Yes	9 (5.3)
	No	161(94.7)
Current or previous history of substance use	Yes	0 (0)
	No	100 (100)
Staff category	Matron	5 (2.9)
	Sister/ Master	11 (6.5)
	In-charge	5 (2.9)
	Nurse	149 (87.6)

(Continued)

Variable		n (%)
Service period in years	< 5	18 (10.6)
	6-10	54 (31.8)
	11-15	35 (20.6)
	16-20	30 (17.6)
	> 20	33 (19.4)
Distance from home to workplace in km	< 25	138 (81.2)
	26-50	24 (14.1)
	51-100	6 (3.5)
	>100	2 (1.2)
Stay during the working days	Alone	9 (5.3)
	With family/ friends/relatives	161 (94.7)

None of the nurses in the study reported current or previous use of psychoactive substances.

Prevalence of burnout and professional fulfilment

In the PFI, the total burnout score is considered as the cumulative scores of work exhaustion and personal disengagement, which ranged from 0-16 and 0-24, respectively. The mean burnout score of the study sample was 10.74 (SD=6.81). The average score of 1.33

was considered as the cut-off value to screen positive for burnout. The prevalence of burnout in our study sample was 31.8% (n=54).

The total score of professional fulfilment ranged from 0-24, with a mean score of 17.48 (SD=3.8) among the study participants. The prevalence of professional fulfilment was determined using the cut-off value of 3.00 of the average score. Nearly half the study population (n=89, 52.4%) showed professional fulfilment in their current employment.

Factors associated with burnout

Table 2. Comparison of sociodemographic/ health-related and employment-related factors of study populations screened positive and negative for burnout				
Variable		Screened positive for burnout number (%)	Screened negative for burnout number (%)	Significance P value at 95% CI
Mean age (Years)		39.96	38.80	0.368
Gender	Female	52 (31.51)	113 (68.48)	0.688
	Male	2 (40.00)	3 (60.00)	
Marital status	Single	3 (42.86)	4 (57.14)	0.681
	Married	51 (31.29)	112 (68.71)	
Having children	Yes	48 (33.57)	95 (66.43)	0.246
	No	6 (22.22)	21 (77.77)	

(Continued)

Variable		Screened positive for burnout number (%)	Screened negative for burnout number (%)	Significance P value at 95% CI
Having children of less than 12 years	Yes	34 (32.69)	70 (67.31)	0.938
	No	14 (35.90)	25 (64.10)	
Having adequate child support	Yes	35 (30.70)	79 (69.30)	0.150
	No	13 (44.83)	16 (55.17)	
Having previous/ current medical condition	Yes	11 (40.74)	16 (59.26)	0.275
	No	43 (30.07)	100 (69.93)	
Having a previous/ current psychiatric condition	Yes	1(25.00)	3 (75.00)	1.000
	No	53 (31.93)	113 (68.07)	
Family History of psychiatric illness	Yes	2 (22.22)	7 (77.77)	0.527
	No	52 (32.30)	109 (67.70)	
Staff category	Matron	3 (60.00)	2 (40.00)	0.519
	Sister/Master	3 (27.27)	8 (72.73)	
	Unit in-charge	1 (20.00)	4 (80.00)	
	Nurse	47 (31.54)	102 (68.46)	
Travelling distance to work (km)	<25	47 (34.06)	91 (65.94)	0.337
	26-50	4 (16.67)	20 (83.33)	
	51-100	3 (50.00)	3 (50.00)	
	>100	0 (00.00)	2 (100.00)	
Stay during the workdays	Alone	3 (33.33)	6 (66.67)	0.917
	With family/ someone	51 (31.67)	110 (68.32)	
Support from the unit	Excellent	11 (18.64)	48 (81.35)	0.010
	Good	30 (37.50)	50 (62.5)	
	Neutral	9 (34.61)	17 (65.38)	
	Poor	4 (80.00)	1 (20.00)	
Work-life balance	Excellent	2 (10.53)	17 (89.47)	0.028
	Good	37 (32.46)	77 (67.54)	
	Neutral	10 (25.64)	29 (74.36)	
	Poor	5 (71.43)	2 (28.57)	
Appreciation by the unit staff	Excellent	2 (13.33)	13 (86.67)	0.098
	Good	30 (32.97)	61 (67.03)	
	Neutral	13 (27.66)	34 (72.34)	
	Poor	9 (52.94)	8 (47.06)	

Age, gender, marital status and staff category were not significantly associated with burnout.

Nurses who have perceived poor or very poor appreciation of their work show a higher prevalence of burnout compared to their colleagues who have excellent or good levels of appreciation of their work. The association between the prevalence of burnout and the perceived level of support from the workplace was found to be statistically significant ($p=0.010$).

Study participants who reported an excellent or good level of work-life balance had a lower prevalence of burnout compared to their counterparts with poor or very

poor work-life balance. There was a statistically significant association between the prevalence of burnout and perceived work-life balance ($p=0.028$).

Association between professional fulfilment and burnout

Among 89 study participants who fulfilled the criteria for professional fulfilment, 17 (19.10%) screened positive for burnout. However, among 81 participants who reported a lack of professional fulfilment, 37 (45.68%) screened positive for burnout. The lack of professional fulfilment is identified as a risk factor for developing burnout ($p=0.000$, OR: 2.9, 95% CI: 1.3-6.3) in this study.

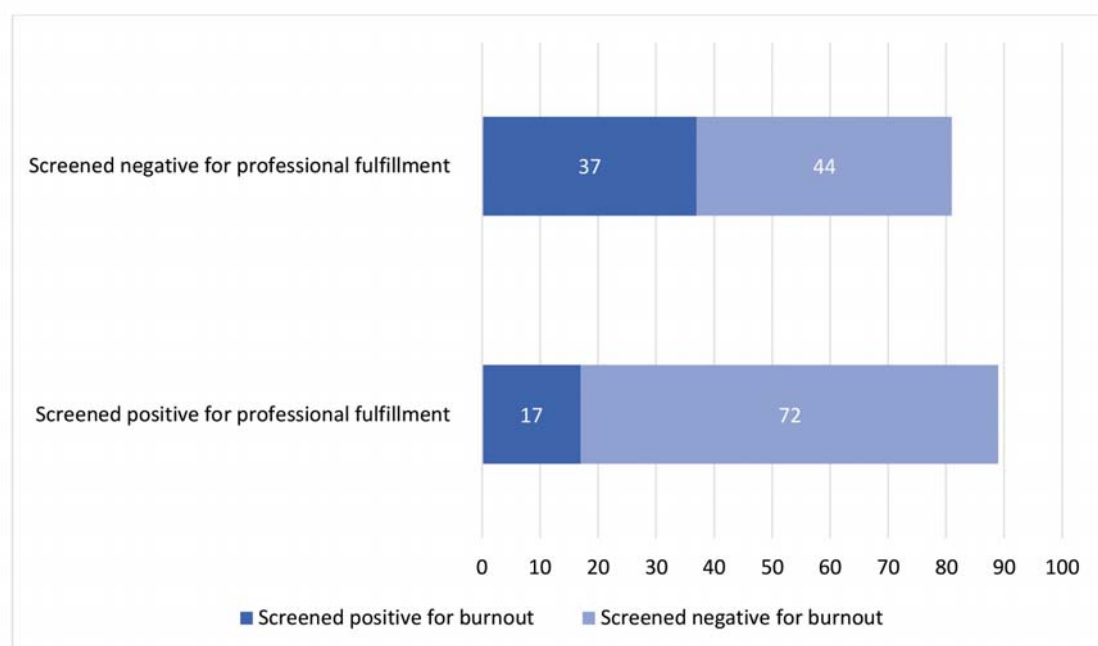


Figure 1. The association between the prevalence of burnout and professional fulfilment.

Discussion

Prevalence of burnout

The prevalence of burnout was 31.8% among the nurses working in the Base and District Hospitals in the Kahawatta cluster area. This is comparable with the results of a cross-sectional study carried out among 346 nurses at the National Institute of Mental Health (NIMH), Angoda, Sri Lanka, where more than one-third of them screened positive for burnout (10). Our study included nurses who are working in all the specialities in peripheral hospitals, whereas the study at NIMH was carried out among mental health nurses employed in a specialised tertiary care hospital. Furthermore, the NIMH study screened for burnout using the Copenhagen burnout inventory (CBI), compared to the Professional Fulfilment Index (PFI) of our study. Despite the differences in the

study population and study instruments, a similar result was yielded in both studies.

The prevalence rate of burnout among nurses varied widely in the more recent research published globally. In 2020, a study on the global prevalence of burnout included 113 studies for systematic review and 61 studies of meta-analysis, including 45,539 nurses in 49 countries, across multiple specialities. This study reported an overall pooled prevalence of burnout symptoms among nurses to be 11.23%, which was significantly lower than the finding of our study (11).

However, our study was in keeping with the results of another meta-analysis, which reported the prevalence of burnout to be 37.4% among nearly 80,000 healthcare workers during the COVID-19 pandemic (1).

The wide variations in the prevalence of burnout may be due to differences in the study populations, methodologies and study instruments. Furthermore, the psychosocial impact of the COVID-19 pandemic may have contributed to the higher reported rates of burnout. Our study was carried out during the period of the post-pandemic era and the economic recession that immediately followed. To the best of our knowledge, this is the first study to report the prevalence of burnout and its associated factors among nurses during those challenging times in the Sri Lankan healthcare setting.

Factors associated with burnout

Professional fulfilment

Lack of professional fulfilment was identified as a predictor of burnout among nurses in our study ($p=0.000$, OR: 2.9, 95% CI: 1.3-6.3). Even though the comparable studies which explored the association between professional fulfilment and burnout are sparse, in a study conducted in 2021, it was reported that lower professional fulfilment is associated with high burnout scores among physicians (12). Similarly, in a more recently published study in Sri Lanka, a lack of professional fulfilment was identified as a predictor of burnout among doctors working in peripheral healthcare settings (13). Both studies carried out during the COVID-19 pandemic used PFI to measure burnout and professional fulfilment, similar to our study.

A recent meta-analysis reported that higher levels of job stressors and poor job satisfaction are associated with adverse mental health outcomes, including burnout (14). This meta-analysis, conducted during the COVID-19 pandemic, included different categories of healthcare workers, compared to our study among nurses during the post-pandemic era.

In a study published in 2017, a significant negative relationship was seen between job satisfaction and burnout among emergency department health staff, including doctors and nurses (15). This study used the Minnesota Satisfaction Questionnaire (MSQ), which assesses intrinsic, extrinsic and overall satisfaction in their employment, compared to the Professional Fulfilment Index (PFI) used in our study.

Lack of support from the working unit and poor work-life balance

A theoretical review, which included 91 qualitative studies, identified high workload, low level of control over the job, poorly supported work environment, and low rewards are predictors of burnout among nurses (4). Comparatively, in our study, lack of support from the working unit and poor work-life balance were identified as statistically significant risk factors for the development of burnout among nurses.

Socio-demographic and other associated factors

The association between socio-demographic factors and increased risk of burnout was inconclusive in this study. In a recently published literature review, gender, marital status, level of education, or childcare burden did not show a strong correlation with burnout among nurses, which was similar to the findings of our study (16). This is contrary to other published data, which demonstrated a correlation between burnout and gender, marital status, and having children (17).

Strengths and limitations

In this study, the response rate is 94.4%, which makes it a more representative sample among the nurses. However, the data collected were self-reported and may have resulted in reporting bias.

This study was limited to the nurses working in a Base and District hospitals located in a peripheral setting. Therefore, the findings cannot be generalised to the nurses working in different categories of hospitals and community healthcare settings in Sri Lanka.

We did not find significant associations between the prevalence of burnout and social-demographic, health and employment-related factors. This may be due to an inadequate sample size.

Conclusion

This study reported that nearly one-third of nurses screened positive for burnout, which illustrates the impact on an already strained healthcare system in Sri Lankan peripheral healthcare settings. Lack of professional fulfilment was identified as a predictor of burnout, along with lack of support from the institution and poor work-life balance.

Hence, it is important to raise awareness of the high prevalence of burnout among nurses. It is also vital to enhance professional fulfilment and work-life balance at the individual and organisational levels to reduce the risk of developing burnout.

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