



ORIGINAL RESEARCH

Burnout and its Associated Factors among Nurses Working in Selected Public Hospitals of Adult Emergency Department Addis Ababa, Ethiopia: Hospital Based Cross Sectional Study

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Abstract

Background: Burnout is a syndrome in which a health professional experiences emotional exhaustion, poor personal accomplishment, and depersonalization. It is more common in nurses due to excessive workload and occupational stress. Burnout makes it difficult for nurses to provide high-quality health care.

Objective: To assess the magnitude of nurses' burnout and its associated factors among nurses working in public hospitals in Addis Ababa, Ethiopia from February to April 2022.

Method: A hospital-based cross-sectional study design was conducted on 239 sample nurses at three public hospitals. A census sampling method was used. Binary logistic regression was performed to see the association between the independent variable and the outcome variable using bivariable analysis. To control for confounding factors, independent variables with a p-value < 0.25 were included in the multivariable analysis. A p-value of ≤ 0.05 was declared as statistically significant.

Result: From a total of 239 participants, 48.5% of nurses suffered from burnout. Emotional exhaustion was indicated by 110 (46%) respondents; depersonalization by 83 (34.7%) participants; and low personal accomplishment by 117 (49%) participants. This finding was significantly associated

with nurses' educational status, work experience, working greater than 8 hours per day, planning to leave their current job in the next 12 months, and medication use related to their work.

Conclusion: The magnitude of burnout among nurses working in the three public hospitals of adult emergency was high. Working experience, educational status, working more than eight hours per day, planning to leave their job within the next 12 months, using analgesics, participating in physical exercise, and using additional or different drugs were associated with nursing burnout.

Keywords:

Burnout, Nurses, Emergency, Public hospitals, Ethiopia

Background

Burnout is a concept that can be characterized in many different ways by various individuals, and different people used the phrase to denote a variety of things before Maslach gave it a standardized definition. In the 1970s, by Freudenberg, the concept "burnout" was used to describe negative responses to human services to be done. First, it was used to describe exhaustion symptoms observed in mental health

professionals [1]. According to Maslach (1982), burnout is a condition characterized by emotional exhaustion, depersonalization, and a decreased sense of personal accomplishment that occurs in people who work with people in some way as a result of extended stress produced by human interaction [2].

Nurse burnout is a common occurrence marked by a loss of energy in nurses that displays as emotional exhaustion, decreased motivation, and dissatisfaction [3]. Nurses' physical and mental health may affect their performance and the quality of care they provide, as nurses are one of the most essential variables in the healthcare system for improving care quality, and according to the literature study, burnout among nursing personnel may have a significant effect on the occurrence of adverse patient events. However, more research into nurse burnout is still needed [4].

Burnout appears in a variety of forms, has the ability to influence nurses' decisions to leave the field, and must be addressed in order to alleviate the problem [5]. The nursing profession has a high workload, which is linked to declining health. It is critical to gain a thorough awareness of the working situation and assess elements that may help to minimize the negative effects of such a high workload [6]. In workforce studies, burnout is regularly highlighted as a nursing "outcome." However, the definitions of burnout, the variables that contribute to its development and the repercussions for individuals, organizations, or their patients are rarely stated [7]. The findings support interventions aimed at correcting work environment mismatches [8]. Burnout has been connected to individual, interpersonal, and organizational experiences. Personality factors were linked to professional burnout, with pessimistic nurses having a higher prevalence of burnout [9]. In this study, the top cause of burnout in nurses was workload. Stress and a lack of medical resources were among the variables that contributed to burnout [10].

The percentage of nurses suffering from burnout has risen in recent years, potentially affecting patient care, working conditions, and staffing shortages [11]. Nurse burnout is a major concern in healthcare settings, with poor consequences for therapeutic results [12]. Burnout among nurses may have an impact on their quality of life, productivity, and nursing care [13]. Burnout is related to increased workload, which results in low back discomfort. It leads to musculoskeletal diseases and burnout as well as more general health problems, including headaches and insomnia for these nurses. Many workplaces that have higher physical and psychological demands may face similar problems [14]. Burnout was prevalent among nurses, and it was particularly caused by workplace pressures [15]. Personal differences are assumed to play a key influence in burnout development because not all nurses exposed to the same organization and job-related circumstances will develop burnout [16].

Methods

An institutional-based cross-sectional study design was conducted to assess burnout and its associated factors among nurses working in adult emergency departments in selected public hospitals of Addis Ababa, Ethiopia. It took place from February to April 2022.

Inclusion criteria

Nurses who were working in adult emergency departments with 6 months or more of experience and who participated in the study during the data collection period were included.

Outcome of interest

Burnout: Is a syndrome which characterized by emotional exhaustion (EE), depersonalization (DP) or cynicism and low personal achievements (PA) [2].

A nurse burnout: is defined as if a nurse scores above the mean value of the sum of emotional exhaustion, depersonalization and reverse adding of low personal accomplishment related item questions.

Result

From a total of 239 participants, 116 (48.5% with 95% CI: (42.2, 54.9)) suffered from professional burnout. Among all respondents, 110 (46%) of nurses developed emotional exhaustion, 83 (34.7%) depersonalization, and 117 (49%) of nurses scored a low level of personal accomplishment (PA), which shows that a significant number of responding nurses had high levels of professional burnout.

Factors associations with nurses' burnout

Nurses' work experience of 6-10 years [AOR = 0.369; 95% CI: (0.158, 0.860)] were 63.1% less likely to develop burnout compared to those with less than three years. Degree nurses were 6.6 times [AOR = 6.572; 95% CI: (1.813, 23.829)] more likely to develop burnout than diploma nurses. Nurses who worked more than 8 hours/day were 3.6 times more likely to develop burnout than nurses who worked less than 8 hours/day [AOR = 3.573; 95% CI: (1.343, 9.506)]. Nurses who planned to leave their current job within the next 12 months were 2.6 times [AOR = 2.645; 95% CI: (1.404, 4.982)] more likely to develop burnout compared to nurses who had no plan to leave. Furthermore, nurses who used analgesics 16.2% [AOR = 0.162; 95% CI (0.031-0.836)] were less likely to develop burnout, nurses who were doing physical activity 17.2% [AOR = 0.172; 95% CI (0.032-0.925)] were less likely to develop burnout, and nurses who were using other medications 15.9% [AOR = 0.159; 95% CI (0.026-0.959)] were less likely to develop burnout than those who were using anxiolytics/sleeping pills (Table 1).

Table 1: Factors associated with burnout among nurses, Addis Ababa, Ethiopia, 2022.

Variables	Nurses' burnout		COR(95% CI)	AOR(95% CI)	P-Value)
	No	Yes			
Gender:					
Male	55 (23.1%)	58 (24.2%)	1.236 (0.743, 2.056)	0.687 (0.352, 1.340)	0.270
Female	68 (28.5%)	58 (24.2)	1		
Age					
20-29	81 (33.9%)	80 (33.4%)	1		
30-39	39 (16.3%)	32 (13.4%)	0.831 (0.474, 1.455)	1.153 (0.456, 2.915)	0.746
40-49	3 (1.2%)	3 (1.2)	1.012 (0.198, 5.167)	1.635 (0.072, 37.109)	0.758
>= 50	0	1 (0.4%)			
Marital status					
Single	76 (31.8%)	65 (27.2%)	1		
Married	46 (19.2%)	48 (20.1%)	1.22 (0.723, 2.058)	1.760 (0.876, 3.536)	0.112
Divorced	1 (0.4%)	2 (0.8)	2.338 (0.207, 26.382)	1.223 (0.101, 14.744)	0.874
Widowed	0	1(0.4%)			
Work Experience					
< 3 years	34 (14.2%)	42 (17.6%)	1		
3-5 years	44 (18.4%)	45 (18.8%)	0.828 (0.448, 1.530)	0.668 (0.312, 1.427)	0.279
6-10 years	40 (16.7%)	27 (11.3%)	0.546 (0.281, 1.063)	0.369 (0.158, 0.860)	0.021**
11-15 years	4 (1.7%)	1 (0.4%)	0.202 (0.022, 1.896)	0.051 (0.002, 1.193)	0.064
> 15 years	1 (0.4%)	1 (0.4%)	0.810 (0.049, 13.42)	2.492 (0.013, 470.229)	0.733
Educational level					
Diploma	17 (7.1%)	4 (1.7%)	1		
Degree	93 (38.9%)	101 (42.3)	4.616 (1.498, 14.217)	6.572 (1.813, 123.929)	0.004**
MSc	13 (5.4%)	11 (4.6%)	3.596 (0.929, 13.916)	4.617 (0.901, 23.643)	0.066
Job title					
Staff nurse	102 (42.7)	93 (38.9%)	1		
Specialty nurse	13 (5.4%)	19 (13.7%)	1.603 (0.750, 3.425)	2.444 (0.924, 6.462)	0.072
head/supervisor nurse	3 (1.3%)	1 (0.4%)	0.366 (0.037, 3.576)	1.332 (0.086, 20.616)	0.837
Others	5 (2.1%)	3 (1.3%)	0.658 (0.153, 2.830)	0.865 (0.135, 5.560)	0.879
Working shift					
Day Shift	13 (5.4%)	7 (2.9%)	1		
Alternative shift	110 (46%)	109 (45.6%)	1.840 (0.707, 4.788)	2.004 (0.607, 6.615)	0.254
Presence of work overload					
Yes	116 (48.5)	115 (48.1)	6.940 (0.840, 57.303)	0.145 (0.014, 1.542)	0.109
No	7 (2.9%)	1 (0.4%)	1		
Working > 8 hour per day					
Yes	100 (41.8%)	105 (43.9%)	2.195 (1.018, 4.737)	3.573 (1.343, 9.506)	0.011**
No	23 (9.6%)	11 (4.6%)	1		
Equipment in your hospital is enough?					
Yes	14 (5.9%)	11 (4.6%)	0.816 (0.354, 1.878)	0.877 (0.304, 2.530)	0.808
No	109 (45.6)	105 (43.9%)	1		
Current quality of life					
Poor	33 (13.8%)	41 (17.2%)	1		
Fair	63 (26.4%)	52 (21.8%)	1.458 (0.709, 2.998)	0.582 (0.268, 1.264)	0.171
Good	27 (11.1%)	23 (9.6%)	0.969 (0.498, 1.887)	1.106 (0.476, 2.904)	0.838
Current health status					

Poor	40 (16.7%)	39 (16.3%)	1.290 (0.679, 2.450)	1.268 (0.577, 2.784)	0.554
Fair	42 (17.6%)	46 (19.2%)	1.449 (0.774, 2.710)	1.494 (0.672, 3.324)	0.325
Good	41 (17.2%)	31 (13%)	1		
Work satisfaction					
Poor	43 (18%)	56 (23.4%)	1		
Fair	52 (21.5%)	47 (19.7%)	2.805 (1.301, 6.049)	0.911 (0.440, 1.884)	0.801
Good	28 (11.7%)	13 (5.4%)	1.947 (0.904, 4.192)	0.495 (0.170, 1.435)	0.195
Planned to leave current work					
Yes	44 (18.4%)	74 (31%)	3.163 (1.865, 5.366)	2.645 (1.404, 4.982)	0.003**
No	79 (33.1%)	42 (17.6%)	1		
Health problems have you experienced in relation to your work?					
Headache	43 (18%)	31 (13%)	1		
Backache	44 (18.4%)	50 (20.9%)	1.576 (0.853, 2.914)	1.969 (0.946, 4.098)	0.070
Depression	6 (2.5%)	14 (5.9%)	3.237 (1.119, 9.361)	2.407 (0.655, 8.848)	0.186
Insomnia	18 (7.5%)	13 (5.4%)	1.002 (0.428, 2.343)	1.129 (0.368, 3.463)	0.832
Hypertension	5 (2.1%)	4 (1.7%)	1.110 (0.275, 4.471)	2.018 (0.337, 12.082)	0.442
Other	7 (2.9%)	4 (1.7%)	0.793 (0.213, 2.945)	1.166 (0.221, 6.157)	0.856
Medication or activities do you use related to your work?					
Anxiolytics/ sleeping pills	4 (1.7%)	15 (6.3%)	1		
Analgesic	52 (21.8%)	43 (18%)	0.221 (0.068, 0.714)	0.162 (0.031, 0.836)	0.030**
Smoking	0	3 (1.3%)			
Physical activity	40 (16.7%)	37 (15.5%)	0.242 (0.075, 0.811)	0.172 (0.032, 0.925)	0.040**
Other	27 (11.3%)	18 (7.5%)	0.178 (0.051, 0.623)	0.159 (0.026, 0.959)	0.045**

Discussion

This institutional-based cross-sectional study was done in three public hospitals to assess the magnitude of burnout and identify its associated factors among 239 (90.5%) respondents. The magnitude showed that 48.5% with 95% CI (42.2, 54.9) of nurses working in the adult emergency department of Addis Ababa had nurses' burnout. The finding was higher than in a study conducted in the United States where burnout affected approximately one-third of nurses, and burnout doubled the risk of poor work performance. This shows one in three nurses develop burnout [17-21]. According to the current finding, nearly half of nurses develop burnout. This may be due to socioeconomic status, salary, nurse to patient ratio, or the work environment in general.

In a study conducted in Brazil, there was a high prevalence of burnout syndrome at 47% and 55.3%, respectively [22,23]. The finding of the current study was 48.5%. It indicates that it was within the range of the study done in Brazil, which is between 47% and 55.3%. But the difference may be due to sample size, study area, geographical location, payment system, and study period. The second study was more than half, which was 55.3% [23]. The difference may be due to the study time period and geographical location. Another study conducted in Belgium found that 68% of nurses develop professional burnout [24,25]. The current finding was lower than the study done in Belgium.

This may be due to the difference in different personal settings, the number of respondents, and the majorities of respondents were young.

A study conducted in Rwanda and Kenya found a significant level of burnout, which was 61.7% and 96.0%, respectively [26,27]. The current finding was lower than studies conducted in Rwanda and Kenya. The discrepancy may be due to the difference in sample size, payment, work load, and the time in which the study was conducted.

The current finding was consistent with studies in the Amhara region, which showed a prevalence rate of 50.4% [28] in all working units, and a prevalence rate of 45% [29] in the Amhara region of North Shoa. The findings were consistent with the previous findings. This may be similar in payment systems, policies, work overload, working hours, and the like. In the eastern part of Ethiopia (Dire Dawa city administration and Harare region), it was found that 44.4% of nurses developed burnout [30]. The findings of the current research were higher than research done in Dire Dawa and the Harare region. The other finding was made in the southern part of Ethiopia, and the prevalence was 34% [31], which was lower than the current finding. Similarly, a study done in Mekelle city was 47.6% [32]. The findings of the current research were slightly higher than those of previous research, which was done in the southern, eastern, and northern parts of the country. It could be

due to differences in socio-demographic characteristics or working in different working units; it could also be due to sample size and study period.

In a study of the magnitude of burnout among nurses working in selected public hospitals for adult emergencies, emotional exhaustion (EE), depersonalization (DP), and low personal accomplishment (PA) were found to be 46 percent, 34.7 percent, and 49 percent, respectively. This finding was comparable with different studies, and it was also consistent with studies done in different areas of the world. Due to this, a study conducted in Amhara regional state showed that 65.3% experienced emotional exhaustion, 43.6% of depersonalization, and 44.4% of low personal accomplishment [28]. The difference may be due to different settings, like different working units, geographical area, and policy.

The similar study done in the Dire Dawa administration and Harare region was 65.3% EE, 70.6% in DP and 74.5% in low PA [30]. The study was lower than the study conducted in eastern Ethiopia in all sub-scales. It's possible that this is due to a variation in sample size; it has a relatively large number of participants, with all policy and location. A similar study done in Rwanda showed that 48.3% in EE, 53.5% in DP, and 50% of low PA [26]. This study was comparable to the same sub-scales. Even if it was different from that in Rwanda, the similarities may be due to working in the same professional settings.

Another study conducted in Belgium found that 38% of EE, 29% of DP, and 31% of low personal accomplishment were found [24,25]. The current finding was higher than the finding that was made in this study, and the difference was due to different aspects like the hospital settings, policy, payment, and so on. And in a similar study conducted in Mexico, 37.3% in EE, 35.1% of DP, and 37% of low personal accomplishment [33]. This finding was higher than the study conducted in Mexico; it may be due to different aspects like income, geographical location, policy and the like.

Similar studies conducted in the United States and Brazil found that 30.5% of EE, 20% of DP, 19% of PA, and 24.5% of EE, 9% of DP, and 30.3% of low PA, respectively [17-21,23]. The current finding was higher, which was found to be 46% in EE, 34.7% in DP, and 49% in low personal accomplishment. The difference may be due to socio-demographic characteristics, hospital setting, policy, and the number of respondents.

Nurses with a BSc degree were 6.6 times more likely than nurses with a diploma to experience burnout. A study conducted in the Amhara region and southern Ethiopia found that diploma nurses were 3.7 times more likely to develop burnout than MSc nurses and 4.8 times more at risk than degree nurses, respectively [28,31], and it was consistent with the current finding. Another study conducted in the Amhara region (Shoa) found that nurses who were BSc degree holders were 1.89

times more likely to feel burnout compared to diploma holders [29]. The difference may be due to work load, policy, sample size, and other personal characteristics.

Participants with 6-10 years of experience were 63.1% less likely to develop burnout compared to those with less than three years of experience. In comparison, a study conducted in southern Ethiopia discovered that nurses with 11-15 years of experience were nearly 15 times more likely to experience burnout [31]; a study conducted in Amhara region discovered that nurses with 3-5 years of experience were twice as likely to experience burnout as nurses with less than 3 years of experience [28]; and a similar study conducted in the Amhara region (Shoa) discovered that nurses with 6-10 years of experience were 2.6 times more likely to experience burnout as nurses with less than 3 years [29]. The current study found that; when nursing experience increases, the prevalence of burnout decreases. This may be due to the adaptation of the work environment and may also be an increment in the benefit of the income.

3.6 times more nurses who worked more than 8 hours per day were more likely to develop burnout when compared to nurses working less than eight hours per day. This finding was consistent with a study conducted in the United States, which found that working 20 to 30 hours per week, 31 to 40 hours per week, and more than 40 hours per week had an OR of 2.26 compared to working fewer than 20 hours per week [34]. A similar study conducted in Saudi Arabia compared individuals who worked 8-hour shifts with those who worked 12-hour shifts, and burnout symptoms were more common in those who worked 12-hour shifts [35-39]. The current finding showed that; there was a positive association and it indicates that when working hours increase, the prevalence of burnout increases in parallel and it is consistent with the study conducted in different areas.

Nurses who planned to leave their current job within the next 12 months were 2.6 times more likely to experience burnout than those who did not. This conclusion was supported by research undertaken in the United States. Nurses who were considering leaving their jobs were found to be 2.26 times more likely than those who were not [34]. A similar study conducted in Saudi Arabia found that 18.8% planned to leave their employment [35-39]. Another study conducted in Ethiopia showed that nurses who had the intention of leaving their current work were 59% less likely to experience professional burnout compared to those who had no intention of leaving their work [28], and nurses who had a plan to leave their profession within 12 months were 0.48 less likely to be at risk for burnout than nurses who had no intention [30]. More specifically, there was a direct correlation between the intention to leave the current job and burnout symptoms. This suggests that the onset of burnout symptoms is a predictor of the intention to leave the nursing profession.

Furthermore, nurses who used analgesics (16.2%) were less likely to develop burnout, nurses who were doing physical activities (17.2%) were less likely to develop burnout, and nurses who were using other medications (15.9%) were less likely to develop burnout than those who were using anxiolytics/sleeping pills. This finding was in line with a study conducted in the Dire Dawa city administration and the Harare region, which reported that taking anxiolytics or sleeping medications reduced the risk of burnout by 3%, and nurses who were using analgesics were 0.4% less likely to develop burnout, those nurses who smoked were 3.4% less likely to develop burnout, and nurses who were doing physical activity were 4.2% less likely to develop burnout [30]. Moreover, the findings of the current study showed that nurses who were using analgesics and other medications and who were doing physical activity in relation to their work-related health problems were less likely to develop burnout than those using sleeping pills. This may suggest that using analgesics, physical activity, and using different medications may decrease professional burnout more than using anxiolytics/sleeping pills.

Conclusion

Burnout affects nearly half of nurses in this study, and a significant proportion of nurses suffer from professional burnout due to their jobs. Working experience, educational status, working more than eight hours per day, planning to leave their job within the next 12 months, using analgesics, participating in physical exercise, and using additional or different drugs were all linked to nursing burnout.

Declaration

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Availability of data and materials

The data analyzed during the current meta-analysis is available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

Funding

Not applicable.

Authors' contributions

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Acknowledgements

Not applicable.

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