

Burnout and Associated Factors Among Nurses Working in A Mental Health Hospital, Madinah, Saudi Arabia

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Submission Date: 2020-10-04 Revision Date: 2020-10-18 Acceptance Date: 2020-10-18

Abstract

Background: Burnout syndrome (BS) is a significant health problem among health care professionals (HCP). **Objectives:** to assess the levels of burnout dimensions among mental health care nurses in a city in the western region, Saudi Arabia, and to investigate the associated socio-demographic and work-related factors. **Method:** A cross-sectional study was carried out among 142 nurses in a public mental hospital in a city in the western region, Saudi Arabia during the year 2018. Data collection was based on self-administered questionnaire including data about nurses' socio-demographic and work-related factors. The assessment of BS dimensions (emotional exhaustion (EE), depersonalization (DP) and personal accomplishment (PA) was done using Maslach Burnout Inventory-Human Service Survey (MBI-HSS) instrument. **Results:** Low, moderate, and high levels EE were found among 43%, 25.4%, and 31.6% of the nurses, respectively. Low level of DP was found in 70%, whereas moderate and high levels of DP were found in 14.5% and 15.5% of the nurses respectively. Low, moderate and high levels of PA were found in 38%, 15.5% and 46.5% of nurses respectively. BS was found to be associated with nurses' sex (EE) and working ≤ 8 hours/day (PA). **Conclusion** Low to moderate level of self-reported burnout among the mental health nurses was found. Work duration was found to play a role in personal accomplishment subscale of burnout.

Keywords: *Burnout syndrome, nurses, mental health*

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Introduction

Burnout has been noted as a significant problem among different, active working populations worldwide. It is defined as "A psychological syndrome emerging as a prolonged response to chronic interpersonal stressors on the job".¹ Three critical dimensions of burnout syndrome are described; emotional exhaustion dimension (EE) indicating wearing out, emotional depletion and fatigue, and depersonalization (DP) dimension indicating the negative attitudes towards

clients and reduced involvement in their work. Lastly, personal accomplishment (PA) which identifies the sense of ineffectiveness and low morale as well as reduced productivity and an inability to cope.^{1, 2, 3}

Burnout is common among healthcare professionals.³ Nursing profession is extremely stressful as the nurses deal with the human (or affective) aspects in addition to medical aspects of health and illness in order to provide ongoing regular

emotional and physical care and deliver the highest percentage of patient care.⁴ Thus, nurses are extremely vulnerable to burnout^{4, 8, 9} due to many stressors such as staff shortage, the demanding patient, workload, inadequate resources, and organizational factors. Consequently, mental healthcare staff also reported higher rates of burnout than HCPs in other sectors.^{1, 10} Notably, nurses working in mental healthcare have a higher level of stress and burnout than other nurses.^{11, 12} Besides regular experienced stress, researches has identified some of the unique stressors that mental health professionals face when they are dealing with difficult or violent clients compared to their colleagues in other fields.^{1, 10, 13} Several demographic and work-related variables have been studied concerning burnout among nurses. Age is one variable that shows a more consistent correlation with burnout. In a meta-analysis of 51 studies, the dimensions of EE and DP were higher in younger nurses than older ones.¹⁴ Gender as a demographic variable has not been a strong predictor of burnout; some studies demonstrated that males report a higher level of burnout while others indicated females as more vulnerable to developing such emotional distress.⁹ The small but consistent sex difference was demonstrated as males often score slightly higher on DP while women score slightly higher EE.⁶

Regarding outcomes, job burnout can lead to severe consequences for the workers, their clients, and families; their work environment; and the organizations.^{8, 10} In the health sector, high burnout level can lead to deterioration in the quality of care or services provided by the staff, which may in turn lead to undesirable patient safety outcomes.¹⁵ Moreover, it can result in poor work performance and job dissatisfaction as well as higher absenteeism and staff turnover.^{10, 16} In addition to their job implication, burnout

can also affect the workers' health. Studies have shown associations between the burnout and some health problems such as smoking¹⁷, alcohol consumption¹⁸, sleep disturbance¹⁹ and increased risk of musculoskeletal pain.²⁰ Currently, burnout is frequently linked with some psychological disorders such as depression and anxiety.¹

The current study aims to improve the general well-being among nurses working in mental healthcare, and to raise the awareness and knowledge about health professional burnout among healthcare workers

Objectives: To measure the burnout levels among nurses working in a public mental hospital in Madinah city, Saudi Arabia and to assess the association between certain socio-demographic and work-related factors with burnout syndrome among them.

Method

Study design: This is a cross-sectional study design. **Study setting and study period:** The study was conducted in a public mental hospital affiliated to the Ministry of Health (MOH) in Madinah, Saudi Arabia. It includes emergency room and intensive care unit, outpatient facility, radiology and laboratories departments, and pharmaceutical services. Besides, there are eight villas for hospitalization for mental health and de-addiction care, two entertainment centers and other facilities.

The majority of nurses working in the setting are Saudis (83.3%), 76.1% are males, 10.1% are nurse-assistants. The total bed capacity of the complex is 246 beds and the current nurse-to-patient ratio for day shift in all wards is one nurse per six patients (1:6).

OpenEpi program²¹ was used to calculate the sample size. The sample was calculated using the estimated frequency of burnout among Saudi critical nurses, of 84%, reported in a recent Saudi study²²,

an accepted error of 5%, confidence limit of 95%, and a statistical power of 80%. This yielded a sample size of at least 207 nurses.

A non-probability sampling procedure was used in this study. The target population were all nurses working in the selected mental hospital. Inclusion criteria involved being of any gender, any nationality, speaking Arabic or English, and working for at least one year in the mental hospital. Exclusion criteria included those working exclusively in non-nursing duties such as administrative or educational roles; those on annual vacations, sick leave, or maternity leave; and students and interns who were in training within the hospital. All eligible nurses found in the hospital while conducting the study were invited to participate in the study. Of a total of 277 nurses working in the setting at the time of the study, 41 had exclusion criteria. Thus, a total of 226 nurses were available for the study. Of these, 142 filled and returned back the self-administered questionnaire (response rate of 62.83%)

Data were collected using a structured self-administered questionnaire in either Arabic or English languages according to the participant's preference. The questionnaire included three sections; and the first and second sections included demographic and work-related data respectively. Demographic data included age, sex, nationality, marital status, having of children, income, qualification; work-related data included job title, working unit, working hours per day, currently having night shifts and currently working during weekends.

The third section of the study questionnaire included the Maslach Burnout Inventory-Human Service Survey (MBI-HSS)^{23, 24} which was used to assess burnout level among participants. The Cronbach's alpha of the English version of this inventory was 0.90 for EE, 0.76 for DP, and 0.76 for PA.²⁴

The Arabic version of this inventory used in this study was validated and recorded with a Cronbach's alpha for the three subscales being: 0.88 for EE, 0.78 for DP, and 0.89 for PA.⁵ The scale has 22-items designed to describe the three main aspects burnout namely; EE, DP, and PA. Each item is answered on a seven-point Likert scale of 0–7. Responses are summed to give independent scores for each of the three subscales, which can then be categorized as low, average, or high degrees of burnout according to normative data based on established cutoff scores (25,26). For EE subscale, a score ≤ 18 , 19-26, ≥ 27 indicated low, average and high EE respectively. For DP subscale, a score ≤ 5 , 6-9, ≥ 10 indicated low, average and High DP respectively. For PA subscale, a score ≥ 40 , 39-34, ≤ 33 indicated low, average and high PA respectively (26). Thus, burnout would be indicated by high scores for EE and DP, and low scores for PA.

Statistical analysis:

Data were entered and analyzed using the Statistical Package of the Social Scientists (SPSS) for Windows, Student Version 23.0, (SPSS, Chicago, Illinois, USA) with statistical significance set at $p < 0.05$. First, Shapiro-Wilk's test was applied to evaluate whether continuous variables were normally distributed. Descriptive statistics were utilized to describe the sample characteristics in the form of median (with minimum and maximum values) or mean \pm SD for all continuous data. For categorical data, frequency, number, and percentage were used to describe sample characteristics.

Univariate analysis using χ^2 or Fisher's exact test, as was appropriate was performed to investigate association of certain sociodemographic and work-related factors with (MBI-HSS scales).

Ethical considerations

An ethical approval was obtained from the General Directorate of Health Affairs in

Madinah and Institutional Review Board Committee. All participants gave informed consent prior to participation,

Table 1: Sociodemographic and Work-related Characteristics of The Participants (N=142)

Characteristics	N (%)
Age (years)	
25-29	29 (20.4)
30-34	46 (32.4)
35-39	44 (31.0)
40-44	13(9.2)
45-49	5 (3.5)
50+	5 (3.5)
Gender	
Male	98 (69.0)
female	44 (31.0)
Nationality	
Saudi	129 (90.8)
Non-Saudi	13(9.2)
Qualification	
Diploma	99 (69.7)
Bachelor	42 (29.6)
Master	1 (0.7)
Marital status	
Single	24 (16.9)
Married	112(78.9)
Divorced	5 (3.5)
widowed	1 (0.7)
Having children	
Yes	106 (74.6)
No	36 (25.4)
Basic salary (SR/month)	
Less than 5000	6 (4.2)
5000-10000	44 (31.0)
More than 10000	92 (64.8)
Job title	
Nurse	137 (96.5)
Nurse assistant	5 (3.5)
Current working unit	
ER and ICU	17 (12.0)
Inpatient care	78 (54.9)
Outpatient care	19 (13.4)
Forensic care	6 (4.2)
Others	22 (15.5)
Currently having night shift	
Yes	73 (51.4)
No	69 (48.6)
Currently working at weekend	
	82 (57.7)

Yes	60 (42.3)
No	

and their anonymity was preserved, and they were guaranteed confidentiality and that the questionnaires were coded without identifying their identity.

Results

Table 1 shows that 63.4% of the participants were within (30-39) age group, mostly Saudi nationality (90%), and males (69%). Most of the nurses were married (79%), having children (74.6%) and of that 37.6 % have four or more children. Sixty-four percent reported that their basic salary is more than 10000 SR per month. As regards work-related characteristics; 69.7% had a nursing diploma, 50.1% reported currently spending ≥ 8 hours daily in the hospital. Most nurses worked in the inpatient wards (54.9%), 51% reported that they are currently working at night, and 58.5% reported that they are currently working during the weekend.

Table 2 shows that 31.6% and 25.4% of the participants have high and moderate EE levels respectively. whereas low, moderate and high levels of DP were found in 70.4%, 14.5% and 15.5% of the participants respectively. Low level of PA was found in 38 % of the participants while moderate and high levels of PA were found in 15.5% and 46.5% of them respectively.

Table 3 shows that males are significantly less likely to have emotional exhaustion compared with female nurses ($p=0.031$). None of the studied factors is statistically significant with EE. For depersonalization, none of the studied factors have been found to be associated with this subscale, as all factors revealed a statistically non-significant difference ($p < 0.05$). However, the risk was found to increase among Saudi nurses (OR= 2.47)

insignificantly, and to decrease among nurses working ≤ 8 hours insignificantly (Table 4).

Table 2: Average scores and levels of MBI-HSS subscales among the participants (N=142)

MBI subscales	Mean score \pm SD	Median score (min-max)	N (%)		
			Low	Moderate	High
EE	21.2 \pm 12.8	22 (0-54)	61(43.0)	36 (25.4)	45 (31.6)
DP	4.1 \pm 5.1	2 (0-24)	100 (70.4)	2 (14.1)	22 (15.5)
PA	34.9 \pm 11.5	38(0-48)	54 (38)	22 (15.5)	66 (46.5)

accomplishment in comparison to those who work more than eight hours per day (OR = 2.381, 95% CI= 1.211 – 4.679, $p=0.011$). However, neither gender, nationality, having children, job title, working in night shifts nor the days of working during weekends were statistically significant to be associated with personal accomplishment.

Discussion

The study findings revealed 25.4%, and 31.6% of participants have moderate, and high levels of EE, respectively. Low level of DP was found in 70%, low level of PA was found in 38% of the studied sample. Many studies indicated that the level of burnout vary among different nursing specialties, and nurses who work in psychiatric care are more prone to burnout.²⁷ A much higher level of burnout, however, was reported in previous Saudi studies. A cross sectional study was conducted among 200 nurses in Tabouk military hospital and reported that 75.9% of the studied nurses have BS.²⁵ Another cross-sectional study carried out in five hospitals, reported nearly three quarters of the studied nurses had high burnout level.²⁸ Similarly, another study was conducted in intensive care units on 150 nurses has reported a moderate to high level of burnout among Saudi national critical care nurses.²⁹ Although no studies were conducted in mental health care centers, the findings of

Table 5 shows that nurses who work eight hours or less per day were more likely to have diminished personal

previous studies revealed burnout is a common among nurses in Saudi Arabia. The present study has presented the level of burnout by its subscales. For the emotional exhaustion dimension, the study showed that 25.4% and 31.7% of the nurses had moderate and high emotional exhaustion levels respectively. In contrast with these findings, a cross-sectional conducted among Lebanese nurses reported 77.5% of the nurses have high level of EE (30); whereas in consistent with the present study finding, another cross-sectional survey was carried out in Lebanese nurses revealed high EE in 23.2% of the studied nurses.³¹ In Western countries, high levels of EE were reported as well among mental health nurses. In their survey carried out with 614 community mental health nurses in Wales, UK, Hannigan et al.³² reported that half of the studied sample was emotionally exhausted by their work. As regards factors associated with EE, an Iranian study showed significant positive correlation between age, work experience, on-call duties, and EE for the nurses working in psychiatric care. Frequency of on-calls was also significantly associated with a sense of declined accomplishment.³³ In Alkhobar, Saudi Arabia, the prevalence of BS among multinational nurses at King Fahd University Hospital was concluded to be high. High frequency of EE (45%) among the national and expatriate nurses. Also, Married nurses found to be more

prone to EE than unmarried ones (28.17 ± 12.1 versus 22.3 ± 9.6 respectively, $P=0.003$). Non-Saudi nurses have reported significantly higher EE than Saudis (27.3

± 12.1 versus 21.6 ± 2.9 respectively, $P=0.004$). Working away from their home countries was an additional risk factor in

Table 3 Association of socio-demographic and work-related factors with EE dimension of burnout syndrome among the participants (N=142)

Factors	No n (%)	Yes n (%)	OR	95% CI	P value
Gender					
Male	48 (49.0)	50 (51.0)	0.43	0.20 - 0.93	0.031*
Female	13 (29.5)	31 (70.5)			
Nationality					
Saudi	54 (41.9)	75 (58.1)	1.62	0.51 - 5.09	0.405
Non-Saudi	7 (53.8)	6 (46.2)			
Having children					
Yes	48 (45.3)	58 (54.7)	0.68	0.31 - 1.40	0.337
No	13 (36.1)	23 (63.9)			
Job title					
Nurse	59 (43.1)	78 (56.9)	0.88	0.14 - 5.44	1.00
Nurse assistants	2 (40.0)	3 (60.0)			
Current working hours					
≤ 8 hours	31 (44.3)	39 (55.7)	0.89	0.46 - 1.74	0.753
> 8 hours	30 (41.7)	42 (58.3)			
Currently working during night shifts					
Yes	27 (37)	46 (63)	1.65	0.84 - 3.23	0.139
No	34 (49.3)	35 (50.7)			
Currently working during weekends					
Yes	32 (38.6)	51 (61.4)	1.54	0.78 - 3.06	0.209
No	29 (49.2)	30 (50.8)			

* $p < 0.05$ is statistically significant

expatriate nurses.⁶ In our study, examining the factors associated with EE revealed that male nurses were less likely to have emotional exhaustion compared to female nurses (OR=0.437, 95% CI=0.204 – 0.933, $p=0.031$).

Low level of depersonalization (DP) was found in about 70% of nurses in the present study, whereas high and moderate levels were found in 15.5% and 14.1% of them respectively. High level DP was as well reported to be 70.7% in one study³¹ compared to the finding reported in other two studies 47.1%³⁴ and 36.0%.³⁰ Similarly, two studies including physicians were conducted including physicians in Egypt reported high level of DP.^{35,36} Prevalence for high burnout in Saudi Arabia showed similar variability in

DP across physicians, nurses, and physiotherapists with DP varying from 15.7 to 48.6.^{6,37}

The risk of DP was found to decrease among nurses working ≤ 8 hours. Working hours has also been investigated with burnout level among psychiatric nurses in Greece and reported that low burnout among the studied sample was significantly associated with fewer working hours (38). Moreover, Karakoc et al.³⁹ have also reported that working more than 50 hours per week is associated with higher DP scores among dialysis nurses. The variation in workload, types of provided care among different units or wards in healthcare settings have been found to affect the level of burnout. It is reported that working in night and rotating

shifts pattern were associated with higher levels of DP among nurses.³⁰

The present study has also examined the level of personal accomplishment (PA) in the studied nurses and revealed high level of PA among 46.5% of them. Moderate and low levels of PA, however, were found in 15.5% and 38%, respectively. Similarly, the level of PA was low in Arab countries, including Jordan¹⁶ and

Table 4 Association of socio-demographic and work-related factors with DP scale among the participants (N=142)

Factors	No n (%)	Yes n (%)	OR	95% CI	P value
Gender					
Male	68 (69.4)	30 (30.6)	1.176	0.53 - 2.59	0.687
Female	32 (72.7)	12 (27.3)			
Nationality					
Saudi	60 (69.0)	40 (31.0)	2.472	0.52 - 11.6	0.345
Non-Saudi	11 (84.6)	2 (15.4)			
Having children					
Yes	76 (71.7)	30 (28.3)	0.789	0.35 - 1.77	0.568
No	24 (66.7)	12 (33.3)			
Job title					
Nurse	96 (70.1)	41 (29.9)	1.708	0.18 - 15.75	1.00
Nurse assistants	4 (80.0)	1 (20.0)			
Current working hours					
≤ 8 hours	51 (72.9)	19 (27.1)	0.794	0.38 - 1.63	0.531
> 8 hours	49 (68.1)	23 (31.9)			
Currently working during night shifts					
Yes	52 (71.2)	21 (28.8)	0.923	0.44 - 1.89	0.828
No	48 (69.6)	21 (30.4)			
Currently working during weekends					
Yes	59 (71.1)	24 (28.9)	0.927	0.44 - 1.92	0.838
No	41 (69.5)	18 (30.5)			

Table 5 Association of socio-demographic and work-related factors with PA scale among the participants (N=142)

Factors	No n (%)	Yes n (%)	OR	95% CI	P value
Gender					
Male	51 (52.0)	47 (48.0)	0.825	0.40-1.68	0.598
Female	25 (56.8)	19 (43.2)			
Nationality					
Saudi	71 (55)	58 (45.0)	1.959	0.60-6.31	0.253
Non-Saudi	5 (38.5)	8 (61.5)			
Having children					
Yes	56 (52.8)	50 (47.2)	0.896	0.41-1.91	0.777
No	20 (55.6)	16 (44.4)			
Job title					
Nurse	72 (52.6)	65 (47.4)	0.277	0.03-2.54	0.372
Nurse assistants	4 (80.0)	1 (20.0)			
Current working hours					
≤ 8 hours	45 (64.2)	25 (35.7)	2.38	0.21-0.82	0.011*

> 8 hours	31 (43.1)	41 (56.1)			
Currently working during night shifts					
Yes	38 (52.1)	35 (47.9)	0.88	0.45-1.71	0.71
No	38 (53.1)	31 (44.9)			
Currently working during weekends					
Yes	42 (50.6)	41 (49.4)	0.75	0.38-1.47	0.408
No	34 (57.6)	25 (42.4)			

* $p < 0.05$ is statistically significant

Lebanon³⁰ among nurses. Compared with these findings, however, low level PA was highly reported in some Western studies. In England, the low level of PA among the studied mental health nurses was 60%.⁴⁰ In Japan, the level of low PA was as high as 72% among psychiatrists.⁴¹ In Poland, low PA was reported to be among 77% of the studied hospital nurses.⁴² Other studies, however, have reported low frequency of low PA; among 10% in the USA⁴³ and 33% in Scotland.⁴⁴ The discrepancies in these studies, however, could be attributed to the type of the studied population, assessment tools, sample size and technique and the difference in culture among different world countries.

The study presents the level of burnout syndrome by its dimensions (EE, DP and PA). According to our knowledge, this study is the first to address this topic among mental nurses in Madinah, Saudi Arabia. The study may have some limitations, firstly, it was done in a single center and in only one Saudi region and hence the results may not be generalizable to the entire nursing workforce in mental health care service in Saudi Arabia. The design was cross-sectional; therefore, the causality of association could not be confirmed. Finally, the use of self-report questionnaires posed a risk of measurement error, also non-response found in the study and the nurses who were in vacation or sick leaves may be differed from those who responded.

CONCLUSION

The current study shows a low to moderate level of self-reported burnout among the studied mental health nurses in Madinah city, Saudi Arabia (moderate level of EE, low level of DP and moderate level of PA). Some factors appeared to pose a higher risk of burnout among nurses. Male sex, working hours seem to be associated with burnout subscales. Identifying those at risk will help practitioners develop coping and wellness programs that might alleviate some of the factors that lead to burnout among health care professionals (HCP). Further studies are needed to assess burnout among different specialties of HCP and to determine the profile of HCP who are at-risk of burnout and assess whether self-reported burnout fluctuates over time in follow up studies.

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