

# Testing burnout syndrome as a psychiatric disorder among nursing staff of different medical settings

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## Background

The high risk for professional burnout noted among nurses has led to a growing interest in the psychosocial work environment. The aim of this study was to discuss the importance of revising the nature of burnout as an illness to be considered in psychiatric classification and to find out the overall prevalence of work-related burnout symptoms and their risk factors among nurses of different departments.

## Patients and methods

This cross-sectional study included 112 nurses: 45 working in psychiatry units, 34 in ICUs, and 33 in the internal medicine unit of the same hospital. The participants were assessed with the use of a questionnaire on their sociodemographic characteristics, workplace stress scale, and the Maslach Burnout Inventory.

## Results

The nurse sample experienced high burnout, with a statistically significant difference between nurses from the three departments ( $P < 0.001$ ). Similarly, psychiatry nurses had an evidence of decreased emotional exhaustion as well as low depersonalization when compared with ICU and internal medicine nurses. Furthermore, depersonalization was high among ICU nurses despite high emotional exhaustion. Burnout was significantly associated with stress and other work-related factors.

## Conclusion

Nurses in the selected three departments were vulnerable to burnout. It was significantly related to stress exposure, years of experience, work safety, job description, and absence of assistance.

## Keywords:

burnout, coping, nurses, stress, workplace

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## Introduction

Burnout has been defined as a combination of emotional exhaustion, depersonalization, and reduced personal accomplishment caused by chronic work stress. It also results in fatigue, loss of motivation, and sense of ineffectiveness and failure related to the individual's job [1]. It is a mental condition attributed to the body's response to the failure of the coping strategies that individuals typically utilize to manage stress at work [2–4]. Despite the increased prevalence of burnout among modern societies and its impact on the quality of life, it is not included in the edition of the *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. Consequently, whether it should be considered as a psychiatric illness is debated [5].

Nursing is often considered as one of the most stressful occupations and highly exposed community for burnout. In the annual National Health Service staff opinion surveys, a significant proportion of respondents reported feeling unwell due to work-related stress [6]. The European Commission defines stress as the emotional, cognitive, behavioral, and physiological reaction to noxious aspects of work, its environments, and organizations [7]. It is a state characterized by high levels of arousal and distress and often by feelings of not coping.

Various factors are associated with a high degree of nursing stress [8], and sources of stress vary in both nature and frequency across nursing specialties [9].

Workplace stress and its consequences on nurse's behavior can create mental problems such as anxiety, depression, insomnia, fatigue, and burnout [10–12].

Nurses have been described as the professional group with the highest risk for burnout, role conflict, and job dissatisfaction. The quality of care provided by nurses is negatively affected by problems related to job satisfaction, job-related stress, and burnout [13]. Heavy workloads, long daily working hours, and negative perceptions of work conditions can lead to burnout [1,14]. Burnout has been associated with high employment turnover, excessive absenteeism, negative job attitudes, low morale and deterioration in idealism toward helping others, and loss of concern for clients [15].

The aim of this study was to discuss the importance of revising the nature of burnout as an illness to be considered in psychiatric classification and to find out the overall prevalence of work-related burnout symptoms and their risk factors among nurses of different departments.

## Patients and methods

This cross-sectional study was conducted at Ain Shams University Hospital in three different departments. Ain Shams University Hospital is located in eastern Cairo; they serve a catchment area of about the third of Greater Cairo. They serve both urban and rural areas, including areas around the Greater Cairo. One hundred and twelve nurses were recruited from the psychiatry, internal medicine, and intensive care departments of Ain Shams University Hospital (45 working in the psychiatry unit, 34 in the ICUs, and 33 in the internal medicine unit of the same hospital). The inclusion criteria for recruitment of the samples were as follows: being free of psychiatric disorders to avoid the bias in our results, and consent to participate. The participants were assessed with the use of a questionnaire as regards their sociodemographic characteristics, workplace stress scale, and the Maslach Burnout Inventory (MBI).

This study was approved by the Ethical and Research Committee of Institute of Psychiatry, Ain Shams University between August and November 2013. Written informed consent from the respondents was obtained for data collection and publication of research findings with full maintenance of confidentiality.

All participants were evaluated using the MBI and workplace stress scale. MBI is a self-administered questionnaire; it has been reliable and valid, easy to administer, and takes 10–15 min to fill out. It contains 22 items that assess the three components of burnout. Each item lists a work-related feeling and respondents indicate how often they felt that way about their job on a seven-point Likert scale. Emotional exhaustion was measured using nine items; depersonalization was measured using five items; and personal accomplishment was measured using eight items. Response options for the items ranged from 0 'never' to 6 'every day'. Responses were added to form a score for each subscale, thus giving each participant three scores for the three components of burnout. In this cross-sectional study, burnout variables were studied with the Arabic version of MBI-Human Services Survey [16].

Workplace stress scale contains eight items that measure overall perceptions of stress experienced by an individual at work. Respondents were asked to indicate how often their lives at work were overwhelming on a five-point Likert scale. Response choices ranged from 1 'never' to 5 'very often'. To calculate the score, the answers of the participant for all of the eight questions were added, and then the total score was categorized as follows: 15 or lower, not stressed; 16–20, low; 21–25, moderate stress; 26–30, severe; and 31–40, stress level potentially dangerous [17].

Questionnaires used in this study were translated into Arabic language and back-translated, and then tested for validity and reliability through a pilot study conducted on 20 nurses working in the ICU of Ain Shams University Hospitals. The results of the pilot study were not included in the actual study.

Data were collected using a questionnaire specifically designed to investigate some sociodemographic factors

(sex, age, education, and marital status) and work-related variables (years of experience, salary, position, job description, job security, presence of assistance, and interpersonal relationships with medical staff and patients).

In addition, Pubmed research was carried out and articles were reviewed to discuss the ongoing debate on nature of the burnout, such as whether or not it is a specific scientific illness and its related criteria.

## Statistical analyses

The computer software package SPSS for Windows (version 12) (SPSS Inc., Chicago, USA) was used for the data analysis. Continuous variables such as age were expressed as mean  $\pm$  SD, whereas categorical variables such as sex were presented as frequencies (%). The ANOVA test,  $\chi^2$ -test, and unpaired *t*-test were used to compare the burnout and coping values between three groups. A logistic regression analysis was used to find out significant independent predictors of burnout dimensions (dependent variable) using the enter technique. Significance level was set at *P* less than 0.05.

## Results

### Demographic and work-related characteristics across groups

Of the 122 selected Egyptian nurses, 112 (91.8%) agreed to participate in this study and gave a consent (84.06% female and 15.9% male). The three study groups were age, sex, and education matched with no significant differences. The mean age of the psychiatric nurse group was  $36.5 \pm 7$  years, that of the internal medicine group was  $38 \pm 10$  years, and that of the ICU nurse group was  $34.6 \pm 8$  years. The majority of respondents were female (84%) and married (62.6%), and over 70% of them had nursing diploma. Meanwhile, the majority of the three groups had experience years between 10 and 20 years. An overall 74.1% of the sample reported that their incomes were inadequate to meet their needs. ICU nurses had the best assistance (81.8%) and family support (87.9%) compared with the other nurses. As regards relation with the medical staff, it was better among internal medicine and ICU nurses, with a statistically significant difference ( $P \leq 0.05$ ) between the studied groups using the  $\chi^2$ -test. There was a highly significant difference between the studied groups ( $P < 0.001$ ) as regards position. However, there was no significant difference as regards other variables (Table 1).

### Work stress level and Maslach Burnout Inventory scores among the three groups

As regards the workplace stress scale in Table 2, stress level was high; 37.8% in the psychiatric department, 23.5% in the internal medicine group, and 18.2% in the ICU group found their job severely stressful. However, 33.3% in the psychiatric department, 32.4% in the internal medicine group, and 27.3% in the ICU group found their job moderately stressful.

**Table 1 Demographic and work-related characteristics across groups**

Variables	Psychiatry nurses (n=45) [n (%)]	Medicine nurses (n=34) [n (%)]	ICU nurses (n=33) [n (%)]	P-value
Age (mean ±SD)	36.5 ± 7	38 ± 10	34.6 ± 8	0.44
Sex				
Female	33 (73.3)	32 (94.1)	28 (84.8)	0.098
Male	12 (26.7)	2 (5.9)	5 (15.2)	
Education				
Diploma	38 (84.4)	29 (85.3)	27 (81.8)	0.59
Bachelor	7 (15.6)	4 (11.8)	6 (18.2)	
Postgraduate	0	1 (2.9)	0	
Marital status				
Single	4 (8.9)	4 (11.8)	6 (18.2)	0.61
Married	39 (86.7)	29 (25.3)	25 (75.8)	
Divorced	2 (4.4)	0	1 (3)	
Widow	0	1 (2.9)	1 (3)	
Work experience (years)				
<5	5 (11.1)	2 (5.9)	8 (24.2)	0.46
6–10	9 (20)	7 (20.6)	4 (12.1)	
11–20	13 (28.9)	10 (29.4)	9 (27.3)	
>20	18 (40)	15 (44.1)	12 (36.4)	
Salary				
Not adequate	33 (73.3)	27 (79.4)	33 (69.7)	0.35
Adequate	12 (26.7)	7 (20.6)	10 (30.3)	
Position				0.023
Appointed	25 (55.6)	28 (82.4)	24 (72.7)	
Voluntary	20 (44.4)	6 (17.6)	9 (27.3)	
Presence of assistance				
No	16 (35.6)	16 (47.1)	6 (18.2)	0.019
Yes	29 (64.4)	18 (52.9)	27 (81.8)	
Job description				
No	20 (44.4)	17 (50)	12 (36.4)	0.56
Yes	25 (55.6)	17 (50)	21 (63.6)	
Job security				
No	26 (57.8)	15 (44.1)	18 (54.5)	0.53
Yes	19 (42.2)	19 (55.9)	15 (45.5)	
Interpersonal relationships with medical staff				
Bad	3 (6.7)	0	2 (6.1)	0.034
Good	35 (77.8)	34 (100)	29 (87.8)	
In between	7 (15.6)	0	2 (6.1)	
Interpersonal relationships with patients				
Bad	1 (2.2)	1 (2.9)	0	0.38
Good	42 (93.3)	33 (97.1)	33 (100)	
In between	2 (4.4)	0	0	
Family support				
No	8 (17.8)	16 (47.1)	4 (12.1)	0.0002
Yes	37 (82.2)	18 (52.9)	29 (87.9)	

$P < 0.05$ , significant.

$P < 0.01$ , highly significant.

Table 2 describes the levels of burnout and work-related stress level reported by the respondents. There was a statistically significant difference ( $P < 0.001$ ) as regards burnout among nurses from the three departments. Emotional exhaustion was highest among ICU nurses (66.7%), whereas it was the lowest among nurses in the psychiatry department (33.3%). Meanwhile, depersonalization was highest among psychiatry department nurses (20%), whereas it was the lowest (17.6%) among internal medicine nurses. Finally, personal accomplishment was lowest among internal medicine nurses (58.8%) and highest among ICU nurses (33.3%).

Tables 3 and 4 describe the relation of burnout dimensions with different work-related stressors. More than half (67.3%) of the respondents exhibited burnout (defined as high levels of emotional exhaustion) due to absence of work safety. In 61.9% of the sample, the high level of depersonalization dimension of burnout was due to inadequate job description. In 57.1% of the sample, burnout was due to absence of assistance, whereas 89.2% found their professional accomplishment was high in relation to good

family support. Meanwhile, burnout dimensions were not associated with any other demographic variables.

#### **Correlation between different demographic and work-related factors and burnout inventory scores**

Pearson's correlation was used to investigate the association between the three burnout dimensions with stress, demographic characteristics, and work characteristics (see Table 4). Stress score was negatively associated with emotional exhaustion ( $r = -0.52$ ,  $P < 0.05$ ) and positively associated with depersonalization ( $r = 0.28$ ,  $P < 0.05$ ), indicating that, as the level of workplace stress increased, the levels of the depersonalization burnout components decreased. Similarly, nurses' years of experience was positively correlated with depersonalization ( $r = 0.21$ ,  $P < 0.05$ ). Therefore, as the years of work increased, nurses were more likely to experience depersonalization.

In the multivariate analysis (Table 5), the independent predictors of the three burnout dimensions included five factors: presence of family support (odds ratio = 1.2); availability of work safety and security (odds ratio = 1.2);

**Table 2 Distribution of Maslach Burnout Inventory scores and stress level among the studied groups**

Dimensions	Psychiatry nurses (n=45) [n (%)]	Internal medicine nurses (n=34) [n (%)]	ICU nurse (n=33) [n (%)]	P-value
Emotional exhaustion				
Low	22 (48.9)	10 (29.4)	8 (24.2)	0.021
Moderate	8 (17.8)	9 (26.5)	3 (9.1)	
High	15 (33.3)	15 (44.1)	22 (66.7)	
Depersonalization				
Low	29 (64.4)	11 (32.4)	13 (39.4)	0.013
Moderate	7 (15.6)	17 (50)	14 (42.4)	
High	9 (20)	6 (17.6)	6 (18.2)	
Personal achievement				
Low	26 (57.8)	20 (58.8)	11 (33.3)	0.040
Moderate	8 (17.8)	5 (14.7)	5 (15.2)	
High	11 (24.4)	9 (26.5)	17 (51.5)	
Work stress level				
No	3 (6.7)	3 (8.8)	5 (15.2)	0.48
Fairly low	9 (20)	8 (23.5)	11 (33.3)	
Moderate stress	15 (33.3)	11 (32.4)	9 (27.3)	
Severe	17 (37.8)	8 (23.5)	6 (18.2)	
Potentially dangerous	1 (2.2)	4 (11.8)	2 (6.1)	

$P < 0.05$ , significant.

$P < 0.01$ , highly significant.

**Table 3 Relation of burnout dimensions with work-related stressors**

Variables	Job description [n (%)]		Work safety [n (%)]		Family support [n (%)]	
	No	Yes	No	Yes	No	Yes
EE						
Low	15 (37.5)	25 (62.5)	14 (35)	26 (65)	9 (22.5)	31 (77.5)
Moderate	8 (40)	12 (60)	10 (50)	10 (50)	6 (30)	14 (70)
High	26 (50)	26 (50)	35 (67.3)	17 (32.7)	13 (25)	39 (75)
P-value	0.37 (NS)		0.045 (S)		0.19 (NS)	
DP						
Low	18 (34)	35 (66)	25 (47.2)	28 (52.8)	13 (24.5)	40 (75.5)
Moderate	18 (47.4)	20 (52.5)	20 (52.6)	18 (47.4)	9 (23.7)	29 (76.3)
High	13 (61.9)	8 (38.1)	14 (66.7)	7 (33.3)	6 (28.6)	15 (71.4)
P-value	0.032 (S)		0.31 (NS)		0.37 (NS)	
PA						
Low	24 (42.1)	23 (57.9)	29 (50.9)	28 (49.1)	18 (31.6)	39 (68.4)
Moderate	8 (44.4)	10 (55.6)	9 (50)	9 (50)	6 (33.3)	12 (66.7)
High	17 (45.9)	20 (54.1)	21 (56.8)	16 (43.2)	4 (10.8)	33 (89.2)
P-value	0.50 (NS)		0.65 (NS)		0.025 (S)	

DP, depersonalization; EE, emotional exhaustion; PA, personal accomplishment; S, significant.

Level of significance is  $P < 0.05$ .

**Table 4 Relation of burnout dimensions with work-related stressors**

Variables	Salary [n (%)]		Assistance [n (%)]		Sex [n (%)]		Position [n (%)]	
	Inadequate	Adequate	No	Yes	F	M	A	V
EE								
Low	28 (70)	12 (30)	20 (50)	20 (50)	31 (77.5)	9 (22.5)	26 (65)	14 (35)
Moderate	15 (75)	5 (25)	7 (35)	13 (65)	19 (95)	1 (5)	14 (70)	6 (30)
High	40 (76.9)	12 (23.1)	11 (21.2)	41 (78.8)	43 (82.5)	9 (17.3)	37 (71.2)	15 (28.8)
P-value	0.67		0.22		0.40		0.32	
DP								
Low	42 (79.2)	11 (20.8)	17 (32.1)	36 (67.9)	46 (86.8)	7 (13.2)	28 (52.8)	25 (47.2)
Moderate	26 (68.4)	12 (31.6)	9 (23.7)	29 (76.3)	33 (86.8)	5 (13.2)	30 (78.9)	8 (21.1)
High	15 (71.4)	6 (28.6)	12 (57.1)	9 (42.9)	14 (66.7)	7 (33.3)	13 (90.5)	2 (9.5)
P-value	0.25		0.020		0.18		0.44	
PA								
Low	39 (68.4)	18 (31.6)	19 (33.3)	38 (66.7)	46 (80.7)	11 (19.3)	36 (63.2)	21 (36.8)
Moderate	17 (94.4)	1 (5.6)	8 (44.4)	10 (55.6)	14 (77.8)	4 (22.2)	15 (83.3)	3 (16.7)
High	27 (73)	10 (27)	11 (29.7)	26 (70.3)	33 (89.2)	4 (10.8)	26 (70.3)	11 (29.7)
P-value	0.51		0.32		0.38		0.27	

A, appointed; DP, depersonalization; EE, emotional exhaustion; F, female; M, male; PA, personal accomplishment; V, voluntary.

Level of significance is  $P < 0.05$ .

**Table 5 Correlation between burnout parameters versus stress score and study variables among the studied group**

Burn outs	Stress scores	Age	Relation with nurses	Educational level	Relation with patients	Years of experience	Relation with doctors
EE	-0.52*	0.11	0.01	0.12	0.10	0.07	0.01
DP	0.28*	0.03	0.07	0.10	-0.14	0.21	0.05
PA	-0.012	0.10	-0.08	0.16	0.09	-0.17	-0.13

DP, depersonalization; EE, emotional exhaustion; PA, personal accomplishment.  
Level of significance is  $P < 0.05$ .

presence of assistance, either junior nursing staff or assistant nurses (odds ratio = 1.8); job description (odds ratio = 1.7); and higher experience (odds ratio = 1.6). Being alone without assistance and without clarity and description of work were significantly associated with depersonalization. In addition, higher experience years was significantly correlated with depersonalization dimension of burnout. Meanwhile, positive family support was correlated with personal achievement.

## Discussion

Nursing is a stressful profession that deals with human aspects of health and illness [18]. Moreover, the risk for professional burnout and work-related stress is high with poor quality of work [19]. Despite its high prevalence, few studies assessed the burnout among nurses, especially in developing countries; therefore, in the present study, burnout syndrome among nurses in different settings and its relation with work stress, demographics, and work-related factors were investigated.

The study results confirmed our hypothesis by showing that nurse staffs in different departments were vulnerable to stress and were exposed to burnout, which is consistent with previous research findings [20–22]. Our results identified significantly higher stress score and depersonalization among psychiatric nurses compared with other two groups. This may be related to intense interpersonal involvement and frequent conflicts with doctors and colleagues that took place in their work atmosphere. Moreover, lack of security had a greater impact on them than on nurses of other specialties. Similar to our results, many studies demonstrated difficulties that arise from stressors related to psychiatric patient care and interprofessional relationships between nurses and clinicians as stressor predictors among the psychiatric nurses [23–27]. Meanwhile, the study by Cronin-Stubbs and Brophy [28] demonstrated that interpersonal relationships were the most frequent sources of undesirable stress for psychiatric nurses, and it had a greater impact on them than on nurses of other specialties. They were vulnerable to burnout because of poor social support and low on-job and off-job pressure compared with nurses from other specialties [28]. In contrast, many studies have found that mental health nurses are less stressed compared with those in other specialties, and stress seems to arise from the overall complexity of nurses' work rather than specific duties required within the ward [23,29–31].

Interestingly, despite a high stress score of psychiatric nurses, emotional exhaustion level was low. This may be because psychiatric nurses have the opportunity to express their opinion in a multidisciplinary team, whereas general nurses have fewer opportunities to do this. Thus, this aspect of their work appears to protect them from different stress-related factors and burnout experienced by their general nursing counterparts [23,32]. In contrast with our results, Robinson *et al.* [33] found that psychiatric nurses had a high level of emotional exhaustion (high burnout). Meanwhile, the higher rate of personal accomplishment despite elevated scores of emotional exhaustion among ICU nurses relates to some type of organizational dynamics within the ICU, such as working part time with the availability of assistance, good job description, proper social and family support, and adequacy of payment in comparison with the other two groups.

In agreement with several other studies, the results provide strong evidence that family support, work security, presence of assistance, job description, and years of experience are important predictors of burnout, which emphasize the influence of individual and job characteristics on burnout and support Maslow's theory [18,34–38]. Moreover, in agreement with our findings, more than one study among Arab nurses had found that workload, motives, job safety, relationships with seniors and peers, and work system structures were the major factors that predict burnout [12,39]. In contrast with our results, other studies had found that nurses reported that lack of career promotion opportunities and unsupportive hospital policies and practices contributed to job dissatisfaction [40,41]. Trygstad [25] reported that difficulties in relationships among staff nurses were the most important determinants of stress and low job satisfaction, whereas Callaghan [42] attributed it to the role ambiguity, role overload, and patients' psychopathology as organizational factors. The difference between studies may be related to sample selection, tools of evaluation, or the types of stressors assessed. At the same time, recent studies support the conclusion that when the same variables are tested in more than one study different influencing variables are identified in each one.

Even though this study found that job stress was a predictor of burnout, causality is difficult to prove, particularly in a cross-sectional study. However, it is likely that burnout has multiple causes, and job stress may be an important factor.

Previous studies described burnout as a specific diagnosis due to emergence of its main characters and its job relatedness [1]. However, current literature enumerated

different reasons against considering burnout as a distinct illness. Bianchi *et al.* [5] argued that tenuous basis of diagnosis of burnout, its overlap with depression, unrealistic main dimensions and definition of burnout, and its job relatedness is not unique for burnout. They suggested that burnout is a form of depression rather than a different illness [43–45]. Kaschka *et al.* [46] stated that there is a lack of knowledge of etiology, pathogenesis, and neurobiological factors of burnout, and thus necessitates further studies. Furthermore, Ferrada-Noli considered burnout as work disapproval rather than true diagnosis [47]. Burnout was considered as a ‘disease’ in Sweden in 1980 and was legitimized in 1997. Consequently, it became one of the five most common diagnoses resulting in high costs due to a high rate of related sick leaves, which raised arguments against its legitimization [47].

To our knowledge, this is the first study trying to precisely assess job stress and burnout in psychiatric nurses in comparison with ICU and internal medicine nurses in an Egyptian sample with good response rate (91.8%). Our study design has some limitations that included the relatively small sample size. We hope our findings will increase the interest in studying and improving the work conditions and professional interactions of nurses in different units, so that the current work problem can be dealt with.

## Conclusion

The current study demonstrates that Egyptian nurses are experiencing high levels of work-related burnout and stress. The study has also highlighted the importance of following different safety measures and increase the numbers of well-trained nurses, which would relieve the stress among nurses. In addition, inadequate job description was associated with increased levels of emotional exhaustion and depersonalization, indicating the need for the management to be mindful of this situation occurring, particularly if foreshadowed nurse shortages continue.

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## Conflicts of interest

There are no conflicts of interest.

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