

# Burnout among nursing staff in Benha University Hospital

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## Objective

Burnout is a state of chronic and excessive stress related to one's job, which comprises three dimensions: emotional exhaustion, depersonalization, and lack of personal accomplishment. It is pervasive among helping professions such as nursing.

The main aim of this study was to identify the sources of stress among nurses at Benha University Hospital.

## Patients and methods

A descriptive cross-sectional study was conducted on a sample of 100 nurses from Benha University Hospital. Inclusion criteria were nurses whose age ranged from 18 to 40 years old, who were still working for at least 1 year continuously, and had started working for at least 1 year. Assessment of stress was done using the Arabic translation of the Maslach burnout inventory and life stress questionnaire.

## Results

The prevalence of burnout syndrome was seen among 64% of nurses. There was a statistically significant difference regarding depersonalization score but not regarding emotional exhaustion or lack of personal accomplishment. The highest rates of burnout were reported among the group of ICU, coronary care unit, and emergency department nurses. Female nurses reported higher levels of burnout (71.4%) compared with male nurses (25%). The most commonly mentioned life stressors among the studied nurses were difficult work conditions (84%), tension at work (80%), inadequate health insurance (60%), change in sleeping habits (54%), and health problem of a family member (54%).

## Conclusion

Burnout is prevalent among nurses in Benha University Hospital, and it contributes to more absences and less job satisfaction. Difficult work conditions and tension at work are the most common sources of stress among nurses followed by inadequate health insurance, health problem of a family member, and inadequate finance.

## Keywords:

burnout, job satisfaction, life stress, nurses

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## Introduction

Burnout is a state of mind developed among professionals related to work (Maslach *et al.*, 2001a, Maslach *et al.*, 2001b). It can reduce effectiveness, as well as decline the motivation and engagements in nonwork-related behaviors.

Maslach (2011) defined burnout as follows: 'psychological syndrome that involves a prolonged response to prolonged stressors on the job.' Burnout is a mental state developed over the period in a work environment with continuous stress related to work demands; it can cause physical and emotional distress (Long *et al.*, 2014) often associated with feelings of hopelessness and inability to perform job duties (Hunsaker *et al.*, 2014).

Nursing is a profession that is particularly vulnerable to stress and burnout, which affects the nurse's personal life (Augusto *et al.*, 2008). Burnout reduces the amount

of efforts by the nursing staff at the workplace, and they show emotional distance in their work.

Burnout has three dimensions, termed as the burnout inventory (Maslach *et al.*, 2001a, Maslach *et al.*, 2001b), namely, emotional exhaustion (EE), depersonalization (DP), and reduction in personal accomplishment (PA). Moreover, recently, the international classification of diseases has categorized burnout as an occupational phenomenon and not a medical condition, with three dimensions, namely, exhaustion, cynicism about the job, and loss of professional efficacy (WHO, 2019).

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EE is the prime factor of burnout; in the end, the individual feels exhausted owing to work. DP is the loss of feeling toward work-related issues and behaving in a nonhuman way (Permarunpa *et al.*, 2020). When an individual experiences EE and DP, they lose the desire for achievement and competence to perform. Studies reported that physicians and nurses who are affected by burnout tend to be involved in substance misuse (Moustou *et al.*, 2010), depression (Ahola and Hakanen, 2007), or high rates of personal stress (Garrosa *et al.*, 2011).

High levels of nurse burnout have been linked to decreased job satisfaction (Billeter-Koponen and Fredén, 2005). The complexity of patient care and decreased resources and insurance are being linked to satisfaction (Medicare, 2013) and cause nurses to leave their job, leading to a greater nursing shortage (Sadovich, 2005; Milliken *et al.*, 2007). Moreover, this leads to shortage of staffing and increased work per nurse, which itself increases turnover (Lacey and McNoldy, 2007b, Lacey and McNoldy, 2007c).

The most visible effect of burnout is the decrease in employee's work performance and in the quality of providing service. The syndrome is highly associated with excessive absenteeism, use of sick leave, wish to leave the job, and decreased overall well-being (Maslach *et al.*, 2001a, Maslach *et al.*, 2001b).

Not all individuals exposed to the same work conditions show burnout, which demonstrates the importance of individual variables such as personality (Pérez-Fuentes *et al.*, 2019a, Pérez-Fuentes *et al.*, 2019b).

It is important in health care to understand factors that influence positive and negative aspects of nurses' work to raise levels of awareness and maintain nurses' positive attitudes.

Thus, the aim was to determine the sources of stress and the prevalence of burnout among nurses at Benha University Hospital and to compare the manifestations of burnout among nurses of different departments and spot out the major causes of turnover, absenteeism, and decreased organization commitment.

## **Patients and methods**

This was a descriptive cross-sectional study held in Benha University Hospital, Benha City, Qalyubiyah governorate.

A total of 100 participants were chosen by nonrandom technique. Overall, 20 nurses were selected to

participate from each department of internal medicine, general surgery, emergency departments, neuropsychiatry, coronary care unit (CCU), and ICU.

They were further grouped into three groups: internal medicine and general surgery were grouped together; ICU, CCU, and emergency departments were grouped together; whereas neuropsychiatry was a separate group.

The inclusion criteria of participation were age range from 18 to 40 years old, nurses were still working for at least 1 year continuously, and nurses must have started working for at least 1 year.

Exclusion criteria were those with mental illness, handicapping medical illness, and head nurses.

### **Ethical consideration**

An informal written consent was obtained from all nurses before participation. It included confidentiality and the choice to leave the study at any time without any consequences. An official permission was obtained from Research Ethics Committee (REC) in Benha Faculty of Medicine to conduct this study.

### **Procedures**

The nurses were interviewed during their shifts in their departments.

The application of the inventories was held in the nurses' offices, which were small and not suitable regarding the number of nurses in charge, usually without good sources for ventilation or lightening and lacking comfortable furniture.

### **Tools**

Nurses were subjected to a semistructured interview (preliminary data, marital history, work record, and health record), and the following inventories and questionnaires:

- (1) Arabic translation of the Maslach Burnout Inventory - Human Services Survey (MBI-HSS), Maslach burnout inventory manual, 3rd ed., especially tailored to be applicable to health care personnel (Maslach *et al.*, 1996). A participant was considered to meet the study criteria for burnout if he or she got a 'high' score on at least two of the three dimensions of MBI.
- (2) Life Stress questionnaire (Wisconsin job center, 2008): it measures the amount of stress to which they have been subjected to during the past year.

It includes 35 events that are considered as sources of stress. Each event is measured by point value ranging from 15 points, referring to least stressor events, to 100 points, referring to the most stressful event.

- (3) Sources of stress according to life stress questionnaire and psychosocial and environmental problems as reported in Axis IV in DSM-IV TR multi-axial classification.

### Statistical analysis

The collected data were tabulated and analyzed using SPSS, version 16 software (SPSS Inc., Chicago, Illinois, USA). Categorical data were presented as number and percentages, whereas quantitative data were expressed as mean and SD.  $\chi^2$  and Student *t* tests were used as tests of significance. The accepted level of significance in this work was stated at 0.05 ( $P < 0.05$  was considered significant).

*P* value more than 0.05 as insignificant.

*P* value less than 0.05 as significant.

*P* value less than 0.001 as highly significant.

## Results

### Prevalence of burnout

The prevalence of burnout syndrome among the studied groups was 64%. In comparison of the three studied groups regarding presence and absence of burnout, it shows that there was no statistically significant difference among three studied groups.

Using the criteria of scoring (high) in at least two of the three dimensions of burnout, which are EE, DP, and lack of PA, the total number of nurses in the present study who scored high in EE, DP, and PA subscales was 86 (86%), 52 (52%), and 54 (54%), respectively.

In comparison of the studied groups according to DP score, there was a statistical significant difference among the three groups, as shown in Table 1. However, regarding EE or lack of PA score, there was a statistically insignificant difference.

The highest scores in DP and PA subscales were recorded by nurses in the ICU, CCU, and emergency departments, reported to be 60 and 60%, respectively. Overall, 10 nurses working in neuropsychiatry department (50%) recorded high on DP subscale followed by 18 nurses working in internal medicine and general surgery departments (45%).

### Demographic characteristic

Concerning the sex, on comparison between nurses with and without burnout, there was a highly statistically significant difference ( $P \leq 0.001$ ). Female nurses reported higher levels of burnout (71.4%) compared with male nurses (25%), and the difference was of high statistical significance.

Regarding age, there was a statistically significant difference ( $P = 0.045$ ), as mean age of nurses with burnout was higher (30.3) than that of nurses without burnout (27.8), and it was found that

**Table 1 Comparison the studied groups regarding depersonalization score**

	Groups			Total
	Internal medicine and general surgery departments	Neuropsychiatry department	ICUs and emergency departments	
DP score				
Low				
Count	16	4	2	22
% within groups	40.0	20.0	5.0	22.0
Average				
Count	6	6	14	26
% within groups	15.0	30.0	35.0	26.0
High				
Count	18	10	24	52
% within groups	45.0	50.0	60.0	52.0
Total				
Count	40	20	40	100
% within groups	100.0	100.0	100.0	100.0

DP, depersonalization.  $\chi^2 = 15.3$ .  $^*P = 0.004$ .

burnout was higher among nurses with longer years of experience, but the difference was not statistically significant.

There was a statistically significant difference ( $P=0.019$ ) among the three groups regarding marital status. Approximately 65% of married nurses and all divorced nurses in the studied sample experienced burnout. The prevalence of divorce was seen to be mainly among internal medicine and general surgery departments (10%) followed by ICU, CCU, and emergency departments (5%).

Regarding marital satisfaction and the presence of burnout, there was a statistically significant difference ( $P=0.02$ ); 41.7% of nurses who were not satisfied with their marriage reported burnout in comparison with 15.4% who did not report burnout. Moreover, regarding the attitude of their husbands/wives toward their job, there was a statistically significant difference ( $P=0.029$ ), whereas regarding

marital status, husband job, and graduation, there was no statistically significant difference.

#### Association between work-related condition and burnout

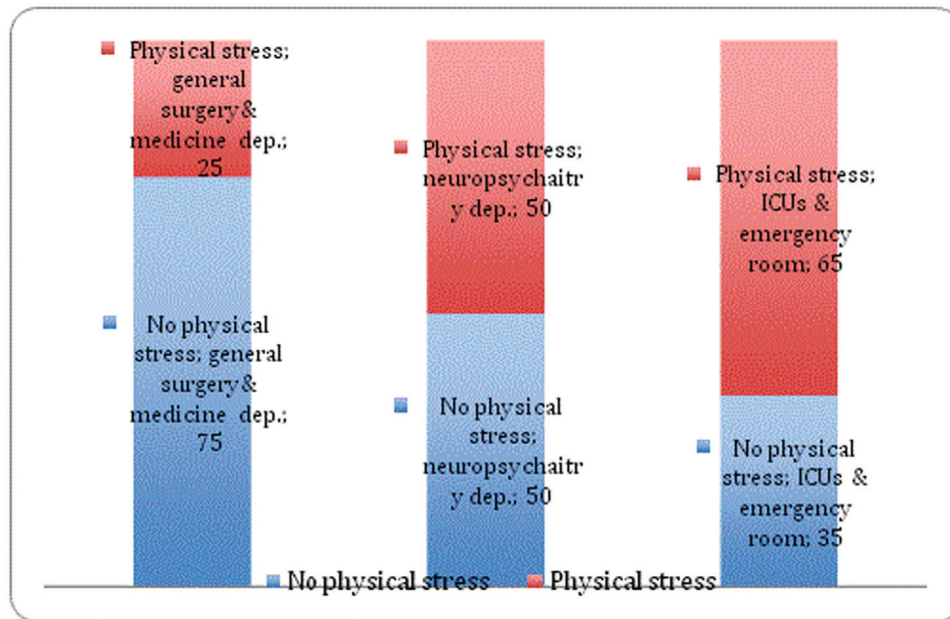
The study of different work conditions among nurses shows that 60 (60%) nurses had both 6 and 12 h shifts, 74 (74%) nurses had both day and night shifts, 88 (88%) nurses considered their work to be important, and 26 (26%) nurses reported the attitude of society toward them was lack of respect.

Table 2 compares between nurses with and without burnout according to some work conditions. There were statistically significant differences regarding job satisfaction, whether their salaries were enough or not, attitude of doctors toward them, and estimation of the importance of their work, as  $P$  values were 0.015, 0.001, 0.008, and 0.007, respectively. Regarding absences, there was a highly statistically significant difference ( $P\leq 0.001$ ), whereas regarding transition

**Table 2 Comparison of nurses with and without burnout regarding some work conditions**

Variables	No burnout [n (%)]	Burnout [n (%)]	Total [n (%)]	$\chi^2$	$P$
Job satisfaction				5.94	0.015*
Not satisfied	8 (22.2)	30 (46.9)	38 (38)		
Satisfied	28 (77.8)	34 (53.1)	62 (62)		
Transition between departments				0.29	0.59
No	20 (55.6)	32 (50.0)	52 (52.0)		
Yes	16 (44.4)	32 (50.0)	48 (48.0)		
Absences				17.3	<0.001*
No	32 (88.9)	30 (46.9)	62 (62.0)		
Yes	4 (11.1)	34 (53.1)	38 (38.0)		
Salary				10.4	0.001*
Not enough	14 (8.9)	46 (71.9)	60 (60.0)		
Enough	22 (61.1)	18 (28.1)	40 (40.0)		
Additional work				0.97	0.32
No	26 (72.2)	40 (62.5)	66 (66.0)		
Yes	10 (27.8)	24 (37.5)	34 (34.0)		
Physical stress				1.15	0.28
No	22 (61.1)	32 (50.0)	54 (54.0)		
Yes	14 (38.9)	32 (50.0)	46 (46.0)		
Attitude of colleagues				1.65	0.19
Supportive	26 (72.2)	38 (59.4)	64 (64.0)		
Hostile	10 (27.8)	26 (40.6)	36 (36.0)		
Attitude of doctors				9.7	0.008*
Abusive	0	10 (15.6)	10 (10.0)		
Inferiority	8 (22.2)	22 (34.4)	30 (30.0)		
Supportive	28 (77.8)	32 (50.0)	60 (60.0)		
Attitude of society				2.4	0.49
Lack of respect	10 (27.8)	16 (25.0)	26 (26.0)		
Look of shame	4 (11.1)	8 (12.5)	12 (12.0)		
Negligent	2 (5.6)	10 (15.6)	12 (12.0)		
Needed	20 (55.6)	30 (46.9)	50 (50.0)		
Feeling of importance of work				6.6	0.007*
Not important	0	12 (18.8)	12 (12.0)		
Important	36 (100)	52 (81.2)	88 (88.0)		

Figure 1



Comparison of nurses in different departments regarding physical stress in work conditions.

Table 3 Comparison of nurses with and without burnout regarding life stress questionnaire score

Life stress questionnaire score	Burnout		Total
	No	Yes	
<150			
Count	20	20	40
% within burnout	55.6	31.2	40.0
150–250			
Count	10	34	44
% within burnout	27.8	53.1	44.0
>250–300			
Count	6	4	10
% within burnout	16.7	6.2	10.0
>350			
Count	0	6	6
% within burnout	0.0	9.4	6.0
Total			
Count	36	64	100
% within burnout	100.0	100.0	100.0

$\chi^2=12.6$ . \* $P=0.005$ .

between departments, extra work, physical stress in work, attitude of their colleagues toward them, and attitude of society toward them there were no statistically significant differences.

Figure 1 compares between nurses in different departments according to some work conditions. There was a statistical significant difference among the three groups regarding physical stress at work and attitude of doctors toward them ( $P=0.001$  and  $0.04$ , respectively).

Regarding the description of some different work conditions among the studied nurses, the majority of them were satisfied with their job (62%), did not have transitions between departments (52%), did not have absences (62%), reported that their salaries were not enough (60%), did not have sick leaves (74%), had both 6 and 12 h shifts (60%), had both day and night shifts (74%), did not have additional work (66%), did not experience physical stress in work (54%), felt that their work is important (88%), the attitude of their colleagues was supportive (64%), the attitude of doctors was also supportive (60%), and the attitude of the society was that they are needed (50%).

**Association between life stressors and burnout**

On comparing nurses with and without burnout regarding life stress questionnaire scores, as shown in Table 3, there was a statistically significant difference ( $P=0.005$ ). All those who scored more than 350 experienced burnout.

Table 4 compares the nurses in different departments according to life stress questionnaire score, and it shows a highly statistical significant difference ( $P\leq 0.001$ ) among the three groups.

On examining the correlation between job satisfaction and burnout, a statistically significant difference was revealed. Of those who were not satisfied, 46.9% experienced burnout and 22.2% did not.

**Table 4 Comparison of life stress questionnaire score among nurses in different departments**

	Groups			Total
	Internal medicine and general surgery departments	Neuropsychiatry department	ICUs and emergency departments	
Life stress questionnaire score				
<150				
Count	12	2	26	40
% within groups	30.0	10.0	65.0	40.0
150–250				
Count	16	14	14	44
% within groups	40.0	70.0	35.0	44.0
250–300				
Count	8	2	0	10
% within groups	20.0	10.0	0	10.0
>350				
Count	4	2	0	6
% within groups	10.0	10.0	0	6.0
Total				
Count	40	20	40	100
% within groups	100.0	100.0	100.0	100.0

$\chi^2=27.7$ . \**P* value less than 0.001.

The most frequent stressors from which the most nurses complained were difficult work condition (84%), tension at work (80%), inadequate health care insurance (60%), health problems in family (54%), change in sleeping habits (54%), stressful work schedule (48%), inadequate finance (46%), difficulties with peers (44%), small children at home (42%), and change in work hours (40%).

## Discussion

Burnout is prevalent among the nurses in different departments (64%). It was validated to be the highest among nurses working in ICU, CCU, and emergency departments (30 nurses, 75%), followed by neuropsychiatry department (12 nurses, 60%), and the least prevalence was seen among nurses working in internal medicine and general surgery departments (22 nurses, 55%).

Concerning the three subscales of burnout (EE, DP, and PA), there was a statistically significant difference among the three groups regarding DP only. A total of 86 nurses recorded high in EE subscale, of whom 36 nurses were from the ICU, CCU, and emergency departments (90%) followed by 34 working in internal medicine and general surgery departments (85%) and 16 (80%) nurses in neuropsychiatry department. Recently, Francino *et al.* (2019) conducted a comparison study of ICU nurses and

technician nurse. They found that ICU nurses reported higher levels of EE and DP and a lower level of PA.

High levels of EE in the current study were owing to longer and more frequent shifts, secondary to the current nursing shortage, nurses have less time for self-care, and 'down time' between working hours. This leads to physical, as well as EE. MBI-EE is considered to be the first stage of burnout syndrome and probably is directly related to high levels of work overloaded demands.

Regarding ICU, CCU, and emergency departments, a number of stress-involving factors exist in the ICUs, such as the demoralizing situation of patients not getting better despite best efforts of intensive care staff, unrealistic expectations of families, and everyday dying and deaths.

Although not all nurses who experience the same stress factors in the workplace develop burnout (Pérez-Fuentes *et al.*, 2019a, Pérez-Fuentes *et al.*, 2019b), studies done on personality in health care personnel have identified a strong association between neuroticism and burnout (Ang *et al.*, 2016; Maslach and Leiter, 2016; Bilehsavar *et al.*, 2017), as they are prone to feeling angry, anxious, depressed, or stressed (Wang *et al.*, 2014; Sandín *et al.*, 2017) and are less able to control their emotions when faced with stressful or

negative situations (Yu *et al.*, 2016) and exhibit immature defense mechanisms that increase their exhaustion (Ntantana *et al.*, 2017).

On comparison of the three studied groups regarding work physical stress, there was a statistically significant difference, as nurses who worked in ICU, CCU, and emergency departments experienced more physical stress. This may be explained owing to the nature of working environment in the ICU, CCU, and emergency departments, which involves rushing around performing lifesaving tasks. Moreover, the nurses are responsible for the hygiene of the patients, feeding them, and caring of unconscious patients.

In agreement with these findings, Aiken *et al.* (2002), who surveyed 43 329 nurses from the USA, Canada, England, Scotland, and Germany working in more than 700 hospitals, mentioned that nurses across countries reported spending time on non-nursing tasks while care requiring their professional skills were left undone.

Most nurses who stated that the doctors' attitude toward them was abusive were working in internal medicine and general surgery departments, followed by ICU, CCU, and emergency departments.

A total of six (30%) nurses in the neuropsychiatry department believed that the attitude of society toward them was that of lack of respect, and this may be explained as a part of the stigma they may have experienced owing to their working in the psychiatric profession.

Most single nurses were in ICU, CCU, and emergency departments (14 of 20 single nurses), and this may be owing to that most nurses who are chosen to work in these departments are young nurses, recently graduated, who may start their jobs with high levels of energy.

Concerning those who experienced burnout, 33.3% had husbands/wives who refused to acknowledge their job. Overall, 25% (all were females) had husbands whose attitudes were abusive toward them. The refusal of the job of nursing especially from the husband is mostly owing to the female nurse has to work in difficult conditions particularly. Consequently, this will affect her role as a wife and a mother especially, when taking care of young children.

In recent times, the Egyptian community faces severe economic problems and low family incomes, thus

rendering it inevitable for wives to work side by side with men.

Moreover, women have to handle many roles, which is surly very stressful and contribute to burnout.

Of 48 married nurses who had burnout, 36 were married to spouses not working in the medical field, and this can be attributed to that if the spouse is working in the medical field, he (she) will be somewhat understanding of his/her partner's work conditions, which may relieve some work stressors the nurse faces and decreases the incidence of burnout. A total of 34 nurses of 64 nurses who experienced burnout were graduated from school of nursing and the remaining burnout nurses were technical institute graduates.

On examining the correlation between job satisfaction and burnout, a statistically significant difference was revealed. Of those who were not satisfied, 46.9% experienced burnout and 22.2% did not. It is not clear whether job dissatisfaction caused burnout or whether burnout causes job dissatisfaction.

Concerning the relation between absenteeism and burnout, there was a highly statistical significant difference (53.1%); those who had recurrent absences experienced burnout. However, the reasons for absence was specifically for mental health reasons, which were related to EE levels rather than absence for physical health reasons.

On mentioning the relation between the attitude of doctors toward nurses and the presence of burnout, it was noticed that all nurses who assumed that the attitude of doctors toward them was abusive experienced burnout, and 22 nurses out of 30 nurses who thought that the doctors considered them inferior also experienced burnout. This may be the reason for the 48% transitions among departments in the study.

On comparing nurses with and without burnout regarding life stress questionnaire scores, there was a statistical significant difference. All those who scored more than 350 experienced burnout. This may be interpreted as, some items of life stress questionnaire are known to be sources of occupational stress and subsequently predispose to burnout, such as change in work hours, tension at work, difficulties with peer group, change in responsibilities at work, and change to a different line of work. In addition, occupational stressors could affect family and social life of the nursing staff.

Thus, it was concluded that burnout is prevalent among Benha University Hospital nurses, and some sociodemographic data and work-related conditions have an effect on it, especially older age, female sex, and marital status (as burnout is higher if the spouse is working in nonmedical field and when the attitude of the spouse toward his/her partner's job is nonsupportive).

Work-related factors such as difficult work conditions and tension at work are the most common sources of stress among nurses, whereas health-related issues, such as inadequate health care insurance and health problems of a family member are ranked second after that.

All three subscales of burnout are more prevalent among nurses working in emergency departments, CCU, and ICU, particularly EE subscale, owing to the stressful nature of work in these departments. Certainly, burnout contributes to more absences and less job satisfaction.

Consequently, it is recommended that by identifying factors that predict burnout and factors that improve satisfaction at work, such as suitable offices, decrease in the number of shifts, improvement in income, adequate health care insurance, and increase in the number of qualified nurses in hospitals may support the nursing staff and help them provide excellent care, without affect their own health and happiness.

The most important limitation that was faced was that sometimes the nurses misinterpreted some of the items of Maslach burnout inventory regarding the multiplicity of the answers which ranged from 0 to 6 based on how often the nurse felt or experienced the situation. Moreover, the timing for answering the questionnaires was limited and was mainly during work times.

Another limitation was that the study adopted a cross-sectional design, which prevented conclusion regarding causality. A longitudinal design is better able in determining the causal relationship among job-related factors, burnout, and psychological morbidity.

Table 1 compares the three studied groups according to DP score, and it shows a statistical significant difference among the three groups.

Table 3 compares the three studied groups according to life stress questionnaire score, and it shows a highly statistical significant difference ( $P \leq 0.001$ )

among the three groups regarding life stress questionnaire score.

Table 4 compares the nurses with and without burnout regarding life questionnaire score. It shows a statistically significant difference ( $P=0.005$ ) between nurses who experienced burnout and nurses who did not experience burnout regarding life stress questionnaire score.

Table 2 compares between nurses with and without burnout according to some work-related conditions. There were statistical significant differences between the two groups regarding job satisfaction, with respect to their salaries were enough or not, attitude of doctors toward them, and estimation of importance of their work ( $P=0.015, 0.001, 0.008, \text{ and } 0.007$ , respectively). Regarding absences, there was a highly statistical significant difference ( $P \leq 0.001$ ), whereas regarding transition between departments, extra work, physical stress in work, attitude of their colleagues toward them, and attitude of society toward them, there were no statistically significant differences.

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#### Conflicts of interest

There are no conflicts of interest.

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