

## Research Article

# The Prevalence of Burnout Syndrome among Nursing Staff Working at King Abdulaziz University Hospital, Jeddah, Saudi Arabia, 2017

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## ABSTRACT

**Objective:** Burnout syndrome is a state of decreased physical and psychological efficiency due to on-going exposure to occupational stressors. In addition, it is usually represented by three elements; emotional exhaustion, depersonalization, and reduced personal accomplishment. Whereas nurses play an integral part in the healthcare system and they are always liable to occupational burnout. We aimed this study to determine the prevalence of burnout syndrome among nursing staff working at King Abdulaziz University Hospital in Jeddah, Saudi Arabia.

**Methodology:** This is a cross-sectional study survey which was conducted among 182 nurses (n=182) working at King Abdulaziz University Hospital in Jeddah, Saudi Arabia in 2017. Our data was collected using a self-demonstrated survey comprised of two parts; part one was sociodemographic and work-related questions, and part two was Maslach Burnout Inventory-Human Services Survey for Medical Personnel. Description of data findings was shown in this study. In addition, we used the definition of burnout syndrome to

calculate the prevalence as; the composition of high emotional exhaustion (EE), high depersonalization (DP), and low personal accomplishment (PA).

**Findings:** Regarding the socio-demographic data, 90.7% of the nurses were female, 92.3% were non- Saudi, and 68.7% were not satisfied with their income. Moreover and out of expectations, the prevalence of burnout syndrome in this study was 9.34%. However, emotional exhaustion alone was 59.89%.

**Conclusions:** Nurses nowadays have a significant role in the healthcare system, and research like this will help to improve their individual-work relationship, resulting in a better evidence-based work environment. As we mentioned, the prevalence of burnout syndrome in our study was low, (out of what we expected compared to previous literature). However, the high level of emotional exhaustion gives us more opportunity to do more studies in this area.

**Keywords:** Nurses; Burnout; Saudi Arabia; King Abdulaziz University hospital

## Introduction

### Background

Burnout syndrome is one of the most common occupational illnesses. It has many psychological and physical destructive consequences, and it may contribute to some disorders such as anxiety, depression, and loss of personal motivation [1,2]. Burnout syndrome decreases the productivity in a workplace, and it has a negative impact in providing proper health care [3]. The term burnout defined in 1974 by the psychologist Herbert J. Freudenberger as a condition of decrease physical and psychological efficiency due to on-going exposure to occupational stressors [4]. Burnout is usually represented by three elements; emotional exhaustion, depersonalization, and reduced personal accomplishment. The first element of burnout according to Maslach Burnout Inventory (MBI) is emotional

exhaustion (EE); which refers to the feelings of tiredness and being emotionally drained by work overload. The second element is depersonalization (DP); which defined by being detached and negative when communicating with people. The third element is reduced personal accomplishment or lack of perceived personal accomplishment (PA); which represented by the failure of achieving satisfaction by own professional work and a sense of low productivity [5]. Recognizing the defective influences that contribute in the burnout syndrome can benefit the introduction of effective practices in human resources management and demand changes in an individual-work relationship, resulting in a better evidence-based work environment [6]. Whereas nurses play an integral part in the healthcare system and they are always liable to occupational burnout. Multiple studies showed concerns about the existence of burnout syndrome among nurses results from continuous exposure to stressors which

nurses cannot handle [7-9]. Even though not all nurses develop burnout after exposing to these stressors. A justification for such a variation is the concept of personal flexibility, depending on the importance of their health role. Not to mention, nurses are open to various stressful situations followed inadequate experience and knowledge, witnessing pain and death, lack of crucial autonomy [7-9]. Moreover, nurses are always in touch with patients and some personal stressors may rise the occurrence of burnout. For example, gender, age, the absence of social support and so on. In the long run, burnout and the ability to regenerate positive attitude by way of different circumstantial supports [10]. As mentioned before, nurses are more liable to burnout as to other healthcare providers [11]. The United States, Canada, England, Scotland, and Germany hosted a 43,000 nurses' survey in more than 700 hospitals. The results were between 30% to 40% of nurses had higher scores related to the norms of healthcare providers published by the developers of the Maslach Burnout Inventory [12]. Furthermore, studies have shown differences in burnout among nurses in different hospital departments [13]. According to Embriaco N (2007) investigating burnout among Intensive Care Unit nurses, severe burnout syndrome was found in one-third of the critical care nurses [14]. Although in Iran a comparative study directed in medical, psychiatric, surgical and burn wards of a hospital showed that psychiatric nurses were in higher levels of emotional exhaustion and depersonalization, related to all the other sectors in the study [13]. Locally, a research was done at Tabuk military hospital in 2012 among 158 nurses, and the results showed an overall prevalence of 75.9% burnout syndrome [15]. So, realizing how important burnout syndrome among nurses is, we dedicated a study which aimed to determine the prevalence of burnout syndrome among nursing staff working at King Abdulaziz University Hospital in Jeddah, Saudi Arabia.

## Methodology

### Research type and location

This is a cross-sectional study, which was conducted at King Abdulaziz University Hospital (which is a public tertiary healthcare center and a teaching hospital as well. With a full capacity of 1002 beds) [16]. Located in Jeddah (one of Kingdom of Saudi Arabia's cities, west on the coast of the Red Sea. Jeddah also considered being the largest city in Makkah Province, with a population of about 4 million people) [17].

### Participants

The participants in this study were nurses from different departments working at King Abdulaziz University hospital in Jeddah, Saudi Arabia. We selected our population size based on previous literature. 202 questionnaires were distributed, but 182 questionnaires were fully completed, a response rate of 90.1%. Most of the hospital departments were covered; medical wards, surgical wards, obstetrics and gynaecology wards including (Labor and delivery), paediatric wards, Intensive care units including (neonatal intensive care unit, paediatric intensive care unit, medical intensive care unit, and surgical intensive care unit), isolation, coronary care unit, and emergency department.

## Procedure and ethical considerations

Ethical approval was obtained from the unit of biomedical ethics research committee at King Abdulaziz University on November 14<sup>th</sup>, 2017. A memo from the nursing administration was sent to all head nurses of all departments at King Abdulaziz University Hospital on November 16<sup>th</sup>, 2017. Each of our data collectors was assigned to certain department and questionnaires were given to participants in person; informed consent was taken verbally from the participants before providing the questionnaires. The participants filled in anonymously on their own time during their shift hours and papers were collected back one by one. All data were confidential; only researchers had access. The investigation was carried out between November 16<sup>th</sup>, 2017 to December 27<sup>th</sup>, 2017 and burnout was assessed with Maslach Burnout Inventory Instruments.

## Research instruments

Data was collected using a survey comprised of two parts. Part one included essential sociodemographic data (gender, age, and marital status, number of children, nationality, hospital, department, professional experience, shift working hours, accommodation and income). Part two consisted of the Maslach Burnout Inventory-Human Services Survey for Medical Personnel.

## Data analysis

Descriptive statistics were conducted for the socio-demographic data (gender, age, marital status, full list in (Table 1). Moreover, Maslach Burnout Inventory-Human Services Survey for Medical Personnel was used to measure burnout levels. MBI is a seven-point Likert scale of 22 items self-reported (0=never, 6=every day). The 22 questions consist of three grouped scales: nine questions for emotional exhaustion, five questions for depersonalization, and eight questions for personal accomplishment. As in previous local and abroad literature, cut off scores were used from (Maslach Burnout Inventory TM Instruments and Scoring Guides, published by Mind Garden 2016) (Table 2) [14,15,18-20]. Average scoring obtained from every element. High emotional exhaustion with depersonalization and low personal accomplishment suggest the presence of burnout [3].

**Table 1:** Cut off scores of Burnout Syndrome.

Emotional Exhaustion	Frequency
High	27 or over
Moderate	17-26
Low	0-16
Depersonalization	Frequency
High	13 or over
Moderate	7-12
Low	0-6
Personal Accomplishment	Frequency
High	39 or over
Moderate	32-38
Low	0-31

**Table 2:** Cut off scores of Burnout Syndrome.

Socio-demographic Characteristics	N°	(N=182) %
<b>1. Gender</b>		
Male	17	9.3%
Female	165	90.7%
<b>2. Age</b>		
≤20-40	131	72%
41-50	37	20.3%
51-60≤	14	7.7%
<b>3. Marital Status</b>		
Married	140	76.9%
Single	39	21.4%
Widowed/Divorced/Separated	3	1.6%
<b>4. Children</b>		
None	59	32.4%
One child	45	24.7%
Two children or more children	78	42.9%
<b>5. Nationality</b>		
Saudi	14	7.7%
Non-Saudi	168	92.3%
<b>6. Professional Experience</b>		
0-10 Years	98	53.8%
11-20 Years	64	35.2%
21 ≤ Years	20	11%
<b>7. Head Nurse</b>		
Yes	6	3.3%
No	176	96.7%
<b>8. Shifting working hours</b>		
8 hours	14	7.7%
12 hours	168	92.3%
<b>9. Daily routine</b>		
Always	134	73.6%
Sometimes	47	25.8%
Never	1	0.5%
<b>10. Nurse accommodation</b>		
With the family	52	28.6%
Away from family	130	71.4%
<b>11. Income</b>		
Satisfactory	57	31.3%
Unsatisfactory	125	68.7%

N°: Total Number of Nurses

## Results

### Socio-demographic and occupational characteristics

Most of the participants in our study were between 20-40 years of age (72%). And 165 of all nurses were female (90.7%). 140 out of 182 nurses were married (76.9%) and 42.9% of them were with two children or more. Only 7.7% of the participants were Saudi, while most of them were non-Saudi (92.3%), 71.4% of nurses lived away from their families, and 35.2% had 11-20 years of professional experience. 92.3% of participants did 12 hrs shifts, while only 7.7% did 8 hrs shifts. Furthermore, 68.7% of nurses were not satisfied with their income. The more descriptive analysis is presented (Table 2).

### The prevalence of burnout syndrome

We used the definition of burnout syndrome to calculate

the prevalence as; the composition of high emotional exhaustion (EE), high depersonalization (DP) and low personal accomplishment (PA) [15]. Therefore, the prevalence of burnout syndrome among nurses in this study according to it was 9.34%.

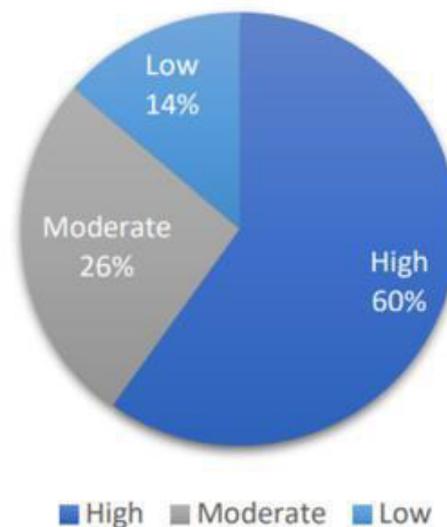
### Elements of burnout syndrome

The degree of each component of burnout syndrome was calculated using Maslach Burnout Inventory-Human Services Survey scoring system. Accordingly, most of the nurses had a high degree of emotional exhaustion (EE); 109 nurses with a percentage of 59.89% and an average of 37.02 (Standard Deviation (SD)=7). While the number of nurses who had a moderate degree of emotional exhaustion was 48 with a percentage of 26.37% and an average of 21.31 (SD=2.83) and 25 nurses who had a low degree of emotional exhaustion with a percentage of 13.74% and an average of 10.28 (SD=3.9). Next in order is the degree of depersonalization (DP) which was evident that the total number of nurses with high degree of depersonalization was 57 nurses with a percentage of 31.32% and an average of 17.02 (SD=03.54) and the number of nurses with moderate degree of depersonalization was 57, percentage of 31.32% and an average of 09.32 (SD=01.64). While the greater number of nurses had a low degree of depersonalization (Mean=03.12 and SD=02.07). Personal accomplishment (PA) on the other hand, data showed nurses who had a low degree of Personal accomplishment which suggests burnout were 49 with a percentage of 26.92% and an average of 25.84 (SD=4.52). All details presented in (Figures 1-3) and (Table 3).

### Departments

As mentioned before, studies have shown differences in burnout syndrome according to each department. As for, data in our study shows that 46 nurses participated from intensive care units and 2.75% of them suffered from burnout syndrome. In addition to that, 24 nurses from the medical wards participated, and only 1.65% of them had burnout syndrome. 0.55% out

## Emotional Exhaustion



**Figure 1:** Characteristics of emotional exhaustion percentage.

## Depersonalization

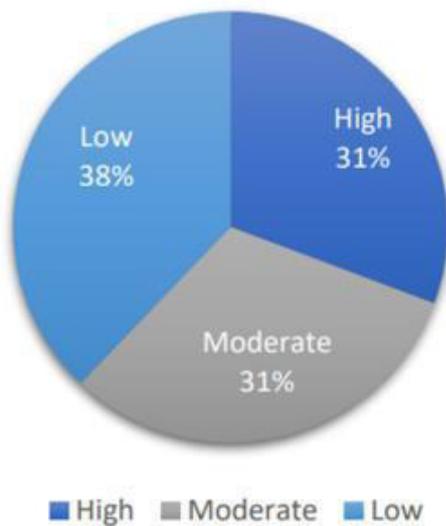


Figure 2: Characteristics of depersonalization percentage.

## Personal Accomplishment

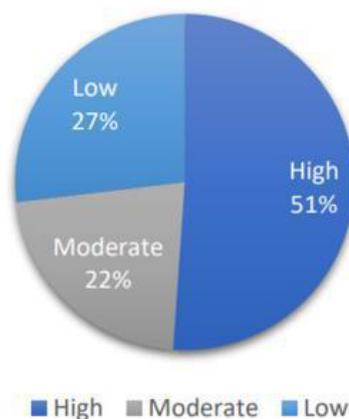


Figure 3: Characteristics of personal accomplishment percentage.

Table 3: Characteristics of Burnout Syndrome Elements.

EE	N°	%	Average	SD
High	109	59.89%	37.02	07.00
Moderate	48	26.37%	21.31	02.83
Low	25	13.74%	10.28	03.90
<b>DP</b>				
High	57	31.32%	17.02	03.54
Moderate	57	31.32%	09.32	01.64
Low	68	37.36%	03.12	02.07
<b>PA</b>				
High	93	51.10%	42.73	02.70
Moderate	40	21.98%	34.95	01.65
Low	49	26.92%	25.84	04.52

N°: Total Number of Nurses, %: Percentage, SD: Standard Deviation, EE: Emotional Exhaustion, DP: Depersonalization, PA: Personal Accomplishment.

of 22 nurses from paediatric wards suffered from burnout syndrome, and only 0.55% out of 14 nurses from obstetrics and gynaecology department had burnout. In addition, we found that each element of burnout syndrome has a different level in each department. For instance, nurses in surgical wards had a higher level of emotional exhaustion (12 out of 13 nurses) compared to other departments. Also, in the medical wards, 17 out of 24 nurses had high depersonalization level. However, 8 nurses out of 22 in the paediatric wards had Low personal accomplishment level. The details about each department is shown (Table 4).

## Discussion

As we mentioned earlier and according to previous literature, burnout syndrome is defined by high emotional exhaustion, high depersonalization, and low personal accomplishment. Surprisingly, nurses at King Abdulaziz University hospital were found to have low prevalence burnout (9.34%) compared to the high prevalence burnout (75.9%) which was found in the local study at Tabuk military hospital in 2012 [15]. Additionally, many evaluators of burnout have considered either emotional exhaustion or depersonalization as a cornerstone of burnout [19]. In our study, 59.89% of nurses were found to have high emotional exhaustion (109 out of 182 nurses), and 30.77% of the nurses were found to have high depersonalization (56 out of 182 nurses). However, only 26.92% of the nurses were found to have a low personal accomplishment, which does not match the definition, and it might explain the low prevalence of burnout in this study. Many factors are contributing to this level of burnout such as different workload in different departments as shown in the study which was done in Iran [13]. In this study, we found that intensive care units' nurses have the highest level of burnout, (which is similar to the results in Embriaco N (2007) investigation), followed by medical nurses. In addition, we found that many nurses live away from their families, which might be another factor [14].

Table 4: Characteristics of Burnout Syndrome in Each Department

Department	N°	% of Burnout	H. EE	H. DP	L. PA
Blood Bank	1	0%	0	0	0
Coronary Care Unit	4	0%	0	0	2
Day Care Unit	12	0.55%	5	5	3
Emergency Department	17	1.1%	14	5	3
Endoscopy Unit	8	0%	4	1	2
Intensive Care Units	46	2.75%	27	11	11
Isolation	3	0.55%	1	1	1
Medical Wards	24	1.65%	17	17	10
Nursing Department	3	0%	1	1	0
Obstetrics and Gynecology	14	0.55%	7	2	4
Operating Room	1	0%	0	0	0
Outpatient Clinics	9	0.55%	7	2	2
Pediatric Wards	22	0.55%	13	5	8
Surgical Wards	13	1.1%	12	6	2
Unknown	5	0%	1	0	1

N°: Total Number of Nurses, % of Burnout: Percentage of burnout according to the definition, H. EE: High emotional exhaustion, H. DP: High depersonalization, L. PA: Low personal accomplishment.

## Limitations

Our study faced limitations that should be taken into consideration. Starting with the language used in our questionnaire; we used English, and all our participants come from non-English speaking countries. So, misunderstanding and misleading answers could be a possibility. Secondly, we come to job security and the mistrust of the nurses to the response confidentiality, which might raise the percentage of personal accomplishment comparing to the high percentage of emotional exhaustion. And finally, some of the nurses might find our questionnaire a bit long during their working hours. So, full attention was not given to each question in the survey.

## Conclusions and Recommendations

Nurses nowadays have a significant role in the healthcare system, and research like this will help to improve their individual-work relationship, resulting in a better evidence-based work environment. The prevalence of burnout syndrome in our study is low (9.34%) out of what we expected compared to previous literature. However, the high level of emotional exhaustion (59.89%) gives us more opportunity to do more studies in this area. Although intensive care units' nurses had the highest level of burnout, followed by medical nurses. In addition, nurses in surgical wards had a higher level of emotional exhaustion compared to other departments. As a recommendation, we encourage researchers to do more investigations about burnout syndrome among nurses and among different medical personnel to improve the quality of health care system.

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