

# Correlation between workplace and occupational burnout syndrome in nurses

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## Abstract

**Background:** This study was conducted to determine the effect of nurses' workplace on burnout syndrome among nurses working in Isfahan's Alzahra Hospital as a reference and typical university affiliated hospital, in 2010.

**Materials and Methods:** In this cross-sectional study, 100 nurses were randomly selected among those working in emergency, orthopedic, dialysis wards and intensive care unit (ICU). Required data on determination of occupational burnout rate among the nurses of these wards were collected using Maslach Burnout Inventory (MBI) standard and validated questionnaire. Nurses were selected using simple random sampling.

**Results:** The multivariate ANOVA analysis showed that occupational burnout mean values of nurses working in orthopedic and dialysis wards were significantly less than those of nurses working in emergency ward and ICU ( $P = 0.01$ ). There was also no significant difference between occupational burnout mean values of nurses working in emergency ward and ICU ( $P > 0.05$ ). *t*-test showed that there was a difference between occupational burnout values of men and women, as these values for women were higher than those of men ( $P = 0.001$ ).

**Conclusion:** Results showed that occupational burnout mean values of nurses working in emergency ward and ICU were significantly more than those of nurses working in orthopedic and dialysis wards.

**Key Words:** Emergency ward, nurse, occupational burnout

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## INTRODUCTION

Problem burnout by Freudenberg for the first

time since being introduced in 1974, has so far been identified in many human service industries.<sup>[1]</sup> Pines and Aronson explain burnout as a state of physical and psychological exhaustion due to prolonged involvement in emotional condition.<sup>[2]</sup> Freudenberg and Richelson believe that it is a state of fatigue and frustration taking place when life or a relationship does not satisfy people as it should.<sup>[3]</sup> Maslach expresses that the pattern of work overload and its subsequent emotional exhaustion constitutes the heart of occupational burnout syndrome.<sup>[4,5]</sup> Maslach also calls burnout a phenomenon in which cumulative

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effect of a stressful environment ultimately overcomes defense mechanisms of workers which results in their psychological withdrawal.<sup>[5]</sup> Level of occupational burnout varied among nurses working in different wards. Comparison of different wards (surgery, pediatrics, and gynecology wards) can reveal the importance of individual's environment.<sup>[6]</sup>

Burnout, in response to chronic fatigue and psychological stress, can be due to degradation and deterioration of the relationship between patient and nurse, other colleagues, family and social environment.<sup>[7]</sup> In addition, Burnout is closely related to the absenteeism and abandonment of the nurse's work.<sup>[8]</sup> Finally, nurse burnout, leading to poor patient care and increase the incidence of medical errors.<sup>[9]</sup>

Occupational burnout bears various adverse effects for the individual and the organization where s/he works and in a longer time for the community. In addition to personal damages, burnout causes occupational dissatisfaction, disruption in organizational commitments, and increase in changes through reducing cognitive abilities.<sup>[10]</sup>

## MATERIALS AND METHODS

This cross-sectional study was conducted on nurses working in the university affiliated Alzahra Hospital in Isfahan, in 2010. These nurses were randomly selected among those working in emergency, orthopedics, dialysis, and ICU wards. All the studied nurses graduated from universities with at least 5 years of nursing experience. Given that the employment status is considered itself a stress factor, only the nurses with official, contractual, and quasi-contractual employment were included in this study in order to eliminate one of the confounding factors. The studied population included all the nurses working in Alzahra Hospital.

### Inclusion and Exclusion Criteria

#### A. Inclusion criteria

- Nurses working in Alzahra Hospital
- At least 5 years of nursing experience in a ward
- Consent to participate in the study
- Graduated from a university
- Type of employment (official, contractual, quasi-contractual)

#### B. Exclusion criteria: Intern nurses (temporary)

### Sample size and method of sampling

Using a formula for estimating sample size in

prevalence studies and regarding the confidence interval of 95%, estimated prevalence of occupational burnout as 50% (given lack of similar study in Isfahan Province), and acceptable error rate of 0.1, size of the studied sample was estimated 96 nurses, however, for more reliability, 100 nurses from the studied wards were elected and studied. Selection of nurses followed the method of simple random sampling.

Data on determination of occupational burnout rate among the nurses of the above-mentioned wards were collected using Maslach Burnout Inventory (MBI) standard and validated questionnaire. All the questionnaire were without name and participators entered their demographic specifications including age, sex, marriage status, level of education, type of work shifts, second occupation, any organic disease, and medications they were taking. All the studied nurses graduated from universities with at least 5 years of nursing. Given that the employment status is considered itself a stress factor, only the nurses with official, contractual, and quasi-contractual employment were included in this study in order to eliminate one of the interfering factors. Furthermore, the time of work shifts (only mornings, only evenings, only nights, or rotated shifts) was determined in order to assimilate samples. The questionnaires were given back to the project executor after 7 days. Once, the occupational syndrome rate was determined, different factors were analyzed to detect factors affecting the incidence of occupational burnout syndrome and provide effective methods for preventing the incidence of burnout syndrome in order to improve treatment services.

The collected data were analyzed using SPSS 18 software. Statistical tests used in this study included Chi square, T-student, multivariate ANOVA, and logistic regression.

## RESULTS

Frequency of nurses in Emergency, Orthopedic, Dialysis wards, and ICU was 28, 22, 19, 31 people, respectively. Frequency distribution of occupational burnout in studied nurses is shown in Table 1.

Results by the multivariate ANOVA test showed a significant difference among occupational mean values of the studied nurses. The test showed the occupational burnout mean values of nurses working in Orthopedic and Dialysis wards were significantly less than those of nurses working in Emergency ward and ICU ( $P = 0.01$ ) [Table 1]. There was also no significant difference between occupational burnout mean values of nurses working in Emergency Ward and ICU ( $P > 0.05$ ) [Table 2].

**Table 1: Frequency distribution of occupational burnout**

Ward	Occupational burnout	
	Mean	Standard deviation
Emergency	56/330	15/325
Orthopedic	41/220	12/421
Dialysis	39/134	11/764
ICU	57/655	16/430

*P* value = 0.01

**Table 2: Correlation of occupational burnout between emergency room and ICU**

Ward	Occupational burnout	
	Mean	Standard deviation
Emergency	56/330	15/325
ICU	57/655	16/430

*P* value >0.05

**Table 3: Correlation between sex and burnout**

Sex	Occupational burnout	
	Mean	Standard deviation
Men	38/650	11/470
Women	55/510	14/411

*P* value=0.001

Number of men and women participating in this study comprised 29 people (29%) and 71 people (71%), respectively. the correlation between sex and burnout is shown in Table 3. Analysis by *t*-test indicated that there was a difference between occupational burnout values of men and women, as these values for women were higher than those of men ( $P = 0.001$ ) [Table 3].

## DISCUSSIONS

Results showed that occupational burnout mean values of nurses working in Emergency ward and ICU were significantly more than those of nurses working in Orthopedic and Dialysis wards. There was also no significant difference between occupational burnout mean values of nurses working in Emergency Ward and ICU. Therefore, it seemed that the rate of occupational burnout of nurses working in Emergency ward and ICU was higher than that of nurses working in other wards due to the higher workload and stress in these wards. Moreover, based on the study carried out in this regard in 1996, technology in the organizational structure may be a stress factor. As the technology grows increasingly, mental stress increases in the workplace. Thus, personnel who deal with modern technologies in emergency ward and ICU are exposed to higher workload and stress.<sup>[11]</sup>

Freeborn *et al.* studied occupational burnout in nurses working in ICU and CCU (103 people) and found a rather high occupational burnout among

the nurses. The occupational burnout in nurses with problem-oriented personality was more than those with emotion-oriented personality.<sup>[12]</sup>

Russel's study showed that women were exposed to stress factors more than men and the subsequent effects on them were also different from those on men.<sup>[13]</sup>

Other researchers reported that female physicians in US were suffering from occupational burnout more than male physicians, as they observed that female general physicians suffered from higher psychological problems like depression, eating disorders, and anxiety and they also expressed that they had less control on their workplace than their male colleagues.<sup>[14]</sup>

Although burnout popular articles on various aspects of life have expressed, the researchers believe that this problem can occur in people who have to deal with people.<sup>[15]</sup> Workplace stressors seem to be widely associated with health and can even cause a person's physical and mental illness.<sup>[16]</sup>

Maslach considers that burnout six organizational development, effective as follows:

High workload, low levels of job control, low remuneration, lack of social communication, discrimination in the workplace and the conflict between individual values and work values.<sup>[17]</sup>

The conclusion of the present study also showed a difference between occupational burnout rate of men and women as it was higher in women.

Finally, it was found that the workplace in the hospital and sex of the nurses had an important role in their occupational burnout, thus, strategies to prevent such complications must be determined.

Furthermore, studies with similar design in other treatment centers are suggested and, in particular, changing some factors to specify changes in the rate of occupational burnout of nurses.

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