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ORIGINAL PAPER

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Burnout Among Nursing Staff in Ziaeeian Hospital

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ABSTRACT

Introduction: Occupational burnout among nurses is a major factor affecting the quality of nursing care. Assessing the prevalence of burnout and its related factors is necessary for discouraging the development of burnout. **Aim:** The aim of this study is determining the burnout among nurses of Ziaeeian Hospital, which has not done before. **Methods:** In this cross-sectional study, all the nursing staff (287 people) was included after filling the informed consent. Occupational burnout was detected using the Maslach occupational burnout inventory tool. Data were analyzed by SPSS software and the significance threshold was set at $p < 0.05$. **Results:** Most of the subjects were female, married, had a bachelor's degree, worked as a nurse, and had less than 5 years of work experience. The mean score of emotional exhaustion was 29.25 ± 12.64 , personal performance was 37.31 ± 7.9 , and depersonalization was 14.7 ± 5.1 . Altogether, 75% of the population had severe emotional exhaustion and depersonalization and mild personal dysfunction. The severity of emotional exhaustion, depersonalization and individual performance impairment were greater in staff with higher degree. Job position also affected the intensity of emotional exhaustion and depersonalization. Additionally, there was a significant association between marital status and depersonalization. **Conclusion:** Nurses of Ziaeeian Hospital have severe emotional exhaustion and depersonalization; and mild personal function impairment. The findings of this research are a guide for the next steps to solve burnout in this hospital.

Keywords: burnout, nurse, occupational health, work characteristics, hospital.

from the long-term emotional stress associated with the job. Emotional exhaustion, the lower sense of competence and success in the profession, dissatisfaction with the work duties, feeling of failure, loss of judgment and understanding, sense of permanent oppression and exploitation, and decreased job performance, are different expressions of burnout. This syndrome negatively affects the individual's social, physical and psychological life (1). Burnout is associated with overthrowing ethics, impaired work performance, absence from work, and inappropriate contact with patients, and high number of job change (2).

Job burnout among nursing staff is about 13% to 27%, which is significantly higher than the general population due to the intense nature of occupational duties and high level of stress (3, 4). Interestingly, the insufficient number of nurses and the resulting high workload is the first source of exhaustion (1).

Individual actions are effective in controlling burnout. Managers also prevent of burnout by guiding and supporting the personnel, providing reasonable salaries, letting working staff's participation in decision-making and improving organizational communication. In addition, the study of the prevalence of burnout and its related factors in planning for effective prevention and intervention is one of the important tasks of the managers (2).

Generally, burnout is a challenging health problem. This problem is harmful to humans and health systems (5). Therefore, in recent years, particular attention has been paid to research on burnout, especially among the nursing professions.

1. INTRODUCTION

Job burnout is the psychosocial status of the physical and psychological tiredness resulting

2. AIM

This study is aim to determining the prevalence of burnout in nurses of Ziaeeian Hospital, Tehran University of Medical Sciences.

3. METHODS

Study sample and population

This cross-sectional study aims to determine the prevalence of burnout among nursing staff of Ziaeeian Hospital in three-shift work. All nursing staff (287 people) entered the study after obtaining informed consent and explaining the research objectives. All job burnout questionnaires were provided to all nurses.

The researchers attempted to maintain the anonymity and privacy of respondents. Nurses were not required to fill their name and address and the questionnaires were completed anonymously. In addition, the data was saved after removing the identification information. To protect confidentiality, all data is numerically encrypted and only accessible by researchers. Ethics Committee of Tehran University of Medical Sciences approves this study

Instruments

The Maslach Burnout Inventory (MBI) questionnaire (6) that is translated to Persian and validated was used for assessing the key symptoms of occupational burnout in nurses. In order to determining the validity of tools, the questionnaire was provided to supervisors and consultants and after collecting their opinions, final questionnaires were developed. The validity of MBI questionnaire is 0.9, 0.79 and 0.71 in the emotional exhaustion scale 8. Maslach C, Jackson SE, Leiter MP. Maslach burnout inventory manual, 3rd edition. California: consulting psychologist press, Inc; 1996.

Badri Gargari R. Psychological syndrome of burnout and the coping strategies. [dissertation], depersonalization scale and personal performance scale, respectively, measuring by the Cronbach's alphas method. The total validity of the questionnaire is 0.91, which is an acceptable value.

The questionnaire consisting of 22 questions concerning emotional exhaustion, personal dysfunction, and depersonalization scales. The 9 item Emotional Exhaustion (EE) scale measures feelings of being under stress and having persistent anxiety at one's work. The 8 item Personal Accomplishment (PA) scale measures feeling of being competence and successful performance in one's work with people. The 5 item Depersonalization (DP) scale measures the degree of separation and impersonal response toward recipients of one's service, care, treatment, or instruction.

All items are scored using a 6 level frequency scale from "never" to "always". Each scale measures its own unique dimension of burnout. There are score ranges that define Low, Moderate and High levels of each component/scale based on the 0-6 scoring (Table 1) (6).

Interestingly, the demographic data including age, gender, working experience, marital status, academic degree, and the job title were recorded as factors that may directly or indirectly involving in developmental of occupational burnout.

Data analysis

Data were analyzed and reported only for patients with completed information. Statistical analysis of data was

performed using SPSS version 22 software. Chi-square test was used to compare qualitative variables between groups. Kolmogorov-Smirnov test was used in order to evaluate the normal distribution of all quantitative studied parameters. Student t-test and paired t-test were used for variables with normal distribution. The p-value less than 0.05 were considered significant

4. RESULTS

In the current study, 77.1% of the precipitants were female and 22.9% were male. Most of the subjects were married (69.3%), had bachelor's degree (71.4%), were employed as a nurse working in the ward (46.2%), and had less than 5 years of work experience (42.3%). In addition, the mean age was 31 years with a standard deviation of 6.7.

Our results show that 129 (47.4%) of cases had severe emotional exhaustion, 95 (35.2%) of cases had high individual dysfunction, and 191 (70.2%) of cases had severe depersonalization (Table 2). The mean emotional exhaustion, personal performance and depersonalization scores were 29.25 ± 12.64 , 37.3 ± 7.9 , and 14.7 ± 5.1 , respectively. In total, 75% of the study population had severe emotional exhaustion, mild personal dysfunction and severe depersonalization (Table 1).

Burnout dimension	Noun (%)	Cut-off points
Emotional Exhaustion		
Mild	56 (20.6%)	≤ 17
Moderate	87 (32%)	18-29
Severe	129 (47.4%)	≥ 30
Mean \pm SD	29.25 ± 12.64	
(75%Third quartile)	38 (severe)	
Depersonalization		
Mild	3 (1.1%)	≤ 6
Moderate	78 (28.7%)	7-11
Severe	191 (70.2%)	≥ 12
Mean \pm SD	14.7 ± 5.1	
(75%Third quartile (17 (severe)	
Personal Performance Impairment		
Mild	95 (35.2%)	≥ 40
Moderate	101 (37.4%)	34-39
Severe	74 (27.4%)	≤ 33
Mean \pm SD	37.31 ± 7.9	
(75%Third quartile (42 (mild)	

Table 1. The scores of different dimensions of job burnout among nurses

Chi-square test analysis shows that there was a significant relationship between the educational degree and the severity of emotional exhaustion ($\chi^2 (8) = 17.88$, $p = 0.02$). Most of the people with an associate's degree (53.8%), bachelor's degree (50%) and masters (60%) had severe emotional exhaustion. However, only 27.3% of people with diploma had severe emotional exhaustion. There was also a significant relationship between job position and severity of emotional exhaustion ($\chi^2 (14) = 30.5$, $p = 0.006$). Most head nurses (45.5%), nurses (58.7%), health workers (66.7%) and midwives (51.3%) had severe emotional exhaustion. While most operating room staff (50%) mentioned mild

emotional exhaustion.

There was a significant relationship between the severity of depersonalization and the marital status ($\chi^2(2) = 8.6, p = 0.01$); so that 68.7% of the single people and 70% of the married cases had severe depersonalization. In contrast, 4.5% of single people and 0% of married people had only mild depersonalization. In addition, the relationship between education and severity of depolarization was statistically significant ($\chi^2(8) = 19.41, p = 0.01$). Our results also show that most nurses with a bachelor's degree (75.7%) and a master's degree (88.9%) had a severe depersonalization. Further, there was a significant association between job title and severity of depersonalization ($\chi^2(14) = 23.8, p = 0.47$). The majority of supervisors (69.2%), head nurses (70%), nurses (80.5%), anesthesia personnel (54.5%), healthcare workers (75%), and midwives (78.4%) had severe depersonalization. While most of the staff in the operating room had moderate degree of depersonalization.

The association between educational degree and individual reduced performance severity was statistically significant ($\chi^2(8) = 17.3, p = 0.02$). Our results show that, as the level of education increases, the personal performance decreases. Most people with diploma (41.7%) and associate's degree (69.2%) had high personal dysfunction, while 55.6% of those with master's degree had severe dysfunction (Table 2).

5. DISCUSSION

The results of this cross-sectional study show that nurses working in Ziaeian Hospital of Tehran University of Medical Sciences, suffer from severe emotional fatigue, mild personal dysfunction, severe depersonalization, and

Emotional Exhaustion	Depersonalization	Personal Performance Impairment	Variable
0.8	0.9	0.4	Sex
0.05	0.01*	0.15	Marital status
0.02*	0.01*	0.02*	Educational degree
0.05	0.29	0.09	Working yeas
0.006**	0.47*	0.09	Job title

Table 2. Relationship between demographic and occupational variables and dimensions of burnout * <0.05 ; ** <0.01

overall severe occupational burnout. So that, 47.4% had severe emotional exhaustion, 27.4% had severe reduced sense of personal accomplishment, and 70.2% had severe degree of depersonalization. Moreover, our findings show that there was a significant association between the level of education and the severity of emotional exhaustion, depersonalization and personal dysfunction. It seems that as the level of education increases, the burnout score in all three scales exacerbates.

A study done in a trauma hospital in Rasht, have shown that the nurses had severe emotional exhaustion, moderate depersonalization, and mild reduced functional performance [7]. The data of our study is almost the same, while our results show that the majority of nurses suffer from severe depersonalization. Another study done by Zayghami Mohammadi in Alborz Hospital in Karaj, 57.8% of the nurses had moderate emotional exhaustion, 52.2% had a low self-esteem and 64.4% had a mild individual

performance impairment (8). While in the current study, 47.4% had severe emotional exhaustion, 27.4% had a severe reduction in individual performance, and 70.2% had high levels of depersonalization. Only 1.1% had mild depersonalization, which is very different from that of, reported by Zayghami Mohammadi (8). Mohammad Arab et al. have reported that 8.3% and 2.5% of nurses working in public hospitals of Tehran University of Medical Sciences have severe emotional exhaustion and depersonalization, respectively, while none of the subjects had a significant reduction in performance (1). These data is significantly different from the results of the current study.

The study of Talaee et al. on 660 medical personnel working in hospitals affiliated to Mashhad University of Medical Sciences, 31.2%, 17.4% and 12.9% of cases had severe emotional exhaustion, depersonalization and severe functional impairment, respectively (9). While, our results are far more than their findings in all three scales.

In addition, the burnout rate of nurses in Ziaeian Hospital is higher than that of reported in studies in different populations. A study done by Ferreira et al. on 534 nurses of a general hospital in Sao Paulo, Brazil, have shown that 23.6% of nurses have severe emotional exhaustion, 21.9% have high depersonalization and 29.9% have significant reduction in individual performance (3). Only in terms of individual performance, our results are similar to those of Ferreira. CJ Kilfedder et al. by including 510 psychiatric nurses have demonstrated that the mean score in three dimensions of emotional exhaustion, depersonalization, and individual performance were 18.8, 4.9, and 34.2, respectively (10). While in this study, the mean scores of emotional exhaustion and depersonalization were higher.

Our results generally indicate that burnout rates in two dimensions of emotional exhaustion and depersonalization are much higher among nurses in Ziaeian Hospital compared to that reported in previous domestic and foreign studies. These differences could be due to higher workload in and stress in the workplace (9). Ziaeian Hospital is an educational and referral hospital with a large number of patients with complicated diseases and numerous emergency cases. Higher expectations and higher workload thus is expected to lead to higher levels of job burnout. On the other hand, issues such as lack of nursing support, and not participation in planning for patient care are causes of higher levels of emotional exhaustion and depersonalization (1).

We found that a significant number of nurses (70.2%) had severe depersonalization, which is significantly higher than previous studies. Depersonalization refers to the separation and impersonal response toward recipients of one's service, care, treatment, or instruction. The lack of motivation to have creativity, the inability to use the nurses' mistakes as an educational opportunity, and the lack of teamwork between nurses and physicians are causes of depersonalization (1, 9).

In continece with previous studies, our findings represent the association of higher levels of education with higher levels of burnout but the link is still unclear (11). In addition, there was a significant relationship among the job position and the severity of emotional exhaustion and depersonalization. Nurses with direct patient contact are more vulnerable to emotional exhaustion and depersonalization. It seems that higher expectations and higher goal setting underlying higher occupational efforts and higher risk of burnout (11, 12).

Talaei et al. have declared that age, sex, working experience and job title is related risk of burnout (9). However, in the current study, we found no significant association among sex and working experience and severity of burnout. In many studies, gender has found to be predictive of burnout, but the results are controversial in this regard. In some studies, the rate of burnout was higher among women while others found the opposite (11). Our results show that there was no significant relationship between sex and burnout. In contrast to previous reports, being married found to be related to a higher risk of depersonalization. The family supports were expected to have positive effect on emotional empowerment and thus to lower levels of burnout (9, 13). Additionally, some studies have not reported any significant relationship between burnout and marital status (9, 14).

One of the strengths of this study is the use of a reliable Maslach questionnaire for measuring occupational burnout. Collecting information done over several consecutive days to including the entire nursing staff of Ziaeeian Hospital. However, there is possibility that some absent nurses at work would not be available for medical reasons or holidays. Therefore, only “healthy employees” are enrolled, which creates limitations in the scheme.

6. CONCLUSION

Nurses working in Ziaeeian Hospital of Tehran University of Medical Sciences, have severe emotional fatigue and depersonalization, mild reduced sense of personal accomplishment. Higher educational degree was found to be related to more severe levels of emotional exhaustion, personal dysfunction and depersonalization. Job positions also have an impact on the intensity of emotional exhaustion and depersonalization. Additionally, marital status is associated with severity of depersonalization.

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