

«Original Articles»

Professional burnout and the affecting factors in operating room nurses in Qom teaching hospitals

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Abstract

background: Burnout is a syndrome, include with emotional exhaustion, depersonalization and reduced personal competence. It has negative impact on the physical, psychological and vocational aspects of the nurses life. The study was carried out to determine burnout and its associated factors in Operating Room Nurses from Qom teaching hospitals.

Materials and methods: A descriptive –analytical study was developed. The participations were selected using census sampling methods. A total of 87 nurses out of 110 were contributed in this study. Data collected including Demographic information and Maslach burnout inventory (MBI) using questionnaires. Then the whole information was entered to SPSS 18 statistical software and analyze with descriptive statistical tests, chi-square T-test and Pearson correlation coefficient.

Results: From 110 population of this research, 52 of them (59.8%) were women and the remaining were men. Mean and standard deviation of age were 33.82 ± 7.66 . The Most of participations from perspective The Most of participations from perspective of emotional exhaustion (96.5% frequency, 50.6% intensity), depersonalization (89.3% frequency, 63.5% intensity) and personal accomplishment (100% frequency , 100% intensity) were in low level. There had also been significant correlation between gender, number of work shifts and night shifts at a month with some aspects of burnout. The results of multiple Logistic Regression model shows that gender Variable is the predictable factor of emotional exhaustion and depersonalization. Also in prediction of personal accomplishment, number of shift significant correlation was only with personal accomplishment (OR:1.07, CI:1-1.15).

Conclusion: Nurses of this study were not in favorite level for personal accomplishment. Take serious and adoption measures in order to increase of individual successful feeling and decrease of burnout in nurses seem to be necessary.

Keywords: professional burnout, operating room nurses

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Introduction

burnout among occupational hazards has been discussed in recent years. Burnout is a psychological syndrome that include emotional analysis (feeling of psychological power discharge), depersonalization (negative reaction without feeling and with inordinate indifference to services recipient) and reduction of personal accomplishment feeling that eventuated to negative self-image, negative attitude to job, and feeling of disconnection with clients. As well as influence the intensity of individual, vocational and organizational relationship (1). This syndrome is the most important professional issues that impose considerable cost to organizations. For example, organizations in the United States, because burnout fee of 50 to 70\$ million per year has been estimated. In England, every year are also estimated that to give away 40 millions Working- day because of irregularities by stress (2) . Medical employees have more readiness for Burnout to other jobs because of facing with stresses like patients mortality, interpersonal problems, low social protection (3), high operating, exposure with large number of people in day, decision-making in emergency situation according to inadequate information and be responsible for this decision- making , Effort with stress for mistake avoidance (4) , exposure with violence and threat in workplace (5) and nightly guard (6). among hygienic personnel, Operating Room Nurses encounter emergency situation and lethally and expose stress and operating pressure(7). Therefore It is expected that the employed personnel in these portions have more Burnout. The recent researches connote the rapid growth Burnout and neurosis specially depression and anxiety in medical employees like nurses (8-14). In study of Embriaco (2007) 5% of emergence`s doctors and one third of emergence`s nurses (15) and in researches of Taylor (2005) 14-27% of oncology surgeons had experienced medium to high level of Burnout (16). In

research of Wu (2007), Chinese nurses with low level of education had also low personality and younger nurses had more amount of Burnout (17). Barrett (2002) in his research about nurses of blood and cancer sectors found that more than 70% of samples suffer from mediate and high level of Burnout (18). Bektasova (2012) indicated that the nurses had more burnout than doctors (19).

Recognition and prevention of Burnout have the important role in preferment of mental health and services' quality (20). Whereas Operating Room Nurses encounter stressful situations and Burnout is the Widespread phenomenon in this profession. The study aimed to determine amount of Burnout of Operating Room Nurses From Qom teaching hospital affiliated to Medical Sciences University medical science university and determining effects of individual factors on burnout.

Materials and methods

A descriptive- analytical cross-sectional study was carried out, in 2012. In this research, population include: all operating room nurses of Qom teaching hospitals (Nekooi, Beheshti, Izadi, Al Zahra, Kamkar, Hazrate Masoome hospitals). From 110 invited operating room nurses to participate in this investigation , 87 were studied by census sampling method according arrival norms. Samples include operating room nurses that had at least junior educational certification with 2 years experience, and previous psychiatric disease or psychoactive medicament specific chronic diseases, disability and physical handicap in themselves or in their family, of severe stress (death of close persons, divorce, severe accidents) in the past month. All ethical issues were considered and all participants were included after informed consent.

The useful instruments in this research are questionnaires that include personal information and a Maslach Burnout Inventory (MBI) that after training to personnel by researcher ,they filled

them. The first questionnaire was related to individual demographic information including age, gender, education, experience, marital status, kind of guard, number of nightly guard in one month, extra guard, occupation, overtime. The second questionnaire was the Maslach Burnout Inventory (MBI), that includes 22 questions, 9 of them related to exhaustion emotional and 5 of them related to depersonalization and 8 of them related to Personal Accomplishment. In every question, the person can choose alternatives from 0 (never) to 6 (everyday). This measurement analyzes separately in two parts of frequency and intensity: Exhaustion Emotional: high (the score more than 30 for frequency and the score more than 40 for intensity); medium (the 18-29 scores for frequency and the 26-39 scores for intensity); low (the score less than 17 for frequency and the score less than 25 for intensity). Depersonalization: High (more than 12 scores for frequency and more than 15 scores for intensity). Medium (6-11 scores for frequency and 7-14 scores for intensity); low (less than 5 scores for frequency and less than 6 scores for intensity) and Personal Accomplishment: Low (less than 33 scores for frequency and less than 36 scores for intensity); medium (34-39 scores for frequency and 37-43 scores for intensity); high (more than 40 scores for frequency and more than 44 scores for intensity). according to cutoff points of questionnaire, the Burnout classify to 3 levels; low, medium, and high. If the person positions in high level of Exhaustion Emotional and depersonalization and in low level of personal accomplishment, it means that he is in Burnout. Coefficient of test-retest reliability and validity of the questionnaire by the Philippines with Coefficient of test-retest 0.82 to 0.92 and Alpha 0.63 to 0.85 has been confirmed (22).

The data of this study was analyzed by SPSS v.16 software and descriptive statistical tests were applied for, chi-square T-test and Pearson correlation coefficient

and Logistic Regression analysis. Meaningful level was considered less than 0.05 in all tests.

Results

Mean and standard deviation of participants nurses age were 33.82 ± 7.66 and 59.8% of them were women. With the view of marital status, 75.8% of them were married, 22.9% of them were single and the other were divorced. 49.42% of all participants had junior certification and 47.12% of them had bachelors certification and 3.44 of them had master certification (Table 1).

The table No.2 shows that in the eye of Burnout frequency, more participants (96.5%) had low and 3.5% of them had medium in Exhaustion Emotional, and more of them (89.3%) had low scores and 10.7% of them got medium scores in depersonalization. 100% of them had low personal accomplishment.

In the eye of Burnout, more of them in Exhaustion Emotional (50.6%) depersonalization (63.5%) personal accomplishment (100%) were in low level. Furthermore, 13.3% of them in Exhaustion Emotional and 16.3% of them in depersonalization were in high level (Table 3).

In these variables, there were also significant correlation between gender and frequency of depersonalization and Exhaustion Emotional and between number of shift as well as nightly shift in a month and frequency of depersonalization ($p < 0/05$).

According to the results of demographic and occupational variables, in the model of Univariate, the Logistic Regression showed that among these variables, the gender and number of night shift have a significant relationship with Exhaustion Emotional (Table 4). After entering gender variables and number of night shift and second career ($p < 0/2$) in the model of multivariate logistic regression, the results showed that gender is the most important predictor variable (OR:0.43, CI:0.17-

1.11); So that 57 percent of men reduced burnout. As well as factors associated with depersonalization, the only gender variable was (OR:0.48, CI:0.16-0.98) positive and significant predictor of depersonalization (Table 5). The results of multivariate logistic regression model for prediction of personal accomplishment of Burnout

showed that among the variables entered into the model (Table 6), only the night shift had significant relationship with personal accomplishment, So that an increase in the number of shifts per month, personal accomplishment decreased 1.07 times.

Table1: Personal and occupational information of nurses

Information	Frequency	percentage
Gender		
Male	35	40.2
Female	52	59.8
Age		
Less than 30	39	44.82
30-40	26	29.88
More than 40	22	25.28
Marital status		
Married	66	57.8
Single	20	22.9
Divorced	1	1.74
Education		
Junior certification	43	49.42
Bachelors certification	41	47.12
Master certification	3	3.44
Experience		
Less than 10	40	45.97
10-20	16	18.39
More than 20		11.49
Night Shift		
Less than 10	36	76.59
10-20	2	4.25
20-30	6	12.76
More than 30	3	6.38
Employment		
permanent	31	35.63
Contractual	40	45.97
Temporary	13	14.94
Committed to serving	3	3.44
Overtime work		
Less than 10 shifts	42	48.27
10-20	15	17.24
More than 20 shifts	1	1.14

Table2: Distribution of samples frequency according to frequency of different Burnout dimensions

Frequency Dimensions of Burnout		Numbers	Percentage
Exhaustion Emotional	Low(and lower than17)	83	96.5
	Medium(18-29)	3	3.5
	High (and more30)	0	0
	Standard Deviation \pm Mean	9.22 \pm 6.92	
Depersonali zation	low (5 and lower)	75	89.3
	medium (6-11)	9	10.7
	high (and more12)	0	0
	standard deviation \pm Mean	3.43 \pm 4.40	
Personal Accomplish ment	low (33 and lower)	87	100
	medium (34-39)	0	0
	high (40 and more)	0	0
	standard deviation \pm Mean	6.0 \pm 4.84	

Table 3: Distribution of samples frequency according to intensity of different Burnout dimensions

Frequency Dimensions of Burnout		Numbers	Percentage
Exhaustion Emotional	Low(and lower than25)	42	50.6
	Medium(26-39)	30	36.1
	High (and more40)	11	13.3
	Standard deviation \pm Mean	27.33 \pm 13.49	
Depersonalization	Low (6 and lower)	54	63.5
	Medium (7-14)	17	20
	High (and more15)	14	16.5
	Standard deviation \pm Mean	6.63 \pm 7.09	
Personal Accomplish ment	Low (36 and lower)	87	100
	Medium (37-43)	0	0
	High (44 and more)	0	0
	Standard deviation \pm Mean	87.18 \pm 7.49	

Table4: consideration of independent variables relationship with Exhaustion Emotional according to Univariant Logistic Regression model

Variable	Interval confidence %95 CI	OR	P-value
age	0.95-1.06	1.01	0.70
Gender	0.15-0.91	0.37	0.03
marital status	0.000	0.000	1
experience	0.93-1.06	0.99	0.81
Overtime	0.23-2.07	0.69	0.51
number of shift in one month	0.95-1.06	1.00	0.74
Number of night shift	0.14-1.01	0.38	0.05
Education	0.68-1.06	1.00	0.70
Second employment	0.15-1.34	0.44	0/.10

Table 5: consideration of independent variables relationship with depersonalization according to Univariant Logistic Regression mode l

Variable	interval confidence 95% CI	OR	P-value
Age	0.93-1.04	0.99	0.80
Gender	0.30-1.99	0.40	0.04
Marital status	0.000	0.000	0.8
Experience	0.95-1.08	0.99	0.93
Overtime	0.48-4.2	1.48	0.46
Number of shift in one month	0.99-1.12	0.98	0.68
Number of night shift	0.89-5.40	1.23	0.64
Education	0.3-3.5	0.82	0.39

Table 6: Consideration of independent variables relationship with personal accomplishment according to Univariate Logistic Regression model

Variable	Interval confidence 95% CI	OR	P-value
Age	0.94-1.05	0.99	0.80
Gender	0.16-0.98	0.40	0.04
Marital status	0.000	0.000	0.8
Experience	0.93-1.06	0.99	0.93
Overtime	0.52-4.02	1.48	0.46
Number of shift in one month	0.93-1.04	0.98	0.68
Number of night shift	0.50-3.007	1.23	0.64
Education	0.53-1.28	0.82	0.39

Discussion

emotional Exhaustion and depersonalization were at a low level. Unfortunately, all the nurses in the sense of personal accomplishment also received low scores. Fonseca *et al* (2012) in their study on palliative care nurses Portuguese low risk of burnout were reported(34). In another study, Sahebalzamani and colleagues (2009) examined the relationship between social support and burnout among nursing staff in psychiatric hospitals of Tehran. In their study, most nurses were reported low levels (67.7%) of emotional analysis, low levels (75.3%) of the depersonalization and (50.5%) a personal accomplishment(30). The results of the present study in three dimensions were in one direction.

In the study of Dehghan Nayeri *et al* (2009), the majority of participants were in low level of personal accomplishment (31), that with findings of present study correspond. In other studies on Iranian nurses working in different sectors , it is reported that the majority of samples were in low level of emotional Exhaustion (30) and depersonalization (32) and in high level of personal accomplishment (25,32) in terms of the frequency. in the contrast, in some studies the majority of samples were in medium(32) to high (24) level of emotional Exhaustion , in medium (30) to high (31)level of depersonalization and in

The main purpose of this research was the determining Burnout level of operating room nurses in hospitals in Qom. Burnout including occupational hazards have been discussed in recent years. Since, the operating room nurses with emergency situations and lethality encountered and operating room environment, is considered high risk (23) Therefore, personnel in these sectors may be more prone to burnout.

The study results showed that the majority of Sample subjectives were in a high level of depersonalization (frequency 89.3% ; intensity 63.5%)and Exhaustion Emotional (frequency 96.5% ; intensity 50.6%) and in personal accomplishment (frequency 100%; intensity 100%) were at a disadvantage. Different studies have produced mixed results regarding the amount of burnout. Among the studies, Mahmoudi *et al* (2006) reported that the majority of nurses (95.5%) were in the lower level of self-sufficiency, 36.6% of nurses in the area of depersonalization and 2.20 percent had low levels of emotional analysis (24). The results of the present study is in line with the self-sufficiency, but in two other dimensions results were different. Interestingly, in this study, although the operating room environment, was considered as high risk and high stress, the majority of nurses in both

level. Khaghani Zadeh *et al* studied the aimed to assess burnout on nursing staff in hospitals affiliated to Tehran University of Medical Sciences. It has also been reported that personal accomplishment dimension in both intensity and frequency in high level . Sense of accomplishment, a sense of mastery and self-sufficiency, when they come to that influence Person's guidelines organization and thereby his ability to display and achieved positive attitude towards his patients and himself. The results of this study, it seems likely that most nurses are not able to demonstrate competencies in the workplace and maybe this is why 100% of them feel a low level of personal success High levels of burnout in failure of individual can also show negative attitude towards their personal success and their career interest and lack of job satisfaction is reduced confidence (25). The success of our nurses is inappropriate to more global studies that refer to dissatisfaction and lack of respect to them . Lack of staff participation in decision-making and lack of valuation of the real differences between effective and ineffective forces can be effective in this field. Studies have also shown that support systems for nurses in stressful environments may have an important role to play in employee job satisfaction and feelings of personal success (21).

The other purpose of our research, was the demographic variables associated with burnout operation theaters . Results of statistical tests did not show a significant relationship between the most common demographic variables and burnout dimensions. However there was a statistically significant relationship between gender and the prevalence of emotional exhaustion, depersonalization, Emotional exhaustion and depersonalization were significantly higher in women than men. Similar results in a study of Talai *et al* (2007) have been reported (23). In addition, there were statistically significant inverse relation between the number of shifts and plenty of

medium level of personal accomplishment(32). Studies also indicated that the majority of samples were in low (30) to medium (35) level of emotional Exhaustion intensity and low level of personal accomplishment and depersonalization (30). Since it happened , The majority of samples were in low level of emotional Exhaustion and personal accomplishment and depersonalization that due to the dynamic and stressful environment of the operating room with the patient's status uncertain and variable, these statistics are fairly satisfactory. Although, the necessary efforts to reduce burnout should be done, specially Operating Room Nurses that encountered Emergency, stressful and lethality situations. However, the low scores of the nurses in two dimensions can be indicated the suitability of the environment for nurses. Studies have shown that people who have higher mental abilities are less depersonalization (27) also present research suggests that depersonalization is less between the nurses who have better mental propriety. The low prevalence of depersonalization can be a sign of good human relations between employees within the organization. However, given the complexity of the issue and the role of multiple factors ,in depersonalization due to hereditary factors, family and community should not be neglected (32). Studies have also shown that mortality is a major cause of distress for nurses who causes grief in them. Resolution of grief can lead to feelings of emotional and psychological problems (33). Due to advances in technology and reduction in mortality in patients in these sectors, one of the most important factors causing distress on nurses has been reduced over the years. Perhaps that is why depersonalization, emotional and units of analysis in this study was lower than previous studies in other populations. But the results were not satisfactory in personal accomplishment and all nurses participating in the study were in the lower

the findings in this study and doing of this study by a larger sample size can effective in upgrade of this restriction. In Conclusion Nurses were in poor condition in personal accomplishment. Adopt the necessary measures in order to increase a sense of accomplishment and serious personal and reducing burnout in nurses is necessary, attention of managers at various levels to establish cordial relations with employees, attention to psychological factors and teaching methods and appropriate adaptive skills can help to employees for being less prone to burnout. It is also suggested that further studies to be done on the relationship between burnout such support systems, mental health and conditions of work.

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individual success. Sotoode Asl and Bakhtiari (2006) showed that increase in hours worked in excess of 8 hours per week caused significant emotional exhaustion of nurses and midwives, they were under investigation (32) that this finding was consistent with the obtained results in the individual success. As was pointed out, among other demographic variables were not significant association with the prevalence of burnout dimensions. The results of the reviewed studies were different. for example:Mirabzadeh study (2007) between the sexes there was a significant association the three domains of burnout and hours of therapy per week for employees but Age, marital status, the average monthly income was not statistically significant (26). Leonardi *et al* (2013) in his study on Italian nurses showed that there was a significant relationship of working hours with emotional exhaustion and negative relationship with individual success as reported (35).Whereas Payami found significantly relationship between age, marital status, employment history, income adequacy with burnout dimensions (36), that these findings are different from the results. Non-random sampling and limit size of sample reduce generalizability of

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