

# Burnout and its related Demographic Factors among the Medical Staff working in Hospitals associated with Bushehr University of Medical Sciences

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**Objective:** Burnout exerts a significant negative influence on job performance, especially in such difficult jobs as those to be found in the health care industry. This research aimed to evaluate the association between 3 dimensions of burnout and demographic factors among the medical staff working in all of the hospitals associated with Bushehr University of Medical Sciences, Iran.

**Methods:** The research detailed herein was a descriptive, analytical cross-sectional study which was conducted on 461 medical staff working in all of the hospitals associated with Bushehr University of Medical Sciences, Iran, from April 2011 to February 2012. The data were collected using a self-response method and include demographic information as well as the Maslach Burnout Inventory. In this study, samples were selected using a stratified random sampling method. The scoring of the burnout questionnaire ranged from 0 (never) to 6 (every day), with the levels of each of the 3 dimensions of burnout (as well as burnout itself) then being categorized as being low, moderate, or high. The data were analyzed using an independent t-test, a chi-square test, ANOVA, and Pearson's correlation coefficient, all in SPSS 18.

**Results:** Most people had experienced moderate levels of burnout (53.6%). With regard to the 3 domains of burnout, 46.4% of the participants had experienced moderate levels of emotional exhaustion, more than half (56.4%) had experienced low levels of depersonalization, and more than half (52.5%), high levels of a diminished sense of accomplishment. Burnout was shown to be statistically significantly associated with gender, place of residence, the condition of that residence, educational level, and being or not being local ( $p>0.05$ ).

**Conclusion:** The research findings showed that the rate of burnout was moderate among the medical staff working in hospitals associated with Bushehr University of Medical Sciences. Probably, burnout can be reduced in the hospitals' different staff members through better and suitable planning and through the organization of human resources. [*P R Health Sci J* 2015;34:208-214]

*Key words:* Burnout, Maslach Burnout Inventory, Demographic factors, Medical staff

One of the most important factors in the generation of burnout is the kind of job that an individual has. Burnout occurs primarily in people who have jobs that deal heavily with human relations (1). It has 3 dimensions: emotional exhaustion, depersonalization, and a feeling of reduced personal achievement (2). Emotional exhaustion includes chronic exhaustion and sleep disorders; depersonalization is a coping strategy that includes treating colleagues and clients impersonally in order to stem the depletion of emotional energy; and feelings of reduced personal achievement emerge as dissatisfaction with one's work (1,2). People who are employed in medical centers experience higher rates of depression than do those in other, non-medical jobs because of their greater exposure to stressful factors (3). Medical

staff deal with mortality and people's pain (2,4). Aziz Nejad et al. showed that clinical nurses had the highest mean of burnout (82%), which was significantly related to work experience and a lack of social support (5). The role of demographic factors such as age, gender, work experience, and place of employment in the creation of burnout cannot be ignored. In Pourreza et al.'s research, age and work experience were significantly related to burnout, indicating that younger people experience burnout to a

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relatively low degree, while burnout tends to be more prevalent in people over 41 years of age (6). In another study, this one from Sahebzade et al., a significant relationship was found between gender and burnout. In this study, the women suffered higher levels of burnout than the men did (7). Job burnout among medical staff causes reductions in work efficiency, increased absence, and increases in health expenses. More importantly, the main clients, i.e., the patients, are affected; therefore, the recognition and prevention of burnout plays an important role in promoting the improvement of the quality level of the provided services (8). However, and unfortunately, only a limited number of studies have been conducted to study the different dimensions of burnout in different classes of medical staff. It is for that reason that the present study looked at different dimensions of burnout in medical staff and examined, as well, the relationship of burnout to a variety of demographic factors. Since previous studies have been directed more at nursing staff and other medical staff members have been less considered, this study was essential. The work described herein was conducted at all the hospitals of Bushehr University of Medical Sciences in Iran.

## Material and Methods

This was a descriptive and analytical cross-sectional study, and the participants consisted of all the staff working in all hospitals of Bushehr University of Medical Sciences, Iran, from February 2011 to April 2012. The study was approved by the Institutional Review Board of this institution. Stratified random sampling was done at all 8 of the hospitals of Bushehr University of Medical Sciences. Overall, 489 people were selected using stratified random sampling. The participating medical staff included nurses' aides, nurses, obstetricians, operation room and anesthesia technicians, laboratory scientists, and radiologists. The participants were briefed about the questionnaires and their informed consents obtained. Participation in the study was optional. Four hundred and sixty-one questionnaires were returned (response rate of 94%). The data were collected from all wards, including the medical and surgical wards; the emergency room; operating rooms; radiology; various of the laboratories; the pediatric, neonatal, and obstetric wards; and the NICU, CCU, and ICU. The inclusion criteria were that the potential participant must have at least 6 months of work experience, have at least a high school diploma, have at most a master's degree, and be a full-time member of the staff. A lack of cooperation on the part of the staff doctors resulted in their not taking part in the study, which is one of the study's limitations. The exclusion criteria included having a chronic disease and that the position as a medical staff member held by the potential participant represented a second job. The data were collected using a self-administered 2-part questionnaire. Part 1 of the questionnaire explored the demographic information of the respondent. Maslach's Burnout Inventory (MBI), a standardized measure of burnout, comprised the second part of the

questionnaire. The validity and reliability of this questionnaire were confirmed by Filyan (9). In addition, using the test-retest method, we determined the reliability of the questionnaire to be 0.78. This questionnaire has been frequently used by Iranian researchers and confirmed by its having a validity of above 90% (8). The demographic questionnaire included questions on age, gender, marital status, the number of children the participant had, the place that the participant worked, the number of years working, educational level, the type of university attended, employment status, the participant's resident status, being or not being local, health status, and monthly income. The MBI included 22 items for testing emotional exhaustion, depersonalization, and perception of personal achievement. Emotional exhaustion had 9 items, depersonalization had 5 items, and perception of personal achievement was tested by 8 items. Items of burnout were scored by Likert scale, which scale ranged from 0 to 6 (never, sometimes in a year, once a year, sometimes in a month, sometimes in a week, once a week, and every day). For positive items, the highest frequency was scored 0 and the lowest frequency was scored 6. For negative items, it was the other way around. High rates of burnout are indicated when the mental-exhaustion and depersonalization domains score high, while, at the same time, the perceived-achievement domain scores low. Because of the equality of the domains, the score was calculated based on 100; scores below 33.3 were regarded as emotional exhaustion and depersonalization at low levels and perceived personal achievement at high levels; scores between 33.3 and 66.6 were regarded as being moderate; and scores above 66.6 were considered as indicating high levels of emotional exhaustion and depersonalization and low levels of perceived personal achievement. The data were analyzed using descriptive statistics, including frequency distributions, means, and standard deviations, and inferential statistics such as Pearson's correlation coefficient, the independent t-test, the chi-square test, and ANOVA (all in SPSS 18).

## Results

This descriptive, analytical, and cross-sectional study was designed for evaluating different dimensions of burnout (and its relationship with demographic factors) among the medical staff working in the hospitals of Bushehr University of Medical Sciences. Participating were 338 (73.3%) women and 123 (26.7%) men. The mean age of the participants was  $32.8 \pm 7.4$  years and their mean work experience was  $9.8 \pm 6.9$  years. In terms of work experience and job burnout, a significant association was observed (the p-values for emotional exhaustion, depersonalization, and perceived lack of personal achievement were, respectively, 0.84, 0.25, and 0.07). The income mean and SD was  $6144504 \pm 227933$  rials (approximately  $\$204 \pm 7.59$ ).

The mean and SD in terms of number of children was  $1.72 \pm 0.77$ . Only when the category of perceived lack of personal achievement was paired with that of income was a positive significant correlation observed (the p-values for

emotional exhaustion, depersonalization, perceived lack of personal achievement, and total burnout were, respectively, 0.54, 0.60, 0.02, and 0.134). Pairing the category of perceived lack of personal achievement with that of number of children yielded a significant negative correlation (the p-values for emotional exhaustion, depersonalization, perceived lack of personal achievement, and total burnout were, respectively, 0.75, 0.39, 0.003, and 0.429). The demographic characteristics of the participants are in Table 1. In Table 2, the frequencies of the different domains of burnout and total burnout are given in terms of intensity. In terms of burnout, 43.2% of the participants (199 people) exhibited mild burnout, 53.6% (247 people) exhibited moderate burnout, and 3.3% (15 people) exhibited severe burnout. A t-test showed statistically significant relationships between depersonalization and gender, between urban/rural designation and both emotional exhaustion and depersonalization, between being or not local and both emotional exhaustion and depersonalization, and between health status and depersonalization (the p-values were 0.001, >0.001, >0.001, 0.038, 0.004, and 0.001, respectively). In addition an ANOVA test showed a statistically significant relationship between housing status and depersonalization, between educational level and both emotional exhaustion and depersonalization, and between type of university and depersonalization (p-values were 0.004, 0.01, 0.009, and 0.039, respectively). The comparison of mean scores per domain and total burnout is shown in Table 3 (in terms of the demographic characteristics of the participants).

### Discussion

The results showed that the total rate of burnout was 53.6%, which is higher than that which was found by Khajeoddin et al.. Our findings were not congruent with those of Embriace et al., who conducted a study on the staff of intensive care units (the members of which were suffering from severe burnout) (10,11).

In the present research, 18% of the participants displayed high levels of emotional exhaustion, 15%, high levels of depersonalization, and 3.3%, low levels of perceived personal achievement. A comparison of the present and previous results demonstrated that people in this study experienced lower levels of emotional exhaustion and higher levels of both depersonalization (12,13,14,15).

Perhaps, the reason for the lower levels of emotional exhaustion was that the present study was conducted on all the medical staff (except, to reiterate, the staff doctors, while others have been conducted only on nurses. Because nursing is so difficult, it is not surprising that members of that profession tend to have high levels of emotional exhaustion. The reason (or reasons) for the high rates of depersonalization in the present study might be that the personnel are not sufficiently motivated, that they do not receive the necessary support from their institutions' top-level managers, that there are insufficient

**Table 1.** Demographic characteristics of participants

Demographic characteristics	Number of participants	Percent
<i>Gender</i>		
Female	338	73.3
Male	123	26.7
<i>Marital status</i>		
Single	135	29.3
Married or cohabitating	321	69.6
Widowed or divorced	5	1
<i>Urban/rural designation</i>		
City	375	81.8
Village	86	18.6
<i>Residential status</i>		
Owns home	284	61.6
Rents home	82	17.8
Housing provided by organization	95	20.6
<i>Educational level</i>		
Secondary school diploma	63	13.7
Associate degree	89	19.3
Bachelor's degree or above	309	67
<i>Residential Status</i>		
local	308	66.8
not a local	153	33.2
<i>Type of university</i>		
Governmental	311	67.5
Private	133	28.8
Other	17	3.7
<i>Employment status</i>		
Contractual	89	19.3
By project	26	5.6
Salaried	179	38.8
Provisional	15	3.3
Tenured	152	5.6
<i>Has a chronic disease</i>		
Yes	38	8.2
No	412	89.4
No response	11	2.4

recreational and cultural facilities in the Bushehr province, (which is an underprivileged region in the country in terms of difficult jobs such as that of being a health care server who always must face the pain of patients and the distress of his or her companions or family), or any combination of some or all of the previous. In this study, about 46.4% of the participants suffered from moderate emotional exhaustion, which result is similar to what was found in other researches(16,17,18,19,20, 21,22,23).

**Table 2.** Frequency of burnout domains and total burnout in terms of intensity

Burnout domains	Severe (%)	Moderate (%)	Mild (%)
Emotional exhaustion	83 (18)	214 (46.4)	164 (35.6)
Depersonalization	69 (15)	132 (28.6)	260 (56.4)
Diminished sense of personal achievement	242 (52.5)	204 (44.3)	15 (3.3)
Burnout totals	15 (3.3)	247 (53.6)	199 (43.2)

Numbers are frequency (percent)

**Table 3.** Comparing the mean scores per domain and total burnout (according to the demographic characteristics of the participants)

Demographic characteristics	Emotional exhaustion		Depersonalization		Perceived personal achievement		Burnout Totals	
	M	SD	M	SD	M	SD	M	SD
<i>Gender</i>								
Female	43.87	20.58	33.66	21.22	31.97	18.15	37.2	14.7
Male	46.82	22.93	42.65	24.64	32.08	16.55	40.4	15.9
<i>P-value</i>	0.212		0.001*		0.95		0.042*	
<i>Marital status</i>								
Single	45.69	21.25	44.50	21.10	33.25	17.10	39.2	14.5
Married or cohabitating	44.15	21.08	37.28	21.45	31.50	17.84	37.5	15.3
Widowed or divorced	34.25	6.54	20.00	4.71	39.58	35.35	38	15
<i>P-value</i>	0.436		0.535		0.663		0.57	
<i>Urban/rural designation</i>								
City	42.50	20.83	33.03	20.97	31.81	18.11	36.4	15.2
Village	53.39	20.83	48.84	24.44	32.53	16.04	44.7	12.5
<i>P-value</i>	<0.001*		<0.001*		0.737		<0.001*	
<i>Housing status</i>								
owns home	43.03	20.63	33.24	21.20	30.95	17.32	36.4	14.5
Rents home	47.65	24.08	41.99	25.22	33.58	18.40	41.2	17.6
Housing provided by organization	46.62	20.31	38.59	22.77	33.37	18.02	39.9	13.8
<i>P-value</i>	0.131		0.004**		0.33		0.014**	
<i>Educational level</i>								
Secondary school diploma	37.97	22.57	40.59	24.81	33.59	16.83	33.7	14.9
Associate degree	48.77	20.22	36.30	22.03	31.44	17.52	41.3	15.7
Bachelor's degree or above	44.70	21.92	28.46	19.47	32.34	20.05	37.9	14.7
<i>P-value</i>	0.010**		0.009*		0.774		0.013**	
<i>Residential status</i>								
a local	43.12	20.12	33.60	20.64	32.23	17.44	37	14
not a local	47.79	22.94	40.68	25.00	31.32	17.99	40	17
<i>P-value</i>	0.038*		0.004*		0.612		0.053	
<i>Type of university</i>								
Governmental	45.39	21.37	35.46	22.26	31.97	17.20	40	17
Private	45.18	20.74	41.11	23.78	30.78	17.62	38.2	15.3
Other	45.20	25.94	30.78	17.73	31.25	15.41	39	14.6
<i>P-value</i>	0.996		0.039**		0.816		0.81	
<i>Employment status</i>								
Contractual	46.52	19.09	46.52	39.02	33.21	17.66	38.3	15.8
By project	45.60	19.89	45.60	36.66	34.11	20.68	39.3	15.8
Salaried	44.21	21.85	34.99	21.76	31.18	17.21	37.3	15
Provisional	41.85	18.98	30.66	19.15	35.27	11.31	39.9	14.3
Tenured	45.00	22.28	36.51	23.89	32.62	19.02	36.9	15.6
<i>P-value</i>	0.907		0.586		0.829		0.74	
<i>Has a chronic disease</i>								
Yes	51.41	26.19	41.75	27.83	26.97	18.50	40.3	16.7
No	44.11	20.69	35.68	22.00	32.52	17.52	37.9	14.9
<i>P-value</i>	0.24		0.001*		0.494		0.054	

\*p-value&lt;0.05 is significant (t-test), \*\*p-value&lt;0.05 is significant (ANOVA)

The finding that the participants in our study had severely decreased levels of perceived personal achievement is in accord with the results of a study from Putnik et al (24). In terms of the high levels of emotional exhaustion that the members of our study example demonstrated, the results of this study were higher than those of Kilfedder, Wu, and Calgan but were lower than those of Abdi. In the study by Thorsen et al., the values were higher in all 3 dimensions (13,15,19,5, 25) which might be attributable to the chronic shortages of equipment and human resources that plague the African country (Malawi), an aspect of which health care system was the subject of that particular study.

Another probable factor is that Thorsen and her team focused on a special medical group (the obstetrics ward), which had high mortality rates (25).

In Iran, medical staff are mentally affected by their work and so suffer from emotional exhaustion due to the shortage of medical staff and the necessity of confronting the pain and death of patients, which can lead to a reduction in the quality of care (25,3).

The low levels of depersonalization that were encountered in this research might be due to the importance and respect that staff members grant to patients and those patients' companions. In a study conducted by Pavlakis et al., the finding showed that the levels of burnout of a group of physiotherapists were moderate, which is similar to the findings of the present investigation (26).

In this study, no statistically significant difference was found, probably because this age range, i.e.,  $32.8 \pm 7.4$ , is considered as covering "middle age," in which age people tend neither to be subject to the inexperience of youth nor yet to be fatigued and burned out because of their relatively older age. Regarding sense

of personal achievement, the results of this study were similar to those of both Talaei et al (3) and Thorsen et al. Regarding emotional exhaustion (25).

The reverse relationship between emotional exhaustion and age that was encountered can probably be explained in the following way: As age increases, the work experience of people increases, especially as they face problems related to their jobs; therefore, these individuals suffer from burnout to a lesser degree than their younger, less experienced counterparts do. In the present investigation, the depersonalization rate of men was higher than that of women ( $p = 0.001$ ), which is similar to what has been found

in multiple studies (13,10,9,27,28). The results of our investigation as a whole were similar to not only those of the previously referenced studies but several others, as well (29,30).

Isakson et al. and Calgan et al. found that gender did not play an important role in job burnout, which was not in agreement with the findings of the present study (31,19). In our investigation, no statistically significant relationship was found between marital status and burnout, which is in accordance with what a number of other investigations have found as well (3,14, 13,32,24,30) but differs from what was found by 3 other investigative groups (31,18,22).

It means that marriage plays a less significant role in the reduction of burnout than it has been found to play in other studies, which would seem to indicate that the loneliness that might exist for many before marriage is less of an issue (in Iran, at any rate) than has previously been thought to be the case. Regarding the educational level of the participating subjects, there was a statistically significant difference between emotional exhaustion and depersonalization, in that levels of burnout in people with an associate degree were higher than were those levels in people with a secondary school diploma or Bachelor's degree ( $p = 0.010$ ), which might be explained by the expectations of a generally well-educated person. An associate degree is higher than a secondary school diploma, and the scientific and educational expectations of people holding an associate degree—level education are higher, and thus work volume increases; but, there is no salary difference between them, which might finally cause a reduction in work motivation, increased impatience, and bad moods. Those who had only a secondary school diploma, which represents the lowest level of educational and academic accomplishment, displayed more depersonalization ( $p = 0.009$ ); therefore, the attitudes and decreased respect of colleagues and clients may cause more depersonalization, which can lead to ineffective communication with clients and colleagues. In the study of Talaei et al., a significant relationship was found between depersonalization and educational level, which relationship indicated that people with an associate degree exhibited greater depersonalization; the findings of Talaei and his team were somewhat similar to those of the present study (3).

In the study by Norlund et al., investigators found that having a low level of education was regarded as an important factor in women's job burnout, which was congruent with what was discovered in our investigation (30).

In the current study, no statistically significant relationship was found between years of work experience and job burnout. In the investigation of Rasoulian, burnout in groups with different levels (in terms of years) of work experience and weekly number of working hours also showed differences that were significant in people with 20 or more years of work experience (14).

In the study of Kilfedder, people with more work experience had lower levels of felt personal achievement. People over 40 years of age and with 20 years of work experience or more exhibited greater emotional exhaustion than did others (13). In

Goldberg's study, similar to what was found in this investigation, no significant relationship was found between burnout and work experience (18).

Probably, it can be said that the relatively young ages of the staff members of the hospitals of Bushehr University of Medical Sciences are an important factor in the lack of a statistically significant relationship between burnout and work experience. There was no statistically significant difference between permanent, project-based, or contractual staff in terms of work conditions. The mean score of burnout among the staff living in rental houses was higher than that of those living in their own homes or in housing provided by the organization, and there was a statistically significant difference between them ( $p = 0.004$ ). Those who lived in rental houses had higher levels of burnout—rents are high—which contributes to a reduction in job satisfaction and the feeling that one's job is not secure. There are not enough people on staff, which fact causes reductions in job satisfaction and uncertainties with regard to job security. A statistically significant difference was found between burnout and geographical area of residence ( $p = 0.001$ ), in that the people who lived in villages showed higher degrees of emotional exhaustion and depersonalization than did those who lived in cities, which might be attributable to transportation expenses and the exhaustion associated with residing in and the generally difficult living conditions of rural regions. In the study by Zhang et al., the physicians who lived and worked in rural regions displayed high levels of burnout, while the physicians working in urban regions exhibited only moderate levels (33).

In the study of Talaei et al., the staff who worked in rural regions evinced greater levels of emotional exhaustion due to the bad living conditions in those regions (3).

In terms of being local or not local, there was no statistically significant difference ( $p = 0.053$ ), but in terms of emotional exhaustion and depersonalization, the mean rate of burnout was higher in those who did not live in or were not native (or both) to the region than it was in their permanent-resident counterparts (0.038 and 0.004), which might be related to cultural issues associated with the different regions. Local people were more successful in their work because of their being more familiar with the environment and rituals of their regions, and they suffered from fewer emotional and occupational problems. In terms of depersonalization, a statistically significant difference ( $p = 0.039$ ) was found between those who graduated from non-governmental universities (i.e., Islamic Azad University) and those who graduated from state-sponsored ones, which might be because of the attitudes and ways of communicating that these people have, as well as their scientific ability levels and skills. In the present study, there was no statistically significant relationship between number of children and burnout. The mean number of children for each participant was  $1.7 \pm 0.7$ , which is similar to what is seen in Msaouel et al.'s study (27).

That lack (of a significant relationship) might be because of the low number of children. In the study of Thorsen et al., number of children was positively related to both depersonalization

and a reduced sense of personal accomplishment. Our study showed that the people with the fewest children tended to be the most successful in terms of their professions (25,34). Demir et al. found (in a group of nurses) that having more children and having to deal with the attendant problems of their care had a significant and direct relationship to increased emotional exhaustion and a given respondent's reduced sense of personal accomplishment (32,35). Because of the absence of accurate income reports (missing values), no statistically significant relationship was found between income and burnout.

### Conclusion

In the health care field, one of the worst consequences of burnout is the reduction of the quality of patient care, which can manifest itself as mistakes made when taking care of patients as well as having a host of other patient-related negative side effects. Also associated with burnout is job turnover, which can less directly but no less significantly compromise patient care. Considering the results, it seems that demographic factors could play an important role in the creation of burnout. Managers and executive need to pay closer attention to personnel and better support their medical staff. Because medical staff are responsible for the lives of their patients, if they suffer from burnout, in one or more dimensions, their performance will be intensely affected, thereby causing irreparable damage to the human community. It is therefore essential to conserve both the labor force and the human resources of which it is composed by improving and increasing workplace motivation. The subsequent flourishing and success of this normally diligent class of workers will lead to improvements in the quality of medical services and, thereby, increase the overall health level of society.

### Study limitations

The study had many limitations, among them being the fact that the participants worked rotating shifts, the apparent difficulty (caused by general worry) of the participants to remain focused on their tasks, the large number of hospitals in the province and their dispersion over a large geographical area, the lack of cooperation afforded to the study by the doctors on staff, and the fact that it was impossible to accurately determine the different educational levels of the participants; all of these issues will need to be addressed in future studies. Another limitation is that one of the participants was unwilling to disclose his/her monthly income. Proving cause and effect requires longitudinal and controlled studies; it has been suggested that a study be conducted to determine the working conditions of the medical staff who are employed in the different wards so that problem-solving action can be taken and, thereby, job quality increased.

### Suggestions

In future studies, doctors should participate and the different levels of medical staff compared (in terms of burnout). However,

the results of this particular study can be used by members of the health services. Top-level managers should pay close attention so that they can act to reduce job stress and, when it comes to that, burnout by establishing the proper channels of communication with staff members, by more fully supporting them, and by creating a suitable environment for continuing professional activities.

### Resumen

**Objetivo:** El síndrome "burnout" (el agotamiento laboral) es uno de los factores más importantes en la reducción del rendimiento. El objetivo de este estudio fue evaluar las diferentes dimensiones del síndrome "burnout" y sus relaciones con los factores demográficos entre el personal médico de los hospitales afiliados a la Universidad de las Ciencias Médicas de Bushehr, Irán. **Métodos:** El presente estudio fue un estudio descriptivo, analítico y seccional, el cual ha sido realizado según un muestreo aleatorio y estratificado, entre 461 personas del personal médico de los hospitales afiliados a la Universidad de las Ciencias Médicas de Bushehr, Irán, durante el año 2012. Los puntajes del método El inventario de "Burnout" de Maslach (MBI, por sus siglas en inglés), son desde el punto cero (nunca) hasta el punto 6 (todos los días), a tres niveles de mínimo, moderado y alto. El análisis de los datos se realizó utilizando la prueba t independiente, prueba  $X^2$ , análisis de la varianza y el coeficiente de correlación de Pearson, y fueron analizados con SPSS 18. **Resultado:** En esta investigación la mayoría de las personas agotadas se encontraban en un nivel moderada (53.6%). Considerando tres diferentes tipos del agotamiento, 46.4% de personas tenían cansancio emocional a un nivel moderada. En el área de la despersonalización, más de una mitad de ellos (56.4%) fueron a un nivel bajo y en el campo de eficacia personal, también más de una mitad (52.5%) se encontraban a un nivel alto. El síndrome "burnout" mostró una relación significativa con el sexo, la ubicación, el estado de la vivienda, el nivel de la educación y estado nivel ( $p < 0.05$ ). **Conclusión:** Los resultados de esta investigación muestran que el síndrome de "burnout" entre el personal médico de los hospitales afiliados a la Universidad de las Ciencias Médicas de Bushehr fue a un nivel moderado. Por eso será posible reducir síndrome a través de la planificación y organización mejor y más adecuadamente de los recursos humanos.

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## References

- Rahmani F, Behshid M, Zamanzadeh V, Rahmani F. The relationship between general health, occupational stress and burnout in critical care nurses of Tabriz teaching hospitals [in Persian]. *Iran J Nurs* 2010;23:54–63.
- Garrosa E, Rainho CC, Moreno-Jiménez B, Monteiro MJ. The relationship between job stressors, hardy personality, coping resources and burnout in a sample of nurses: A co relational study at two time points. *Int J Nurs Stud* 2010;47: 205–15.
- Talaei A, Mohammad Nejad M, Samari AA. Burnout in staffs of health care centers in Mashhad [in Persian]. *Q J Fundament Ment Health* 2008;9:135–44.
- Garrosa E, Moreno-Jiménez B, Rodríguez-Muñoz A, Rodríguez Carvajal R. Role stress and personal resources in nursing: A cross-sectional study of burnout and engagement. *Int J Nurs Stud* 2011;48:479–89.
- Abdi H, Shahbazi L. Correlation between occupational stress in nurses at intensive care unit with job burnout. *J Shahid Sadoughi Univ Med Sci* 2001;9:63–58.
- Filiyan E. Evaluation of the association between burnout and coping strategies used by nurses in hospitals of Tehran [master's thesis]. *Tarbiat Modarres University, Tehran, Iran; 1992*.152p.
- Aziz Nejad P, Hosseini SJ. Occupational burnout and its causes among practicing nurses in hospitals affiliated with Babol University of Medical Sciences [in Persian]. *J Babol Univ Medi Sci* 2004;8:63–9.
- Jourdain G, Chênevert D. Job demands-resources, burnout and intention to leave the nursing profession: a questionnaire survey. *Int J Nurs Stud* 2010;47:709–22.
- Binabaj NA, Moghimian M, Attarbashy M, Qarche M. The relationship between job burnout and mental health professional nursing and midwifery career [in Persian]. *J Gonabad Univ Med Sci & Health Serv* 2003;9:99–104.
- Khajeoddin N, Shoshtari M, Hajebi A. The relationship between understanding the control center and the burnout syndrome among nurses working in a psychiatric hospital [in Persian]. *J Psychiat Clin Psychol (Andisheh & Raftar)* 2004;12:43–8.
- Embrice N, Papazian L, Kentish-Barnes N, Pochard F, Azoulay E. Burnout syndrome among critical care workers. *Curr Opin Crit Care* 2007;13:482–8.
- Abdi Massole F, Kaviani H, Khaghanizade M, Momeni Araghi A. The relationship between burnout and mental health among nurses. [in Persian]. *Tehran Univ Med J* 2007;65:65–75.
- Kilfedder CJ, Power KG, Wells TJ. Burnout in psychiatric nursing. *J Adv Nurs* 2001;34:383–96.
- Rasoulia M, Elahi F, Afkham Ebrahimi A. The Relationship between job burnout and Personality Traits in Nurses. *Iran. J Psychiat Clin Psychol (Andisheh & Raftar)* 2004;9:18–24.
- Wu S, Zhu W, Wang Z, Wang M, Lan Y. Relationship between burnout and occupational stress among nurses in China. *J Adv Nurs* 2007;59:233–9.
- Keller KL, Koenig WJ. Management of stress and prevention of burnout in emergency physicians. *Ann Emerg Med* 1989;18:42–7.
- Pourreza A, Monazam MR, Abassinia M, Asghari ME, Safari HO, Sorani MO, Habibi F. Relationship between job burnout and mental health of nurses working in province of Qom [in Persian]. *J Hosp* 2012;11:45–54.
- Goldberg R, Boss RW, Chan L, Goldberg J, Mallon WK, Moradzadeh D, et al. Burnout and its correlates in emergency physicians: four years' experience with a wellness booth. *Acad Emerg Med* 1996;3:1156–64.
- Calgan Z, Aslan D, Yegenoglu S. Community pharmacist's burnout levels and related factors: An example from Turkey. *Int J Clin Pharm* 2011;33:92–100.
- Yaghoobi Niya F, Mazloom SR, Salehi Ghadardi J, Esmaeili H. The relationship between self-esteem and burnout in nurses of hospitals of Mashhad University of Medical Sciences. *J Sabzevar School Med Sci* 2003;10:73–9.
- Sahebzadeh M, Karimi S, Hosseini SM, Akhtar Danesh G, Hosseini S. Job Burnout of Nursing Administrators and Chief Executive Officers in University Hospitals and Its Relation to Their Demographic Features [in Persian]. *Health Info Manage* 2011;7(special issue):637–48.
- Houkes I, Winants Y, Twellaar M, Verdonk P. Development of burnout over time and the causal order of the three dimensions of burnout among male and female GPs. A three-wave panel study. *BMC Public Health* 2011;11:240.
- Oehler JM, Davidson MG, Starr LE, Lee DA. Burnout, job stress, anxiety, and perceived social support in neonatal nurses. *Heart Lung* 1991;20(5 Pt 1):500–5.
- Putnik K, Houkes I. Work related characteristics, work-home and home-work interference and burnout among primary healthcare physicians: A gender perspective in a Serbian context. *BMC Public Health* 2011;11:716.
- Thorsen VC, Tharp AL, Meguid T. High rates of burnout among maternal health staff at a referral hospital in Malawi: A cross-sectional study. *BMC Nurs* 2011;10:9.
- Pavakis A, Raftopoulos V, Theodorou M. Burnout syndrome in Cypriot physiotherapists: A national survey. *BMC Health Serv Res* 2010;10:63.
- Msaouel P, Keramaris NC, Tasoulis A, Kolokythas D, Szymos N, Pararas N, et al. Burnout and training satisfaction of medical residents in Greece: will the European Work Time Directive make a difference? *Hum Resour Health* 2010;8:16.
- Brake H, Bloemendal E, Hoogstraten J. Gender differences in burnout among Dutch dentists. *Community Dent Oral Epidemiol* 2003;31:321–7.
- Gulalp B, Karcioğlu O, Sari A, Koseoglu Z. Burnout: need help? *J Occup Med Toxicol* 2008;3:32.
- Norlund S, Reuterwall C, Höög J, Lindahl B, Janlert U, Birgander LS. Burnout, working conditions and gender-results from the northern Sweden MONICA Study. *BMC Public Health* 2010;10:326.
- Isaksson Ro KE, Tyssen R, Hoffart A, Sexton H, Aasland OG, Gude T. A three-year cohort study of the relationships between coping, job stress and burnout after a counseling intervention for help-seeking physicians. *BMC Public Health* 2010;10:213.
- Demir A, Ulusoy M, Ulusoy MF. Investigation of factors influencing burnout levels in the professional and private lives of nurses. *Int J Nurs Stud* 2003;40:807–27.
- Zhang Y, Feng XU. The relationship between job satisfaction burnout and turnover intention among physicians from urban state-owned medical institutions in Hubei, China: a cross-sectional study. *BMC Health Serv Res* 2011;11:235.
- Kluger MT, Townend K, Laidlaw T. Job satisfaction, stress and burnout in Australian specialist anesthetists. *Anesthesia* 2003;58:339–45.
- Sharma A, Sharp DM, Walker LG, Monson JR. Stress and burnout among colorectal surgeons and colorectal nurse specialists working in the National Health Service. *Colorectal Dis* 2008;10:397–406.