



## Prevalence of Burnout Syndrome and its Related Factors among Healthcare Staffs: A Systematic Review

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### Abstract

**Background:** People working in health environments are exposed to many serious risks and injuries. This study aimed to determine the prevalence of burnout syndrome and its related factors among Iranian healthcare staff.

**Materials and Methods** In this systematic review, a systemic search of online databases (Medline, EMBASE, Scopus, Web of Science, Cochrane Library, ProQuest, SID, CIVILICA, Magiran, and Google Scholar search engine) was conducted for relevant studies with no time limit up to February 2022. Two reviewers evaluated the quality of eligible studies and carried out the selection procedure. The quality of the information was evaluated using the STROBE positioning guidelines.

**Results:** Finally, 16 studies were included. 85.5% of the healthcare staff (ranged: 32-85.5%) suffered moderate burnout. Also, 55.3% of staff had high emotional exhaustion (EE), 90.5% high depersonalization (DP), and 98.9% low personal achievement (PA) scores. High scores in EE and DP and low scores in PA are indicative of high burnout. There was a significant direct correlation between occupational burnout with age, gender, marital status, type of employment, financial problems, disease history, educational degree, place of work, and work experience ( $P<0.05$ ). Also, there was a significant reverse correlation between occupational burnout and income satisfaction ( $P=0.01$ ,  $r=-0.19$ ), quality of life ( $P<0.001$ ), EE ( $P=0.001$ ), job satisfaction ( $P<0.001$ ,  $r=-0.46$ ), and job performance ( $P=0.000$ ,  $r=-0.249$ ).

**Conclusion:** The high prevalence of burnout in the healthcare staff (85.5%) necessitates measures such as the implementation of leisure and educational programs and stress management workshops.

**Key Words:** Burnout, Depersonalization, Emotional exhaustion, Healthcare Staff, Personal achievement.

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## 1- INTRODUCTION

Freudenberger introduced the term burnout in 1970 when he observed a state of fatigue among people who provided health care services. He defined burnout as a reaction to high job stimuli. Burnout is an occupational disease that occurs in people working in contact with clients (1-3). Job burnout is a psychological state that was first defined by Maslach in the 1980s as the end state of chronic stress associated with work (4, 5). This condition is composed of emotional exhaustion (EE), depersonalization (DP), and reduced personal achievement (PA). EE refers to the reduction or loss of emotional resources and the feeling of being emotionally exhausted due to work, and the feeling that there is nothing to offer psychologically to others. DP is negative attitudes and feelings and a lack of sensitivity and empathy towards service receivers. Reduced PA is the tendency to assess oneself and one's work negatively with the avoidance of interpersonal relationships, low productivity, and low stress resistance. High scores in EE and DP and low scores in PA are indicative of high burnout (6).

In 2018, the World Health Organization (WHO) published burnout prevalence data from 182 studies on 109,628 people in 45 countries between 1991 and 2018. The prevalence of EE, DP, and reduction of PA ranged from zero to 86.2%, zero to 89.9%, and zero to 87.1%, respectively (7). Job burnout syndrome can decrease employee health, productivity, work quality, individual competence, the sense of cooperation and responsibility of people, and increase absenteeism, negative attitude, job dissatisfaction, and motivation and passion for work or changing a job, each having unfavorable consequences for organizations (8-12). Researchers have shown that job burnout is treatable, and those suffering from job burnout may recover by receiving appropriate help (13).

Burnout is detrimental to healthcare staff and the quality of services and has destructive effects on their performance in society. Therefore, diagnosis and prevention of burnout and alleviating its symptoms are necessary to protect the health of healthcare service personnel. The present study aimed to determine the prevalence of burnout syndrome and its related factors among Iranian healthcare staff.

## 2- MATERIALS AND METHODS

The Preferred Reporting Items for Systematic review and Meta-Analysis (PRISMA) checklist was used as the template for this review (14).

### 2-1. Eligibility criteria

Participants, interventions, comparators, and outcome (PICO) was used to formulate the review objective and inclusion criteria.

**2-1-1. Participants:** Iranian Healthcare staff working in Healthcare centers.

**2-1-2. Interventions:** The included studies were non-interventional, so a comparison group did not exist.

**2-1-3. Comparators:** The comparison group, was not examined in this investigation because there was no comparison group

**2-1-4. Outcomes:** Burnout Syndrome.

**2-2. Included studies:** Only articles that had been peer-reviewed were chosen. The review included studies containing any form of quantitative assessment, measurement, and evaluation of job burnout in healthcare providers in Iran. The inclusion criteria were focusing on job burnout among healthcare providers only, published up to February 2022, written in English or Persian, exclusively using Maslach Burnout Inventory-Student Survey (MBI-SS) for diagnosis (three-dimensional approach) (15), and published

articles with full-text available. Healthcare providers included physicians, health experts, nurses, midwives, and other health workers who work in healthcare centers.

**2-3. Exclusion criteria:** The exclusion criteria were abstracts without the full article, studies on students or medical providers populations who work in hospitals, use of diagnostic instruments other than the Maslach Burnout Inventory-Student Survey, and articles that are not written in English or Persian, review articles and meta-analyses, letters to the editor, editorials, protocols, short reports, case reports, and briefs.

#### **2-4. Information sources**

A systemic search of electronic databases (Medline, EMBASE, Scopus, Web of Science, Cochrane Library, ProQuest, SID, CIVILICA, Magiran, and Google Scholar search engine) was conducted. The search was done independently and in duplication by two reviewers, and any disagreement was resolved by the supervisor.

#### **2-5. Search strategy**

Search words were a combination of (Burnout OR Job Burnout OR Occupational Burnout) AND (Healthcare providers OR Health experts OR Health workers OR Healthcare staffs) AND (Prevalence) AND (Iran).

#### **2-6. Study selection**

Database search was done for possible studies, study abstracts were screened for eligible studies, full-text articles were obtained and assessed, and a final list of included studies was made. This process was done independently and in duplication by two reviewers, and any disagreement was resolved by the third reviewer. References were organized and managed

using EndNote software (version X8). The following data were extracted independently for each included article: first author, publication year, study population, reported burnout, and main findings.

#### **2-7. Data collection process**

A researcher form was developed and followed for each study. Two reviewers collected the data independently. The collected data were combined and compared for accuracy, and a third reviewer solved any discrepancies.

#### **2-8. Risk of bias in individual studies**

The risk of bias was assessed following the standard tool of STROBE (STrengthening the Reporting of Observational Studies in Epidemiology) positioning guidelines (16). It is a valuable tool for evaluating the quality of observational studies. This checklist has 22 items, scored based on the importance of each item according to the present study. The final score of the checklist was 30, and the minimum score was 15.0. The assessment was done by two reviewers independently and in duplication, and any discrepancies were resolved by the third reviewer.

#### **2-9. Synthesis of results**

Due to differences in the time of studies, job types, study designs, sample sizes, and the type of studied communities, a meta-analysis was not conducted.

### **3- RESULTS**

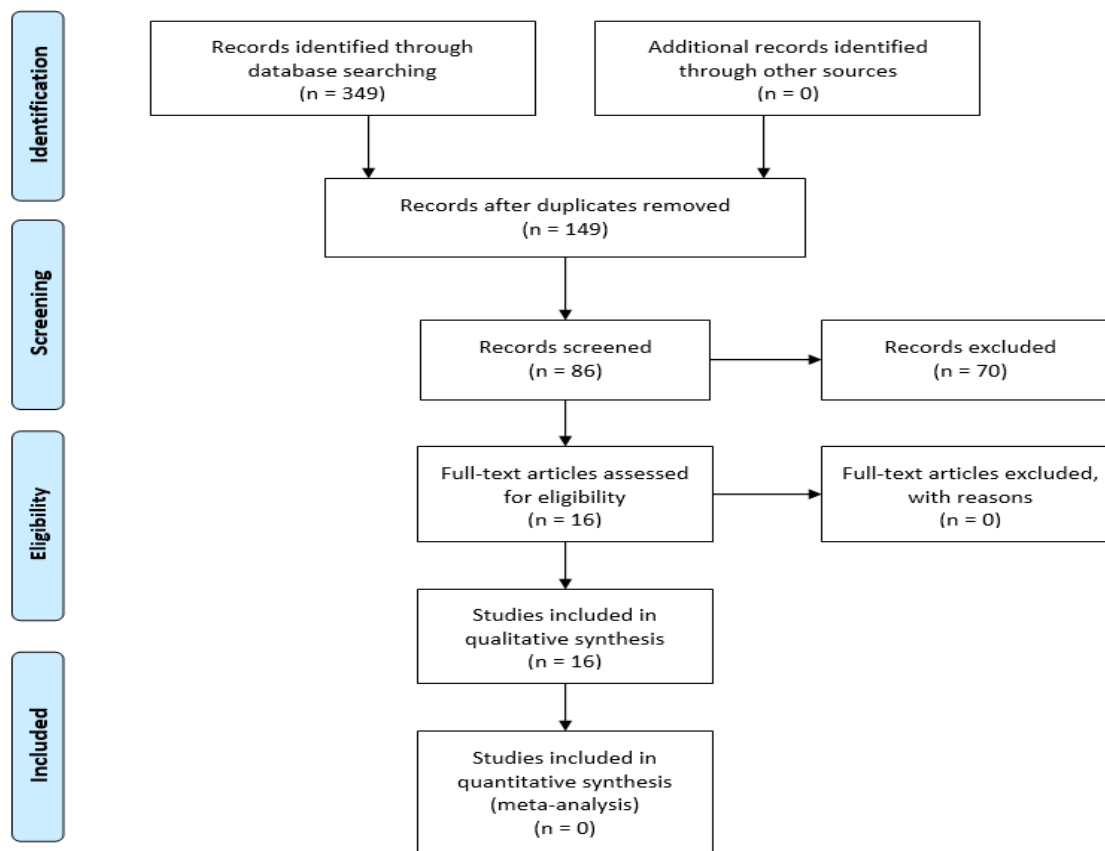
A total of 16 articles (n=5,634) met the inclusion criteria for this systematic review (**Figure.1**). The main characteristics of the selected studies are summarized in **Table.1** and the following:

**Table-1:** General characteristics of included studies (n=16).

Author, Year, Reference	Area/city	Study population	Reported burnout	Main findings
Zare et al., 2017, (17)	Sabzevar	95 midwives	The score of occupational burnout in midwives was 41.81±17.47 (moderate rate).	There was a significant and direct correlation between the occupational burnout with age and work experience. Also, there was a significant and reverse correlation between the occupational burnout and income satisfaction and job satisfaction.
Ershad Sarabi et al., 2018, (18)	Southeastern Iran	225 healthcare workers	The mean score of overall burnout syndrome was 74.83 ± 32.68, which was at a moderate level.	The highest mean score of burnout syndrome was related to PA and EE, respectively and the lowest was DP.
Najafi Sharjabad et al., 2019, (19)	Bushehr	203 healthcare workers	99 percent of the healthcare workers had low and moderate levels of job burnout.	67% of the research samples had low burnout intensity, 32% had moderate burnout intensity, and 1% had high burnout intensity.
Ziaei et al., 2015, (20)	Kamyaran	80 healthcare workers	77.5 percent of them suffered from mild condition of this disorder.	A reverse and statistical significant correlation was found between quality of life and occupational burnout.
Habibpour et al., 2011, (21)	Khoy	152 female health staff	The highest percentage of burnout, 22.7%, was related to EE.	DP of the hospital staff were more than health staff but PA in hospital staff was more than the health staffs.
Zarei et al., 2018, (22)	West of Iran	539 health network staff	52.9% of the staffs suffered from high burnout. 90.5% of the staff had high DP, 55.3% had high EE, and 98.9% had low PA scores.	Single people, less experienced employees, people aged over 35 years, physicians, and staffs with permanent employment were more likely to suffer high levels of burnout.
Hajebi et al., 2022, (23)	Provinces of Tehran, Tabriz, Gilan, Ahvaz, Qom, and Kurdistan of Iran	1,133 healthcare workers	48.9% of participants had moderate and high level burnout.	50.5% of the female and 45.8% of the male participants had moderate and high level burnout (p<0.05).
Amiri et al., 2021, (24)	Hormozgan province	402 (healthcare workers=128, staffs=274)	The mean score of EE, DP, and PA was 23.57±7.02 (moderate), 11.77±3.51 (mod), and 20.09±5.14 (high), respectively.	Variables such as gender and type of job were related to PTSD and burnout. Also, there was a significant relationship between PTSD and job burnout.
Sadeghi et al., 2020, (25)	Mahabad	200 healthcare workers	There is a significant positive and negative correlation between work and family conflict variables with job burnout and safety behavior.	The higher level of work-family conflict among employees, and the higher level of job burnout will increase and the safety behavior will decrease.
Sotoodeh Ghorban et al., 2018, (26)	Tehran	1,274 staffs in Shahid Beheshti University of Medical Sciences.	The most of the employees had low EE (82.8%) and low DP (83.3%). Also, 85.5 percent of employees had moderate job burnout.	There was a significant inverse relationship between the quality of working life and job burnout. Significant inverse relationship was seen between quality of life, EE, and DP, and a significant direct relationship was observed between quality of life and PA.
Hosseini et al., 2016, (27)	Babol	210 employees of health care centers	22.2% of staffs had high EE, and 26.6% had high DP. None of the respondents felt low PA.	Emotional exhaustion and depersonalization had a significant inverse relation with the staff's educational level. There was a significant direct correlation between EE with work experience, and type of employment; and between DP with work experience and type of employment.

Jafari et al., 2019, (28)	Kermanshah	282 healthcare workers	There was a significant relationship between EE, disease history, and financial problems, as well as between DP and financial difficulties and between PA and family disease history.	The dimensions of burnout were more significant in the employees with a disease history, family medical history, and financial problems.
Behboodi Moghadam et al., 2012, (29)	Tehran	300 midwives	Moderate and severe job burnout were found in most participants (76.7%). There were low levels of EE (59.7%), and DP (75%), and PA (59.3%).	There was a significant inverse association between age and DP, a significant direct association between education and EE and between three dimensions of job burnout and place of work.
Bakhshi et al., 2017, (30)	Islam Abad-e-Gharb	136 healthcare personnel of urban/rural healthcare centers	The mean of job burnout was found to be 45.96±17.77 (out of 132).	There was a significant inverse correlation between job burnout and job performance.
Sohrabi et al., 2016. (31)	Sanandaj	200 midwives	The rate of job burnout was moderate among the studied midwives	36% of people with moderate DP, 37% of people with moderate EE, and 39% of people reported a sense of moderate PA.
Dashti et al., 2021, (32)	Hamadan	278 staffs of health centers	55.7% of the personnel had job burnout. The studied subjects had low EE (44.4%), low DP (66%) and low PA (50%).	There was a significant relationship between EE, DP and PA.

EE: Emotional exhaustion, DP: Depersonalization, PA: Personal achievement, PTSD: Post traumatic stress disorder.



**Fig.1:** PRISMA flowchart.

**1.** A cross-sectional study on 95 midwives working in hospitals and health centers in Sabzevar in 2017, surveyed occupational burnout and its relationship with spiritual intelligence. The results showed that the score of occupational burnout in midwives was  $41.81 \pm 17.47$  (moderate). There was a significant direct correlation between occupational burnout with age ( $P=0.02$ ,  $r=0.16$ ), and work experience ( $P=0.001$ ,  $r=0.26$ ). Also, there was a significant reverse correlation between occupational burnout and income satisfaction ( $P=0.01$ ,  $r=-0.19$ ) and job satisfaction ( $P=0.001$ ,  $r=-0.46$ ). Occupational burnout was higher in official midwives ( $P=0.01$ ) (17).

**2.** A cross-sectional study on 150 healthcare workers aimed to determine the burnout syndrome and job satisfaction among healthcare workers in rural areas of southeastern Iran. The results showed that the mean score of overall burnout syndrome was  $74.83 \pm 32.68$  (moderate level). The highest mean score of burnout syndrome was related to PA and EE, respectively, and the lowest was DP. It means that the level of burnout and job satisfaction in health care workers were moderate, so with increasing burnout, job satisfaction decreases (18).

**3.** A cross-sectional study was conducted on 203 healthcare workers of Comprehensive Healthcare Centers in Bushehr and Borazjan in 2019 to determine the frequency of different levels of job burnout and their related factors. The results showed that 99 percent of the healthcare workers had low and moderate levels of job burnout. The data analysis showed that 67% of the research samples had low burnout, 32% had moderate burnout, and 1% had high burnout (19).

**4.** A cross-sectional study on 80 healthcare workers in three occupational groups (health, nursing-obstetric, and administrative services) in Kamyaran city aimed to determine the association

between occupational burnout and quality of life among healthcare workers. The results showed that 22.5% of workers were not exposed to occupational burnout and 77.5% suffered from mild burnout. A reverse, statistically significant correlation was found between quality of life and occupational burnout ( $P<0.001$ ) (20).

**5.** A descriptive analysis with the random sampling method on 152 female healthcare staff aimed to evaluate the burnout syndrome in Khoy city. The results showed that the highest percentage of burnout (22.7%) was related to EE. The DP of the hospital staff was higher than the health staff, but the PA in hospital staff was higher than the health staff (21).

**6.** A cross-sectional study on health network staff ( $n=539$ ) aimed to investigate the level of burnout among primary health care (PHC) workers and its predictive factors in the West of Iran. The results showed that 90.5% of the staff had high DP, 55.3% had high EE, and 98.9% had low PA scores (high scores in EE and DP and low scores in PA indicate high burnout). Also, 52.9% (277 people) of the staff suffered from high burnout. Single people ( $OR = 3.33$ ), less experienced employees ( $OR = 9.09$ ), people older than 35 ( $OR = 2.35$ ), physicians ( $OR = 1.72$ ), and staff with permanent employment ( $OR= 5.0$ ) were more likely to suffer high levels of burnout (22).

**7.** A cross-sectional study in the primary healthcare centers (42.8%), and hospitals affiliated with six medical universities in Iran (in the provinces of Tehran, Tabriz, Gilan, Ahvaz, Qom, and Kurdistan of Iran,  $n=1133$ ) aimed to assess mental health, job stress, and burnout among healthcare workers in Iran. The results showed that among the 1,133 participants, 554 (48.9%) had moderate and high burnout levels. "Worry about children and older members of the family", "family worries for one's health condition", and "lack of specific



effective treatment for COVID-19" were predictive of mental disorders and burnout. Also, the results showed that 50.5% (381) of female and 45.8% (173) of male participants had moderate and high burnout ( $P < 0.05$ ) (23).

**8.** A cross-sectional study on 402 workers in Hormozgan province (healthcare workers=128, staff=274) in 2021 aimed to determine the relationship between post-traumatic stress disorder (PTSD), and burnout during the COVID-19 pandemic. The results showed that the mean score of EE, depersonalization, and PA was  $23.57 \pm 7.02$  (moderate),  $11.77 \pm 3.51$  (moderate), and  $20.09 \pm 5.14$ , respectively. Variables such as gender and job type were related to PTSD and burnout. Based on the Pearson correlation test, there was a significant relationship between PTSD and job burnout (24).

**9.** A cross-sectional study on 200 health workers in Mahabad aimed to determine the mediating role of burnout in the relationship of work/family conflict and emotional intelligence with safety behavior in healthcare staff. The results showed a significant positive and negative correlation between work and family conflict variables with job burnout and safety behavior. It means that the higher the level of work-family conflict among employees, the higher the level of job burnout and the lower the safety behavior (25).

**10.** A study, as part of the first stage of an investigation by the Health Cohort of Staff in Shahid Beheshti University of Medical Sciences on 1274 participants, aimed to investigate the relationship between the quality of working life and job burnout in a large sample of health workers. The results showed that most employees had low EE (82.8%), and DP (83.3%), and 85.5% of employees had moderate job burnout. There was a significant reverse relationship between the quality of

working life and job burnout ( $r = -0.234$ ,  $P = 0.001$ ). Also, a significant inverse relationship existed between quality of life, EE, and DP ( $r = -0.117$ ,  $P = 0.001$  and  $r = -0.080$ ,  $P = 0.004$ , respectively), and a significant direct relationship was observed between quality of life and PA ( $r = 0.116$ ,  $P = 0.001$ ) (26).

**11.** A cross-sectional study on 210 employees of healthcare centers of Babol in 2016 aimed to determine occupational burnout and its factors among the staff of healthcare centers. The results showed that 22.2% of staff had high EE, and 26.6% had high DP. None of the respondents had low PA. Emotional exhaustion and depersonalization had a significant inverse relation with the educational level ( $P < 0.05$ ). There was also a significant direct correlation between EE and work experience ( $P = 0.003$ ), and type of employment ( $P = 0.048$ ), and between DP with work experience ( $P = 0.001$ ), and type of employment ( $P = 0.013$ ) (27).

**12.** A cross-sectional study on 282 healthcare staff in Kermanshah in 2019 aimed to evaluate the influential factors of burnout in the healthcare staff. The results showed significant correlations between EE, disease history ( $P = 0.006$ ), and financial problems ( $P = 0.05$ ), and between DP and financial difficulties ( $P = 0.024$ ), and between PA and family disease history ( $P = 0.015$ ). It means the dimensions of burnout were more significant in the employees with a disease history, family medical history, and financial problems (28).

**13.** A cross-sectional study on 300 midwives working in teaching hospitals and health centers in Tehran aimed to assess the prevalence of burnout in midwives. The results showed that moderate and severe job burnout were found in most participants (76.7%). There were low levels of EE (59.7%), DP (75%), and PA (59.3%). There was a significant

inverse association between age and DP ( $P=0.03$ ), a significant direct association between education and EE ( $P = 0.04$ ), and between three dimensions of job burnout and place of work ( $P = 0.02$ ) (29).

**14.** A cross-sectional study on 136 healthcare personnel of urban/rural healthcare centers in the Health Office of Islam Abad-e-Gharb aimed to investigate the job burnout prevalence and its association with performance among healthcare personnel. The results showed that the mean (SD) frequencies of job burnout and performance were  $45.96\pm 17.77$  (out of 132), and  $52.5\pm 9$  (out of 80), respectively. There was a significant inverse correlation between job burnout and job performance ( $P=0.000$ ,  $r=-0.249$ ), meaning that most personnel experienced moderate to low levels of job burnout (30).

**15.** A descriptive-analytical study on 200 midwives at the hospitals and health centers in Sanandaj in 2016 aimed to evaluate the rate of job burnout and its factors in midwives. The results showed that the rate of job burnout was moderate among the studied midwives; 36% had moderate DP, 37% had moderate EE, and 39% reported a sense of PA (31).

**16.** A cross-sectional study on 278 workers at health centers in Hamadan in 2021 aimed to assess the features of burnout and their association with demographic characteristics. The results showed that 55.7% of the personnel had job burnout, including low emotional exhaustion (44.4%), low depersonalization (66%), and low personal sufficiency (50%). There was a significant relationship between EE, DP, and PA ( $P<0.001$ ) (32).

#### 4- DISCUSSION

This study aimed to determine the prevalence of burnout syndrome and its factors among Iranian healthcare staff. Results showed that 85.5% of healthcare

staff suffered from moderate burnout. Also, 55.3% (ranged: 22.2-55.3%) of staff had high emotional exhaustion, 90.5% (ranged: 26.6-90.5%) had high depersonalization, and 98.9% (ranged: 50-98.9%) had low personal achievement scores. Job burnout is a serious issue due to its detrimental effects on the quality of personal, family, and professional life (33). It is associated with symptoms such as mental fatigue, physical fatigue, separation from work, and reduced competence. Its risk factors include high workload, monotonous tasks, conflict with superiors and colleagues, and exposure to aggressive behavior from customers (34).

According to Maslach, the treatment of burnout can begin when its causes are identified (35). This condition is composed of emotional exhaustion, depersonalization, and reduced personal achievement. Emotional exhaustion is when a person loses all positive feelings, sympathy, and respect towards clients while providing care, and negative changes in a person's self-concept are at the core of this condition (36). In this study, 55.3% of people reported EE at a high level and 37% at an average level, which is significant. As the feeling of EE continues the mental strength of the person decreases. The person experiences a coldness combined with excessive indifference towards the client and their profession. Therefore, DP can be a mechanism to cope with EE. Decreased self-confidence and job dissatisfaction, failure to accept organizational responsibilities, increased relocation and leaving the profession are among the consequences of DP (37, 38).

In a study by Kowalski et al., a positive relationship was indicated between workload and emotional exhaustion (39). In the present study, 90.5% of people reported high levels of DP. People experience job burnout and lose their humane views in caring for patients when



they find no encouragement, sense of efficiency, and self-discovery at work and do not understand their duties, rules and policies are not explained (36, 40). In this study, 98.9% of people reported low levels of PA. The feeling of individual success arises when a person can influence the policies of their organization, show their abilities, and gain positive attitudes about themselves and patients. In these cases, in addition to feeling self-confidence, they exhibit higher competence and skill in performing tasks, find better views about their job, enjoy working, and feel satisfied. On the contrary, the feeling of personal failure automatically causes DP and a negative attitude when providing care (41).

Therefore, most health workers may fail to prove their competence in the work environment due to negative conditions. The progress and efficiency of an organization depend on the capabilities and physical-psychological health and performance of its employees. Paying attention to the performance of employees is a contributor to organizational success, and efficient human resources in organizations is a concern of all managers. According to Potter (1998), adopting prevention methods for people with low job burnout, expanding corrective programs in problematic areas for people with medium job burnout, and taking immediate corrective measures for people with high burnout are necessary (42).

## 5- CONCLUSION

The present study showed that 85.5% of the healthcare staff suffered from moderate burnout. Also, 55.3% had high emotional exhaustion, 90.5% had high depersonalization, and 98.9% had low personal achievement scores. There was a significant correlation between occupational burnout and age, gender, single marital status, employment type, financial problems, disease history, education degree, place of work, and work

experience. In addition, there was a significant reverse correlation between occupational burnout and income satisfaction, quality of life, EE, job satisfaction, and job performance. For staff at risk of burnout, preventive measures such as strengthening social skills, communication competency, coping strategies, and risk reduction are suggested. Improving job satisfaction through rewards, incentives, career development, and educational opportunities can increase the sense of personal achievement.

**6- CONFLICT OF INTEREST:** None.

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