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INVESTIGATING THE STATUS OF BURNOUT AMONG IRANIAN NURSES: A SYSTEMATIC REVIEW

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ABSTRACT

Background: Job burnout is indicative of acute stress between an individual and his job. Nurses are more exposed to job burnout than other members of the medical team. However, studies have shown different statistics in this regard. The present study was designed and carried out with the aim of determining the status of job burnout in Iranian nurses. **Materials and Methods:** The present study is a systematic review study based on the PRISMA guide, that conducted by studying 29 English and Persian articles related to job burnout among nurses, without time limit and with (or-and) strategy. The keywords that were searched included: job burnout, job burnout in nursing, job burnout in nurses, job burnout in personnel, job burnout in therapeutic team and job burnout in health care providers. Screening of articles was done in four stages of initial search, review of articles, examination of title and abstract of articles, access to all articles and studying full text of the articles. **Results:** The rate of job burnout in emotional exhaustion was 24.33 ± 10.55 , in depersonalization was 8.33 ± 5.62 , at an average level, and in personal accomplishment was 30.83 ± 9.10 , at a low level. **Conclusion:** According to the average level of job burnout in nurses and its impact on the quality of patient care, therefore, nursing managers and authorities should take the necessary steps in order to understand the causes of burnout and eliminate them.

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Introduction

Job burnout is indicative of acute stress between an individual and his job. Various individual, occupational and environmental factors can play a role in developing this situation [1]. The term "job burnout" was first introduced by Lassenberger in the late 1960s. He called this phenomenon a syndrome for the weakening of physical and mental strengths that is created in people working in medical professions [2]. Based on numerous researches, health care providers suffer from the highest rates of occupational injury including job burnout [3]. The exhaustion of staff forces or job burnout is a common problem in all health care systems and is one of the most important problems of the 21st century, so that according to available statistics, one out of seven people working will be exhausted at the end of the day [1]. Studies show that the prevalence of job burnout in doctors is 70% [4]. Nurses are considered the largest specialized team among healthcare teams in hospitals. When nurses, as part of the social services staff, are plagued with job burnout, they offer poorer care that ultimately causes loss to the organization [5]. Some studies demonstrate that 4.7% of nurses are absent weekly due to job burnout or stress-induced disability, which is 80% more than other occupational groups [6]. Other studies also indicate that 30-50% of nurses in the world suffer from job burnout [7-9]. Different countries have expressed a variety of statistics. South Korea, for example, has reported very high rates of nurses' burnout, to the extent that this statistics is higher than that of the United States, Germany, Britain and Canada [10].

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Job burnout will have many complications, such as absence from the work place, reduced quality of patient care, increased workplace stress, reduced quality of life, and reduced quality of work etc. According to the National Health Service in England, job burnout makes an annual loss of £ 450,000 to health care systems [11]. Several studies have been carried out in Iran, but there is still no accurate data on the job burnout of nurses. Therefore, the present study aimed to determine the extent of job burnout in Iranian nurses through systematic review.

Materials and Methods

The present study is a systematic review study based on the PRISMA guide, that was carried out after compiling the main question, "How is the status of job burnout in Iranian nurses?". The researchers (2 people: assistant professor of nursing, nursing educator), after approving it at Jahrom University of Medical Sciences and receiving the review code, performed it according to the international prospective register of systematic reviews.

The present study was conducted by studying 29 English and Persian articles related to job burnout among nurses, without time limit and with (or-and) strategy. The keywords that were searched until 23/7/2017 included: job burnout, job burnout in nursing, job burnout in nurses, job burnout in personnel, job burnout in therapeutic team and job burnout in health care providers. The search was carried out in the libraries of Isfahan, Jahrom and Shiraz Universities of Medical Sciences, and used databases like Google Scholar, pubmed, SID-IRANMEDEX and MAG IRAN were used.

By initial review and with the assistance of project supervisors, inclusion and exclusion criteria were prepared. All published quantitative and non-interventional papers (congresses, dissertations, articles) that were in Persian or English and that their full texts available were included in this study. There was no limit to the article format. Studies that did not describe the details of the method and did not have the ability to examine the method of work were excluded. Also, articles that were repetitive, those whose samples were not nurses, or those that used tools other than MBI and had computational errors were excluded. Researchers have conducted these studies separately. The screening of papers was done in four steps. In the initial search, 358 articles were found which, after the initial review, were removed due to the repetition of 77 articles. In terms of access to the full article, a review was done and it turned out that there was no access to 81 articles. Then the abstracts of the articles were examined and 103 non-relevant articles were identified. Finally, with the study of the original articles, another 86 articles were removed and 29 articles were investigated (Figure 1).

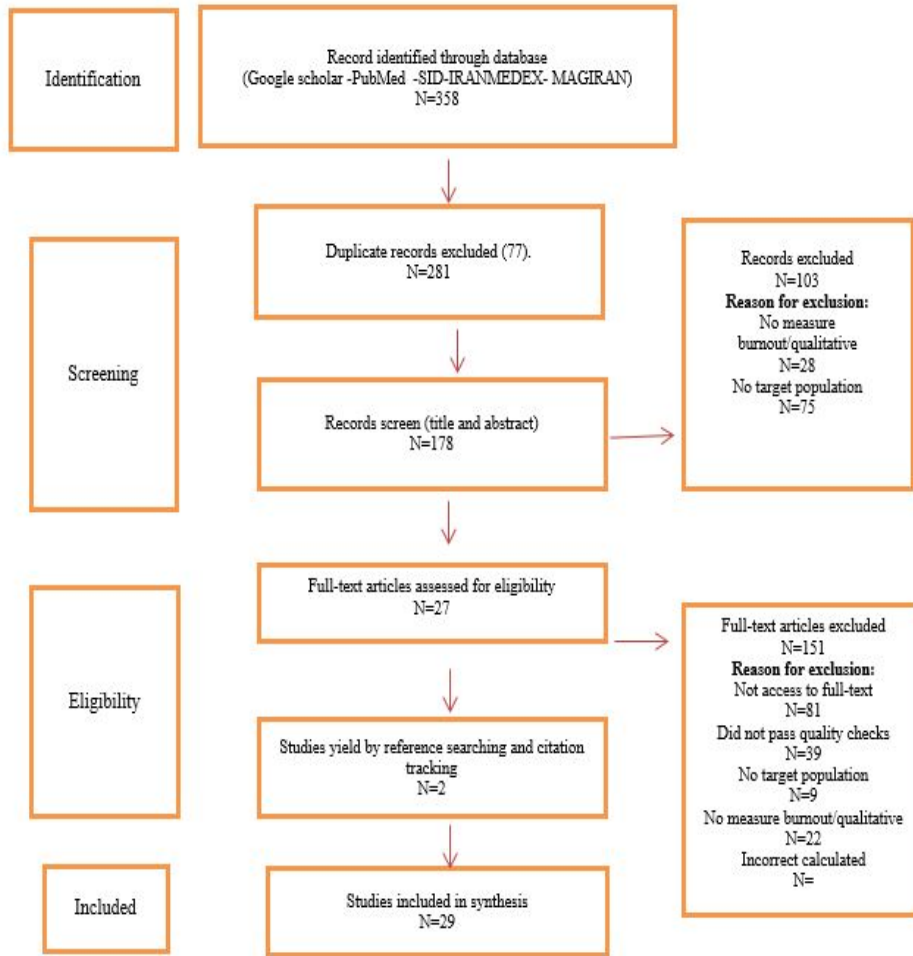


Figure 1. Flow Chart of Literature Search Process.

Results

Few Studies reported repetition of burnout, and most studies only examined the severity of job burnout. Therefore, the repetition of burnout cases was not reported in this study. Most studies reported an average score of burnout in three areas of emotional exhaustion, depersonalization, and personal accomplishment. In addition, some of them reported a relative and absolute frequency at three levels: mild, moderate and severe, whose results were examined in this study (Table 1).

Table 1: rating points of Maslach s burnout inventory subscales

	low	moderate	high
emotional exhaustion(0-54)	$16 \leq x$	17-26	$x \leq 27$
Depersonalization(0-30)	$6 \leq x$	7-12	$x \leq 13$
personal accomplishment(0-48)	$31 \leq x$	32-38	$x \leq 39$

In 29 reviewed articles, job burnout was reported by more than 4,526 nurses from 1999 to 2016 in 17 provinces. 1 study was conducted before 2000, 5 studies before 2010 and 23 studies from 2010 to 2017. All of the studies were done by cross-sectional and correlation methods, and most of them were performed through portion sampling, stratified random sampling, cluster sampling, multistage, and convenience sampling from hospitals and general, intensive, psychiatric, gynecological, and burning wards. The highest rate of job burnout respectively was related to in Intensive Care Units, especially ICU, burning, psychiatric, emergency, and gynecological wards. The prevalence of job burnout among clinical nurses with low work experience, female nurses and those at night shift was higher than other nurses [12-15]. No article was carried out in review or qualitative format. In all of these studies, the 22-item Inventory Maslach Burnout (1993) was used. But in one study, the 25-item Maslach Burnout Inventory (1981) was used. The process of translation, re-translation and localization of the tool was performed and the reliability of the tool in three subgroups was also reported separately in various studies by Cronbach's alpha (0.71 to 0.90) [2, 13, 16-18]. The relationship and predictive role of different variables were examined in

relation job burnout such as: emotional intelligence [19], demographic characteristics [13, 17, 20, 21], moral distress [22], stress [23, 24], general health [24], resiliency, satisfaction with life [15], personality traits [25, 26], social capital, psychological health [27], emotional intelligence, perfectionism, negligence, workload [28], adapting techniques [29], patient satisfaction [2], Job quitting, work-family conflict, self-efficacy, social support [16, 30], marital satisfaction, job satisfaction [2], lifestyle, positive thinking, Islamic ethics, organizational behavior, organizational commitment, organizational respect [31], the quality of work life [3], noise pollution and happiness [32] (Table 2).

Table 2: titles, goals, methods, results, authors and journals of articles reviewed

Author/year	Setting	Method	Sampling/ sample size	Journal
Shafiei A/2016	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	Census /110	Nursing Journal of the Vulnerable
Asgari H/2016	CCU, ICU, NICU, dialysis	cross- sectional	Census /220	Journal of Urmia Nursing and Midwifery Faculty
Alidosti M/2016	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	stratified/151	Journal of Fundamentals of Mental Health
Mooghali A/2015	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	stratified /280	Journal of hospital
Shirazi F Z/2015	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	Census /270	Knowledge & Research in Applied Psychology
Farsi Z/2015	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	Random/322	Military Caring Sciences
Rashedi V/2014	CCU, surgery, medical, emergency, GYN, pediatric, Psychiatric, ENT	cross- sectional	Random/194	Galen Medical Journal
Habibi H/2014	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	stratified /280	Journal of hayat
Vaezfar SS/2014	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	Cluster/165	Iran Journal of Nursing
Amini F/2013	CCU, ICU, NICU, dialysis, surgery, medical, emergency, pediatric,	causal-comparative	Cluster/304	Nursing Management
Pourreza A/2012	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	stratified / 200	Journal of hospital
Rafii F/2012	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR	cross- sectional	stratified / 200	Iran Journal of Nursing
Mohammadpoorsl A/2012	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	Convenience /712	Iranian Journal of Nursing and Midwifery Research
Sahebzade M/2011	administrative	cross- sectional	Census /198	Health information management
Delpasand M/2011	CCU, ICU, emergency	cross- sectional	stratified/150	Iranian journal of critical care nursing
Khodabakhsh MR/2011	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	Random/60	Zahedan journal of research in medical sciences
Rahmani F/2010	CCU, ICU, emergency	cross- sectional	stratified /63	Iran Journal of Nursing
Shakerinia I/2010	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	Random/124	journal of the Kermanshah University of Medical Sciences
Sahebzamani M/2009	Psychiatric	cross- sectional	stratified /93	Medical Sciences Journal of Islamic Azad University
Toubaei SH/2007	surgery, medical, Psychiatric, burn	cross- sectional	stratified /180	the Horizon of Medical Sciences
Khazaei T/ 2006	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	Census /120	Journal of BIRJAND university of medical sciences
Mohamadi MA/2006	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	Census /400	Journal of health and care
Rasolian M/2004	CCU, ICU, NICU, dialysis, surgery, medical, emergency, GYN, pediatric, OR, administrative	cross- sectional	Convenience /210	Iranian Journal of Psychiatry and Clinical Psychology
Abdi H/1999	CCU, ICU	cross- sectional	Census /24	Nursing and midwifery journal

According to the demographic data reported in studies, 75.85% of samples were female, 86.14% had a BS degree in nursing and 72.02% were officially employed. The mean age and work experience of nurses were 32.95 ± 6.38 and 12.35 ± 5.55 years, respectively (Table 3).

Table 3: some demographics criteria of articles reviewed

Author/year	age	Official hiring%	BS% degree	Work experience	Female%
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Shafiei A/2016	33.91±7.08	67.8	97.8	10.50±6.78	80.20
Asgari H/2016	35.18±6.16	-	-	5.90±4.47	93.9
Alidosti M/2016	33.48 ±8.74	-	-	8.74 ± 5.19	74.2
Mooghali A/2015	29.50±7.47	-	-	6.00±7.65	82
Shirazi F Z/2015	33.17±6.68	-	86	9.25±6.39	85.6
Farsi Z/2015	30.95±5.86	-	84.5	-	48.8
Habibi H/2014	28.00±8.72	-	67.14	5.00±7.31	81
Vaezfar SS/2014	37.04±6.52	-	-	-	58
Rashedi V/2014	30.98±5.11	-	92.80	7.24±4.89	83.51
Amini F/2013	-	-	76	-	73.7
Pourreza A/2012	33.80±6.93	-	73.5	-	67.5
Mohammadpoorasl A/2012	34.37±6.99	68.5	93.1	9.71±6.89	89.1
Rafii F/2012	30.33±5.49	-	96.5	5.72±4.62	92.5
Delpasand M/2011	35.01±5.25	-	100	11.27±5.41	62
Sahebzade M/2011	42.70±7.30	96.3	89.2	19.80±6.60	67.3
Khodabakhsh M R/2011	30.19±4.61	-	100	10.02±6.11	53.33
Rahmani F/2010	28.30±4.60	71.2	-	-	72.9
Shakerinia I/2010	31.40±3.57	-	100	9.59±2.24	100
Sahebzamani M/2009	34.80±6.31	-	-	-	55.9
Toubaei SH/2007	34.80±7.30	-	88	13.70±5.68	62.2
Khazaei T/ 2006	35.00±0.0	-	47.5	14.00±0.0	78.3
Mohamadi MA/2006	29.01±7.01	56.3	-	7.01±3.00	86.5
Rasolian M/2004	-	-	-	-	96
total	32.95 ±6.38	72.02	86.14	12.35 ± 5.55	75.85

The results of the research show that in the area of emotional exhaustion, most studies reported job burnout at a medium range, and only 5 study results reported job burnout at high levels. The average of all studies is $24/33 \pm 10/55$ at the average level. In the domain of depersonalization, except for 1 study, the results of the studies were moderate and low and the mean of all studies was 8.33 ± 5.62 at an average level. In the field of personal accomplishment, except for 5 studies, the results of other studies were moderate and high, the mean of all studies was 30.83 ± 9.10 at a low level (Table 5 and 4).

Table 4: The Mean ± SD of job burnout levels in various subscales

Author/year	emotional exhaustion	depersonalization	personal accomplishment
	Mean ± SD		
Shafiei A/2016	27/82±12/00 H	9/31±5/23	40/38±10/01
Asgari H/2016	38/29±15/33 H	10/65±8/93	37/66±9/26
Mooghali A/2015	22/17±8/83	12/16±5/10	10/13±7/58 L
Shirazi F Z/2015	26/90±7/47	11/21±3/75	20/14±4/78 L
Farsi Z/2015	37/67±13/15 H	19/54±8/20 H	34/42±11/00
Habibi H/2014	22/31±8/86	12/07±5/12	15/07±7/62 L
Vaezfar SS/2014	27/55±12/26 H	9/13±7/15	35/38±7/83
Amini F/2013	22/70±10/90	7/97±7/29	33/96±9/47
Pourreza A/2012	27/20±- H	12/17±-	21/07±- L
Delpasand M/2011	20/39±12/54	5/04±5/81	33/42±11/41
Sahebzade M/2011	19/45±11/40	4/20±5/48	42/14±9/77
Khodabakhsh M R/2011	18/32±6/15	4/42±2/50	37/75±10/15
Sahebzamani M/2009	18/94±8/50	-	31/72±9/69
Toubaei SH/2007	20/50±10/17	3/72±4/95	30/37±9/09 L
Khazaei T/ 2006	18/55±10/15	12/25±3/5	33/65±9/75
Rasolian M/2004	20/70±-	3/26±-	36/03±-
Total Mean	24/33±10/55	8/33±5/62	30/83±9/10 L

Table 5: The relative frequency of burnout subscales levels

Author/ year	emotional exhaustion	depersonalization	personal accomplishment
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Alidosti M/2016	L	64.2	63.6	9.9
	M	24.5	23.8	24.5
	H	11.3	12.6	65.6
Rashedi V/2014	L	30.74	22.50	75.23
	M	63.70	69.12	17.56
	H	5.56	8.38	7.21
Rafii F/2012	L	37	45	12
	M	34.5	30	36
	H	28.5	25	70
Rahmani F/2010	L	28/8	45/8	39/0
	M	25/4	32/2	13/5
	H	45/8	22/0	47/5
Pendar/2010	L	10.8	50.1	15.2
	M	65.3	45.6	33.7
	H	23.9	4.3	50.1
Mohamadi M /2006	L	29.5	26	44.7
	M	43.5	51.5	42.3
	H	27	22.5	13
Mirtaghi/2006	L	48	33	24.5
	M	29.5	37.5	20
	H	22.5	29.5	55.5
Payami/2002	L	66.8	38.5	20.9
	M	29	43.9	32.4
	H	4	17.5	45.9

Discussion

The results of the research indicated that emotional exhaustion and depersonalization in the majority of studied samples were moderate and personal accomplishment was at low level.

Emotional exhaustion, referred to as the main core of job burnout, can be indicative of the average motivation of worker to provide services. Emotional tiredness means that a person has lost his emotional power and is unable to communicate with the patients. This concept is consistent with the feeling of being under pressure and the loss of emotional resources in a person. In this case, the person may become reluctant and indifferent, and working will arouse no passion and positive emotions in him [33]. Most studies have indicated moderate to high levels of emotional exhaustion among nurses working in different wards [33, 34]. For example, in the study of Khajeedin et al., the mean of job burnout rate for emotional exhaustion was estimated at an average level, but emotional exhaustion was high in 35% of cases [35]. Regarding the review of the average of all studies, in this study, the estimated emotional exhaustion was moderate. Our study result was consistent with the results of the studies as the result of the Kluger study in Australia, the results of the Keller study in the United States, the results of Kilfedder on 510 nurses in Scotland and the results of Wu in China [36-40]. This similarity is significant, despite the differences in the research environment, in the study times, in the studied populations, and so on. However, the results of this study were not consistent with the results of Guntupalli that reported emotional exhaustion in nurses 71% and with that of Teixeira who reported emotional exhaustion in nurses 63%, which was probably due to their study environment (Intensive Units) [41, 42].

Depersonalization or the feeling of self-alienation leads to violent and emotion-deprived behaviors toward patients and pionners. The person has a negative attitude towards colleagues and considers other people as inhuman things. Depersonalization means a negative and harsh response to those people who are usually recipients of service. In this situation, the attitude of the individual towards the patient and his companion is negative. He assumes that the patient and his companion mean "the creditor". This leads to active (verbal and non-verbal) and non-active (remissness/obstructionism and deliberate delays) aggression [33].

In this study, the nurses' depersonalization was estimated at a moderate level. In a study, Zerk showed that 40% of nurses had high levels of depersonalization. The results of the study by Marida indicated that job burnout was 41% in the depersonalization dimension. Tay in Singapore reported a mean of 33.3% of job burnout among nurses [43]. Shimomitsu reported the symptoms of depersonalization in 39% of nurses in educational hospitals in Japan [44]. The results of the study by Asai in Japan on 5956 nurses in 302 wards showed that 56% suffered from depersonalization [45]. In a study on nurses with a one-year work experience in Germany Awa also found that 43% of nurses suffered from depersonalization [46]. In the study of Teixeira 64% of nurses suffered from burnout in depersonalized domain [41]. The results of this study are

consistent with the findings of all published studies, and this is a sign of moderate to high levels of job burnout in depersonalization dimension in most studies. In other words, job burnout has a global average that is true in Iran as well. Feeling of a lack of individual success occurs in people who are negatively affected by their job efforts and feel that they have not progressed in their jobs. This concept means diminishing a sense of competence in the performance of a personal duty and is considered a negative self-assessment of the job. In fact, the sense of inadequacy means "being fossilized" [31]. In this study, a low level of satisfaction was reported. Zerak in a study showed that 77% of nurses had failure in personal accomplishment. The results of the study by Marida indicated that job burnout was 71% in the dimension of personal accomplishment in nursing staff [35]. In the study of Kalpaha 60% of nurses were exhausted in the context of reducing personal success. Ayala's study on military nurses in Peru reported a moderate burnout in the individual's inadequacy (personal accomplishment) dimension [47]. As in the present study, Silvia reported a high level of job burnout among nurses in Mexico in emotional exhaustion and depersonalization dimensions, and a low level of it the dimension of personal adequacy (personal accomplishment) [48]. All of the reviewed studies, like the present study, reported personal adequacy among nurses at low level.

Today, much emphasis is placed on the physical and mental health of hospital staff. Regarding the negative effects of job burnout on the performance of all employees, having information on the degree of job burnout can provide the basis for appropriate interventions to reduce job burnout extent. Although the rate of job burnout in Iranian nurses has been reported at an intermediate level, it should be noted that not only does job burnout risk the health of nurses and patients, but also it makes the health systems stressful and agitated. Therefore, we should be very sensitive to it and its lowest level should be considered as the highest risk for nurses, patients and health systems.

Job burnout is one of the important issues for nursing researchers in Iran. Regarding the average level of job burnout in nurses and its impact on the quality of patient care, managers and nursing authorities should take the necessary steps to identify the causes and factors of job burnout and improve the condition of the patients.

No specific limitations were found in this study.

Conclusion

The prevalence of job burnout among nurses varies depending on the work environment, individual, social and organizational factors in different countries and even in different cities of different countries. But despite all these variables, most studies in Iran show an average level of job burnout.

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