

Review Article

Prevalence of job burnout in Iranian nurses: A systematic review and meta-analysis

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Abstract.

BACKGROUND: Nurses experience many job tensions, which lead to job burnout. The consequences of nurses' job burnout include absenteeism, reduced quality of patient care, interpersonal conflicts with colleagues, physical and mental problems, reluctance to provide care with patients, and quitting the job.

OBJECTIVE: The present study aimed to investigate the prevalence of job burnout among nurses in Iran using a meta-analysis method.

METHOD: The study was conducted through a meta-analysis method based on the PRISMA checklist. An unlimited search was conducted until 2020 to access the Persian and English papers in national databases, including Medlib, SID, Iranmedex, and Magiran, and databases including Cochrane, Science-Direct, PubMed, Scopus, and Web of Science. The keywords were "job burnout, nurse, and Iran." The data were searched and extracted by two researchers independently. All analyses were performed using version 2.0 of the Comprehensive Meta-Analysis (CMA) software.

RESULTS: The prevalence of job burnout was investigated in 14 papers with a sample size of 2271 individuals with an average age of 31.44 years old, and a confidence interval of 55% (44–66%). Fars province, with 89.2%, had the highest, and Zanjan province, with 25.9%, experienced the lowest prevalence of job burnout. The overall prevalence of job burnout was 44% in male and 66% in female so that the highest prevalence was in women.

CONCLUSION: The prevalence of job burnout in nurses was high in some areas of Iran. A special attention by managers is needed in this field because of the several roles played by the nurses in the healthcare system and the improvement of public health. Implementation of plans to reduce the job burnout and to improve the mental health of nurses by reducing work hours, giving more opportunities to them to express their opinion(s) in amount of salary and benefits, and creating better working conditions are recommended.

Keywords: Job burnout, nurse, Iran, systematic review, meta-analysis

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1. Introduction

Nowadays, the health sector is one of the most significant areas of sustainable development given its direct relationship with the human health. Achieving this goal requires healthy, vibrant, and highly motivated therapists. The cadre of hospital nurses is a group of therapists. We faced nurses in all hospital wards that have been activated and motivated before embarking on the nursing profession. They feel tired and are willing to resign after a while and facing lots of problems and job stress [1]. The nursing profession is covered by the Hard and Harmful Occupations Act and nurses suffer the most from the job among the people working in medical centers [2]. Exposure to job stress leads to job burnout; burnout is a psychological response to chronic work stress [3]. Jackson and Maslach described job burnout as a psychological syndrome of emotional exhaustion, depersonalization, and diminished personal performance that mostly occurs in occupations that requiring communications with people [4]. They also described emotional fatigue as mental stress, feeling pressured, and losing emotions. Depersonalization is a negative and pessimistic attitude towards others and clients. Decreased sense of self-value is a decrease in feeling competent and being able to successfully perform assigned tasks. It is also a negative attitude and evaluation towards oneself [5].

According to studies, the prevalence of job burnout in the UK is 36% [6]. Various studies have shown that this syndrome can cause a decline in quality of service delivery, and is a factor in quitting the job, absenteeism, or low mood. It is connected with the disorders such as physical fatigue, insomnia, alcohol and drug abuse, and family and marital problems. Although early researches on job burnout have focused on organizational performance, several types of researches have focused on negative effects of burnout on physical and mental health in recent years. Such studies on job burnout have shown that people do not suffer the burnout to the same extent under the same conditions. Burnout is affected by many factors, including individual, interpersonal, occupational, and personality traits [7, 8].

The complications of job burnout not only create physical and psychological symptoms in people but also increase the rate of absenteeism because of illness [9], job dissatisfaction, tendency to quit the job [10], and poor work outcomes [11, 12].

In the clinical field, burnout means losing the desire to provide clients with adequate and human care [11,

13]. Studies conducted in Iran have shown that the suicide rate because of burnout in nurses is significantly higher than the average rate in the society, and the life expectancy of nurses is only one year higher than mine workers [14]. Studies conducted in the country have shown that burnout is prevalent among the Iranian nurses in public health centers. Job burnout's detrimental consequences for nurses, patients, and hospitals emphasize the recognition of key influential factors to prevent or minimize the consequences and to eliminate them in the Iranian Nursing Society [15]. Because of the importance of the issue, this study aimed to investigate the prevalence of job burnout among nurses in Iran through a systematic review and meta-analysis.

2. Research methodology

2.1. Features of the studies

All studies on the prevalence of burnout in Iran before 2020 were reviewed, without a time limit. The Iranian databases including Medlib, SID, Iran Medex, Magiran, and international databases including Cochrane, Science-Direct, PubMed, Scopus, and Web of Science were used in this study to find papers. The keywords used for the search were "prevalence of job burnout, nurses, and Iran." The criterion for inclusion was the terms of burnout, nurses, and Iran in the title. The exclusion criteria included a lack of access to the full text of papers, insufficient data, and irrelevance of the studies to the topic. The study was conducted based on the reporting system of the systematic and meta-analysis review studies (PRISMA) [16]. The search, selection of studies, qualitative evaluation, and data extraction were performed by two researchers independently in order to prevent bias.

2.2. Data extraction

Based on the inclusion and exclusion criteria, the abstracts were studied by the researcher. Then, the unrelated papers were removed, and research-related ones were identified to receive full texts and data extraction. The quality of the selected papers was investigated and verified using the researcher-designed checklist (Fig. 1). A framework was prepared to extract the data, which included the number of samples, type of study, age, geographical area,

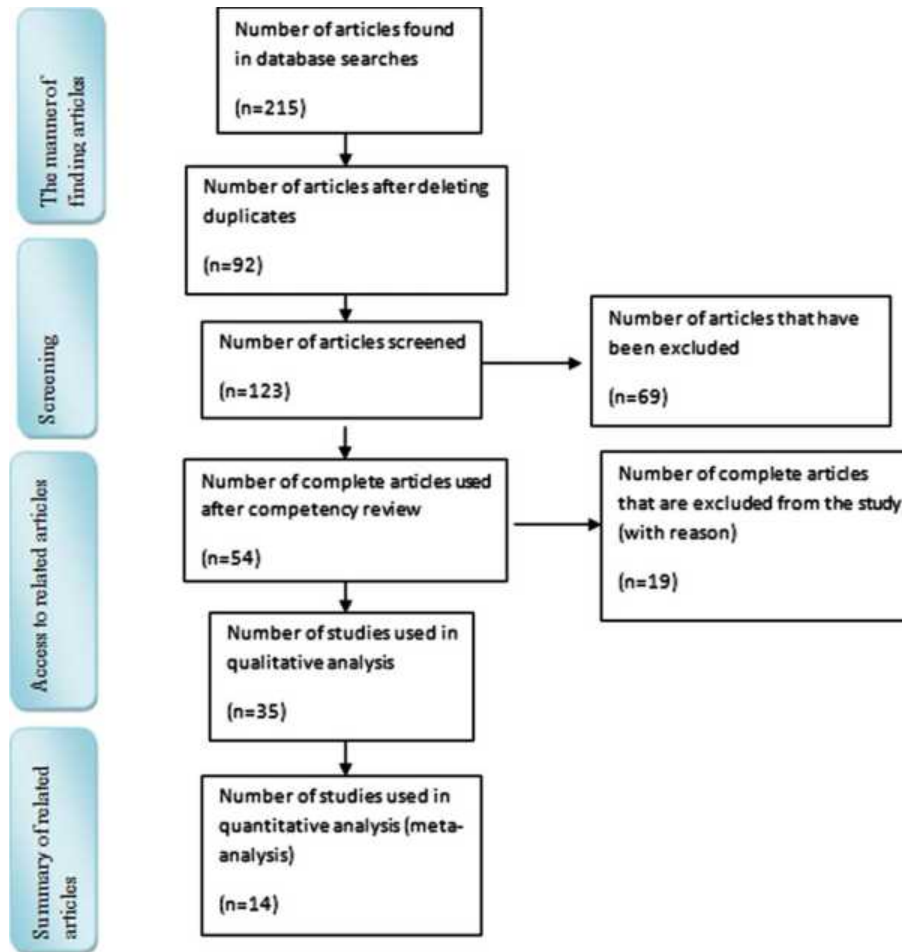


Fig. 1. Flowchart of study selection process.

place of the study, and the prevalence of total job burnout, job burnout based on gender, author's name, and the year of publication.

2.3. Data analysis

The variance of each study was calculated based on the binomial distribution, and the studies were combined according to the number of samples and variances. The point estimation and 95% confidence interval of the prevalence of burnout for each study were calculated separately based on gender and different geographical areas. The stochastic effects model was used to combine the studies based on the heterogeneity of the studies and the significance of the heterogeneity index [12]. The Cochran's Q test and I² index were used to evaluate any non-uniformity in the studies (I² index less than 25% are low heterogeneity, between 25% to 75% is a

moderate heterogeneity, and more than 75% are high heterogeneity). The Forest chart was used to investigate the heterogeneity between the studies ($p < 0.1$ significant). The Egger test and funnel plot were used to evaluate the heterogeneity of the studies. The Meta-regression analysis was used to investigate the relationship among the prevalence of burnout, the year of the studies publication and the size of samples. The level of prevalence along with confidence interval-based geographical area was presented in the Forest chart. All the analyzes were performed using version 2.0 of the Comprehensive Meta-Analysis (CMA) software.

3. Results

Fourteen eligible studies from 2002 through 2020 with a total sample size of 2271 entered the review

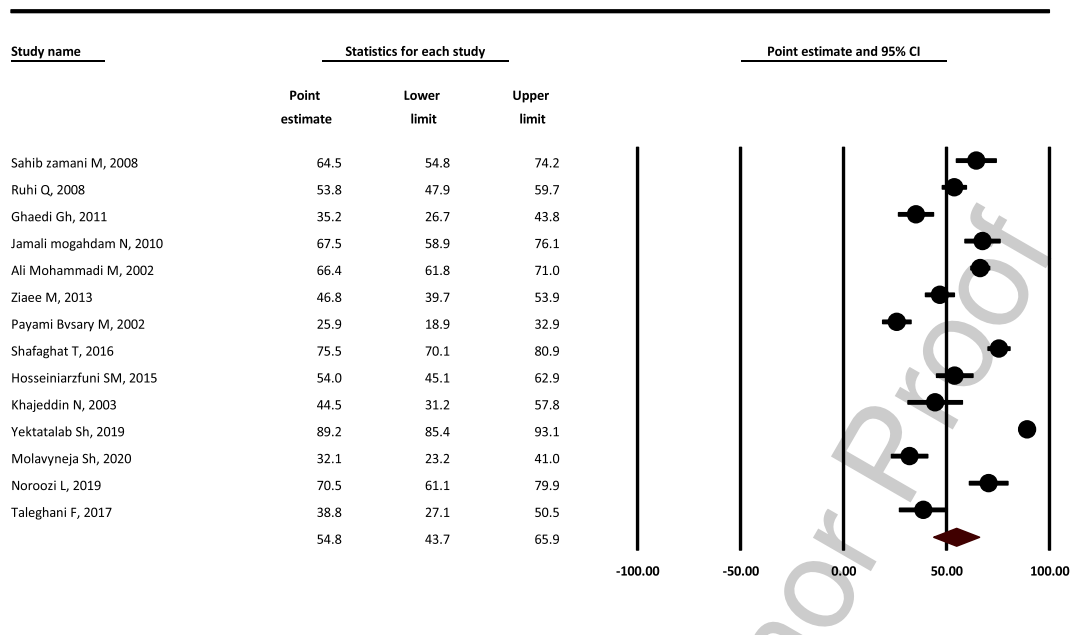


Fig. 2. The prevalence of job burnout of nurses in each segment shows the length of the confidence interval, and the rhombus sign indicates the combination of studies with a 95% confidence interval.

Table 1
Features of the studies included in the meta-analysis step

Author's Name	Geographical location	Place of implementation	Year of implementation	Sample size	Number of males	Number of females	Job burnout
Sahib Zamani M	Center	Tehran	2008	93	41	52	64.5
Ruhi Q	North	Gorgan	2008	272	95	177	53.8
Ghaedi Gh	North	Rasht	2011	120	95	177	35.2
Jamali Mogahdam N	East	Shiraz	2010	114	60	60	67.5
Ali Mohammadi M	West	Ardabil	2002	400	54	346	66.4
Ziaee M	West	Kermanshah	2013	189	74	115	46.8
Payami Bvsary M	Center	Zanjan	2002	151	30	121	25.9
Shafaghat T	East	Shiraz	2016	245	25	220	75.5
Hosseiniarzfuni SM	North	Sari	2015	120	70	50	54
Khajeddin N	Center	Tehran	2003	54	38	16	44.5
Yektatalab Sh	East	Shiraz	2019	250	54	196	89.2
Moulavinezhad Sh	South	Khuzestan	2020	106	39	67	32.1
Noroozi L	East	Fars	2019	90	22	68	70.5
Taleghani F	East	Isfahan	2017	67	8	59	38.8

168 process. Table 1 shows the general characteristics and
 169 data of each of the mentioned samples. The Maslach
 170 questionnaire was used to determine the rate of job
 171 burnout in all papers.

172 The results showed that the overall prevalence of
 173 job burnout was 44% in male and 66% in female. Fars
 174 province, with 89.2 %, had the highest, and Zanjan
 175 province, with 25.9 %, had the lowest prevalence of
 176 job burnout. The highest rate of burnout was in the
 177 east regions of the country. According to the meta-
 178 regression diagram of the frequency of job burnout,

the frequency of burnout increases as the year (Fig. 3)
 and the sample size of the study increase (Fig. 4).

4. Discussion

Job burnout in nurses was investigated through a
 systematic review and meta-analysis. For this pur-
 pose, fourteen studies were reviewed. Different levels
 of prevalence were reported based on the provinces
 studied and the gender of the nurses. Accordingly,

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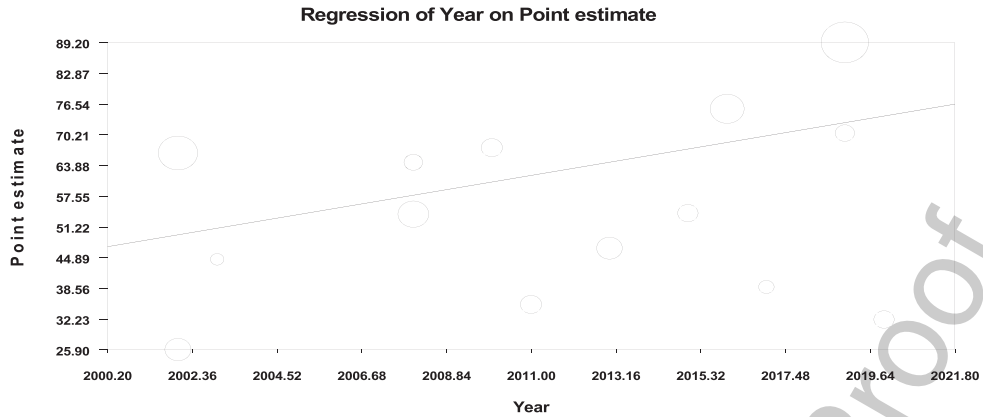


Fig. 3. Meta-regression diagram of the frequency of job burnout based on the year of study.

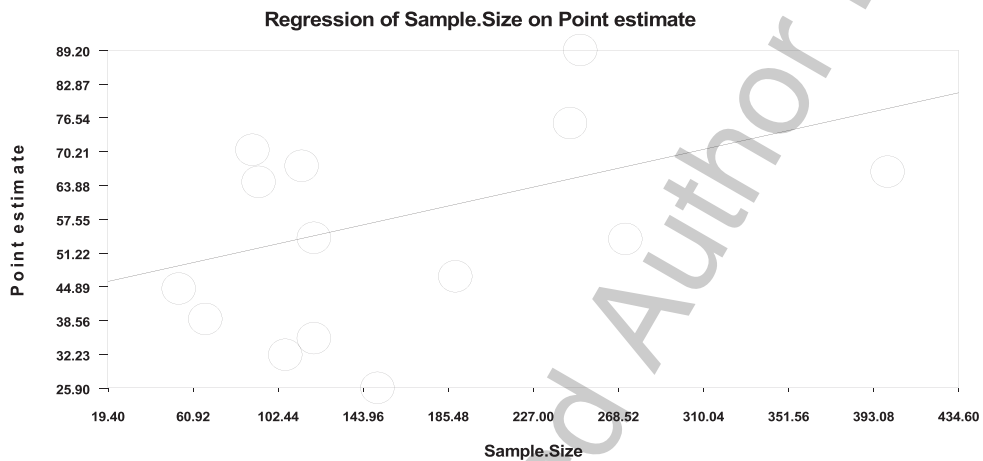


Fig. 4. Meta-regression diagram of the frequency of job burnout based on the sample size of the studies.

187 the highest prevalence of job burnout in nurses was
 188 reported in Fars Province (89.2%), and the lowest one
 189 was in Zanjan province (25.9 %).

190 Since the nurses in metropolitan hospitals are
 191 under high pressure in terms of workload because
 192 of the lack of access to health facilities and special-
 193 ized physicians to provide specialized health services,
 194 many patients from remote and small neighboring
 195 cities come to big cities and provinces. Therefore, it is
 196 not far-fetched to see more burnout in metropolitans.

197 The prevalence rates reported by other provinces
 198 also showed a high prevalence of job burnout in
 199 the nursing profession in Iran and nurses experience
 200 higher levels of job burnout because of the high levels
 201 of job stress compared to other members of the health
 202 team. In a systematic study conducted by Rezaei et
 203 al. on the job burnout of Iranian nurses, the preva-
 204 lence of burnout was 36% [17]. The high prevalence

of burnout in nurses is not limited to Iran and it is
 high in many parts of the world [18].

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 206
 207 About 15 to 45% of working nurses in the western
 208 countries and 50% of working nurses in China suf-
 209 fered from burnout [19]. The socio-cultural context
 210 of Iranian society and the variables affecting it have
 211 exacerbated these problems and made it more diffi-
 212 cult for nurses to tolerate. Many studies have reported
 213 high levels of job stress in nurses [20–22]. This issue
 214 causes 30 to 50% of job burnout in this profession
 215 [23–25]. According to Rezaei et al., a reason for the
 216 difference in the prevalence of burnout in different
 217 countries can be attributed to factors such as gender
 218 and age of nurses, different working conditions, use
 219 of various measuring tools, and different sample sizes
 220 [17].

221 One of the objectives of this study was to inves-
 222 tigate the prevalence of job burnout among nurses

based on gender. The prevalence of burnout in female nurses was about 20% higher than in male ones (66% vs. 44%). Given that women are more emotionally vulnerable than men, this finding seems reasonable. Workplace pressures and especially the conflicts between job and family make women more vulnerable to stress than men.

The role of women as mothers, working at home, and intimate relationships with husband and children increase their psychological sensitivity, limit their power directly and indirectly, and increase their sensitivity in the workplace and the prevalence of job burnout in this group. Therefore, the prevalence of burnout in women is higher, as a significant relationship has been reported between the gender and emotional aspect in other studies [26–28].

Different studies have reported different reasons for the nurse job burnout, including low salaries and benefits, lack of social support, lack of support in managers at different levels, job insecurity, and long working hours [29]. According to Greenglass et al., there was a significant and direct relationship between high workload and job burnout of nurses [30]. Job burnout is a symptom that is caused by the interaction among various individuals, interpersonal, and organizational factors [31].

Burnout is associated with symptoms such as mental fatigue, physical fatigue, and reduced ability to work. It causes more irritability because of reduced concentration and energy depending on the type of work that a person carries out. Nurses, who experience job burnout, are usually physically, emotionally, and mentally exhausted and this has a considerable impact on the quality of patient care. Compared to other jobs, nursing is known as one of the high-risk occupations in terms of job burnout [32]. Therefore, it is important to pay more attention to nurses as the important members of the medical staff.

5. Conclusion

Based on the results of the study, the prevalence of job burnout is high in some areas of Iran. The relevant authorities' special attention is required to solve the problem because of the considerable role of nurses in the healthcare system and the improvement of public health. It is recommended to implement plans to reduce job burnout and to improve mental health in nurses including reducing the working hours; giving an opportunity to nurses to express their level

of salary and benefits, and creating better working conditions.

Moreover, the awareness about the level of nursing job burnout can provide significant information with healthcare officials and managers to introduce management plans, reduce the turn-over and relinquish the nursing profession, increase job productivity and enhance the client satisfaction.

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Conflict of interest

None declared.

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