

# Job burnout among technicians and nurses of Northern Iran

Kuzey İran'da teknisyenler ve hemşireler arasında tükenmişlik

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## Abstract

Staff burnout is increasingly noticed as a research issue in the mental-health field. Regarding the importance and key role of nurses and technicians in health care services, this study aimed to evaluate job burnout in relation to education, age and occupation. This study was a correlational and descriptive cross-sectional study that selected all nurses and technicians working on Mazandaran University of Medical Science. The job burnout of participants measured through Maslach occupational burnout inventory. The gathered from participants data analysed by correlation and T-test method through SPSS software. The finding showed the nurses had high level of job burnout. Job experiences and age were in relation to job burnout. There was no relationship between marital status and job burnout. The personnel with higher education presented higher level of job burnout than staff that holds the lower degree of education. Job's burnout was related to factors such as age, job experiences and education level. Considering importance and sensitivity of health care professional's job some suggestions explained in this research.

**Keywords:** Job burnout, nurses, hospital staff

## Özet

Personel tükenmişliği ruh sağlığı alanında giderek artan bir araştırma konusu olarak fark edilmektedir. Sağlık hizmetlerinde hemşire ve teknisyenlerin önemli ve anahtar rolleri ile ilgili olarak, bu çalışmada eğitim, yaş ve meslek ile ilgili iş tükenmişliği arasındaki ilişkinin değerlendirilmesi amaçlanmıştır. Mazandaran Üniversitesi Sağlık Bilimlerinde çalışan tüm hemşireler ve teknisyenleri kapsayan bir korelasyonel ve tanımlayıcı kesitsel çalışma oldu. Katılımcıların iş tükenmişliği Maslach tükenmişlik anketi ile ölçüldü. Katılımcılardan toplanan veriler SPSS programı aracılığıyla korelasyon ve t-test yöntemi ile analiz edildi. Bulgular hemşirelerin iş tükenmişliğinin yüksek düzeyde olduğunu gösterdi. İş deneyimleri ve yaş iş tükenmişlik ile ilgili idi. Medeni durum ve iş tükenmişlik arasında ilişki saptanmadı. Yüksek eğitim düzeyine sahip personelde iş tükenmişliği daha yüksek seviyedeydi. İşin tükenmişliği yaş, iş deneyimleri ve eğitim düzeyi gibi faktörler ile ilişkili bulunmuştur. Sağlık profesyonellerinin işinin önemi ve hassasiyeti göz önüne alındığında bazı öneriler bu çalışmada belirtilmiştir.

**Anahtar kelimeler:** İş tükenmişliği, hemşire, hastane personeli

## Introduction

In first, Freudenberger used the concept of 'burnout' to describe the gradual emotional depletion, loss of motivation and reduced commitment among volunteers who worked for addicts. After three decades, burnout has been defined as a psychological syndrome that may emerge when employees are exposed to a stressful working environment with high job demands and low resources (1, 2). It is mainly applied to the caring professions, defines the breakdown of energy resources and adaptability as a reaction to chronic stress (3, 4). At the outset, burnout was reported most predominantly among human service workers. Today in industrial societies, job burnout is significant issues for healthcare professionals. Burnout not only endangers their

health and well-being, but is associated with higher medical errors and suboptimal quality of care (5, 6). On a financial basis also burnout can be costly leading to increased employee tardiness, absenteeism, turnover, decreased performance, and difficulty in recruiting and retaining staff (7, 8).

There is a raft of studies on burnout in nurses because of the intense nature of their job in relation to patients and care giver. Similarly, a high prevalence of burnout among physicians has also been reported from various countries (9-10).

Some research has noted lower job satisfaction for social workers compared to psychiatrists (11), but most mental health burnout studies have not compared rates of burnout across professions or disciplines. Most of the studies either focused on

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burnout rates for a professional groups of interest (e.g., nurses, psychologists, social workers) or aggregate burnout findings across a wider swath of disciplines working within a single service. Although many studies have discussed the stress and burnout situation for physicians and nurses because Nurses are more susceptible to experiencing burnout than some of the other healthcare professions. There has been no research on other medical professions, such as physician assistants, technicians and administrative staff, who work together as a team in hospitals. They are working with physicians and nurses in all aspects related to patient care, but their stress and burnout situation have not been reported yet.

This study was aimed at an investigation and comparison of the prevalence of job burnout among different medical professions in Mazandaran University of Medical Science.

### Materials and Methods

#### Participants and study design

This study made use cross sectional descriptive-correlation method. The proposal of this study approved by ethical committee of Mazandaran University of Medical Science. The medical professions included in this study were mid-wife, nurse and technician. All nurses, mid-wife and technicians asked to participate in the study and during a group session the aims of the study explained to participants. They signed consent form after reading the explanations and asking their questions. Finally, 120 participants completed the questionnaires.

#### Tools

The questionnaire used in this study included socio-demographic information and level of burnout. Socio-demographic information comprised gender, age, educational level and marital status, length of employment in current position, working hours per day.

Several instruments have been developed during time to assess the burnout in the healthcare professionals. However, the most prominent is the Maslach's burn out Inventory developed by Maslach and Jackson (12).

The Maslach's Burnout Inventory is a tool for detecting and measuring the severity of the burnout syndrome. It is a 22-item instrument that assesses the degree of burnout in terms of three sub scales: emotional exhaustion (EE), feelings of being emotionally exhausted and lack of energy, depersonalization (DP), and feelings of impersonal response towards recipients of the service and lack of personal accomplishment (PA), feeling of incompetence. The EE subscale contains nine items,

PA 8 items and DP 5 items. The Maslach's burn out Inventory is a well-established scale that has been validated in Iran. Farhadian et al reported very high reliability for this questionnaire  $\alpha = 0.97$ . It was  $\alpha = 0.88$  in the current study (13).

#### Statistical analysis

IBM SPSS statistic 19 was used to analyse the data. P values < 0.05 were considered to be statistically significant, unless otherwise stated. Internal consistency of the Maslach's burn out Inventory was assessed by calculating Cronbach's alpha.

We estimated various multilevel logistic regression models with cross effects to investigate the connection between having burn out, and the factors associated with the burnout syndrome such as age, gender, EE, DP, PA, working hours and job experience.

### Results

89% of participants completed questionnaires. Out of 100 participants, 81 were female. 20% hold Master degree, 68% BSc and rest associated degree. The majority of respondents (82%) were married. Age range was between 23-58. More than half of them (54%) were between 28-38 years old.

**Table-1.** distribution of samples according gender, marital status, education, occupation

Variables	N	%
<b>Gender</b>	Male	50 41.3
	Female	70 48.7
<b>Marital status</b>	Single	17 14.1
	Married	103 85.9
<b>Education</b>	Associated degree	44 36.5
	Bach lure	64 53.1
	Master	12 10.4
<b>Occupation</b>	Nurse	65 53.9
	Technicians	32 26.5
	Midwife	23 19

### Discussion

Descriptive analysis revealed nurse's experiences higher job burnout than technicians as it is obvious in total job burnout 42% vs 52% had mild job burnout 34% vs 29% and 24% vs 19% had average and severe burn out respectively. The participants reported medium job burnout.

Across several studies, it appears that 21-67% of mental health workers may be experiencing high levels of burnout. In a study of 151 communities mental health workers in Northern California, Webster and Hackett (1999) found that 54% had high emotional exhaustion, and 38% reported high depersonalization rates, but most reported high levels of personal

**Table 2.** Percentage of job burnout among nurses technicians and midwife

Variables		Mild	Average	severe
emotional exhaustion	Technicians	10%	57.8%	32.2%
	Nurses	14%	62%	24%
depersonalization	Technicians	52.2%	41.1%	6.7%
	Nurses	34%	50%	26%
personal accomplishment	Technicians	64.4%	35.6%	0
	Nurses	51%	39%	10%
Job burn-out Total	Technicians	52%	29%	19%
	Nurses	42%	34%	24%

**Table 3.** Correlation between job burnout and age, job experiences, marital status and working hours

	Age	Job experiences	Working hours	Marital status
Job burn out	(0.49)*	(0.41)*	(0.63)*	-(0.025)

\*significant p 0.05

accomplishment as well (14). These results are consistent with studies conducted by Önder (2008), Gilibert (2008), Maslach(2001), Mostoffian (2001), Movahed (2004), Khaghanizadeh et al., (2008) and Khodabakhsh (2011) (5, 16,17,18,19,20-21).

Furthermore, finding indicated there is positive relationship between increment of job burnout with age (0.49). Along the relationship of job burnout with job experience showed (0.41), marital status(-0.025), working hours (0.63).

In relation to the contributing factors to nurses' burnout Devereux et al. (22, 23) assert that based on the available evidence, there are various levels of correlations. However, both researchers reported that there is sufficient evidence to show that age, work pressure, role confusion, fewer hardiness, passive coping style and limited social support can negatively influence burnout in nurses. Several studies have indicated that the presence of social resources can contribute to low levels of burnout (24, 25, 26). These contributing factors have also been identified earlier by Maslach et al. (24).

For the nursing population the studies have demonstrated those long working hours, rotating shifts and night shifts can lead nurses to fatigue. The effects of fatigue include but are not limited to poor performance, errors in clinical practice, and prolonged fatigue may lead to burn out. Existing evidence support that the healthcare workers' performance on tasks requiring vigilance, attention to detail, or, which are long in duration may be particularly susceptible to fatigue related consequences (27,28).

Medical practice is stressful. This is because medical personnel must respond to the needs of patients and families very quickly. However, medical knowledge and procedures usually include limitations and

uncertainties. Any medical errors or mistakes may be costly, harmful to a patient's life and sometimes irreversible. Moreover, night work, shift work and long work hours are also very common in medical professions (29). Therefore, according to findings of this study, the authors suggest following points;

- Designing the educational program for nurses and technicians to teach them how to identify and cope with job burnout related signs in early stages
- Development of social and environmental support for staffs
- Identify and diminish the prolonged stress related pressures in daily job of nurses and technicians
- Equip the personnel and health care-related students with coping stress skills in early stages of education in universities.
- Using the toughed skills which made them feeling more beneficial
- Decreasing salary according to capability and functions of personnel.
- Encouraging personnel to engaging in team works, which are associated with social support also

#### Conflict of interest

There is no conflict of interest in this study

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