

Evaluating the Relationship Between Risk Factors and Occupational Hazards of Emergency Department Medical Staff on their Psychological Health

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ABSTRACT

Attention to psychological health of emergency staff is an obvious case, providing psychological health and mental hygiene is inevitable. Accordingly, the present study attempts to consider psychological health and its relation to occupational hazards. The study was performed on 150 emergency department medical staff Loghman Hakim and Imam Hossein Hospitals. Random sampling and data collection instrument was a questionnaire that its validity and reliability were confirmed. For data analysis, descriptive and inferential statistics were used. Depending on findings of this study, there is a significant relationship between gender and psychological suffering, awareness of protective measures, vocational training, physical symptoms, anxiety, social dysfunction, major depression; but there is not a significant relationship between gender and physical damage, understanding the safety of tools and the equipment, and there is not a significant relationship between education and psychological suffering, awareness of protective measures, vocational training, physical symptoms, anxiety, social dysfunction, major depression, and physical damage and understanding the safety of tools and the equipment. Also according to the study findings, there is significant relationship between psychological health indicators and occupational hazards indicators.

Keywords: Occupational hazards, Psychological health, emergency staff

INTRODUCTION

Today more than ever, people are at risk of occupational accidents¹. The incident is unplanned and damaging event, that has hampered implementation or continuing of an activity, and always it occurs as a result of unsafe acts, unsafe conditions or a combination of them². In recent decades, Iran has also an enormous increase in development, that one of the bad effects of it is the significant increase in the number and diversity of occupational accidents³.

According to the data issued by the forensic medicine, despite the fact that the number of deaths resulting from occupational accidents in 1391 compared to the last ten years was higher, in

1391 the trend continued with growth of 19.1 percent⁴. Therefore, occupational accidents has considered as a growing problem in public health in Iran and the world.

In general, the events can be evaluated from the perspective of human, social and economic. Occupational injury, addition to causing physical discomfort, mental, emotional and social for employees, it also exposes the organization to damages and vulnerable conditions and it sustains costs. These costs are include employee treatment costs and lost opportunity cost⁶.

The existence of occupational injuries can decrease job satisfaction, security and motivate of staff and impose expensive costs on the health

system⁷. As a result, any neglect on the staff of the emergency department led to a decline in the quality of services that provided to patients.

Although much research has been done in the field of occupational hazards, but there is not the research that has investigated risk factors as a whole in the five dimensions of risk psychological damage, physical injuries, the awareness of protective measures, vocational training, understanding safety of tools and equipment and its impact on psychological health and that suggests a suitable way to resolve it according to the existing conditions, is not available within the country.

Due to the high volume and sensitivity of working in the emergency department, his study intends to identify occupational hazards faced by staff and to assess its impact on their psychological health.

Occupational hazards

The hospital is the main and the most risky Central Health Services in health systems⁸. Obviously presentation of good service is related to quality of staff in the hospital⁹. While the workplaces where employees are engaged in increasingly known as a high-risk workplaces¹⁰. Occupational injuries are not completely random events, so they can be forecasted and can prevent it. Prevention of occupational injuries among staff and subsequent patients, depends on the ability of employees to identify and control occupational hazards of their various profession.

Emergency department staff rather than the other parts of hospital are at a higher risk of occupational injuries that speed operation and high pressure of task in emergency department, fatigue and high stress of employees and dealing with blood and body fluids of emergency patients are the reasons that increase the risk of occupational exposure of the staff in this section¹¹.

Psychological trauma: Working alone on night shifts can lead to the mood disorders and mental depression in practitioners. Also liability in case of emergency care patients need to make certain decisions that will lead to a lot of stress.

Encountering nurses with injured after accidents is another cause of stress in them. In addition, most employees working shift work and a few of them are workday that these conditions can lead to adverse health effects.

psychological health concept

psychological health topics is including the promotion of optimal functioning and interventions and reduce the amount of and inadequate functioning (functioning maladaptive). It contains two extensive dimensions. The first, psychological health, that is including the absence of dysfunction in psychological, emotional, behavioral and social aspects. The purpose of dysfunction is disorder in daily life; emotional and behavioral problems, as discussed in psychiatric diagnosis, includes such as anxiety disorders, depression, schizophrenia, etc., Such conditions disrupt daily functioning (such as school performance and interpersonal relation) and may be threaten physical health (such as trying to commit suicide).

The second, The purpose of psychological health, optimal functioning in psychological and social. Mental health is not just absence of disease, but it is presence and promotion of personal and interpersonal optimal functioning. Ultra-social competence is positive personal interactions. Researchers for operations of psychological health use two above tradition, the clinical tradition (the first dimension) and psychological tradition (the second dimension). (Kazdyn [8], 1993, Kiyes [9], 1998, quoted by Ali Nia Krouei, 1382)

Index and mental health variables, including: physical symptoms (general health and individual physical symptoms in the past month), anxiety (clinical signs and symptoms of severe anxiety, under pressure, anger, anxiety, insomnia, and having panic), impaired in social functioning (ability to perform everyday tasks, having decision making power, satisfaction in their duties, sense of usefulness in life, and enjoy daily activities), major depression (feelings of hopelessness, worthlessness of life, having suicidal thoughts and demise, feelings of worthlessness and inability to do things)

MATERIALS AND METHODS

This study is a descriptive - analytic study that was done cross-sectional in 1395. The studied population was emergency department medical team in Loghman Hakim and Imam Hossein Hospitals.

In determining the sample size for the study, since definition of occupational hazards and psychological in health emergency staff has overlooked, so the sample size for descriptive studies (Cochran Formula) was used. But sample size of 150 obtained with considering the limited community emergency staff Loghman Hakim and Imam Hossein Hospitals.

Two questionnaires were used to collect data. The first questionnaire is related to

occupational hazards in the study of Nekoei moghadam et al (1392). The validity of this scale has been approved by the respective professors. The reliability of the questionnaire has obtained using Cronbach's alpha 0.68.

And the second questionnaire is general health questionnaire GHQ. questionnaires were set in two parts: The first part contains demographic and job variables consists of 4 questions and the second part contains questions on a 5-point Likert scale.

To gather data, researchers by doing prior arrangement return to hospitals, and between the list of emergency medical team, they randomly selecteds sample size proportional to the number of emergency medical team. After their introduction, they reflect the aim of this study and after declaring

Table 1, the mean difference test of mental health indicators and occupational hazards by gender

p value	t	Standard deviation	mean	groups	variable
0/023	0	Jul-38	7	woman	Psychological damage
		Jul-20	Jul-55	man	
0/001	Jan-77	Jul-47	Aug-73	woman	Physical damage
		07-Jan	Jun-98	man	
0/011	0	Feb-45	Feb-27	woman	Awareness of protective measures
		Feb-56	Feb-41	man	
0/001	0	Mar-46	Mar-22	woman	professional training
		Mar-78	Mar-28	man	
0/505	Jan-36	Jul-56	Jun-81	woman	Understanding Safety Tools and Equipment
		Jul-13	Jun-43	man	
0/001	0/489	Jul-66	Jul-70	woman	Physical symptoms
		Jul-25	Jul-14	man	
0/001	0	Mar-48	Mar-38	woman	Anxiety
		Mar-22	03-Nov	man	
0/011	0/694	May-17	Apr-40	woman	Social dysfunction
		05-Feb	Apr-58	man	
0/001	0/489	Jul-52	Aug-54	woman	Major Depression
		Jul-32	Aug-17	man	

According to Table 1, there is a significant relationship between gender and psychological harm questions, awareness of protective measures, vocational training, physical symptoms, anxiety, social dysfunction, major depression, but there is not a significant relationship between gender and physical damage, understanding of safety tools and equipment.

the satisfaction of the participants, the questionnaire was presented to them. They asked them to report the risks that have experienced in the last year in their activities in an emergency. If they didn't prefer to be in the sample, the sample replacement was used.

Findings

The age range of participants are 25-45 and mean age of participants are equal to 65/33 , and mean and standard deviation is 46.5. The highest number of respondents are in the age group between 35-25 years and the lowest rate is in the age group 45 and older. Most of the respondents have the level of doctorate degree.

According to Table 3, there is significant level of 0.001 between psychological damage,

awareness of protective measures, vocational training, physical injury, understand safety equipment and somatic symptoms, anxiety, social dysfunction, major depression.

DISCUSSION AND CONCLUSION

Basically psychological health discussion has been pervasive phenomenon and even a major concern for all organizations and scientific centers. Understanding health culture and its impact on human life in all communities, especially in developed countries has crucial importance. As a result of continuous research and study and understanding of this phenomenon, it is possible to renovation, remodeling and restoring the production, and injection factors governing the people. Inefficient or damaging parts of

Table 2: the mean difference test of psychological health indicators and occupational hazards in terms of educational

p value	t	Standard deviation	mean	groups	variable
<0/001	Feb-54	14-Aug 06-Oct	76/8 Jun-46	Doctor Assistant	Physical damage
<0/001	Feb-79	Jul-44	Jul-63	Doctor	Awareness of protective measures
0/003	Feb-49	May-22 May-86	May-38 May-80	Assistant Doctor	professional training
0/001	Feb-91	Apr-66 Sep-24	Apr-13 Sep-30	Assistant Doctor	Understanding Safety Tools and Equipment
<0/001	03-Dec	May-70 Jun-63	Jun-51 May-33	Assistant Doctor	Physical symptoms
<0/001	Mar-65	4/00 04-Sep	Mar-20 Apr-22	Assistant Doctor	Anxiety
0/011	2/00	Feb-66 Apr-65	Feb-65 Feb-91	Assistant Doctor	Social dysfunction
0/001	02-Jan	Feb-98 May-56	Jan-93 Jun-16	Assistant Doctor	Major Depression
			Jun-18	Assistant	

According to Table 2, there is no significant relationship between education and psychological suffering questions, awareness of protective measures, vocational training, physical symptoms, anxiety, social dysfunction, depression, and physical damage and understanding of safety tools and equipment .

psychological health among them has either modified or deleted, and act to strengthen influencing factors. The occupational hazards are also unavoidable.

According to findings of the study¹², there are significant relationship between psychological health indicators and occupational hazards indicators. So that by increasing the occupational hazards, the psychological damage is also increasing. The researchers has written about

accompanied by psychiatric symptoms and occupational hazards: Often the first symptoms that appear during occupational hazards are symptoms such as somatic symptoms, anxiety, depression and anger. is. National Institute of Occupational Health, after the study about the prevalence of health disorders in stressful jobs, announced that 130 jobs assessed in the community, nurses and emergency workers, have 27th ranking on a visit to the physician for problems caused by the lack of mental health have earned.

Table 3: Variable of Psychological damage / awareness of protective measures / vocational training / physical damage / understanding of safety tools and equipment

Physical symptoms	0/04	0/028	-0/015	0/049	0/028
Anxiety	0/813	0/695	0/001	809/0	445/0
Social dysfunction	116/0-	620/0	155/0-	148/0-	13/0-
Major Depression	067/0	020/0	21/0	148/0	019/0

The relationship between occupational hazards and anxiety scale of questionnaire showed that the mean scores of the scale are significant differences in the levels of occupational hazards. Various studies have been introduced also the first symptoms of occupational hazards from work-related anxiety and symptoms such as frequent headaches, sleep disorders and weight loss.

Kouli¹³ in a report also has stated that 64 percent of his nurses suffer from tension headaches, 62 percent from sleep problems and 30 percent from weight loss. Other findings show^{14,15,16} that the scale of depression and social dysfunction are significant differences in the levels of occupational hazards. The second loss of occupational hazards is that people experience social dysfunction. Depression, anxiety, helplessness and inefficiency of the occupation are examples of this disorder.

Psychologists have suggested different solutions in order to alleviate the symptoms of occupational hazards. The various solutions that can be used by themselves are including: poor working conditions, lack of responsibility for inappropriate use of relaxation techniques, sports. To prevent occupational accidents at the macro

level should be created all-round cooperation and interaction between policy makers and stakeholders in this field at the national level. It is hoped that in view of the results of this study, the authorities consider the research of occupational accidents more inclusively and more cohesively, and the strengths and weaknesses of the implementation of occupational health procedures in hospitals of the country has been shown by doing better future research.

Providing proper facilities to be close to normal sleep pattern, such as using the model of the morning - evening - night shifts, in turn, equipping hospitals to injury reporting systems, committee occupational hazards, the startup of mental health counseling in clinical settings, stress management workshop, providing social support and creating confidence, professional support, and to identify the role of individuals in the organization, and applying ergonomic, educational programs and to provide adequate training in this field and the use of health and safety equipment, improvement work environment and finally the action to enhance the quality of work life that could lead to a reduction in occupational injuries and increase employee productivity.

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