

Occupational Health and Safety of Healthcare Personnel

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Abstract

Workers in the health care industry may be exposed to a variety of work related disease and injury including biological, physical, and chemical, ergonomic and psychological hazards. This study was planned to determine whether occupational health and safety is ensured for the health care personnel working in health institutions under Association of Public Hospitals in one of the medium-sized provinces in Turkey. The study was carried out with a total of 240 healthcare personnel working in health institutions. Participants stated that protective measures (3.53 ± 1.05), the control of materials, tools and equipment (3.50 ± 1.34) are ensured better in health institutions where they work and that physical environment (3.44 ± 1.17) is good; however, there are occupational illnesses and complaints (3.24 ± 0.87) and that executive support (2.74 ± 1.18) is not provided adequately.

Keywords: Occupational Health and Safety; Occupational Hazards; Occupational Injuries; Health Institutions; Healthcare Personnel

Introduction

Job is not only an important social factor that gives a place to people in their lives; satisfies them and ensures cohesion in society but it also affects human health with plenty of physical, chemical, psychological, social and economic characteristics (İlhan et al., 2006). Employees spend about one-third of their waking hours at work, and don't necessarily leave the job behind when they leave the work site. For example, work-related stress combined with the stress from everyday life can lead to detrimental physical and emotional outcomes because of the excess physical and mental demands placed on the human body and mind (Danna & Griffin, 1999). Occupational safety and health (OSH) is generally defined as the science of the anticipation, recognition, evaluation and control of hazards arising in or from the workplace that could impair the health and well-being of workers, taking into account the possible impact on the surrounding communities and the general environment (Alli, 2008). The promotion of occupational safety and health, as part of an overall improvement in working conditions, not only to ensure the well-being workers but also to contribute positively to productivity (Alli, 2001: 27). Health protection at work is not only a matter of national policy and legislation. For many years, standards for occupational health and safety have also been elaborated at an international level. The International Labour Organization (ILO) and the World Health Organization have been active in this field since 1950, and their policies on occupational health and safety are essentially contained in its international conventions and accompanying recommendations (Kopias, 2001).

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Despite all efforts by those concerned with workers' health, occupational accidents and diseases cause huge human suffering to workers and their families and economic losses, while public awareness of occupational safety and health remains generally low (Fedotov, 2005). One of the working areas carrying substantial risks in terms of occupational health and safety is health service area. Especially hospitals are complex organizations where employees use electronic devices, carry heavy weights (Toraman et al., 2011), are exposed to a wide range of biological, physical, and chemical hazards, and recent research has added biomechanical/ ergonomic hazards to the list of harmful exposures (Gershon et al, 2000; Wilburn & Eijkemans, 2004). While, for instance, it is radiation that pose a risk for those working in radiology and nuclear medicine departments; mercury and glutaraldehyde exposition for those working in sterilization units, toxic gases have an influence on operating room staff (Parlar, 2008). Occupational safety and health within healthcare workers have been studied worldwide. It is ascertained in many studies that doctors, nurses and other healthcare personnel have many diseases such as mechanical (back pain, extremity, backache etc.), physical (needlestick, noise etc.), biological (viruses, mycosis etc.), psychological (stress etc.) deformation (Bi et al., 2008; Saha et al., 2005; Clarke et al., 2002; Sun et al, 2012; Barbadoro et al., 2012; Uchiyama et al., 2013; Wang et al, 2014; Errico et al, 2013; Kişioğlu et al., 2002; Sveinsdóttir, Biering & Ramel, 2006) and they catch contagious diseases such as AIDS, hepatitis; skin diseases such as dermatitis; vascular diseases such as varicosis; and occupational diseases such as cancer due to the fact that their occupational environment safety is not ensured (Berton & Novi, 2012; Horsman & Sheeran, 1995; Bell, 1997).

This study was intended to determine whether occupational health and safety is ensured for the health care personnel working in health institutions under Association of Public Hospitals in one of the medium-sized provinces in Turkey. The city where the study was conducted is located on the borderline of Syria in the South of Turkey. It becomes more of an issue in that it is a province to which those who escaped the battle took refuge in Turkey as a result of the war in Syria. Refugees are confronted with substantial health risks because of either their environments before migration, what they experienced during migrations or unhealthy living conditions in the environments they arrived upon immigration. World Health Organization (WHO) draws attention to the fact that those Syrians staying in Jordan, Lebanon, Iraq and Turkey have measles, tuberculosis and several contagious skin diseases. Turkish Doctors' Union also stated that they had the opinion that refugee immigration from Syria had an influence on spread of measles instances. Health problems experienced by refugees owing to living conditions also adversely affects the health of the country where they took refuge in (Korkmaz, 2014). It is thought that fulfilling diagnosis and treatment requirements of refugees, as well as Turkish citizens living in the city where the study was conducted, will increase the work load of healthcare staff and that it may adversely affect occupational health and safety.

Methods

Aim of The Study: The study was planned to determine whether occupational health and safety is ensured for the health care personnel (doctor, nurses, other healthcare personnel and administrative personnel) working in secondary health care services under Association of Public Hospitals in one of the medium-sized provinces in Turkey.

Population and Sample of the Study: A total of 374 healthcare personnel working in health institutions under the Association of Public Hospitals constitute the population of the survey. Permission was obtained prior to the survey from the Association of Public Hospitals. There are two health institutions under the Association, one is State Hospital and the other is Oral and Dental Health Centre. It was endeavored to reach all of the population in the study. Survey's rate of return is 64 % (n=240); however, the answers of those 223 participants could be analyzed.

The Instrument: Data for the study was collected manually on October 2013 by means of 45-point "Occupational Safety Instrument for Healthcare Personnel" developed by Öztürk and Babacan (2012). The scale consists of 45 positive points and seven sub-dimensions to determine whether occupational safety is ensured for the personnel working in hospitals and specify the activities carried out for occupational safety. These dimensions are; Occupational Diseases and Complaints, Health Screening and Record Systems, Accidents and Intoxication, Administrative Support and Approaches, Material and Instruments Control, Protective Measures and Rules and Physical Environment Suitability. Validity and reliability of the Instrument was carried out by Öztürk and Babacan (2012). Öztürk and Babacan (2012) specified that overall reliability coefficient of the scale is $\alpha=0.96$ and reliability coefficients with respect to sub-dimensions range between 0.82 and 0.93. In this study, it was determined that reliability rate of the scale is $\alpha=0.93$ and reliability values regarding sub-dimensions are over 0.80.

Data Analyses: Making use of SPSS 20.0 packaged software, the data obtained from the survey are analyzed through descriptive statistical methods, reliability analysis, t test in two independent groups, Kruskal Wallis test in independent groups more than two when the number of subjects per groups is less than 30 and Scheffe test to determine from which group differences stem from. Alpha level is taken as 0.05 in all statistical tests.

Restrictions: Data obtained from the study could not be generalized for private sector health institutions in the province or for the other provinces, since the survey was carried out in public health organizations rendering service only in one province. On the other hand, the data obtained from the study can be generalized to the other provinces where refugees escaping the battle in Syria are accommodated, in that they have similarity in terms of geopolitical structure.

Results

When it is investigated the distribution as regards several socio-economic characteristics of the participants within the scope of survey, it is observed that 58.1 % consists of females and 41.9 % consists of males. Doctors, nurses, other healthcare personnel and administrative personnel constitute 8.1%, 35.7%, 22.9% and 33.3% of the participants respectively. While, 53.8% of the medical staff participated in the survey are 32 years old and below, 59% has a working experience of 9 years and below, which is the average working period. When considered in terms of education, while 9% and 28.6% of the participants are primary school graduate and high school graduate respectively; 27.6% 28.6% and 6.2% have associate, bachelor and post graduate degrees respectively. While large part of the participants (71%) is married, 27.1% work as contracted and subcontractor personnel and 72.9% work as permanent staff. Mean and standard deviation values with respect to sub-dimensions of occupational safety of medical staff took part in the survey are indicated in Table 1. According to this, it draws attention that participants gave the highest average points to the occupational safety sub-dimensions of protective measures and rules (3.53 ± 1.05) and to the control of materials, tools and equipment (3.50 ± 1.34). These two sub dimensions are followed by the sub-dimensions of physical environment (3.44 ± 1.17), health screening and record systems (3.36 ± 1.10), accidents and intoxications (3.34 ± 1.08), occupational diseases and complaints (3.24 ± 0.87). As for the lowest average point, the participants gave the lowest point to the sub-dimension of executive support and approaches (2.74 ± 1.18).

Table 1: Means, Standard Deviations, and Inter-Correlations

Occupational Safety Sub Dimensions	Means	Standard Deviations
Occupational Diseases and Complaints	3.24	0.87
Health Screening and Record Systems	3.36	1.10
Accidents and Intoxications	3.34	1.08
Executive Support and Approaches	2.74	1.18
Material, Tools and Equipment Management	3.50	1.34
Protective Measures and Rules	3.53	1.05
Physical Environment	3.44	1.17

When scores with respect to sub-dimensions are investigated based on question, it is found out that the highest points as regards the sub-dimension of occupational diseases and complaints are given respectively to respiratory tract diseases (3.97 ± 1.31), allergic diseases such as dermatitis (3.80 ± 1.44), varicose is (3.55 ± 1.58) and mental problems such as depression (3.50 ± 1.47). As well as physical problems such as hernia problems and digestive system, high points are also given to emotional problems such as discordance, burnout etc., although it is less. As for the lowest scored occupational diseases, they are infection diseases such as hepatitis, AIDS etc. (2.55 ± 1.45), and the problem of fatigue (2.57 ± 1.47) and insomnia (2.90 ± 1.56). Rather low a point (2.91 ± 1.31) is given to the question of "Soft tissue trauma is slightly seen in the organization (sharps and needle stick injuries etc.). In other words, it is stated that soft tissue trauma is experienced rather frequently. While the participants give high points to the question "Work accidents such as burning (3.46 ± 1.33) and intoxication (3.45 ± 1.29) are not much experienced in the institutions" regarding the sub-dimension of accidents and intoxications; they gave lower points to the questions of falling, electric shock (3.27 ± 1.30) and contusion and compression work accidents on organs such as legs and hands etc., (3.36 ± 1.23) are slightly observed within the organization.

Participants gave the lowest average point (2.74 ± 1.18) as regards occupational safety to executive support and approaches sub-dimension (see Table 1). When the questions with respect to this sub-dimension are examined in detail, the participants gave the highest point (3.13 ± 1.32) to the question "Management acts caringly when issues regarding safety are conveyed to them". However, the participants gave low points to the questions "Management immediately remedies the problems regarding safety (2.80 ± 1.37), organizes meetings such as entertainment and education to reduce psychological pressure (2.40 ± 1.44), performs applications to increase motivation and job satisfaction (2.55 ± 1.44).". Further, the participants also gave lower points to the number of nurses (2.54 ± 1.52) and doctors (2.84 ± 1.37) in proportion to the number of patients taking health service within the institutions. Despite all these, participants gave high points to the sub-dimensions regarding management's control of material, tools and equipment, protective measures and rules, physical environment and health screening and recording system (see Table 1). Among the questions with respect to this sub-dimension, they gave high points to the questions "Management takes precautions for toxic, medical waste etc., (3.72 ± 1.17) and to protect from liquids such as blood etc., (3.62 ± 1.19), provides protective material (3.73 ± 1.30), gets tools and equipment controlled regularly (3.49 ± 1.32), lightening is proper and adequate (3.58 ± 1.35), work accident (3.59 ± 1.24) and sharp object injuries forms are used (3.58 ± 1.27).". However; they gave the lowest points to the questions "Purchased material and devices are of high quality (3.30 ± 1.30), ventilation system of working environment is proper and adequate (3.15 ± 1.48), and determination for occupational diseases is carried out and relevant forms are used (3.13 ± 1.34), compared to other questions within the relevant sub-dimensions. Despite all these, the participants gave lower points for the questions "Ventilation system of the working environment is proper and adequate (3.15 ± 1.48) and determination for occupational diseases is carried out (3.13 ± 1.34). Average points with respect to occupational safety of those medical staff participated in the survey are compared based on their ages, genders, educational status, professions, and staff status and results of the performed test are indicated in Table 2 and Table 3.

Table 2: The Views of the Respondents on Occupational Safety Sub Dimensions According to Individual Characteristics

Individual Characteristic	Occupational Diseases and Complaints		Health Screening and Record Systems		Accidents and Intoxications	
	Mean	SD	Mean	SD	Mean	SD
<i>Age (years)</i>						
≤ 32	3,22	0,82	3,35	0,99	3,29	0,97
≥ 33	3,27	0,93	3,37	1,22	3,40	1,19
	t=-0,421; p=0,674		t=-0,119; p=0,906		t=-0,733; p=0,464	
<i>Gender</i>						
Female	3,01	0,85	3,38	0,95	3,28	0,93
Male	3,56	0,80	3,32	1,28	3,42	1,26
	t=-4,810; p=0,000		t=0,401; p=0,689		t=-0,878; p=0,381	
<i>Educational Level</i>						
Primary level	3,43	0,78	3,56	1,53	3,39	1,49
High school level	3,51	0,83	3,28	1,25	3,22	1,14
Associate degree	3,14	0,88	3,39	1,14	3,56	0,97
Undergraduate degree	2,98	0,86	3,33	0,82	3,26	0,94
Postgraduate degree	3,37	0,82	3,44	0,55	3,22	1,18
	$\chi^2=14,253$; p=0,007		$\chi^2=2,087$; p=0,720		$\chi^2=4,147$; p=0,387	
<i>Profession</i>						
Physician	3,22	0,83	3,36	0,72	3,45	1,31
Nurse	2,73	0,84	3,40	1,00	3,46	0,86
Other health personnel	3,47	0,73	3,34	1,01	3,03	1,00
Administrative personnel	3,63	0,74	3,33	1,33	3,40	1,25
	$\chi^2=41,887$; p=0,000		$\chi^2=0,236$; p=0,972		$\chi^2=6,058$; p=0,109	
<i>Status of Personnel</i>						
Public servant*	3,10	0,90	3,26	1,03	3,34	1,01
Contractual and subcontractor personnel	3,61	0,67	3,62	1,24	3,33	1,25
	t=-3,922; p=0,000		t=-2,122; p=0,035		t=0,076; p=0,940	

*Permanent staff (Law No. 657)

When test results comparing the points given by the participants to “occupational diseases and complaints” sub-dimension based on several variables are considered, it is observed that the scores of participants as regards this dimension show statistically significant differences as per gender ($t=-4.810$; $p<0.05$), education level ($\chi^2=14.253$; $p<0.05$), profession ($\chi^2=41.887$; $p<0.05$) and staff status ($t=-3.922$; $p<0.05$). It can be said that female participants (3.01) gave lower points than male participants (3.56) for occupational diseases and complaints dimension and that they display a more negative attitude as regards this dimension. When considered in terms of education level, it is seen that highest points are given by high school graduates (3.51) and lowest points are given by bachelors (2.98) to occupational diseases and complaints dimension and the results of Scheffe test performed reveal out that high school graduates think differently than bachelors. When considered in terms of professions of the participants, it is found out that the nurses have the most adverse opinion about occupational diseases and complaints (2.73) followed by the doctors (3.22). When the results of Scheffe test are examined, it draws attention that nurses (2.73) think differently than other medical staff (3.47) and administrative personnel (3.63). Besides it is found out that permanent staff (3.10) gave lower points to occupational diseases and complaints dimension than those participants working as contractual and subcontractor personnel (3.61) (see Table 2). When test results comparing the points given by the medical staff took part in the survey to “health screening and recording systems” sub-dimension of occupational safety based on several variables are considered, it is observed that points differentiated based on staff status ($t=-3.922$; $p<0.05$). According to this, those participants who work as contractual and subcontractor personnel (3.61) gives higher points to health screening and record systems dimension than those of permanent staff (3.10) and express a more positive opinion. When test results comparing the points given by medical staff to “accidents and intoxications” dimension based on several variables are considered, it is seen that the points of groups as regards accidents and intoxications dimension did not differ statistically (see Table 2).

Table 3: The Views of the Respondents on Occupational Safety Sub Dimensions According to Individual Characteristics

Individual Characteristic	Executive Support		Material, Tools and Equipment Management		Protective Measures		Physical Environment	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<i>Age (years)</i>								
≤ 32	2,71	1,17	3,49	0,98	3,49	1,00	3,29	1,18
≥ 33	2,76	1,20	3,51	1,67	3,59	1,10	3,62	1,14
	$t=-0,330$; $p=0,742$		$t=-0,083$; $p=0,934$		$t=-0,694$; $p=0,489$		$t=-2,013$; $p=0,045$	
<i>Gender</i>								
Female	2,85	1,20	3,57	1,43	3,54	0,98	3,45	1,14
Male	2,58	1,14	3,40	1,20	3,53	1,15	3,43	1,23
	$t=1,600$; $p=0,111$		$t=0,908$; $p=0,365$		$t=0,997$; $p=0,922$		$t=0,098$; $p=0,922$	
<i>Educational Level</i>								
Primary level	2,41	1,41	3,63	1,59	3,82	1,53	3,66	1,66
High school level	2,54	1,18	3,49	1,15	3,48	1,23	3,34	1,33
Associate degree	3,22	1,25	3,65	1,03	3,71	0,93	3,73	0,98
Undergraduate degree	2,56	0,99	3,38	1,71	3,40	0,75	3,29	1,02
Postgraduate degree	2,78	0,62	3,23	1,10	3,20	0,97	3,04	0,80
	$\chi^2=14,061$; $p=0,007$		$\chi^2=8,201$; $p=0,084$		$\chi^2=6,824$; $p=0,146$		$\chi^2=8,926$; $p=0,063$	
<i>Profession</i>								
Physician	2,55	0,83	2,99	1,06	3,18	0,89	3,26	0,85
Nurse	2,87	1,25	3,66	1,64	3,68	0,94	3,41	1,18
Other health personnel	2,71	1,15	3,33	0,96	3,28	0,99	3,17	1,09
Administrative personnel	2,66	1,19	3,57	1,23	3,64	1,20	3,71	1,25
	$\chi^2=1,039$; $p=0,792$		$\chi^2=4,619$; $p=0,202$		$\chi^2=7,117$; $p=0,068$		$\chi^2=9,426$; $p=0,024$	
<i>Status of Personnel</i>								
Public servant*	2,76	1,15	3,37	1,38	3,42	0,94	3,37	1,10
Contractual and subcontractor personnel	2,68	1,27	3,85	1,16	3,85	1,24	3,64	1,35
	$t=0,421$; $p=0,674$		$t=-2,351$; $p=0,020$		$t=-2,701$; $p=0,007$		$t=-1,451$; $p=0,148$	

* Permanent staff (Law No. 657)

Test results comparing the points, based on several variables, given by survey participants to “executive support” sub-dimension of occupational health are indicated in Table 3, and it is seen that points show a statistically significant difference based on education level ($\chi^2=14.061$; $p<0.05$). While those having associate degree gave the highest point to executive support with 3.22, the lowest points are granted by primary school (2.41) and high school (2.54) graduates. Scheffe test indicates that those participants with associate degree think differently than primary school and high school graduates and that they have a more favorable opinion about the issue of getting executive support. It is further found out that the points of survey participants given for the dimension of “material, tools and equipment control” and “protective measures” differed according to staff status ($t=-2.351$, $p<0.05$; $t=-2.701$, $p<0.05$) and that the participants working in contractual personnel and those working as subcontractor personnel in both dimensions gave higher points than those of permanent staff and that they expressed a more favorable opinion about these dimensions. Referring to Table 3, it is observed that the points given by medical staff participated in the study for “physical environment” sub-dimension showed statistically significant differences based on their professions ($\chi^2=9.426$, $p<0.05$). According to this, while it is the administrative personnel that express the most favorable opinion about physical environment sub-dimension (3.71); the most adverse opinion is expressed by the doctors (3.26) and other medical staff (3.17). The results of Scheffe test indicate that administrative personnel think differently than other occupational groups and gave higher points for this dimension.

Discussion and Result

To the extent that work environment is made healthy and safe is important in terms of the health and safety of employees; it also affects labor productivity of employees in a positive manner. Besides, safe care of patient can be ensured by means of health employee and safe work place environment. While ensuring patient care, medical staff encounters many risk factors and health issues. This study was planned to determine whether occupational health and safety is ensured for the nurses, doctors, other medical staff and administrative personnel working in health institutions under Association of Public Hospitals in one of the medium-sized provinces in Turkey. Participants stated that protective measures, control of materials and tools and equipment are ensured better and physical environment is good in health institutions where they work; that there are occupational diseases and complaints and work accidents but executive support is not ensured adequately. Further average points with respect to occupational safety sub-dimension of those medical staff took part in the survey were compared according to their socio-demographic characteristics and it was seen that their evaluations as regards occupational safety change based on gender, training level, profession and staff status. Participants stated that they experience mostly respiratory tract diseases, allergic problems, varicose is and mental problems such as depression respectively in health institutions where they work. It is further thought that as well as hernia problems and physical problems such as digestion system, emotional problems such as discordance and burnout are also encountered in health organizations where the survey was conducted.

As to the lowest scored occupational diseases, they are infection diseases such as hepatitis and AIDS etc., and the problem of exhaustion and insomnia. Participants stated that accidents in connection with falling, electric shock, soft tissue trauma and contusion and compression in the organs are frequently observed in their organizations; however, accidents regarding burning and poisoning are less observed in proportion to other accidents. As a result of the study performed on 956 medical staff working in a university hospital, two state hospitals and 54 health care centers under Provincial Health Directorate located in another province of Turkey, it was found out that injury experience is 79.1%. It was remarked that most of the injuries are experienced through tools contaminated with blood and injector needle (Altıok et al., 2009). In the study of Vredenburg (2002) carried out in 62 public and private hospitals carrying service in several states of United States of America, 15 kinds of injury types over 3-year hospital data were specified. Most frequently observed injury types are respectively sprain, rupture and fractures with 34%, pinpricks and blood exposure with 13%, wounds and contusion with 13%, and cutting with 9%. In a study in a clinic operating in Hamadan, Iran carried out by Ghannad and his friends (2002) between 2007 and 2008, medical staff exposed to 89 pinprick and rush of blood in total together with mucosa. Most exposed medical staff is nurses with a percentage of 53.6. The records of medical staff regarding sharp injuries and exposure to body fluid between 2000 and 2003, rendering service in a 1000-bed hospital providing tertiary health care services in Australia were examined and as a result, 640 records in total (hospital staff and not a staff of the hospital) were discovered. Injury rate with sharp objects is 47% for nurses, 38% for other medical staff and 5% for the administrative personnel. As for exposure to body fluid, it is 68% for nurses, 16% for other medical staff and 4% for administrative personnel. And the other percentages belong to those who are not working in the hospital (Bi et al., 2008). As is seen from the studies, medical staff expose to quite a few injuries and body fluid.

In this study, it is thought that medical staff mostly experience injuries such as contusion and compression and expose to soft tissue trauma such as pinprick and bistoury cut. Just as in other studies, mostly nurses stated also in this study that they exposed to injuries and body fluid. Whereas the nurses expressed the most adverse opinion about the dimension of occupational illnesses and complaints; it is once the nurses that think that executive support is provided much more although it makes no difference statistically. In the analysis performed on 1.962 nurse data by Clarke et al. (2002), it is determined that executive support and organizational climate are good and that there are almost no occupational health risk factors and injuries in the units where the number of personnel is adequate. Accordingly, in the study by Kazanc, Karayemişoğlu and Baykal (2011) as well, performed on 618 nurses working in hospitals with different ownerships, several problems are specified stating that findings as regards health and safety of those working in hospitals which took certificate of quality; however the precautions in university hospitals are inadequate, that nutritive and recreation environments of the employees are not proper(43.7%), that there is no improvement regarding the conditions of work environment and that directors do not take the employees' opinions about this issue (56%).

In the study carried out by Önderet al., (2011) on 1.000 doctors and nurses in total, working at a training and research hospital, it is determined that 19.1% of doctors and 39.9% of nurses have a feeling of weariness and burnout; 44.0% of the doctors and 50.1% of the nurses have loss of concentration; 17.3% of doctors and 25.2% of nurses have depression; 69.8% of doctors and 72.9% of nurses have overstress. In the study performed on 457 doctors in total in 21 hospitals in Shanghai by Wang et al., (2014) and on 1.134 doctors in China by Sun et al. (2012), it is specified that doctors have much work stress arising out of themselves and their working conditions and therefore, burnout syndrome is highly experienced. Also in our study, emotional problems such as discordance, burnout and mental problems such as depression are scored, although low. Based on the assessments of healthcare personnel, it was seen that occupational safety in health organizations where they work is inadequate in terms of occupational diseases and complaints, executive support and approaches and this is not satisfactory for them. As it was not encountered in the literature search with any earlier study performed on occupational health and safety of medical staff in this province, no case comparison regarding the situation before the refugees arrived could be carried out with the data obtained. In this study, current situation of medical staff with respect to occupational safety could be revealed. It is found out that the results obtained share similarities in terms of both country level, and with the results of surveys carried out in other countries. It is considered that this study may contribute to the prevention or minimization of occurrence of work accidents or occupational diseases of medical staff, loss of health labor force and prevention of problems likely to develop dependent on such loses. It is further thought that also the safety of patients could be ensured thanks to the fact that employees work more safely, peacefully, happily and satisfactorily. Furthermore, it is believed that the costs caused by risks and damages due to lack of occupational safety can also be reduced.

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