The Relationship Between Occupational Health and Safety Awareness of Health Workers and Work Efficiency

Sağlık Çalışanlarının İş Sağlığı ve Güvenliği Farkındalığı ile İş Verimliliği Arasındaki İlişki

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ABSTRACT

This study focused on analyzing the knowledge and attitudes of the staff members concerning occupational health and safety in the settings where surgical operations are executed and investigating the effect on their productivity.

The study was conducted in five public hospitals in Trabzon city center. The sample was calculated as 256 in 95% confidence interval by going through the total population including doctors, nurses and health technicians. Participation consent, institutional clearance, scientific research permit, and research ethics committee approval, which are necessary to conduct the study, were received from natural and legal entities accordingly.

The study results revealed that the knowledge level of the study group about occupational health and safety was 38.3% (good, excellent). If there is an occurrence of an occupational accident at the workplace, the influence rates of the participants' productivity were as follows: 73.8% mostly and always affected, 55.5% mostly and always experienced a decrease in the quality of work, and 89.1% mostly and always affected, emphasizing on employee health. The study findings indicated that occupational health and safety-related practices influence employee productivity.

Keywords: Efficiency, Occupational Health and Safety, Surgery

ÖZ

Bu araştırma, cerrahi uygulamaların yapıldığı birimlerde çalışanların; iş sağlığı ve güvenliği hakkında bilgi ve tutumlarının incelenmesi ve verimlilikleri üzerindeki etkisinin araştırılması amacıyla yapılmıştır.

Bu çalışma, Trabzon il merkezinde bulunan beş tane kamu hastanesinde yapılmıştır. Çalışmaya doktor, hemşire ve sağlık teknisyenleri olmak üzere toplam evren üzerinden gidilerek %95 güven aralığında örneklem 256 olarak hesap edilmiştir. Çalışmanın yürütülebilmesi için gerekli katılımcı izni, kurum izni ve bilimsel araştırma ve etik kurul izinleri alınmıştır.

Çalışma kapsamında elde edilen veri sonuçlarına göre; çalışma grubunun iş sağlığı ve güvenliği hakkında sahip oldukları bilgi düzeyi %38,3 (iyi, çok iyi)'tür. Katılımcıların iş yerinde iş kazası yaşanması sonucunda verimliliğinin etkilenme durumuna ilişkin personelin %73,8'i çoğunlukla ve her zaman etkilendiğini, %55,5'i çoğunlukla ve her zaman çalışma kalitesinde düşüş yaşandığını, çalışan sağlığına önem verilmesi %89,1 ile çoğunlukla ve her zaman etkilediğini belirtmiştir. Araştırma sonucunda iş sağlığı ve güvenliğine yönelik uygulamaların çalışan verimliliğini etkilediği bulunmuştur.

Anahtar Kelimeler: Verimlilik, İş Sağlığı ve Güvenliği, Cerrahi

** This study is derived from the 1st author's master thesis.*

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INTRODUCTION

As in all fields of work, OHS is a crucial aspect that concerns everyone accountable and requires participation, particularly in health, in line with all necessary legal regulations. Encountering prescribed industrial diseases and accidents around the workplace is something undesirable and disregarded. Workplace accidents and work-related diseases cause multiple losses in terms of their consequences. The government, businesses, employers, and employees all suffer substantial losses in this regard. In addition to the extreme work schedule and patient density in the health sector, considering especially invasive interventions, locations performed surgical operations frequently, the operating environment and conditions in the health sector with employee behaviors, the rate of occupational accidents is relatively higher in the health sector than in other fields. Such constraints have the potential to impact staff members and their work performance. OHS refers to safeguarding employees from all types of occupational accidents (OA) and diseases (OD) that potentially occur within the scope of the actual work and conveying the workplace into a safe and healthy state. The objectives of OHS in this context are to ensure the safety of employees, enterprises, and productions. In addition to being a legal obligation, OHS is a value to assign to the human being mandatorily.[1] The subject is multidisciplinary, encompassing several technical and medical disciplines.[2] Assuring the compliance of the job to the employee and the employee's eligibility for that job is among the rudimentary prerequisites. Consequently, it is a crucial matter requiring holistic supervision in its physical, psychological, and social aspects and sustaining its protection and progress.[3]

Trying to protect human health, treating diseases, ensuring the sustainability of welfare and improving human health can be defined as health services. Health services are provided within the scope of the social state. Although the public and private sectors provide services in this field, most of the health services are provided in public hospitals.

Numerous health professionals, especially physicians and nurses, deliver a significant portion of the health services.[4] The health sector is an area that retains many risks. As in all other sectors, this sector is also open to considerable risk factors. In this reference, occupational accidents and industrial diseases in the work environment compel undesirable financial losses for the employee and the institution, in addition to their severe impact on the employee's productivity; as a result, the institution. Therefore, studying the shortcomings in occupational health and safety issues and taking the necessary measures in advance is one of the most critical elements in improving work-related productivity in organizations.[5] Numerous factors such as physical conditions, effective communication, financial compensation for the work completed, cooperation in organizational recognition and problem-solving stages, feeling admired, and thoughts and attitudes in this direction potentially impact organizational performance.[6] Supporting employees physically and mentally in terms of employment psychology and preserving and sustaining them in this state is vital for occupational safety and health.[7] Therefore, negative situations that may arise due to the execution of work in working environments will cause the emergence of stress phenomenon on employees. This situation will pave the way for dangerous situations to occur and turn into risks in terms of OHS.[8] Application studies on occupational health and safety raise awareness of dangers among individuals.[9] Safety culture and practices are highly correlated with increasing the OHS knowledge and behaviors of those performing real jobs in the working environment.[10]

Different performance measures have been used in studies to evaluate the effectiveness of productivity in occupational

health and safety. In order to guide the improvements to be made in occupational health and safety, it is an important solution point to not only monitor the effectiveness but also to measure the effectiveness and to distinguish between efficient and inefficient situations. Therefore, efficiency takes into account the resources we use and the results obtained. In line with productivity, resources should be used to promote safer working environments. Therefore, it aims to measure the effectiveness of safe working environment from a business perspective.[38,39]

Appropriate workplace-based models need to be developed and checked with case studies. The resulting undesirable situations are identified and evaluated. The workplace tries to identify best practices by making comparisons between operations and processes within the workplace. As a result, the productivity of both employees and the workplace is monitored.[38,40] Similar to other studies conducted in our study, a study was conducted to examine the situations that may affect the work efficiency of employees' occupational health and safety awareness.

The study aimed to assess employees' knowledge levels and attitudes about Occupational Health and Safety (OHS) in the settings where surgical operations are executed and investigate the effect of this state on their productivity.

MATERIAL AND METHOD

Ethical Dimension of Study

Health professionals delivered their written consent to participate in the study; consequently, the study was conducted in compliance with the ethical rules. The General Secretariat of the Trabzon Provincial Public Hospitals Union presented the scientific research approval, dated May 20, 2015, and the Scientific Research and Publication Ethics Committee of Gümüşhane University granted the research ethics committee approval, dated April 30, 2015, and numbered 2015/2.

Sampling of Study

This study was carried out on the health care professionals working in surgical units (operating rooms and surgical services) of five public hospitals in Trabzon city center between May 4, 2015, and September 15, 2015. This study is a descriptive cross-sectional study. The study population is 757 people, 183 of whom are doctors, 497 are nurses and 77 are technicians. With a 95% confidence interval and 5% margin of error, the sample size was calculated as 256 and the number of people to be reached was determined by stratification sampling method (taking into account the total employee numbers in these hospitals during the study period). Based on the total sample, 62 doctors, 168 nurses and 26 technicians were reached.

Data Collection Tools and Analysis

A questionnaire form comprising questions was generated by combining the 'OHS Awareness Questionnaire' designed by Bayılmış (2013) and the data retaining details about the surgical field studied within the scope of the literature. In order to investigate occupational health and safety awareness, the questionnaire consists of a total of 23 main questions, 2 of which consist of 5 sub-questions and 1 of which consists of 4 sub-questions. The questions that make up the questionnaire form consist of yes/no and multiple choice (5-point Likert scale) question types. The data collection form consists of sections including questions enabling data identification for the participants' demographic features, information about the surgical unit, and OHS-related data for these units. The face-to-face interview technique was used to collect the study data. The data were entered into IBM SPSS Statistics 22 data analysis package and then analyzed. Frequency, percentage, chi-square tests, and arithmetic mean were applied in the data analysis process. Statistical significance level was taken as p=0.05.

RESULTS AND DISCUSSION

This section displays the data related to the study findings. The demographic characteristics of the participants are as follows: Considering the age variable, 24.6% (63 persons) of the participants ranged between the ages of 18 and 25, while 30.1% (77 persons) were between the ages of 26 and 30, 34% (87 persons) between 31 and 40, and 11.3% (29 persons) were 41 and over. According to the gender variable, 73.8% (189 persons) of the participants were female, while 26.2% (67 persons) were male. Regarding the marital status variable, 60.2% (154 persons) of the participants were married, whereas 39.8% (102 persons) were single. Concerning the education status variable, 15.2% (39 persons) of the participants were high-school graduates, and 20.7% (53 persons) completed associate degree programs; however, 35.5% (91 persons) of the participants had bachelor's degrees, 16.8% (43 persons) had master's degrees, and 11.7% (30 persons) had doctoral degrees. Considering the occupational status variable, 9.8% (25 persons) of the participants were health technicians, while 5.1% (13 persons) were medical assistants, 60.2% (154 persons) were nurses, and 25% (64 persons) were doctors. Regarding the working period variable, 19.5% (50 persons) of the participants worked daytime, 2.7% (7 persons) had the night shift, and 16.4% (42 persons) were on-call staff; however, the majority of the participants – approximately 61.3% (157 persons) – worked in a mixed form, performing in all working periods. According to the occupational experience variable, 3.5% (9 persons) of the participants had less than a year, while 42.2% (108 persons) had 1-5 years, 21.5% (55 persons) had 6-10 years, and 32.8% (84 persons) worked 11 years and over. Regarding the working period variable, 55.6% (40 persons) of the participants had 1-5 years of operating room experience, while 25% (18 persons) had 5-10 years, and 19.4% (14 persons) had ten years and over. Additionally, 61% (112 persons) of the participants served in the surgical service for 1-5 years, 22.2% (41 persons) for 5-10 years; however, 16.8% (31 persons) stated that they served in such services for ten years or more.

According to Table I data revealed that 30.1% of the participants described their OHS knowledge level as good; however, 8.2% placed themselves at an excellent rate. Approximately 75% of the participants stated that they somehow received OHS training, according to the analysis of the participants' OHS training backgrounds. There was a significant relationship (p=0.000) between the occupational experience interval of the study group and their status of receiving OHS training.

Table 1. Knowledge Levels of the Study Group on OHS

	Frequency (count)	Rate (%)
Very Less	11	4.3
Less	42	16.4
Moderate	105	41.0
Good	77	30.1
Excellent	21	8.2
Total	256	100.0

*OHS: Occupational Health and Safety

According to Table II data considering the organizational accident (OA) experiencing status of the participants, while 72.7% (184 persons) stated no OA experience, 28.2% (72 persons) indicated that they experienced OA in their workplaces. Among those 72 participants who claimed to have OA in their workplaces, 83.3% (60 persons) stated the OA experience 1-3 times, ten of them (13.8%) had 3-5 times, and 2 participants (2.7%) remarked that they had five or more times OA in their workplaces. Regarding the question posed to the study group whether they experienced any occupational-industrial disease (OD), 91% (233 persons) of the articipants stated that they experienced no disease, whereas the remaining 9% (23 persons) participants responded to having an OD in their workplaces.

Table 2. Distribution of the OA or OD-Experiencing Status of the Study Group

	OA-Experienced		OD-Experienced	
	Frequency	Rate (%)	Frequency	Rate (%)
No	184	72.7	233	91
Yes	72	28.1	23	9
Total	256	100	256	100

*OA: Occupational Accident, OD: Occupational Disease

According to Table III data Statistical analysis of the data revealed that there was no significant relationship between the status of receiving OHS training and either OA (p=0.945) or OD-experiencing (p=0.870) in the workplaces.

Table 3. Data Distribution on the Relationship Between the Statuses of the Study Group on OHS Training and OA-Experiencing- OD-Experiencing

OHS Training Status		OA-Experiencing Status			
		No	Yes	Total	χ^2/p
No	**Person**	48	0	48	
	%	100%	0.0%	100%	
Yes	**Person**	133	1	135	χ^2=0.749
	%	98.5%	0.7%	100%	p=0.945
Total	**Person**	183	1	185	
	%	98.9%	0.5%	100%	
OHS Training Status		**OD-Experiencing Status**			
		No	**Yes**	**Total**	χ^2/p
No	**Person**	56	5	61	
	%	91.8%	8.2%	100%	
Yes	**Person**	174	18	192	χ^2=0.278
	%	90.6%	9.4%	100%	p=0.870
Total	**Person**	232	23	255	
	%	91.0%	9.0%	100%	

*OA: Occupational Accident, OD: Occupational Disease, ** p=0.05

According to Table IV indicated that the study group asserted more OA-experiencing under inexperience, inattentiveness, failure to utilize personal protective equipment, lengthy working hours, and severe workload categories. Accordingly, while the highest value was for the severe workload category, with an average of 4.13, the prolonged working hours followed it with an average of 4.00. The remaining participant replies for the categories of inattentiveness, failure to utilize personal protective equipment, and inexperience averaged 3.60, 3.56, and 3.30, respectively.

Table 4. Distribution of OA-Experiencing Reasons by Working Group Definition

	Average	Standard Deviation
Inexperience	3.30	1.030
Inattentiveness	3.60	0.903
No Personal Protective Usage	3.56	0.925
Lengthy Working Hours	4.00	0.842
Severe Workload	4.13	0.792

*OA: Occupational Accident

The vast majority of the study group (83.62%) emphasized that the bulk of OA was avoidable. Furthermore, 84.8% of the participants underlined that complying with the OHS rules was not a waste of time. The study group further stated that prevention of the OA and OD-experiencing fell under the responsibility of the government, employer, and employee with an average of 3.80, 3.77, and 3.41, respectively. Assessment of the employees' previous injuries with penetrating-stinging-sharp objects demonstrated that 52.7% of them (135 persons) underwent such incidents, whereas 47.3% (121 persons) experienced no such occasions. The frequency of experiencing such incidents with penetrating-stinging-sharp objects in the study group was as follows: 37.5% (96 persons) experienced it 1-3 times, while 10.5% (27 persons) injured 3-5 times, and 3.9% (10 persons) had five or more injuries. When asked about how participants reacted to injuries, the replies were as follows: 13.3% (23 persons) claimed that they reported the incident to the supervising unit, 18.5% (32 persons) stated having their hepatitis marker results checked immediately, 29.5% (51 persons) checked if the patient had an infectious disease, 6.4% (11 persons) made the injury site bled, 15.0% (26 persons) washed their hands straight away, 13.9% (24 persons) treated their hands with alcohol, and 3.5% (6 persons) answered that they took no action. Analysis of the study group data about preventive measures against injuries verified that using masks was the most preferred technique, with an average of 3.52.

This measure was followed by using double gloves, wearing a protective apron, and wearing protective glasses with an

average of 3.14, 3.07, and 2.14, respectively. Surprisingly, 108 participants in the study group stated that they used neither of the preventive equipment mentioned above. However, 7.4% (8 persons) of the participants claimed that they had vaccines as preventive measures against injuries. Finally, the participants reasoned the failure in using preventive measures against injuries with the following replies: 18.5% (20 persons) replied that they could not move freely with preventive equipment, while 6.5% (7 persons) answered as they did not have time to take precautionary measures, 31.5% (34 persons) indicated the lack of equipment, 2.8% (3 persons) opined that such incidents had no infection risk, and 33.3% (36 persons) answered that they were aware that the patient had no contagious disease.

According to Table V data the answers given to the question after how many hours the participants were distracted while working were as follows: 1.6% (4 persons) for one hour, 5.9% (15 persons) 3 hours, 14.5% (37 persons) 4 hours, 29.2% (75 persons) 6 hours, 34.3% (88 persons) 8 hours, and 14.5% (37 persons) answered 10 hours and above. Accordingly, while the vast majority of participants seemed capable of working during duty hours without distraction, some participants became distracted even after one (some after 3-4 hours) hour of work.

Table 5. Data on the Number of Working Hours in Surgical Units After Participants Start to Get Distracted

After How Many Hours Do You Get Distracted?	Frequency	Rate (%)
1 hour	4	1.6
3 hours	15	5.9
4 hours	37	14.5
6 hours	75	29.2
8 hours	88	34.3
10 hours and over	37	14.5
Total	256	100.0

Analysis of the relationship between working duration and injury rate with surgical equipment among the participants resulted in the following data: while 1.2% (3 persons) of the personnel stated never injured, 7.4% (19 persons) indicated rarely, 13.3% (34 persons) occasionally, 55.5% (142 persons) mostly, and 22.7% (58 persons) always, indicating that the more the working duration in the hospital, the more injuries occurs.

In another question, when asked if an experienced Occupational Accident in the workplace affected their work productivity, 57% (146 persons) of the participants stated that it mostly affected their working productivity, whereas 16.8% (43 persons) replied that it always impacted it.

However, for the question posed whether emphasizing employee health in their workplace delivered better and more work productivity, the answers were as follows: 0.4% (1 persons) of the participants replied as never, while 3.9% (10 persons) responded as rarely, 6.6% (17 persons) occasionally, 46.5% (119 persons) mostly, and 42.6% (109 persons) always. When asked the study group whether there was any change in their motivation due to an experienced OA, the replies were as follows: 3.9% (10 persons) of the participants replied as never, whereas 11.3% (29 persons) responded as rarely, 19.9% (51 persons) occasionally, 53.1% (136 persons) mostly, and 11.7% (30 persons) always. For the question of whether employees experienced any decline in their willingness to work by occupational accidents, their replies were as follows: %2.7 (7 persons) responded as never, %12.1 (31 persons) rarely, %24.2 (62 persons) occasionally, %47.3 (121 persons) mostly, and %13.7 (35 persons) always. Similarly, employees' responses to the question of whether they experienced any decline in working quality were as follows: 6.6% (17 persons) responded as never, while 16% (41 persons) answered as rarely, 21.9% (56 persons) occasionally, 41.4% (106 persons) mostly, and 14.1% (36 persons) always. Four more questions have also been posed to the study group to measure their replies accordingly. First, participants' answers to the question of whether they sensed any modification in desiring to go to work due to an OA experienced were as follows: 30.1%

of the participants (77 persons) replied as occasionally, while 37.9% (97 persons) mostly; 9.4% (24 persons) always. However, there was no reply for the 'never' and 'rarely' categories. Second, when assessing the answers given to the question of whether they considered quitting the job due to an experienced OA, 22.7% (58 persons) of the participants replied as never, whereas 30.1% (77 persons) responded as rarely and 28.5% (73 persons) occasionally. None of the participants answered this question as mostly or always. Third, the answers to the question of whether they considered changing their workplace due to an experienced OA were as follows: 14.8% (38 persons) of the participants replied as never, while 27% (69 persons) responded as rarely, 28.9% (74 persons) occasionally, 21.5% (55 persons) mostly, and 7.8% (20 persons) always. Finally, according to the analysis of the replies on whether they consider switching their profession due to an experienced OA, they replied as follows: 12.1% (31 persons) of the participants responded as never, whereas 19.1% (49 persons) replied as rarely, 23% (59 persons) occasionally, 27.7% (71 persons) mostly, and 18% (46 persons) always, signifying that the vast majority of the participants somehow considered switching their occupations.

This study aimed to analyze the OHS knowledge and attitudes of surgical clinic staff and assess the impact of OHS on employee productivity in the working environment. According to the study findings, the OHS knowledge level of the participants in the study group was 38.3% (good, excellent). Furthermore, 75% of the participants had received OHS training previously. Consequently, the relationship between their OHS knowledge level and the received OHS training was statistically significant (p=0.000). Bayılmış (2013) conveyed similar findings indicating a correlation between training level and OHS knowledge.[11] The current study also analyzed the relationship between participants' OHS training and the years in occupation; as a result, there was a statistically significant link between the two parameters (p=0.000). Vaz et al. (2010) discovered that the awareness level in taking general precautions was higher among staff with over 16 years of occupational experience than those having less than five years in the health sector.[12] About 83.6% of the study group opined that many occupational accidents were in avoidable form. Within the scope of OHS, the perception of the safety climate to be created among managers and employees is highly critical. Nearly 84.8% of the study group opposed the notion of wasting time complying with OHS rules. However, 74.1% of employees disagreed that OA could be entirely avoided, according to Taşçı (2016).[13] About the study group's responses regarding prior injuries with surgical penetrating-stinging-sharp objects, 52.7% (135 persons) of the participants underwent such incidents, whereas 47.3% (121 persons) experienced no such occasions. The frequency of participants' prior injuries by surgical penetrating-stinging-sharp objects revealed that 37.5% (96 persons) of the participants experienced such injuries 1-3 times, 10.5% (27 persons) had 3-5 times, and 3.9% (10 persons) had five and over. Castro et al. (2009) also reported that 35.9% of the hospital staff members averaged 1-4 times work accidents/occupational-industrial diseases, while an additional 1.4% had even five or more times.[14] Şentürk and Sunal (2018) found that 48.3% of the healthcare professionals had no occupational accident/disease, whereas 28.3% had occupational diseases 1-4 times and 23.4% had five or more times of occupational accidents/diseases.[15] We can say that nurses working in operating rooms are exposed to more injuries than nurses working in other areas. Similarly, Altıok et al. (2009) revealed that 31.1% of the occupational injuries occurred during the patient treatment and 19.2% during the suturing, especially when opening and sealing the needle tip and dumping it into the medical waste container.[16] Considering the tools causing injuries, 21.6% (36 persons) of the participants suffered injury from penetrating objects, whereas 60.5% (101 persons) with stinging and 18% (30 persons) with sharp

objects. However, the current study revealed that stinging-object injuries to staff members were more common than penetrating- and cutting-object injuries. Altıok et al. (2009) discovered that 87.3% of the study group suffered injuries from penetrating and sharp objects, yet, they failed to disclose it since they were unaware of reporting it.[16] Samancıoğlu et al. (2013) stated that disposable needles were to blame for 32% of the injuries, while sewing needles, winged needles, bistouries, catheters, and blood collection needles all contributed to %19, %12, %7, %6, and %3 of the injuries, respectively.[17] Bozkurt et al. (2013) also found that 90% of the injuries were in the form of pinpricks, 5% by sharp objects, and 5% by body fluid contamination.[18] When asked if the study group employed multiple gloves, masks, glasses, and protective aprons as protective equipment against injuries, they reacted with the following responses: 30.9% (79 persons) of the participants responded as always, 56.3% (144 persons) utilized them only when there was a contagious disease and 11.3% (29 persons) in surgeries for certain diseases. However, 1.6% (4) of the participants claimed they never used such protective equipment. Kâhya et al. (2019) discovered in a study conducted in the metal industry that although a factory owner provided earphones to 93.48% of the employees, 43% never used protective equipment.[19] Similarly, Altıoklar (2019) observed that the rate of protective equipment used by health workers, in general, was 72% (21 persons). Assessment of the study group's data with the techniques they used against injuries revealed that masks were the most frequently used equipment, with a maximum average of 3.52. The use of double gloves was next, with an average of 3.14. However, wearing a protective apron and wearing glasses were the least two averaged personal protective equipment, averaging 3.07 and 2.14, respectively. According to Samancolu et al. (2013), the nurses operating in the intensive care unit took precautions for the condition of injury by wearing masks, protective aprons, and glasses, cleaning their hands, and isolating themselves.[17] Also found that 45.7% of medical professionals (doctors and nurses) regularly use personal protective equipment.[20] In this study, however, 19.1% of the participants (49 persons) claimed that they never used protective equipment, 29.7% (76 persons) responded as rarely, 35.5% (91 persons) occasionally, 12.1% (31 persons) mostly, and only 3.5% (9 persons) of the participants asserted to use such equipment in every instance (always). The participants who claimed to be reluctant to use personal protective equipment against injuries made the following statements: 7.4% (8 persons) 'I got the hepatitis vaccine,' 18.5% (20 persons) 'I am unable to move freely in that equipment,' 6.5% (7 persons) 'I do not have time,' 31.5% (34 persons) 'there is lack of equipment,' 2.8% (3 persons) 'I do not believe it eliminates the risk of infection,' and 33.3% (36 persons) 'I know that the patient does not have a contagious disease.' The working environment and conditions at the workplace must be suitable to achieve the desired productivity level in organizations for OHS. In this context, it is a critical step to assure the compliance of the job to the employee and the employee's eligibility for that job.[21] In doing so, increasing productivity and ensuring the required levels of health and safety becomes conceivable.[22] The responses of the study group to the question of when they begin to get distracted while working was as follows: 1.6% of the participants (4 persons) replied within the first hour, while 5.9% (15 persons) answered after 3 hours, 14.5% (37 persons) 4 hours, 29.2% (75 persons) 6 hours, 34.3% (87 persons) 8 hours, and 14.5% (37 persons) 10 hours and over. Additionally, when asked if there was a linkage between working hours (duration) and injuries with a surgical instrument, 1.2% (3 persons) of the participants replied as never and 7.4% (19 persons) rarely. However, 13.3% (34 persons) of the participants responded that there were injuries occasionally, 55.5% (142 persons), mostly, and 22.7% (58 persons) consistently (always), indicating a strong linkage between the two parameters. Analysis of the OA event time revealed that

it was typically the initial hours in the morning (the first two hours after beginning to work), after lunch hours (5 hours after starting to work), and eight, nine, or more hours of working duration, which even eventuated in the critical moments for the excess of fatal accidents.[23] It was found that the occupational health and safety performance of employees with more working hours and daytime employees had higher occupational safety performance.[41] Omaç (2006) indicated that 78.1% of nurses who worked night shifts were more likely to get wounded by penetrating and sharp objects; as a result, their injury rates were 63.5% higher than those who worked daytime shifts.[24] Almost 73.8% of the participants indicated 'mostly' and 'always' to the question of whether an OA incident in the workplace affected their labor productivity. Additionally, when employees were asked whether paying more attention to employee health ensured better work performance and productivity, 89.1%responded as 'mostly' and 'always.' However, only 69.9% replied 'mostly' and 'always' when employees asked if the health conditions and suitability of the working environment were more critical and prioritized than the salary. Öztürk and Akbulut (2011) reported that productivity is impacted by the working period.[25] Tüzüner and Özaslan (2011) also indicated that the safety climate perception did not significantly differ according to the employees' work experience.[26] All employees desire to be contended and satisfied in their workplaces. Such a degree of satisfaction reflects the effectiveness and success of the employees, as well as workplace productivity. Job satisfaction eventuates when combining employees' satisfaction with the job and their anticipations and desires. Factors potentially affecting employee satisfaction are listed wage, organizational size, communication, working conditions, social environment and opportunities, the essence of work, educational opportunities, and the perception of the job's nature in the employee surrounding.[27] Considering the aggregate of the ‘mostly’ and ‘always’ responses of the participants to the questions below were as follows: for the question of whether there was any change in their motivation due to an experienced OA, the rate was 64.8%; however, for the question of whether they experienced any decline in their willingness to work by any OA experienced, the rate was 61%. When asked whether they experienced any decrease in working quality, the rate was 55.5%. When asked whether participants sensed any modification in desiring to go to work due to an OA experienced, the rate was 47.3%. Surprisingly, for the question of whether participants considered quitting the job due to an experienced OA, the rate was as low as 18.8%. Similarly, when asked whether participants considered changing their workplace due to an experienced OA, the rate was 29.3%. Finally, for the question of whether they consider switching their profession due to an experienced OA, the rate was 45.7%. Doğru (2019) reported a similar and significant relationship between supportive organizational climate and work engagement.[22] Approaches to enhance employee motivation levels in the workplace, such as rewarding systems, job design techniques, group, and teamwork, consulting, or flexible working arrangements, prevent adverse employee behaviors such as quitting or absenteeism by entirely affecting job satisfaction and raising employee motivation. Job satisfaction potentially diminishes negative behaviors such as leaving the job and absenteeism. A high level of job satisfaction strengthens the potential of directing an employee to work more productively by influencing internal motivation.[29] It was found that the work efficiency of healthcare workers was lower in those with less experience and younger age (18-25 and 26-35 years old).[35] In another study, Bostancıoğlu (2014) proclaimed that participants' perception of productivity with 1-5 years of professional experience was more positive than with 6-10 years and 16-20 years of professional experience.[30] According to Umutlu and Karcolu (2021), when employers and employees both participated in occupational health and safety activities, job satisfaction levels improved along with

employee knowledge.[31] Günaydın and Şüküroğlu (2021) reported that employees who willingly completed their tasks conveyed greater overall job satisfaction levels on the arithmetic average than those who did not.[32] Also indicated that job satisfaction significantly impacted work productivity.[33] There is a significant positive relationship between the employee's performance on the job, the definition of the job and the experience on the work carried out, and the work-life balance with work productivity.[36] In a study, it was found that nurses scored at a moderate level (49.17±3.74) in the Attitude Scale on Productivity and it was determined that nurses' productivity decreased as their working conditions worsened.[37]

CONCLUSIONS AND SUGGESTIONS

The study findings concluded that the participants OHS knowledge was at an above-average (satisfactory) level and that the significance of OHS practices in organizations potentially affected employee productivity. Therefore, taking the following actions is advised: Strengthening the OHS practices in healthcare institutions, providing crucial training at predetermined intervals, and ensuring maximum employee participation in the training process. In order to provide better working opportunities for their employees, employers should renew the design of work environments in line with the wishes of employees or organize social activities. Employees attend trainings to improve their skills and abilities must participate. When examining the effect of working conditions on productivity, it is important to note that the productivity level of human resources is formed as a result of the mutual interaction of these factors within a whole should not be forgotten. Organization as the elements that constitute the working conditions in the working environment culture, rights and obligations, rules and policies, job design, technology and the physical environment of the workplace. Organization as the elements that constitute the working conditions in the working environment culture, rights and obligations, rules and policies, job design, technology and the physical environment of the workplace. Ensuring work-life balance will lead to an increase in employees' job satisfaction levels and a decrease in burnout levels. Ensuring this situation will have positive reflections on work efficiency. Therefore, negative occupational health and safety situations that may occur in work areas will be prevented.

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