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ORIGINAL ARTICLE

Occupational health and safety services during the pandemic from the perspective of occupational health and safety professionals working at site: A combination of questionnaire based and in-depth interview research from Türkiye

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Abstract

Objective: In this study, it was aimed to determine occupational health and safety practices in workplaces in COVID-19 pandemic and assess these practices from the perspective of occupational health and safety professionals.

Methods: In this study, questionnaire-based and in-depth interviews were used concomitantly. In the quantitative part, an electronic survey form was applied to 413 professionals. In the qualitative part, in-depth interviews were conducted with 24 professionals using a semi-structured interview form and the data were analyzed with MAXQDA.

Results: When the measures taken for mask use, social distancing and hygiene in workplaces during the pandemic were questioned, measures taken at the highest rate were related to mask use. In-depth interviews were grouped under three themes: difficulties, strengths and the effects of the pandemic. It was emphasized that difficulties were encountered in occupational health and safety implementation areas and the empowering role of professionals in the management of the process was emphasized. The disruption of routine OHS practices as a negative impact of the pandemic and the increase in OHS awareness as a positive impact were the most emphasized issues.

Conclusion: The highest precaution taken in workplaces was the use of masks. In in-depth interviews, almost all participants emphasized the difficulties encountered in occupational health and safety practices, the supportive role of professionals in the process, and the many positive and negative effects of the pandemic on practices.

Keywords: Pandemics, Occupational Health, Occupational Safety

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INTRODUCTION

The COVID-19 pandemic has affected all aspects of daily life. Workplaces have been influenced miscellaneously in terms of employers, employees, customers, and social repercussions during the COVID-19 pandemic.[1] Many workplaces and employers have faced difficulties due to the change in demand, supply chain, transportation and mobility and protective precautions oriented at employees.[2] All these difficulties have put forth once again the importance of occupational health and safety (OHS) practices in the management of the process.

During the COVID-19 pandemic, according to ILOSTAT data, the working population aged over 15 years worldwide made up 57.2% of the world population as of the year 2020.[3] Many people spend a major part of their days working and being in close contact with the public and other employees.[4] The most effective practices to protect employee health, and thus the health of the public are ensuring that the workplace is safe and healthy and taking the spread of the virus under control.[5,6] Moreover, workplaces are effective platforms where occupational health and safety (OHS) professionals can establish sensitivity towards OHS including the spread of information among employees and their families and prevention and protection precautions aimed at decreasing the spread of infectious diseases.[5] Apart from protecting employee health, OHS practices offered in workplaces are also important in terms of limiting the spread of the diseases in the public, preventing build-up in health services, supporting health services, and preventing workplace closures through early intervention.[7]

Due to these reasons, several national and international OHS organizations rapidly published guidelines related to infection control and protection measures at the workplace and gave suggestions during the COVID-19 pandemic.[8,9] OHS professionals, in response to these regulations, showed great effort and devotion in order to establish a safe and healthy working environment by making the workplaces take necessary precautions and regulate the workplaces accordingly.[10] Scientific researches on the subject that have been conducted based on the effect of infectious diseases in the last 20 years on OHS and public health are of vital importance in terms of offering points of intervention to OHS.

Evaluating the experiences and recommendations of OHS professionals who experienced the COVID-19 pandemic can provide important clues for future pandemics. In this research, it was aimed to determine OHS practices in workplaces in the early phase of the COVID-19 pandemic and assess these practices from the perspective of OHS professionals.

METHOD

Research Type

This is a descriptive research in which qualitative and quantitative data collection methods were used concomitantly.

Research Population and Sample

The population of the study consists of occupational health and safety (OHS) professionals working in Türkiye and actively providing services during the COVID-19 pandemic. No sampling was conducted in the quantitative part of the research. An online survey form was shared with OHS

professionals through social platforms, communication networks of the society and communicating with Joint Health and Safety Units (JHSU).[11] The data for the quantitative part of the study were collected between May 20 and June 30, 2020, after obtaining the Scientific Research Platform of the Ministry of Health, to evaluate the early period of the pandemic. During this period, a total of 440 OHS professionals participated in the quantitative part. Four hundred and thirteen surveys of good quality were included in the study. Of the participants, 277 (67.1%) were occupational safety specialists, 108 (26.2%) were occupational physicians, and 28 (6.8%) were other healthcare personnel.

Participants with whom qualitative research would be conducted were chosen from among the OHS professionals who were approved to participate in the qualitative research. Maximum variation sampling was used in selecting OHS professionals that would be included in the qualitative part of the research. The criteria that were grounded on in this sampling method were being an occupational physician/ occupational safety specialist, the form of delivery of service (within Joint Health and Safety Units or Occupational Health and Safety Units), and city where the service is provided. Participant inclusion continued until data saturation had been achieved and data started to repeat themselves. The data for the qualitative part of the study were collected between August-September 2020. Twenty-four OHS professionals were included in the qualitative part of the research. Of the participants, 13 were occupational safety specialists, 11 were occupational physicians.

Research Method

For the quantitative part of the research, a data collection form prepared by Google Forms and converted into an electronic survey form was used. Participant informed consent was obtained at the top of the electronic survey form following the explanation of research characteristics. Participants filling out the survey form were invited to the qualitative research at the end of the survey form. The questions regarding the measures taken by OHS professionals for COVID-19 in the workplace were prepared by considering the guidelines published by the Ministry of Family Labour and Social Services of the Republic of Türkiye and the recommendations for workplaces by international organizations.[12-16]

At the end of the first part of the study, the participants who declared that they agreed to take part in the qualitative research were called and the researcher informed the participant about the purpose, subject, general framework and interview method of the research. A written consent form was received by mail from the participants who agreed to participate in the study. The interviews were conducted by a researcher (corresponding author) with a doctoral degree in public health. A semi-structured interview form was used for in-depth interviews. The interview form had been reviewed and approved by an expert. The research was planned with a phenomenological design. The interviews were preferably conducted via video communication networks. At the beginning of the interviews, the aim of the research was explained, approval for audio recording was asked promising full confidentiality, and the interview was started after oral consent of the participant had been obtained. During the research, only audio recordings of the participants were taken. The researcher was not present at the field during the

qualitative research process but took notes of the environment and interview process. While presenting participant statements, the abbreviation "OP" stood for occupational physician, "OSS" abbreviation for occupational safety specialist, and participant number were used. Interviews with OP2 and OSS6 were cut several times. The remaining interviews were conducted in a quiet environment when the participant was alone and without any interruptions. These interviews lasted for an average of 40 minutes (min: 20 minutes- max: 92 minutes). The interviews and deciphering of the audio records were performed by the researcher only.

Data Analysis

Data obtained from quantitative research were analyzed using SPSS 23.0 (spss.ktu.edu.tr) statistical package. Descriptive statistics were given as number and percentage for categorical variables and mean, standard deviation or median and minimum, maximum for numeric data. Statistical alpha significance was accepted as $p<0.05$. OHS professionals may provide service in more than one workplace. Since infection spread risk is higher in crowded places, the answers on the survey were asked to be given considering the workplace with the highest number of employees.

Data collection and data analysis were performed synchronously during the qualitative research. Interviews with the participants were analyzed using MAXQDA 2020 (VERBI Software, 2019). During the coding phase of the qualitative data, a code list was formed considering the literature and participant responses. A thematic code list was formed determining the categories and themes that gathered the related codes considering the differences and similarities between the codes.

Research Approval

To conduct the research, application was made on May 14, 2020, to the Scientific Research Platform of of Health, and approval was received on May 19, 2020. Ethics Committee Approval was received University, Faculty of Medicine, Scientific Research Ethics Committee (Date: 13.07.2020, Number: 24237859-473). Informed consent was confirmed by the Ethics Committee.

RESULTS

Of the participants, 277 (67.1%) were occupational safety specialists, 108 (26.2%) were occupational physicians, and 28 (6.8%) were other healthcare personnel. The mean age of professionals was 39.9±9.8 years, 297 (71.9%) were male and 116 (28.1%) were female. Professional experience as an OHS professional was 6.0 (1-36) years. Of the participants, 291 (70.5%) worked full-time, 122 (29.5%) worked part-time. The number of employees at the workplace was 250 (3-10000).

The precautions reported to have been taken by OHS professionals during the COVID-19 pandemic in terms of masks, social distancing and general hygiene practices are presented in Table 1.

Table 1. The precautions taken by OHS professionals at the workplace

Mask use	**n**	**%**
To be worn when entering and exiting the building	399	96.6
Ensuring that employees constantly wear masks at the working environment	377	91.3
Distributing masks free of charge	372	90.1
Driver and all personnel wearing surgical masks during journeys inside the vehicle *	279	89.4
Ensuring that employees wear masks in rest areas †	314	76.8
Ensuring that people attending meetings in meeting halls wear masks	180	43.6
Social distance		
Re-arranging the carrying capacity of transportation vehicles consideringsocial distance *	269	86.2
Arranging the wait line at the cafeteria considering social distance ‡	291	85.1
Arranging tables in the cafeteria considering social distance ‡	286	83.6
Arranging the workspace considering social distance	334	80.9
Arranging the rest areas considering social distance †	312	76.3
Postponing face-to-face meetings and training until the pandemic has ended	298	72.2
Flexible shifts	243	58.8
Arranging teleconferences or remote trainings for meeting and trainings that cannot be postponed	222	53.8
Increasing the number of transportation vehicles *	166	53.2
Remote working	194	47.0
Hygiene		
Hand disinfectants at the entrances and exits of the workplace	366	88.6
Increasing the cleaning of toilets	353	85.5
Increasing the cleaning of the working environment	341	82.6
Measuring fever while entering and exiting the workplace	335	81.1
Regular disinfection of surfaces (working stations, counters, knobs, handles, devices shared, etc.)	329	79.7
Frequent cleaning of the transportation vehicles, especially the places that are touched the most*	243	77.9
Providing hand sanitizer in the cafeteria	259	75.7
Appropriate and sufficient ventilation of the environment	309	74.8
Regular disinfection of the cafeteria	253	74.0
Frequent disinfection of rest areas †	282	68.9
Providing handwashing units where appropriate	282	68.3
Disinfection of all equipment used by the employees (including instruments with screens)	281	68.0
Providing single-use seasonings, forks, knives, spoons, glasses, and toothpicks in the cafeteria ‡	232	67.8
Hand disinfectant in rest areas †	268	65.5
Distribution of foods and beverages as single-use food packets	209	61.1
Providing contact-free garbage bins	244	59.1
Providing disposable towels	238	57.6
Hand disinfectant in meeting halls	155	37.5

Data are presented as *n* (%) * Calculated for workplaces where transportation vehicles are used (N=312). † Calculated for workplaces with rest area (n=409) ‡ Calculated for workplaces with cafeteria (N=342)

Of the OHS professionals, 339 (82.1%) stated that there were employees with chronic diseases that would constitute a risk for COVID-19, and 174 (42.1%) emphasized that they had employees aged over 65 years. Figure 1 presents data on work arrangements OHS professionals made in the workplaces they offered their services for those with chronic diseases and over the age of 65 years.

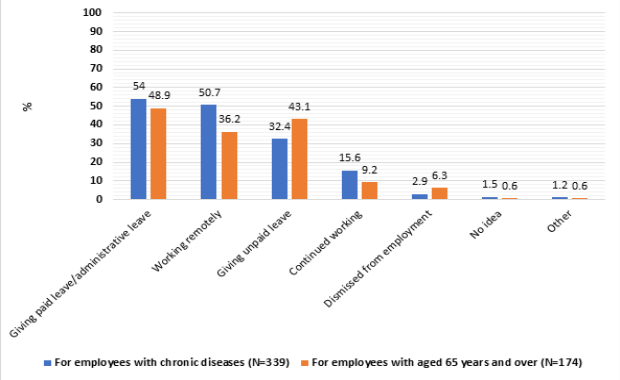

Figure 1. Working arrangements performed for employees over the age of 65 years and those with chronic diseases

Figure 2 summarizes data on the evaluation of employee adjustment to the precautions taken at the workplace by OHS professionals during the COVID-19 pandemic.

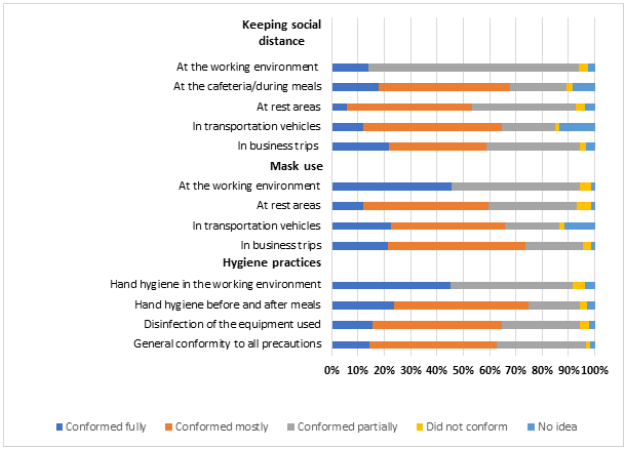

Figure 2. Evaluation of the conformity of the employees to the precautions during the COVID-19 pandemic

Following the revisions made during data analysis, 36 codes were formed by combining similar conditions and differences. These codes were divided into 9 categories and 3 themes (difficulties, strengths and effect) and are given in Figure 3.

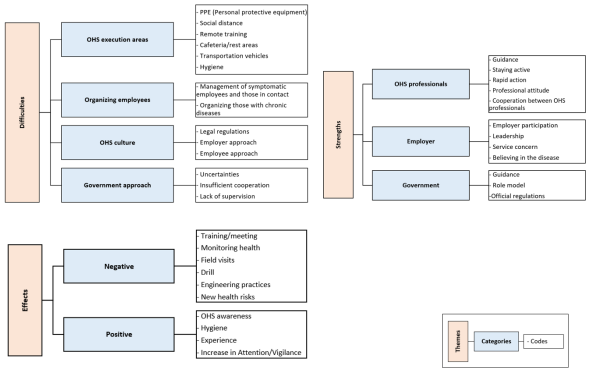

Figure 3. Themes, categories and codes formed in relation to the experiences of OHS professionals during the COVID-19 pandemic

Difficulties

The difficulties experienced by OHS professionals in managing the COVID-19 pandemic at the workplace were categorized as OHS execution areas, organizing employees, OHS culture, and government approach.

a.1. OHS execution areas

All the participants stated that they faced difficulties in relation to OHS execution areas. The use of personal protective equipment (PPE) and social distancing were the two most common difficulties in relation to OHS execution areas, which were followed by training, cafeteria/rest areas, transportation vehicles, and hygiene. Some of the statements of the participants related to the codes evaluated in the category of OHS application areas are as follows:

a.1.1. Personal protective equipment

"For instance, PPE is at the forefront for us, but since we made it mandatory to wear masks in this period, PPE use has become a problem. Safety goggles could not be worn due to misting. People who weld use welding masks and therefore did not want to wear pandemic masks, or they told me that since they wore

pandemic masks, they did not want to wear the welding masks (OP8)".

a.1.2. Social distance

"Since mines are underground, workers must work in very close contact. In short, we could not enforce social distancing on them (OSS11)."

a.1.3. Remote training

"We cannot plan online trainings on Meet to workers. Most of them do not have internet connection at home or use smart devices or connect with these devices (OP11)."

a.1.4. Cafeteria/ rest areas

"Of course, we made some things very difficult in the implementations; before, the chairs at the rest stops were designed for five or six people. We made them all for one person. But I guess due to the structure of the society, even though we made them for one person, we found the employees sitting two people in those single seats a lot (OP2)."

a.1.5. Transportation vehicles

"Regarding the transportation vehicles, for example, while only one transportation vehicle was used before, the load increased when 2 or 3 transportation vehicles were used due to the social distancing practice. We received complaints about this from time to time (IH5)."

a.1.6. Hygiene

"For example, we suggested a hand sanitizer with a pedal at the door entrance, and the administration said why did you suggest it, we don't accept it, it's an administrative decision (OSS12)."

"You say use disinfectant, use soap, soap your hands. How can I soap my hands, they tell me to take the product, how can I soap my hands every hour, every half hour (OSS13)."

a.2. Organizing employees

The majority of OHS professionals stated that they faced difficulties in managing symptomatic employees and those who were in contact with and organizing employees with chronic diseases. Some of the statements of the participants related to the codes evaluated in the category of organizing employees are as follows:

a.2.1. Management of symptomatic employees and those in contact

"We had to receive verbal information from the workers. Since we could not reach any official records, we could not obtain full information. We called the workers every day and found out who got into contact with them. The problem was that a COVID-positive patient was cast out by the others. This was just like what happens to an HIV-positive patient. In the end, due to such exclusion, we later learned that some workers were also positive. Therefore, contact tracing of that worker, separating and following them at home took very long. Hence, infectiousness increased (OP1)."

a.2.2. Organizing those with chronic diseases

Participants stated the fundamental reasons of the difficulties faced due to workers with chronic diseases as legal uncertainties related to private sector workers, financial worries of the employers and employees, and difficulty in reaching the medical records of the employees. The statements of an occupational physician regarding the difficulties experienced in organizing those with chronic diseases are as follows: "The biggest issue we have here is the

uncertainty in patients with chronic diseases. We really got exhausted. I am responsible for two factories divided by a wire fence. One of them did not victimize the workers with chronic diseases, and the workers I selected were sent home and received pay. In the other factory, these workers were sent home without pay (OP2)."

a.3. OHS culture

Another issue that OHS professionals emphasized was poor OHS culture. OHS professionals stated that the limited authority before employers due to legal regulations, which made it more difficult to manage the process. Some of the statements of the participants related to the codes evaluated in the category of OHS culture are as follows:

a.3.1. Legal regulations

"All of the methods that they determined were recommendations and were not mandatory for the employers. Therefore, we were very tired of trying to impose them on employers and trying to make them implement their practices according to these guidelines. Because we had no legal basis (OP8)."

a.3.2. Employer approach

"Social distancing rules, cafeterias, transportation services, locker rooms, etc., which were important for us during the pandemic, became a problem between us and the management. Because every work to be done on these issues was called extra cost, loss of time, loss of workers, loss of labor. For this reason, we had a lot of trouble with the employer (OP8)."

a.3.3. Employee approach

"You must use these masks during work. All employees use their masks during work, no problem. When they take a break, the masks come off. Why don't you wear the mask? They say they are on break. This is not a helmet so that you can take it off during the break, the time you should wear it is the break time. But we have seen that, unfortunately, our employees cannot even think about this (OSS9)."

a.4. Government approach

Another issue that OHS professionals stated about the difficulties they faced with the pandemic was the government's approach to workplaces in the process. There were uncertainties that arose from the fact that information on OHS practices specific to the sector could not be reached in the early period of the pandemic, there was lack of local and central cooperation with OHS professionals, OHS professionals did not get involved in the decisions-making process, and such weaknesses made it difficult for OHS professionals to manage the process. Some of the statements of the participants related to the codes evaluated in the category of Government approach are as follows:

a.4.1. Uncertainties

"The state published some circular notes and bylaws, but most of them were only on paper. The state did not have a clear plan on how to implement these. The pandemic was also new to them (OSS3)."

a.4.2. Insufficient cooperation

"OHS teams had to be supported by the Ministry of Health. They should have at least called or written and asked how we dealt with the process. We did not take part in any commission. The Ministry of Health

had to give us the authority with official correspondences so that we could manage the process effectively (OSS12)".

a.4.3. Lack of supervision

"Do you know that there is a control form sent by the governorate? Does the workplace comply with these rules, does it have an isolated room, does it apply the necessary social distancing rules? They came from public health centers. I found 10 deficiencies, they went before me and said thank you and left. Now, where they fill out the form and say thank you and leave, can I say you have deficiencies? So, the supervision mechanism is weak (OSS10)."

Strengths

This theme is based on the statements of OHS professionals regarding supportive factors that were effective in making OHS practices effective during the pandemic and regarding strengths in terms of OHS practices during the pandemic. The participants emphasized the supportive role of the OHS professionals, employers and government during this period.

b.1. OHS professionals

Nearly all of the participants underlined the role of OHS professionals in making OHS practices effective during this process. Among the statements of the participants, guidance, having been given an active role in the field, having taken rapid actions, professional attitude and cooperation between OHS professionals were at the forefront. Some of the statements of the participants related to the codes evaluated in the category of OHS professionals are as follows:

b.1.1 Guidance and rapid action

"OHS professionals approached the matter well. Healthcare workers, occupational physicians, and retired occupational physicians dominated the issue and shared very useful information. We were really prepared due to know-how and experience. Having experienced people on board, having implemented the practices that were applied abroad by immediately translating the articles into Turkish, and having physicians in the field of OHS and those that were specifically experienced on the subject paved our way (OSS13)."

b.1.2. Staying active

"The most important thing in this process is for OHS professionals to give on-the-job talks and to be in the field constantly. As occupational safety specialists, we said that we would get posters printed and hang these posters everywhere. We constantly sent e-mails to executives and were in the field constantly. We warned the employees whenever we realized a disobedience and avoided mistakes since awareness of the top management was also raised (OSS2)."

b.1.3. Professional attitude

"When something like this happens, we grasp the severity of the event differently than a normal citizen and prepare ourselves for it immediately (OSS10)."

b.1.4. Cooperation between OHS professionals

"Obviously, when I look at my own practices, there were big factories that I took as role models, there were the experiences of my friends, we passed the experiences with them. It is written in the guidebook, but we cannot do this, how did you complete this subject (OSS6)."

b.2. Employers

Some of the statements of the participants related to the codes evaluated in the category of employers are as follows:

b.2.1. Employer participation

"In this period, since we had an advisory role, it was the management that had full responsibility in implementing and supervising the practices that we recommended. In general, it looked like occupational health professionals that did the work, but decision-makers also had an active and efficient role in this period and faced many difficulties along the process (OP8)."

b.2.2. Leadership

"The management has a big role. If the management trusts occupational health and safety, OHS team, and implements the decisions properly, then the process goes smoothly (OSS7)."

b.2.3. Service concern

"During the pandemic, OHS professionals were very effective in the workplaces where they worked. Production did not stop. In a place where 300 people work, if 30 people test positive, that factory is closed for 15 days. We stayed there in 2-3 cases and prevented it from spreading.

b.2.4. Believing in the disease

"Although we provide training, as I said, we want them to take precautions against something they have not seen. After the cases happened, they became more aware (OSS7)."

b.3. Government

In terms of strengthening the process, the notification role of the government, official regulations and being a role model were emphasized. Some of the statements of the participants related to the codes evaluated in the category of government are as follows:

b.3.1. Guidance

"I think the Ministry of Health was the most active. The publications and booklets given by it. For example, I think there was a lot of dirty information on television (OSS4).

b.3.2. Role model

"The Minister of Health sat tall in the saddle, appeared on tv regularly and gave speeches related to the subject. I heard at the construction site that the workers were persuaded by the effort of the Minister of Health to at least wear the mask. His attitude really affected their attitude (OSS8).

b.3.3 Official regulation

"If it were not for the State's precautions, ours would be left hanging in the air. When the State adopted a decision, it was easier for us and more acceptable and convincing for the public to obey the regulations (OP2)."

Effects

OHS professionals also elaborated upon the negative and positive effects of the COVID-19 pandemic on OHS practices.

c.1. Negative

OHS professionals stated that, routine OHS practices such as training/meeting, monitoring health, field visits, drill, engineering practices were halted and additionally, new health risks emerged in this period:

c.1.1 Training/meeting

*"*We used to hold monthly meetings to prevent occupational accidents in the hospital. These

meetings were cancelled during the pandemic, and only meetings oriented at the pandemic were held (OSS12)."

c.1.2. Monitoring health

"It has many negative aspects. I cannot even get the tests that I need to write a medical report. For instance, we could not get respiratory function tests performed because everyone would blow into a device and might increase COVID-19 infection risk. However, if I do not know the person's respiratory function, I cannot decide if he/she is healthy (OSS9)."

c.1.3. Field visits

"We could not be in the field. The specialist or authorized person did not want to get into the field since we did not know who had it. The field was uncontrolled, and we could not take the necessary actions in the field (OSS7)."

c.1.4. Drill

"Earthquake drill, fire drill, their trainings, periodic examinations, normal occupational health and safety trainings were all interrupted. We were not able to perform our normal, regular responsibilities (OP11)."

c.1.5. Engineering practices

"All specialists had to focus on the health part of the job due to COVID-19. We are all skipping the technical part of our job. We focus more on social distance, contact, mask etc. There may be a problem with our electricity system, but we are all focused on coronavirus, which is a negative effect of the pandemic (OSS4)."

c.1.6. New health risk

"Allergies increased; eye dryness increased also. There are more cases of allergic dermatitis and eczematous reactions (OP1)."

c.2. Positive

The participants also emphasized some positive aspects of the COVID-19 pandemic on OHS. The participants focused on the fact that OHS awareness of the employees and employers increased, more importance was attached to hygiene, OHS professionals gained experience regarding management of infectious diseases, and vigilance of the employees in terms of risks and dangers increased:

c.2.1. OHS awareness

"Firms once again understood the importance of occupational health and safety and realized that it was teamwork. During the pandemic, the team that followed all protective precautions and the health of the workers comprised of 3 individuals: the occupational safety specialist, occupational physician, and the assistant healthcare worker. Therefore, they realized what this team meant in a factory. Now, they pay more attention to what we say (OP1)."

c.2.2. Hygiene

"People give more importance to hygiene now. This is an advantage for us to prevent the spread of COVID-19 and other infectious diseases (OSS3)."

c.2.3. Experience

"I realized that I was weak in matters on health. I had to improve myself. I am more informed now. Because I have researched, made risk analyses and emergency plans. These made me to become more aware of matters on health (OSS4)."

c.2.4. Increase in attention/ vigilance

"People are more attentive now. They also try not to go to hospital. They are more careful when they do their jobs. Occupational

accidents really decreased in this period. We did not dismiss any workers or reduced manufacturing capabilities. But we saw a decrease in occupational accidents. We are of the opinion that workers now do their jobs more carefully, of course we will be evaluating further in the future (OSS3)."

DISCUSSION

When the density of the working population and the crowdedness and mobility of the working environments are considered, workplaces become focal points in controlling such a pandemic. OHS professionals assumed a fundamental role in terms of implementing the precautions and transmitting information to employees and employers. Therefore, this research presents valuable information in connection to the practices and opinions of OHS professionals during the COVID-19 pandemic.

During the COVID-19 pandemic, national and international guides indicating the rules to be followed were published so that OHS professionals and employers could arrange the workplaces.[4,10,12] Within the scope of the research, the precautions taken by OHS professionals during the pandemic were questioned. This research showed that precautions that also appeared in the media including mask, distance and hygiene were more commonly implemented when compared to precautions that would require high cost or prevent the offering of services, like working with less personnel. In the study by Ishimaru et al. the most common workplace measure was to encourage the wearing of masks at work, followed by requesting employees not to go to work when ill and restricting work-related social gatherings and entertainment. In contrast, encouraging remote working was reported to be much less common.[17] In the study conducted by Asaoka et al. the most common precautions were hand washing, use of disinfectants, use of masks, and temperature measurement, while the least common precautions were shifting work, remote working, changing the working environment, and restrictions on cafeteria use.[18] In the study by Sasaki et al. hand washing, encouraging finger alcohol disinfection, and encouraging wearing masks were implemented over 80%, while shift work, encouraging remote work and working from home, changing the working environment (table layout, flow lines, etc.), restrictions on the use of cafeterias, and waiting at home for employees with a history of being abroad were reported to be implemented in less than 30% of the enterprises.[19] Like this study, it has been reported in the literature that mask, distance and hygiene measures are implemented at higher rates than measures such as shift work and organizing the work environment. The combined application of the recommended measures to stop the spread of COVID-19 infection in workplaces significantly reduces the risk of infection compared to their single use.[20,21] Therefore, as reported in the literature and in this study, it is thought that the implementation of some measures at workplaces at a much lower rate than others may be an obstacle in terms of preventing the spread of infection.

Apart from these precautions that involved workplace arrangements, it was decided with official regulations following the first case in our country that employees over the age of 60 years and with chronic diseases in state institutions would be on administrative leave.[22-24] However, a legal regulation was not made for those working in the private sector. It was detected in the research that the

manner of work for those over the age of 60 years and with chronic diseases varied from one workplace to another. These practices were in terms of paid leave, unpaid leave, and administrative leave. COVID-19 pandemic deepened the inequality between the sectors and institutions regarding employees' access to paid sick leave.[25,26] The findings of this research underline that employees with chronic diseases that constitute a risk for COVID-19 do not have equal conditions in protecting one's health and benefiting from financial rights and draw attention to another aspect of inequality in health.

In the second part of the research, experiences of OHS professionals regarding OHS practices during the COVID-19 pandemic were evaluated with semi-structured interviews. All the OHS professionals indicated that they faced difficulties in OHA practices during the COVID-19 pandemic. Difficulties with PPE and social distance were at the forefront. A factor that should be elaborated on is the compelling effect of other OHS practices related to the work itself on OHS practices related to the pandemic. This finding points to important intervention areas in terms of employee health and safety.

OHS professionals had a key role in being prepared against COVID-19 in the workplaces they offer their services and in intervening when there were possible/definite cases at the workplace.[27] To achieve this, OHS professionals needed to access credible information regarding the medical statuses of the employees. In this research, OHS professionals pointed out that they could not have access to official test results of those applying to hospital due to symptoms and could not isolate those who were symptomatic or had contact with a positive case until their status became clear. This situation points to organizational weakness in the management of workplaces during the pandemic.

The COVID-19 pandemic has shown that the best way to implement OHS precautions is effective cooperation between the employers, employees, and governments[28]. In this research, the participants indicated OHS professionals, employers and the state as the factors that contribute to OHS practices to come though during the COVID-19 pandemic. Nearly all of the participants in this research emphasized the role of OHS professionals in the efficiency of OHS practices during this process. There were statements expressing that rapid actions needed to be taken by OHS professionals at the workplace and be constantly active during the process.

In the research, many positive and negative effects of the COVID-19 pandemic on OHS were indicated by OHS professionals. When negative effects of the COVID-19 on OHS were evaluated, nearly all of the participants stated that routine OHS practices were badly influenced by the pandemic. During the COVID-19 pandemic, while risk factors against which measures should be taken at workplaces continued, OHS professionals, employers, and employees also faced the risks brought by COVID-19. This research found that most of the OHS professionals diverted their attention to precautions against the pandemic and trainings, employment examination, follow-up of employees with chronic diseases, examinations and tests including intermittent control examinations, field visits, meetings, drills, engineering practices were put on the backburner. Each OHS practice offered at the workplace is separately and interrelatedly important for employee health. A setback

in one of these precautions may generate a serious threat for the health and safety of the employee. Therefore, the current picture is worrisome in terms of possible negative effects of the setbacks on employee health. Even, some participants stated that new health problems emerged in employees and drew attention to the health effects of COVID-19 in the early period.

In the literature, one of the positive effects of the COVID-19 pandemic on OHS is that it increased the value of OHS.[29] In this research, participants stated that the pandemic made the employees, and the employers understand the value of OHS. Another positive effect is that conformity of rules at the workplace increased. Moreover, the participants also gained experience in managing infectious diseases at the workplace. In the 21st century when infectious diseases have become more spread and induced a public threat, it is significant for OHS professionals to obtain experience in how to deal with and manage an infectious disease and to become prepared for the upcoming process.

CONCLUSION

In this research, OHS practices and experiences of OHS professionals during the early period of the COVID-19 pandemic were evaluated using qualitative and quantitative methods together. When the measures taken regarding the use of masks, social distancing and hygiene practices in workplaces during the pandemic are evaluated, all three measures taken at the highest rate are related to the use of masks. In addition, it was found that the measures under the other two headings, such as flexible shifts, remote working, increasing the number of transportation vehicles and increasing hygiene equipment, which may disrupt service delivery or increase costs, were implemented at a lower rate. Professionals reported that staff compliance with measures was lower in rest areas. According to the results of the research, during the COVID-19 pandemic, there were deficiencies in both occupational health and safety practice areas and employee compliance. To overcome these deficiencies, it may be recommended to implement interventions and policies to strengthen the occupational health and safety culture for employers and employees. Again, an attention-grabbing finding was the uncertainty of the status of employees with chronic diseases and the health inequality that arose from it during the pandemic. Considering possible pandemics and other emergencies, the government should take measures to eliminate health inequalities among workers.

In-depth interviews were categorized under three themes: difficulties, strengths and the effects of the pandemic. All participants stated that difficulties were encountered in occupational health and safety implementation areas, and the empowering role of professionals in the management of the process was emphasized by almost all the participants. The difficulties and strengthening factors encountered in occupational health and safety practices during the pandemic should be carefully evaluated by occupational health and safety committees or employers and professionals in workplaces and risk plans should be made and prepared for another crisis. Professionals also drew attention to the many positive and negative effects of the pandemic on OHS practices. Nearly all OHS professionals stated that they experienced setbacks in routine OHS practices and the focus was solely on managing the pandemic. Furthermore, another effect of COVID-19 was that it led to new diseases to emerge in the employees, and

they should be recorded and followed-up in the long term. As emphasized by the participants, the positive effect of COVID-19 was that it raised OHS awareness in the employers and employees.

The COVID-19 pandemic brought about multifaceted experiences regarding OHS practice for the government, employees, and OHS professionals. In this respect, this and other scientific research should be carefully examined for OHS practices that could save lives in another possible crisis.

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