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Psychosocial dimensions of the work environment of medical workers during the COVID-19 pandemic

Abstract

The work environment of medical workers changed significantly during the COVID-19 pandemic. It concerned not only physical, chemical, biological, but also psychosocial factors shaping working conditions. The study focuses on presenting the results of research carried out during the pandemic on a group of medical workers regarding the psychosocial aspects of a safe work environment. STATISTICA software was used in the process of developing research results. To assess the significance of differences in variables analyzed, non-parametric tests were used: Mann-Whitney U test (UMW), Kruskal-Wallis ANOVA test (AKW). Kendall's tau correlation coefficient was used to assess the strength of correlations between variables. The research results revealed a significant deterioration of the psychosocial dimension of the work environment in relation to medical workers employed in public health care units, in particular in hospitals, including single-name hospitals. The results also indicate a very strong relationship between the family/home situation of the respondents and their feelings about security, satisfaction, and meaning of work.

Keywords: work environment, medical workers, COVID-19 pandemic
JEL Classification: M12, M54

Introduction

In modern organizations, building a competitive advantage is largely based on human capital [Nafei, 2016, p. 86] and therefore they stimulate the potential of their employees in various ways. Some invest in knowledge development or coaching, some pose various challenges to employees to motivate their teams to develop, and some still use talent management. There are also companies that make every effort to ensure a safe working environment in the organization. This is primarily related to the area of operation of the organization and the set of risks that may occur in the work environment (physical, chemical, biological, psychological and psychosocial factors) [Tarczoń, 2017a, pp. 13–16].

In the case of organizations employing medical workers, all four previously mentioned groups of risks occurring in the work environment became particularly important during the COVID-19 pandemic.

In this study, the authors focus only on the psychological and psychosocial aspects of the work environment, basing on the literature which states that a psychologically safe climate contributes to the increase of employees' commitment to their duties, increased effort in the implementation of tasks, encourages the sharing of information, mobilizes open diagnosis of defects in the organization or work on the development of the organization [Bass, De Dren, Nijstad, 2008.; Boucher, Sheng, 2018; O'Donovan, McAuliffe, 2020]. The rules and practices applicable in the organization as a whole may impose specific, commonly desired and accepted patterns of behavior on employees, which may or may not be consistent with the idea of a psychologically safe environment. However, the assumptions adopted by organizations are completely destroyed in the face of an unexpected and all-encompassing crisis. We encountered such a situation especially during the first period of the COVID-19 pandemic. Given the rapidly growing number of cases, it seemed that the only effective strategy to counteract the virus was social isolation [Poland Country Snapshot, n.d., 2024]. For many organizations, this situation meant reduced activity. However, in the health care system, this time was associated with an intensification of activities, and for medical workers, with increased work in a dangerous work environment that provided many negative feelings. These employees had to perform their duties for long hours in cumbersome protective clothing, exposed not only to the virus, but also to chemical substances that protected them from illness. They had traumatic experiences related to the dramas of patients and their families. Although the above-mentioned work features are not atypical for medical workers, their dramatically increased intensity resulted in a significant psychological burden. It should be remembered that we are talking about ordinary people who at that time had to take care of children stuck at home and other dependent people, such as older family members, the disabled and the sick. For many employees, it was a time of difficult choices between the need to work and protecting the health of themselves and their loved ones.

Coping with the demands of the work environment, especially in such a difficult time as the pandemic, was one of the most important factors in job satisfaction and building a sense of security. It should be noted that although a person's functioning in the work environment is determined by factors dependent on the employer, much depends on subjective factors, among which the employee's behavior, shaping the environment and relationships with others are essential [Jakimiuk, 2016].

The aim of the study is to present and analyze the results of the study on the work environment of medical workers during the COVID-19 pandemic in terms of its selected psychological aspects. The study was planned for the first half of December 2020, just after the second wave of infections had subsided in Poland, with the expectation that the study results would reveal interesting regularities related to the functioning of medical staff in their work environment during the crisis. It should also be added that this was the period just before the launch of vaccinations. In Poland, the first vaccine was applied on December 27, 2020, within a group of medical workers.

Theoretical assumptions

The professional functioning of all employees is related to the work environment, which affects not only health and safety, but also the sense of psychological comfort. It creates a context that should be taken into account when analyzing various issues related to work. It should also be remembered that the work environment plays an important role in the social and professional education of the employee [Trawińska-Konador, 2013]. Furthermore, it is also the subject of managerial decisions, even if they are made with the intention of influencing other areas of organizational management. The issues of shaping the work environment and adapting it to the needs of employees as well as the relationship between people and the work environment are the subject of interest of many scientific disciplines.

The work environment includes a set of conditions in which the work process takes place [Korpus, 2008], among which material and social conditions can be distinguished [Jasińska, 2010]. Working conditions can be defined as "all the physical [material] and psychosocial factors originating in the work environment and affecting people performing work" [Pocztowski, 2008, p. 377].

The material work environment is understood as a system of factors that favor [or disfavor] work efficiency and at the same time guarantee [or on the contrary] the employee appropriate conditions of hygiene, health, safety, and aesthetics [Wiatrowski, 2000, p. 377]. According to the typology presented by Tarczoń [2017a, 2017b, 2017c] with regard to medical workers, they include physical, biological and chemical factors. These factors cause various reactions of the human body, therefore they are the subject of research aimed at establishing certain standards and developing regulations ensuring their compliance and determining their level of harmfulness. They refer to working conditions that employers should take care of and on

which employees has little influence, although they affect their efficiency and productivity [D.P. Schultz, S.E. Schultz 2006] as well as work comfort. These factors are also important for creating a good working atmosphere, a sense of security and job satisfaction.

During the COVID-19 pandemic, the material elements of the work environment for medical workers underwent significant transformations and intensification [Lusk et al., 2024]. The main goal of these changes was to prevent the spread of the virus and to protect the health of patients and medical workers. The tools and procedures used to achieve these goals often exceeded the norms and standards set for this professional group. However, the physical comfort of medical workers seemed to be of secondary importance during the fight against the virus [Sunny, Lalkrishna, James, Suprasannan, 2024].

The second group of factors related to the work environment is created by psychosocial working conditions, i.e., interpersonal relations, social and living conditions as well as employee involvement in the life of the organization [Jasińska, 2010]. They can significantly affect the sense of job satisfaction and the feeling of occupational stress, which is associated with other unfavorable phenomena, such as burnout, mobbing or workaholism [Jakimiuk, 2016]. Psychosocial factors should be analyzed in the context of the humanization of work, understood as all changes in the treatment of human work, conditioned by contemporary work culture as well as scientific and technical progress [Kiwanuka et al., 2024], leading to giving human working conditions a fully humanistic character [Wiatrowski, 2000, p. 392], relating to the treatment of man as a subject of work, and work as the good of man and the good of his humanity [John Paul II, 1986].

Regarding the factors of the work environment of medical workers, Tarczoń [2018] distinguishes not only psychosocial elements, but also psychophysical ones. The latter refer to how the physical strain on the body during work affects the mental sphere. Examples include pain in the legs, knees and back resulting from the overload of the musculoskeletal system associated with performing care and hygiene activities for patients, long periods of treatment in a standing position with the spine bent and twisted, or the movement and transport of medical materials and supplies.

However, when characterizing the psychosocial dimension of the work environment, attention should be paid to the neuro-mental load that is related to the performance of tasks and directly depends on the availability and flow of information, the method, and conditions of organizing the activities performed and the validity of the decisions made [Li et al., 2024; Robert, Hockey, 2003]. The consequence of neuro-mental load is mental load, emotional load, or also perceptual underload or overload [Sakai et al., 2024]. Mental load is also influenced by stress factors such as: the number and complexity of incoming information, variability, wakefulness, the need to make difficult decisions, interpersonal conflicts, disruption of the work-life balance, or too many tasks [Tarczoń, 2018]. In relation to some groups of medical workers [e.g., nurses, doctors, paramedics], one of the basic sources of stress is also the sense of lack of control associated with the need to make difficult decisions in a short time [Żurowska-Wolak, Wolak, Mikos, Juszczyk, Czerw, 2015]. The functioning of medical workers

is associated with situations of conflict with colleagues, patients, and their families, but also with manifestations of violence and aggression. Typical elements of this work environment are: traumatic experiences, working with dying people, confrontation with pain, crisis situations, and even complaints and legal disputes. According to the OECD report [Kwiecień-Jaguś, Wujtewicz, 2015], these elements are associated with high pressure in the workplace and low sense of security of medical workers [Bellehsen et al., 2024].

The need to be safe is a primary and basic human need, although the understanding of the concept of safety has changed over the centuries. There is a lack of clarity in the literature regarding the term 'security', mainly due to its multidimensional nature. However, there are numerous research studies that have contributed to expanding our knowledge of its numerous dimensions. Security can be understood as: a social phenomenon [Kołodziejczyk, 2007], a value [Kitler, 2001, p.39], a good [Lutostański, 2015, pp. 143, 148], a need [Kołodziejczyk, 2007], a process state [Koziej, 2011]. The security theorist Koziej [2011] sees the essence of security in ensuring the existence and freedom to pursue the interests of actors in the context of opportunities, challenges, risks, and threats. Other theorists point out that security is a specific and real construct belonging to a specific real entity. Consequently, as a concrete and real thing, it is measurable. This approach resulted in the definition of safety areas that are important from the perspective of organization and employees functioning, which include: ensuring safe and hygienic conditions in the work environment, their compliance with applicable legal regulations, and creating a subjective feeling in the cognitive and emotional sphere [Szweda, 2017].

Due to the subjective nature of the perceived level of security, instead of analyzing objective security indicators, the sense of security of individuals is often examined.

Numerous studies draw attention to the importance of psychological safety, that is most frequently defined as individuals' shared belief in whether it is safe to take interpersonal risks in the workplace [Newman, Donohue, Eva, 2017]. The beginnings of the development of this concept can be traced back to the works of E.W. Schein and W.G. Bennis [1965] on organizational changes, which revealed the need to create psychological safety for individuals who have to cope with the risks associated with the implementation of changes [Edmondson, Lei, 2014, pp. 23–24]. The modern concept of psychological safety in organizations was developed by W.A. Kahn [1990, p. 708], who defined psychological safety in an organization in the context of team members' feelings and individuals' perception of their behavior through the prism of negative consequences that may result from these behaviors for their image, position, or career. This concept is based on the assumption that an individual's sense of psychological safety in the workplace is shaped by ongoing interpersonal interactions between close colleagues [Steinerowska-Streb, 2020].

In the literature on the subject [Rogowska, 2020] there is also the term 'healthy work environment', which is considered as the environment in which both parties functioni in a given organization. That is, employees, but also the management of a given company, cooperate with each other in order to improve activities leading to the health protection of people who are

professionally active in a given organization. Activities should be multi-faceted and should include health promotion, safety in the health context, taking care of employees' well-being, and balance in the workplace. Therefore, creating a safe workplace, also in psychological terms. It seems that during the COVID-19 pandemic, this aspect of shaping the work environment was neglected and pushed into the background in the face of problems of that time in the workplaces of medical workers.

The problem of psychosocial elements of the work environment became the subject of a study carried out by the authors of the study in 2020. Literature studies on the safe work environment and its psychosocial dimension confirmed the authors' belief in its significant impact not only on the health condition of medical workers and the quality of activities they undertake, but also on their well-being, family and social life. Therefore, a decision was made to additionally analyze the research material using different statistical tools.

Methodology

The research results presented in the study are part of a nationwide quantitative survey of medical workers carried out in December 2020 as part of the project "Research on the opinions of medical workers on their functioning during the COVID-19 pandemic at work" with the participation of a specialized external company DRB Polonia.

In the area of analysis of psychosocial dimensions of the work environment, the following research assumptions were adopted:

- The situation of the COVID-19 pandemic has affected the sense of security of all groups of medical workers;
- Medical workers had better access to specialist knowledge about the SARS-CoV-2 virus and the rules for safe functioning in the workplace during the pandemic than the average citizen.

The study posed the following problem: How did the surveyed medical workers assess the psychosocial elements of the work environment, including their own sense of security in the context of the functioning of health care units in the crisis resulting from the COVID-19 pandemic in Poland?

The study was conducted with quantitative research methods using the CATI (Computer Assisted Telephone Interview) telephone survey technique. The technique was chosen due to the restrictions on direct contact resulting from the COVID-19 epidemic in Poland at the time of the study. The research population consisted of medical workers according to the classification of Statistics Poland [Statistics Poland, 2018]. The study included a randomly selected representative sample of medical workers N=384, determined on the basis of the Statistics Poland report for 2018, with the following assumptions:

- the size of the research population of medical workers is 400,986 people;
- fraction size: 0.5;

- confidence level: 95%;
- maximum error: 5%.

Table 1 presents the percentage distribution of individual professional groups in the population and in the selected research sample.

Table 1. Percentage of individual professional groups in the selected research sample

Professional group of medical workers according to the Statistics Poland classification	N in the population	% N	N for the research sample	N rounded
Doctors	89 532	22.33	85.7	86
Dentists	12 927	3.22	12.4	12
Pharmacists	28 873	7.20	27.6	28
Nurses	192 964	48.12	184.8	185
Midwives	22 880	5.71	21.9	22
Physiotherapists	27 787	6.93	26.6	26
Diagnosticians	11 657	2.91	11.2	11
Paramedics	14 366	3.58	13.7	14
Total:	400 986	100	384.0	384

Source: own study based on research results.

The research tool used is a standardized questionnaire consisting of closed questions and statements. A Likert scale (so-called Likert scaling technique) was used for responses. The research tool, which isthe questionnaire is original and was formulated by members of the research team – employees of the Department of Psychology, Sociology, and Communication in Management, Faculty of Management, Częstochowa University of Technology.

The research tool was subjected to a reliability and item analysis test using the Cronbach's Alpha indicator, examining the internal consistency of the questionnaire. Following results were obtained: Cronbach's Alpha: .940762 Standardized Alpha: .943384 Average correction between positions: .394206.

The STATISTICA software was used in the process of developing research results. To assess the significance of differences in the analyzed variables, non-parametric tests were used: Mann-Whitney U test (UMW), Kruskal-Wallis ANOVA test (AKW). Kendall's tau correlation coefficient was used to assess the strength of correlations between variables.

When preparing the research methodology, no research hypotheses were adopted due to the unprecedented nature of the phenomenon under study and the prevailing pandemic situation, as well as the lack of literature studies in this area. However, for the purpose of analyzing the research results, a number of statistical hypotheses were defined regarding the occurrence of significant differences in the respondents' statements due to their characteristics and due to the characteristics of the organizations employing them. It was assumed that H_0 is a hypothesis about the lack of differences due to the grouping variable, while H_1 is an alternative hypothesis about the presence of such differences. The study presents only relationships

verified by statistical tests, which allow for drawing conclusions about regularities occurring in the population studied.

Study findings

The survey included 12 questions that were considered indicators of the psychosocial dimensions of the work environment of medical workers (Table 2).

Table 2. Percentage distribution of respondents' answers

Coefficient	5	4	3	2	1
	%				
Scale	Yes, I know more than 10 such people	Yes, I know between 6 and 10 such people	Yes, I know between 2 and 5 such people	Yes, I know 1 such person	No, I don't know such a person
1. Do you know anyone who resigned from the profession of a medical worker due to the pandemic?	8.33	10.16	23.95	16.93	40.63
2. Do you know anyone who avoided practicing as a medical worker due to the COVID-19 pandemic?	9.37	11.46	23.44	18.23	37.50
Scale	Very well	Well	Neither well nor bad	Badly	Very badly
3. How do you deal with the illness or death of co-workers related to the COVID-19 pandemic?	8.07	16.67	41.67	23.96	9.63
4. How do you deal with the illness or death of patients related to the COVID-19 pandemic?	8.59	21.63	39.06	22.39	8.33
Scale	Definitely yes	Probably yes	Neither yes nor no	Probably not	Definitely not
5. Do you currently feel that your work makes sense (do I help people)?	42.18	31.78	16.67	7.29	2.08
6. Do you currently derive satisfaction from doing your job?	32.81	36.46	20.57	6.25	3.91
7. Do you feel powerless/helpless in the current situation (in connection with your work)?	12.24	28.38	31.77	21.09	6.52
8. Do you think you are highly vulnerable?	24.23	30.47	29.95	11.19	4.16
9. Do you feel like you are surrounded by information chaos at work?	14.32	32.82	25.53	18.48	8.85
10. Do you feel a sense of lack of control over what is happening at work?	11.19	28.38	32.29	16.16	11.98
11. Have you noticed an increased number of conflict situations in the workplace during the COVID-19 pandemic?	11.98	28.12	29.16	19.79	10.95
12. Do you feel safe at work during the COVID-19 pandemic?	11.98	34.37	31.25	14.58	7.82

Source: own study based on research results.

A significant number of respondents declared that they did not know anyone who would resign from or avoid practicing the profession of a medical worker due to the pandemic. However, it should be emphasized that at the same time, almost one in five respondents knew at least 6 people who gave up or avoided practicing their profession. Regarding the respondents' opinions on how they deal with the illness or death of co-workers or patients as a result of COVID-19, a similar percentage declared positive and negative emotions. It is optimistic that over 70% of respondents felt that their work was meaningful, and almost the same percentage declared that they derived satisfaction from their work. Unfortunately, over 40% of respondents expressed a feeling of powerlessness and helplessness in the face of situations they encountered while performing the work. More than half of medical workers believed that they were at high risk of infection with the SARS-CoV-2 virus at the time of the study. Nearly half of the respondents declared that they felt that they were in information chaos at work, while 10 pp. fewer respondents indicated a loss of control over what was happening in the workplace. Most employees also observed an increase in conflict situations in the workplace during the COVID-19 pandemic. To summarize respondents' declarations, over 46% did not feel safe at work, and over 22% of employees had different feelings.

The next step in the process of analyzing the collected data on the psychosocial dimensions of the work environment was to determine whether independent variables describing the characteristics of the respondents and the organizations employing them significantly differentiated the respondents' opinions (Table 3).

Table 3. Results of the Mann-Whitney U (UMW) and Kruskal-Wallis (AKW) ANOVA tests for significance of differences

Coefficient	1	2	3	4	5	6	7	8	9	10	11	12
Independent variable	p for $\alpha=0.05$											
Gender (UMW)	0.0433		0.0491				0.0383	0.0383				
Having children (UMW)	0.0101	0.0077										
Having dependents (UMW)	0.0374	0.0041				0.0342	0.0004	0.0005		0.0272	0.0405	
Public/non-public organization (UMW)				0.0095					0.0396	0.0129	0.0199	
Form of employment (UMW)	0.0184	0.0051						0.0461				
Age (AKW)			0.0014	0.0058								
Type of employing entity (AKW)									0.0029		0.0105	
Residential and 24-hour care (AKW)								0.0248	0.0003	0.0069	0.0015	
Single-name hospital (AKW)	0.0002	0.0002						0.0228	0.0001	0.0025	0.0024	0.0187
Employer size (AKW)								0.0285				0.0433

Source: own study based on research results.

With regard to gender, it was observed that men declared that they knew more people who resigned from the profession of a medical worker during the pandemic. Women were much more likely to declare that they did not know such people at all. Men coped better with the illness or death of co-workers than women. Women were much more likely to report feelings of powerlessness and helplessness in relation to their work. They were also much more likely to declare a sense of high risk of infection with the SARS-CoV-2 virus. Similar patterns in the statements of women and men were revealed in the research of Abukhalil et al. [2022] and Chigwedere, Sadath, Kabir, Arensman [2021].

A statistically significant regularity was observed in which people with children declared knowing more people who had resigned from or avoided practicing the profession of medical workers than respondents without children. A similar relationship was noticed in relation to people who lived with loved ones during the pandemic, whose health they were particularly concerned about. Persons who did not care for dependent relatives:

- derived greater satisfaction from doing their job;
- were less likely to feel a sense of powerlessness and lack of control over what was happening in the workplace;
- were less likely to believe that they were at risk of infection with the SARS-CoV-2 virus;
- were more likely to declare that there was no increase in number of conflict situations at their workplace.

Taking the type of organization into account, employees of public organizations coped better with the illness or death of patients than employees of non-public organizations, but they had a greater sense of functioning in information chaos at work and felt a greater lack of control over what was happening in the workplace. Employees of non-public organizations were also much more likely to declare that they had not observed an increased number of conflict situations in the workplace.

Respondents employed under an employment relationship declared much more often than those employed under another legal relationship that they knew more people who had resigned from or avoided practicing their profession of medical workers, and also felt more exposed to infection with the SARS-CoV-2 virus.

Surveyed employees declared that they are less able to cope with the illness or death of co-workers and patients while getting older.

With regard to the sense of functioning in information chaos, respondents employed in facilities providing stationary and 24-hour services (hospital and non-hospital) provided the worst assessment. Employees of clinics and diagnostic points had slightly better feelings, while pharmacy employees were the least likely to report the feeling of functioning in chaos. Employees of inpatient and 24-hour facilities declared no increase in the number of conflict situations at work to a greater extent than employees of other types of medical units. However, it should be remembered that this group of entities includes both hospitals and other facilities. In hospital units, staff declared that they felt highly exposed to infection with the SARS-CoV-2 virus to a slightly greater extent than in other units providing 24-hour and inpatient services.

In addition, respondents in this type of units felt much more strongly that they were working in information chaos and felt a lack of control over what was happening in the workplace. Similar patterns were also observed among hospital staff in terms of an increased number of conflict situations.

A specific type of hospital during the COVID-19 pandemic were single-name hospitals, so-called "COVID hospitals". Employees of these hospitals declared much more often than the staff of other units that they knew a relatively large number of people who had resigned from their jobs as medical workers or had avoided practicing their profession. The interesting fact is, however, that respondents from these units declared a feeling of high exposure to SARS-CoV-2 virus infection less frequently than respondents from other types of hospitals. However, they confirmed that they were working in information chaos and felt a lack of control over what was happening in the workplace, although on this last point the differences between responses of employees of "COVID" and "non-COVID" hospitals were not so significant. In the case of conflict situations at work, employees of "non-conflict" hospitals more often declared that they had observed an increase in their number. They were also relatively more likely to report feeling unsafe at work.

Employees of large facilities employing more than 250 employees were most at risk of infection with the SARS-CoV-2 virus. However, employees of small units (10–49 employees) felt the safest in the workplace.

The indicators analyzed were also examined in terms of correlations between them (Table 4).

Table 4. Kendall's tau correlation coefficients

Kendall's tau correlation coefficients are significant at p <.005												
coefficients	1	2	3	4	5	6	7	8	9	10	11	12
1	1.0000											
2	0.6187	1.0000										
3	0.1793	0.1258	1.0000									
4	0.1645	0.1681	0.6601	1.0000								
5	–0.1044				1.0000							
6			0.0975		0.6650	1.0000						
7	0.1330	0.1365					1.0000					
8					0.1269		0.3875	1.0000				
9	0.1878	0.1746	0.1284	0.1195			0.4076	0.2839	1.0000			
10	0.2179	0.2021	0.1374	0.1382	–0.1749	–0.1491	0.4107	0.2453	0.5917	1.0000		
11	0.2193	0.2115			–0.1605	–0.1342	0.3463	0.2692	0.4388	0.5110	1.0000	
12			0.2132	0.1827	0.1908	0.2757						1.0000

Source: own study based on research results.

The study revealed that the ability to cope with the illness or death of co-workers and patients had the greatest impact on the overall sense of safety in the workplace. In turn, the

sense of security should be related to the sense ofmeaning of the work performed, and the satisfaction derived from it. This is confirmed by the research of Gustavsson, Goetz-Kundera, Flaga-Łuczkiewicz, Wichniak [2023]. In relation to job satisfaction, the ability to cope with the illness or death of co-workers and the ability to maintain a sense of control over both the tasks performed and conflict situations had an impact. A positive relationship between the work of medical workers exposed to high psychophysical risks during the pandemic and job satisfaction is also indicated by the work of Barros, Baylina, Fernandes, Ramalho, Arezes [2022]. The sense of work was felt by people who also declared being at high risk of infection with the SARS-CoV-2 virus. The interesting fact is that the sense of meaning in work should be associated with the sense of having control over what is happening at work and functioning in a non-conflict work environment.

High values of Kendall's tau correlation index were observed in relation to the correlation between the sense of lack of control and conflict in the workplace. It seems justified to say that the feeling of lack of control and lack of functioning in information chaos is the source of an increased number of conflict situations in the workplace. However, the feeling of powerlessness and helplessness in connection with work was influenced by exposure to virus infection, functioning in information chaos, feeling of lack of control and conflicts in the work environment.

Discussion

In the light of the results obtained, it seems that hospital employees, especially in single-name hospitals, were most exposed to the loss of sense of security. Employees of this type of facilities, who are on the front line, as they are called in the literature [Karakose, Malkoc, 2021; Sivaprakash, Akshaya, 2022; Starkweather et al., 2023], most often encountered functioning in conditions of information chaos and lack of sense of control. Similar observations were reported for public hospitals in the work of Saifullah, Li, Maqbool [2023]. The way the pandemic was managed at the national level seemed to be responsible for this state of affairs [Poland Country Snapshot, n.d., 2024]. The importance of communication in the management of medical staff during the pandemic is also emphasized by the works of other researchers [Gustavsson, Włoszczak-Szubzda, Al-Wathinani, Goniewicz 2023; Hou et al., 2023]. Similar regularities were not observed in relation to private facilities employing medical workers, which had much greater possibilities for organizing their activities. These units also appear to have done a better job of protecting the psychosocial work environment. Employees of single-name hospitals were also much more likely to witness colleagues resigning from work or avoiding work during the pandemic. As the research confirms [Goniewicz et al., 2023], this was one of the typical behaviors to eliminate the risk of functioning in a dangerous work environment. At the same time, it should be noted that during the pandemic, instructions were issued by the Ministry of Health ordering Polish medical workers (usually working for

several employers) to reduce their work to their primary place of employment [Gustavsson et al., 2023]. This group also included people employed under an employment contract.

The research results also show that the subjective perception of the psychosocial dimensions of the work environment was significantly influenced by having children and living with people who are particularly vulnerable to the effects of the disease, such as the elderly, disabled or sick. Concern and fear for others appears to be a factor that has a strong impact on the sense of security, as emphasized by works of Kalrao, Srivastava, Kumar [2023] and Souadka, Essangri, Benkabbou, Amrani, Majbar [2020]. Perhaps this should be related to gender, because this criterion was associated with feelings of powerlessness and helplessness among the respondents.

People who did not care for children and dependent persons did not have to worry about their health, which contributed to greater job satisfaction and less feelings of powerlessness and lack of control.

Another important observation made is the impact of a poorly organized work environment (even if the state policy to combat the pandemic was partly responsible for this situation) on the feeling of safety, which is also confirmed by the results of other studies [Edwards, La, Keku, Telesford 2023; Harrison, Lancaster, Rhodes, 2023; Saifullah et al., 2023; Dagenais et al., 2023]. Organizational and team managers are responsible for issues of chaos in the workplace and failure to prevent conflict situations, and these elements shape the psychological work environment in the light of research results [Hallam, Popovic, Karimi, 2023; Skýpalová, Stojanová, Troger, Caha, 2023].

Summary

Two main conclusions can be drawn from the conducted analyses. The first concerns the role of the organization in creating a safe work environment. This task was particularly important for the group of medical workers during the COVID-19 pandemic. Unfortunately, the picture of the situation obtained at the time of the study shows that employees, especially those employed in units fighting the pandemic on the front line, struggled to function in conditions of constant chaos. This affected their emotions and, consequently, their sense of psychological safety. Managers of units, especially public ones, explained this situation by pointing to existing staffing and financial problems, which became a crisis during the pandemic.

The second conclusion revealed by the study is the unexpected importance of personal issues, such as having children or caring for dependents. Medical workers are a group of specific professions where the risk associated with work can be directly transferred to the home environment, which we perceive as safe. So, in a sense, it is a violation of the intimate and private sphere. During the pandemic, this situation probably led to internal dilemmas: whether to give up work or contact with loved ones, or whether to take the risk of exposing them to the effects of the disease. Another element of the analysis of this situation is the difficulty of reconciling work and caring for children and dependent persons while they are isolated at home.

The experience of the COVID-19 epidemic on such a massive scale has contributed to drawing various conclusions, both in relation to the functioning of economies, societies and individual organizations. Changes in the functioning of the latter will remain with us permanently, for example, in relation to medical facilities, teleconsultations and other forms of digitization of medical services, the implementation of which was accelerated by the pandemic. Many medical procedures and processes have been formalized in the event of a similar crisis situation. Paradoxically, however, no conclusions have been drawn yet with regard to medical workers in terms of ensuring a healthy working environment, emphasizing the role of psychological aspects. This area of analysis should definitely be detailed and re-examined. Conducting survey again in standard working conditions of medical workers would allow to diagnose areas of safety that are particularly vulnerable to crisis circumstances.

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