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WORK ENVIRONMENT AS ASSESSED BY MEDICAL WORKERS DURING THE COVID-19 PANDEMIC

Introduction

The unprecedented situation in which the world and Poland found themselves due to the outbreak of the COVID-19 pandemic revealed many weaknesses and problems in the functioning of state systems, economic units, societies and institutions. For the first time in history, many countries made joint efforts to contain and combat the virus. Its appearance had a significant impact on economic and social life, but above all, exposed the weaknesses of healthcare systems [Rypicz et al., 2020]. In the era of fighting the pandemic, medical workers played a special role. In Poland, according to the classification of the Central Statistical Office, medical professionals include: doctors, dentists, pharmacists, nurses, midwives, physiotherapists, laboratory diagnosticians and paramedics [GUS (CSO-Central Statistical Office), 2018]. Compared to global and European standards, the situation of Polish medical staff is extremely unfavorable [*Struktura i średnia wieku pielęgniarek*…, 2021]. Poland has one of the lowest employment rates among medical professions in the European Union, coupled with an unfavorable age structure for doctors and nurses, professional emigration, and frequent protests and strikes from various medical groups, which – result from low remuneration and excessive workload.

This accumulation of problems within the health service was also compounded by the COVID-19 pandemic, which turned out to be a unique phenomenon both in Poland and globally, in terms of its scale and the use of resources, as well as organizational

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and political responses. The authors of this study decided to re-analyze the research results from 2020, this time using the cluster analysis method. The motivation for this decision was the desire to examine the results from a time-based perspective. The 2020 study aimed to capture the opinions of medical workers on their professional experiences during the COVID-19 pandemic. The data collection took place in the first half of December 2020, shortly after the second wave of infections subsided in Poland, with the expectation that the results would reveal interesting patterns regarding the functioning of medical workers in their work environments during the crisis. It is also important to note that the study was conducted just before the start of the vaccination program (the first vaccine in Poland was administered on December 27, 2020), with medical workers being the first group to receive it. The study presents the attitudes of medical workers towards sudden and unpredictable events in the work environment during a global crisis. The results are valuable for both scientists and practitioners dealing with these issues, as they represent an unprecedented situation of functioning during a pandemic. The experience gained during the SARS-CoV-2 lockdown holds utilitarian value and can be used in response to future crises of this nature. The aim of this article is to explore the general patterns observed in the work environment of medical workers during the COVID-19 pandemic. In the literature both Polish and foreign researchers have analyzed the functioning of medical workers during the pandemic [Barros et al., 2022; David et al., 2023; Goniewicz et al., 2023; Gustavsson et al., 2023; Hallam et al., 2023; Harrison et al., 2023; Hou et al., 2023; Liu et al., 2023; Rhodes et al., 2024; Saifullah et al., 2023]. However, research carried out at such a special and unprecedented moment, as presented here, is difficult to find. The results of the study provide insights into the attitudes and opinions of a broadly defined group of medical workers (as classified by the Central Statistical Office in Poland), while existing literature focuses on individual professional groups (nurses, doctors, paramedics, etc.). As a result, making direct comparisons is challenging.

1. Theoretical foundations of the issue

The work environment is an integral part of the professional functioning of all employees. It creates a context that should be taken into account when analyzing various work-related issues. The shaping of the work environment, adapting it to the needs of employees, and understanding the relationship between people and their work environment are subjects of interest across various scientific disciplines. Adults learn not only in educational institutions but also in the work environment [Trawińska-Konador, 2013].

The work environment includes a set of conditions under which the work process takes place [Korpus, 2008], including both material and social factors [Jasińska,

2010]. Working conditions can thus be defined as "all of the physical (material) and psychosocial factors originating in the work environment and affecting individuals performing work" [Pocztowski, 2008: 377]. Upon analyzing the literature on the subject and the professional practices within medical workers' environment, taking into account the nature of their activities, four groups of factors can be identified: physical, chemical, biological and psychological (psychosocial) [Tarczoń, 2017a: 13–16]

Physical factors in the medical sector include, first and foremost, slippery, wet, rough, and uneven surfaces on which employees move. Other traumatic factors include moving and loose elements, sharp tools and edges, broken glass, needles, scissors, as well as hot surfaces and liquids. Another threat is: electric current and devices that are a source of ionizing radiation, laser radiation, ultraviolet radiation, or electromagnetic field. The physical factors of the working environment also encompass mechanical vibrations, noise (from medical devices and equipment), specific room microclimate, shift work (including particularly strenuous night shifts), and high-intensity lighting [Tarczoń, 2017a: 13–16].

In Poland, many elements of the physical work environment are regulated by legal provisions in the field of occupational health and safety, the Labor Code and internal company policies. The COVID-19 pandemic did not significantly affect this area for staff and employers. Medical personnel, especially those employed in hospital facilities, are exposed to health hazards due to contact with chemical agents. It is worth noting that chemical hazard factors include water and the so-called wet work environment (frequent contact with water and the chemical compounds it contains). These factors pose a problem not only because they cause illness and discomfort for employees, but also due to the costs incurred by employers as a result of employees' inability to work [Tarczoń, 2017b: 50–53].

During the COVID-19 pandemic, working conditions related to chemical factors in the work environment significantly deteriorated. Contact with disinfectants and wet work environments increased, and wearing masks caused additional irritation and skin problems [Di Altobrando et al., 2020; Liu et al., 2023]. Although these elements were the simplest and fastest way to deal with the epidemiological threat, they undoubtedly contributed to increased discomfort for employees [Ayu et al., 2021].

Throughout their professional activity, medical workers are also exposed to biological factors that negatively affect their health or reduce their physical and mental fitness. According to Polish regulations [Regulation of the Minister of Health, 2005], biological agents are defined as cellular microorganisms, internal parasites, and cell-free entities capable of replicating or transferring genetic material, including genetically modified cell cultures, which may cause infection, allergy, or poisoning. Biological factors present in the medical work environment are largely responsible for their incidence of occupational diseases [Tarczoń, 2017c: 50–53].

The COVID-19 epidemic has changed the working environment of medical workers, especially in this respect. Wearing masks, and protective clothing, organizing workspaces into "clean" and "infected" areas, and creating transition areas resulted in significant work challenges.

The final group of factors in the work environment of medical workers are psychosocial and psychophysical factors. According to Tarczoń [2018: 22–24], static physical load takes first place in this group, such as working in a forced body position – especially standing, bending, and twisting the spine Laboratory workers also face the burden of repetitive manual tasks, monotony, reduced activity, and dynamic physical loads involving repetitive work that leads to one-sided overload of certain muscle groups. Paradoxically, the introduction of modern IT solutions aimed at improving healthcare management has increased the amount of time medical workers spend in front of computer monitors, the burden of repetitive manual tasks, monotony, reduced activity, and dynamic physical loads involving repetitive work that leads to one-sided overload of certain muscle groups. During the pandemic, the additional obligation to report and prepare non-medical documentation further compounded these challenges.

An important factor in this group is the neuro-mental load, which is related to the performance and directly depends on the method and conditions of receiving information, performing activities, and making decisions. The consequence of neuropsychological load is mental load, emotional load, or perceptual underload or overload [Tarczoń, 2018: 22–24]. Mental load is also influenced by elements such as the number and complexity of incoming information, variability, wakefulness, the need to make difficult decisions, interpersonal conflicts, disruption of work-life balance, and task overload (stress factors). Typical psychosocial factors in this work environment include traumatic experiences, working with dying people, confronting pain, crisis situations, complaints, and legal disputes. Psychosocial factors are also related to the organization of work in this sector. The most important of these factors are organizational uncertainty, high work demands, rigid working hours, hierarchical structures, unstructured work system, conflicting instructions and responsibilities, time pressure, poor staff management, and lack of access to important information. All the above-mentioned elements were even more highlighted during the pandemic and additionally strengthened by the fact that the staff often had to work almost non-stop, replacing those colleagues who were unable to work due to COVID-19 [Abukhalil et al., 2022].

For medical workers, exposure to the SARS-CoV-2 virus contributed to a significant deterioration of the work environment in terms of psychosocial and psychophysical factors [Barros et al., 2022]. This professional group, especially during the initial waves of the pandemic, was forced to deal with an undiagnosed disease to a much greater extent than the rest of the society. It should be remembered that, at that time,

complete isolation was one of the most effective methods of preventing illness. While much of society tried to avoid contact with the virus, medical workers operated under opposite circumstances, often on the verge of mental breakdown, physical fatigue, and emotional exhaustion [Rhodes et al., 2024; Saifullah et al., 2023].

The catalog of psychosocial and psychophysical factors in the work environment of medical staff is not exhaustive. These factors develop individually throughout the entire professional life of employees, and their number is constantly changing. Ongoing analysis and understanding of these factors allow for more effective prevention and protection against threats.

Employers play a key role in shaping all the discussed factors of the work environment. Regardless of external factors and circumstances, the safety and comfort of medical workers' working conditions depend largely on their decisions.

2. Methodology

The research results presented in the study are part of a nationwide quantitative survey of medical workers carried out as part of the project "Research on the opinions of medical workers on their functioning during the COVID-19 pandemic at work" in December 2020 with the participation of a specialized external company, DRB Polonia. The research problem of the project was formulated as follows: How do medical workers perceive their professional functioning in the conditions of the COVID-19 pandemic in the areas of occupational safety; work organization, employee relations, and job satisfaction and meaning?

The study was conducted using quantitative research methods using the CATI (Computer Assisted Telephone Interview). The technique was chosen due to the restrictions on direct contact resulting from the COVID-19 pandemic in Poland at the time of the study. The research population consisted of medical workers classified according to the Central Statistical Office. The study included a randomly selected representative sample of medical workers N=384, determined on based on the Central Statistical Office's 2018 report (the only available listing of medical worker groups at the time of planning the study). The following assumptions were made:

- the size of the research population of medical workers is: 400,986 people;
- fraction size: 0.5;
- confidence level: 95%;
- maximum error: 5%.

The research sample was selected taking into account representativeness of the research population in terms of division into professional groups, according to the Central Statistical Office classification.

The research tool used was a standardized questionnaire consisting of closed questions and statements. A Likert scale (the so-called Likert scaling technique) was used to allow responses to indicate the relative intensity of their responses [Babbie, 2004: 192]. The form of the established and given conditions allowed for a reliable and quick analysis of the collected data, ensuring uniformity and ease of processing. The research tool (questionnaire) was original and developed by members of the research team – employees of the Faculty of Management at Czestochowa University of Technology.

The research tool was subjected to a reliability and item analysis test using the Cronbach's Alpha indicator to examine the internal consistency of the questionnaire. The following results were obtained: Cronbach's Alpha: .940762 Standardized Alpha: .943384, and an average correction between positions:.394206. These measures allow us to conclude that the questionnaire is devoted to one area and examines its various dimensions.

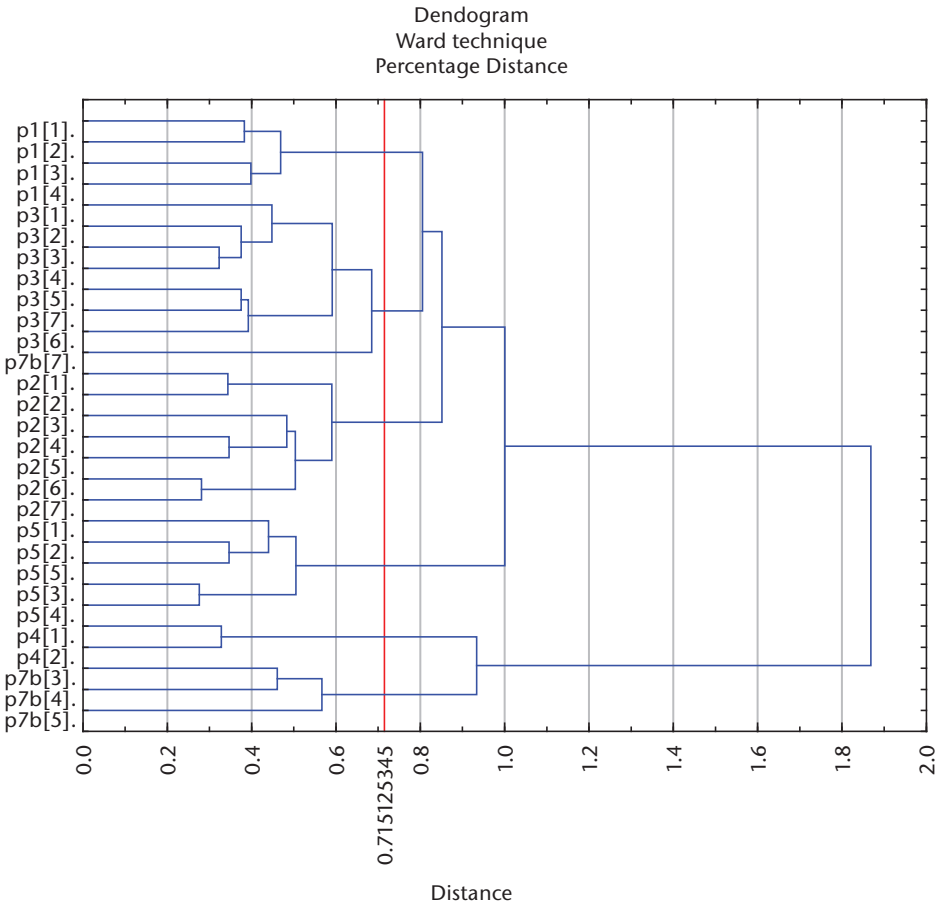
In the process of developing research results for the purposes of segmentation of objects and variables, cluster analysis was used using the STATISTICA program. Cluster analysis also referred to as feature and object segmentation, is a method that involves identifying and extracting clusters from data, i.e. groups of similar objects. Correctly performed cluster analysis allows for dividing a dataset into groups in order to better understand the information contained therein and to determine the properties of similar object groups and their synthetic characteristics [Korzeniewski, 2012: 5].

The analysis used the nonoverlapping domain decomposition method, using a hierarchical data grouping algorithm (agglomeration method). A characteristic feature of hierarchical analysis is that the researcher can obtain information about each individual object being analyzed. The researcher can either use this information or opt for a more synthetic analysis, taking into account only multi-element clusters. Hierarchical methods present reality in an analytical way while revealing how individual objects are arranged in clusters and what relationships exist between them. Depending on the research purpose, the researcher may conduct the analysis at various levels of generality.

3. Research results

As a result of the cluster analysis procedure, using the Ward Method as the agglomeration method and percentage discrepancy as the distance measure, the variables were divided into clusters. The number of clusters was determined by analyzing the agglomeration distance graph and the intersecting the dendrogram at the point of the first significant jump (increase) in agglomeration distance (Graph 1, Figure 1).

Figure 1. Dendrogram



Source: own study.

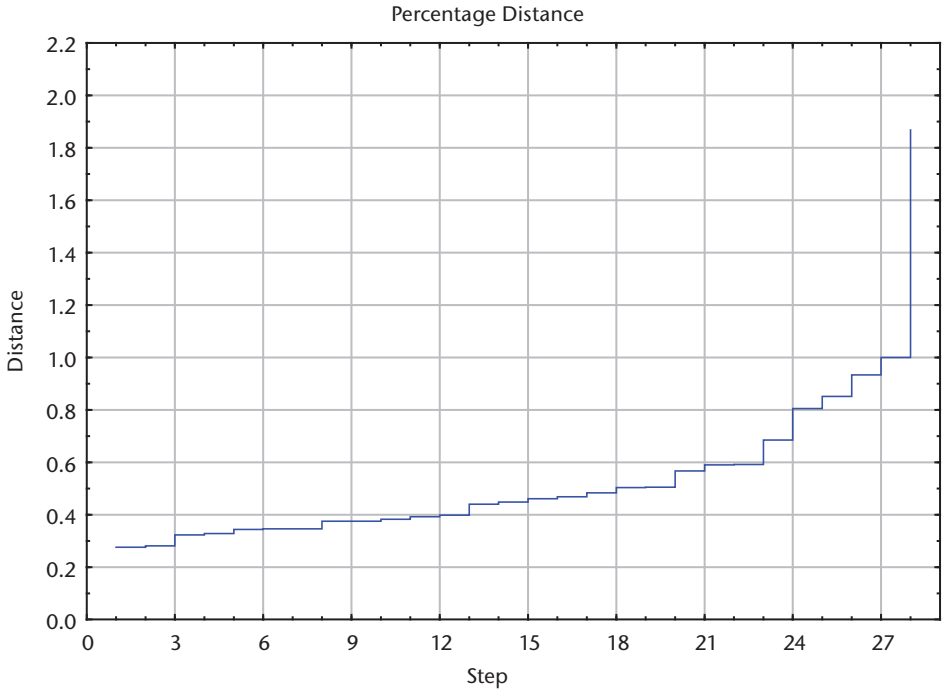
In the next step of the data analysis procedure, representative variables were selected using formula (1), substituting appropriate values from the distance matrix for individual groups. The center of gravity method [Błażejczak-Majka, 2018] was used here, consisting in calculating the distances of each variable from the others in multi-element groups of variables and selecting the one for which the sum of the distances is the smallest (Table 1).

$$D_i^W = \Sigma^n{}_{l\ i\neq j;\ j+1} d_{ij} \tag{1}$$

where:
D_i^W – the sum of the distances of the i-th variable from the remaining variables in the l-th group

n_l – number of variables belonging to the l-th cluster,
d_{ij} – the i-th distance of the i-th variable from the j-th variable, with i≠j and j=1, 2, …, n_l.

Graph 1. Agglomeration distance chart



Source: own study.

If the group of variables has two elements, as is the case with cluster 1, the variable that is furthest from the previously determined representatives is selected in accordance with formula 2 [Błażejczak-Majka, 2018]. In the analyzed case, the former was selected from among the variables P4.1 and P4.2.

$$D_i^z = \Sigma^{g-k}{}_{i\neq j;\, j=1} d_{ij} \tag{2}$$

where
D_i^z – the sum of the distances of the i-th variable from the remaining representative variables,
g – the number of distinguished groups of variables, wherein i=1, 2, …, g,
k – number of two-element groups,
d_{ij} – the value of the distance of the i-th variable from the j-th variable – a representative of one of the other groups, wherein i≠j and j=1, 2, …, g–k.

Table 1. Membership in clusters

Variable*	Means and standard deviations		Cluster membership Connecting distance = 0.7 Ward's method Percentage mismatch	The sum of the distance of a variable from other variables in the group
	Means	Standard deviations		
p1[1].	3.713542	1.101257	2	1.25
p1[2].	3.898438	1.045991	2	1.23
p1[3].	3.877604	1.043752	2	1.30
p1[4].	3.846354	1.081454	2	**1.22****
p2[1].	4.119792	1.012313	5	2.71
p2[2].	4.044271	0.980552	5	2.51
p2[3].	3.734375	1.122877	5	2.79
p2[4].	4,049479	0.993530	5	2.49
p2[5].	3.916667	1.046358	5	2.50
p2[6].	3.986979	1.063192	5	2.42
p2[7].	3.971354	1.038030	5	**2.40****
p3[1].	3.804688	1.093956	6	3.11
p3[2].	3.723958	1.113341	6	3.05
p3[3].	3.914063	1.011893	6	3.03
p3[4].	3.773438	1.063627	6	3.02
p3[5].	3.815104	1.086197	6	**3.01****
p3[6].	3.666667	1.128012	6	3.21
p3[7].	3.789063	1.081429	6	3.13
p4[1].	3.458333	1.109340	1	**0.33****
p4[2].	3.494792	1.093524	1	0.33
p5[1].	3.570313	1.119611	3	1.76
p5[2].	3.760417	1.079065	3	1.53
p5[3].	3.927083	0.947662	3	1.53
p5[4].	3.890625	0.995297	3	**1.49****
p5[5].	3.729167	1.105214	3	1.53
p7b[3].	3.252604	1.174687	4	1.01
p7b[4].	3.106771	1.168139	4	**0.99****
p7b[5].	3.104167	1.178388	4	1.08
p7b[7].	3.393229	1.064036	6	4.00

* original coding
** variable-representatives

Source: own study.

Cluster 1 "keeping medical records" included variables regarding the burdensomeness of maintaining medical records and other necessary documentation (e.g., statements, reports, statistics, etc.).

Cluster 2 "employer image in times of crisis" includes variables regarding the assessment of the employer's performance during the COVID-19 pandemic in relation to: work organization, ensuring safety at work, and maintaining good employee relations.

The next cluster 3, "relations at work", concerns the assessment of workplace relationships including: employee support in performing professional duties, supervisor's trust in employees, relationships with co-workers, and employees' trust in both co-workers and the supervisor.

Cluster 4 "sense of lack of control" includes respondents' opinions regarding: the feeling of functioning in information chaos, the feeling of lacking of control over what is happening in the workplace, and the increase in conflict situations.

The next cluster 5 "sense of health security" refers to the respondents' assessment of their sense of health of health security, covering aspects such as: the availability of disinfectants, personal protective equipment, the organization of workspace (e.g., locks, isolation areas etc.), access to knowledge and information about COVID-19, as well as current legal regulations, patient management procedures, and other relevant workplace situations.

The last cluster 6 "organization of work in a crisis situation" contains variables related to the assessment of work organization, focusing on: decision-making by superiors, comfort, quality, and efficiency of work, adaptation of procedures to the current situation, availability of information and knowledge (e.g., organization of meetings, briefings, issuing orders), and employee participation in the creation of procedures and their adequacy to the demands of their duties.

In the next stage of the analysis, further reduction of the dimensions of the analysis was achieved through the use of the cluster method. Selected variables – cluster representatives were used to define the profiles of respondents:

Group 1 – satisfactory work environment

The first group included medical workers who, despite highlighting the difficulties of maintaining medical records, including reporting and statistics, rated their work environment very positively. In their opinion, the pandemic did not negatively affect the perception of the employer's image, workplace relations, sense of health security, or work organization. Half of them did not feel they had lost control over what was happening.

Group 2 – mediocre working environment

Respondents in this group showed ambivalence toward all six areas of analysis. It seems that, in their opinion, little to nothing had changed in their work environment

during the pandemic. Characteristically, over 95% were unable to clearly define their own sense of health security.

Group 3 – negative work environment

Medical workers in this cluster expressed a rather negative attitude toward their employer, particularly regarding the employer's functioning during the COVID-19 pandemic. They also reported a loss of control over workplace events. Opinions about "medical documentation" and "relations at work" were nearly equally divided into positive, neutral, and negative attitudes. In terms of work organization, their attitude was either indifferent or negative. Interestingly, half of them rated their own health safety as good or rather good.

Group 4 – unstable work environment

In this group, respondents had moderately positive attitudes toward areas such as employer image, relationships at work, sense of health security, and work organization. However, it is notable that 34% of respondents felt a lack of control over what was happening in the workplace, and over 40% were unable to clearly define their stance this issue. More than half of the respondents found the obligation to maintain documentation during the pandemic to be very or somewhat burdensome.

Group 5 – bureaucratic/formalized work environment

In this group, respondents assessed the obligation to maintain medical and non-medical records during the pandemic very negatively. However, they expressed very positive opinions about their employer, workplace relationships, their sense of health security, and work organization. Regarding the feeling of lack of control, over 43% confirmed experiencing it, while 32% denied it.

4. Discussion

Analyzing the results obtained through the statistical analysis using the cluster analysis procedure, three main observations emerge. The first one concerns the fact that the diagnosed clusters largely overlap with the areas initially defined by the researchers as describing the working environment of medical workers. This suggests that the research areas were appropriately diagnosed during the tool design stage.

Another important observation is that, in relation to the analysis of respondent cluster, no specific characteristics of the respondents were found to define the cluster,

such as age, gender, having children, providing care for dependents during the study, profession, form of employment, type of employing facility (including the analysis of single-name hospitals, the so-called "Covid hospitals", public and non-public entities), the size of the organization, or the geographical location and the size of the town in which the entity is located. This is an interesting observation because it may indicate that during the pandemic, opinions regarding the work environment were influenced primarily by intra-organizational management elements, possibly specific to individual organizational units or even specific employee teams. This finding is supported by research from Montgomery et al. [2023], David et al. [2023], and Dagenais et al. [2023]. However, it should be noted that during the analyzed period, management decisions within individual organizational units were often spontaneous actions driven by the desire to protect both staff and patients. This is further confirmed by the research of Hou et al. [2023].

This is evidenced by the high coefficients of Kendall's Tau correlation index (a correlation index used for ordinal scales [Błażejczyk-Majka, 2018]) between areas such as the employer's image, sense of health security, and work organization in a crisis situation (Table 2). Notably, the presence of a minus sign in the correlation indicators for the "loss of sense of control" area and the previously mentioned areas, indicates that as the sense of control decreases, negative opinions about the other areas increase. The exception to this is the burdensomeness of maintaining medical and non-medical records, which is closely associated with the loss of a sense of control.

Table 2. Kendall's Tau correlation

Clusters	Kendall's Tau correlation All correlation coefficients are significant with p <.05000					
	1	2	3	4	5	6
1	1.0000					
2	0.1821	1.0000				
3	0.1567	0.3992	1.0000			
4	0.0892	–0.1674	–0.0765	1.0000		
5	0.2073	0.5284	0.4184	–0.1907	1.0000	
6	0.1778	0.5242	0.4469	–0.1180	0.6054	1.0000

Source: own study.

The third observation made during the statistical analysis is the significantly smaller impact of employee relations on other areas of the work environment. This suggests that the managerial factor played a stronger role than the influence of colleagues in shaping opinions about the work environment during the pandemic [Sivaprakash, Akshaya, 2022]. This may be related to the fact that, under conditions of work overload and extreme stress, even the closest colleagues may not provide sufficient support,

making formal, systematic solutions much more important [Saifullah et al., 2023]. As shown by the research of Karakose and Malkoc [2021], medical workers in such conditions often avoided all types of contacts with colleagues.

Conclusion

Taking into account that the study was carried out during the first year of the pandemic, before the introduction of vaccinations to protect medical workers against the effects of the SARS-CoV-2 virus, the overall picture of the work environment emerging from the respondents' declarations is nevertheless moderately positive. The main conclusion drawn from the research and analysis is that the respondents' opinions about the work environment were influenced primarily by management-related issues, rather than by the socio-demographic characteristics of respondents or the nature of their individual roles. The initial research context suggested that health security concerns, particularly those related to biological factors, would be the most significant in shaping medical workers' assessments of their work environment.. However, the research revealed slightly different conclusions. First, medical workers – the group most exposed to infection and facing physically and emotionally demanding work – largely reported a moderately high sense of health security. This may be attributed to their specialist knowledge and access to the latest information regarding both the virus and the development of the pandemic. Additionally, respondents seemed to assess access to material and organizational elements that protect their health in a relatively positive manner.

The second conclusion is less clear, but strongly emphasizes the feeling of losing control over what is happening in the work environment in times of crisis. In relation to opinions about the burdensomeness of maintaining medical and non-medical records, these issues should be associated with psychosocial and psychophysical factors. A positive attitude towards the organization of work in crisis conditions, while simultaneously expressing a sense of functioning in chaos, may reflect the inconsistency of decision-making regarding action guidelines at the national level. Regardless of the observed regularities, it is worth noting that the surveyed medical workers functioned in five types of work environment during the pandemic. However, the nature of these environments seems to primarily result from intra-organizational coping mechanism for functioning in crisis conditions. This is further evidenced by the identification of a group of employees who reported working in a satisfactory environment, despite the burden of maintaining extensive medical records, and did not feel a loss of control over their work.

The study presents a unique picture of the working environment of medical workers during a critical moment in their professional lives. This is both an advantage

and a significant limitation of the research. It would be impossible to replicate under similar circumstances because, even if another pandemic occurred, organizations would react based on their experience from the previous one. Undoubtedly, conducting retrospective qualitative research would be interesting, as it could deepen the understanding of the analyzed problem.

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WORK ENVIRONMENT AS ASSESSED BY MEDICAL WORKERS DURING THE COVID-19 PANDEMIC

Abstract

The COVID-19 pandemic has had a negative impact on the management of the work environment across organizations representing all sectors of the economy and social life. This impact was particularly noticeable in entities employing medical workers. The study, carried out by the research team from the Faculty of Management of the Czestochowa University of Technology during the first year of the pandemic, aimed to gather the opinions from medical workers about their experiences during this crisis period.

The aim of the article is to explore the general regularities observed in the work environment of medical workers during the COVID-19 pandemic.

The research results revealed that the respondents' opinions about the work environment were primarily influenced by management-related issues, rather than socio-demographic characteristics or the nature of the organizational units. Moreover, the use of cluster analysis allowed the identification of five types of work environments: satisfactory, non-singular, negative, unstable, and bureaucratic. The study presents a picture of the work environment during a specific moment that cannot be recreated, making it difficult to verify the results. However, this also contributes to the study's uniqueness. Undoubtedly, conducting retrospective qualitative research would be valuable in deepening our understanding of the problem.

Keywords: work environment, medical workers, COVID-19 pandemic

JEL Classification Codes: M12, H12

ŚRODOWISKO PRACY W OCENIE PRACOWNIKÓW MEDYCZNYCH W CZASIE PANDEMII COVID-19

Streszczenie

Okres pandemii COVID-19 negatywnie wpłynął na zarządzanie środowiskiem pracy organizacji reprezentujących wszystkie sektory gospodarki i życia społecznego. W odniesieniu do jednostek zatrudniających pracowników medycznych ten wpływ był szczególnie odczuwalny. Badanie zrealizowane przez zespół badawczy Wydziału Zarządzania Politechniki Częstochowskiej w pierwszym roku trwania pandemii miało za cel poznanie opinii pracowników medycznych na temat funkcjonowania w tym kryzysowym czasie.

Celem artykułu jest poznanie ogólnych prawidłowości występujących w środowisku pracy pracowników medycznych w czasie pandemii COVID-19.

Wyniki badań ujawniły, iż na opinie badanych na temat środowiska pracy miały najistotniejszy wpływ kwestie zarządcze, a nie społeczno-demograficzne cechy respondentów lub jednostek organizacyjnych. Ponadto zastosowanie statystycznej metody analizy skupień pozwoliło na wyodrębnienie pięciu typów środowiska pracy, w których funkcjonowali pracownicy medyczni w czasie pandemii, a do których należą: satysfakcjonujące, nieosobliwe, negatywne, niestabilne oraz zbiurokratyzowane środowisko pracy. Badanie przedstawia obraz środowiska pracy w pewnym unikatowym i niemożliwym do powtórzenia momencie. Jest to ograniczenie badań, ponieważ niemożliwym jest ich powtórzenie w podobnych okolicznościach i zweryfikowanie osiągniętych rezultatów. Jednocześnie jest to również element decydujący o ich wyjątkowości. Niewątpliwie interesujące byłoby przeprowadzenie badań jakościowych, o charakterze retrospektywnym, pogłębiających wiedzę o analizowanym problemie.

Słowa kluczowe: środowisko pracy, pracownicy medyczni, pandemia COVID-19

Kody klasyfikacji JEL: M12, H12