

BELCARZ, Maria & MARCZEWSKA, Sylwia. The Impact of the COVID-19 pandemic on the mental health and social functioning of healthcare workers. *Journal of Education, Health and Sport*. 2023;13(4):319-324. eISSN 2391-8306. DOI <http://dx.doi.org/10.12775/JEHS.2023.13.04.038> <https://apcz.umk.pl/JEHS/article/view/42664> <https://zenodo.org/record/7692227>

The journal has had 40 points in Ministry of Education and Science of Poland parametric evaluation. Annex to the announcement of the Minister of Education and Science of December 21, 2021. No. 32343. Has a Journal's Unique Identifier: 201159. Scientific disciplines assigned: Physical Culture Sciences (Field of Medical sciences and health sciences); Health Sciences (Field of Medical Sciences and Health Sciences). Punkty Ministerialne z 2019 - aktualny rok 40 punktów. Załącznik do komunikatu Ministra Edukacji i Nauki z dnia 21 grudnia 2021 r. Lp. 32343. Posiada Unikatowy Identyfikator Czasopisma: 201159. Przynależność dyscypliny naukowej: Nauki o kulturze fizycznej (Dziedzina nauk medycznych i nauk o zdrowiu); Nauki o zdrowiu (Dziedzina nauk medycznych i nauk o zdrowiu). © The Authors 2023; This article is published with open access at License Open Journal Systems of Nicolaus Copernicus University in Torun, Poland Open Access. This article is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author (s) and source are credited. This is an open access article licensed under the terms of the Creative Commons Attribution Non commercial license Share alike. (<http://creativecommons.org/licenses/by-nc-sa/4.0/>) which permits unrestricted, non commercial use, distribution and reproduction in any medium, provided the work is properly cited. The authors declare that there is no conflict of interests regarding the publication of this paper. Received: 19.02.2023. Revised: 22.02.2023. Accepted: 02.03.2023.

The Impact of the COVID-19 pandemic on the mental health and social functioning of healthcare workers

Wpływ pandemii COVID-19 na zdrowie psychiczne i funkcjonowanie społeczne pracowników ochrony zdrowia

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Abstract

Introduction: The work of medical staff (doctors, nurses) is very stressful, especially during a pandemic. They often bear a lot of responsibility, work under time pressure and take care of a terminally ill patient. This unique time affects not only medical workers but also their families. The rules of functioning in a group and society are changing, and the possibility of exposure to infection by colleagues, relatives or friends is a risk factor for mental health problems.

The aim of the study: The aim of the study was to analyse the prevalence of mental disorders and changes in the social functioning of medical workers during the Covid-19 pandemic.

Materials and methods: Survey search using author-made questionnaire was conducted. The study group consisted of people from 22 to 66 years of age. The survey was anonymous. The study material was analyzed, consisting of 127 correctly completed questionnaires. Collected data was then transformed for statistical purposes and the correlations were examined using Mann-Whitney U test (men vs women).

Results: Comparing the situation before the pandemic to the present one statistically significant increase in to experience stress at work for women. Nearly 90% of surveyed individuals are afraid of being infected with SARS-CoV-2 virus by a patient. Medical personnel (nurses, paramedics, doctors) are experiences stress (83%), fear (65%) and anxiety (76%) in the workplace. 10% of respondents took advantage of the psychological support.

Conclusions: The mental condition and functioning in the society of medical workers is significantly impaired due to the ongoing Covid-19 pandemic. Medical workers are exposed to constant stress, anxiety, powerlessness and their social activity is disturbed.

Key words: COVID-19, mental health,

Wprowadzenie:

When analysing epidemiological, economic and business data from countries all over the world, it can be stated that the Covid-19 disease resulted in deep transformations, mainly of negative significance. Changes caused by the pandemic were quick and unprecedented. The dynamic growth of new infections, social isolation, business losses, economic threats also had a significant impact on mental health of society with particular consideration of patients, medical personnel and elderly people [1].

According to the data presented by the WHO in February 2023, the number of diagnosed cases and deaths caused by the SARS-CoV-2 virus is growing. Globally, the number of infections reached nearly 674 million, whereas the number of deaths amounted close to 7 million [2]. Quick expansion and mortality rates are considerable, although, as history tells us, they are not the highest ones.[18] More than hundred years ago, in 1918, 50 million people all over the world died because of the Spanish flu; yet we still do not know what caused this disease and we still cannot treat or eliminate this malady. And we cannot be certain that the disease will not reoccur. However, in 2002-2003 SARS-CoV-1 infection started to spread, affecting more than 8096 people and leading to 774 deaths, yet the viral illness spread only to 26 countries. The occurrence of pandemic is mainly related with the growing global population, easy access to international transport, as well as lack of basic habits related with daily hand-washing. Population density, evolutionary contact, enhanced herd (population) immunity, infectivity, transmission route of the germ and how effective the immune response of the body is to pathogens – all this impacts the development of the pandemic [3]. Apart from fast spreading of the infection, namely biological exposure associated with the transmission of the virus, the society is exposed to stress, which can be caused by fear or anxiety [16].

Apart from the threat resulting from the pandemic itself, stress situation can be evoked by social isolation, job loss, risk of getting infected by direct contact with infected patients, death of our loved ones [1,4]. These may lead to changes in mental well-being, psychosomatic disorders, fear [2,5]. Mental issues are caused by chronic stress, which the personnel experiences, especially the people working on wards, where patients infected with SARS-CoV-2 are being treated. Constant contact with a patient that poses a possible threat to health and life of the personnel, exposes these people to long-term health-related consequences [6,7].

During the Covid-19 pandemic the medical personnel deals with the risk of infection, overwork, exhaustion, and isolation from their loved ones. This difficult situation often has a negative impact on the mental condition of medical professionals, which may result in lowering the quality of provided healthcare services [8]. Anxiety disorders, feeling lonely, somatic disorders along with low quality of sleep are problems frequently reported by healthcare professionals [9,10].

Regular monitoring of mental health during the pandemic is of particular importance. The World Health Organisation recommends conducting regular tests, in order to better understand the psychological aspect of the pandemic [7]. Collecting and analysing data should become a priority during the Covid-19 pandemic [8].

The aim of the study:

Due to the introduction of restrictions to combat the spread of the Sars-Cov-2 virus, it was decided to determine the impact of the COVID-19 pandemic on the mental health and social functioning of health care workers

Materials and methods:

The study was conducted using a questionnaire designed by the authors of the study. The study was carried out in 2022 year. This was an anonymous study. Participation in the survey was possible after providing an informed consent for the survey. The questionnaire was provided in an electronic form on a social media portal, due to the biggest outreach and the possibility to reach possible respondents. Statistical analysis was performed using the Chi-square test for independence of variables. The strength of the relationship was determined by coefficients Mann-Whitney U Test.

Results:

The study group included 127 people from the medical personnel, namely nurses (n=62), paramedics (n=46) and physicians (n=19). The age of the tested population ranged from 22 to 66 years old. The median age was 43.8 years old. Women constituted nearly 60% of all respondents. As far as all respondents are concerned,

38,1% work in a city with more than 500 thousand inhabitants and up to 500 thousand inhabitants, whereas 23,8% of respondents work in a city with up to 100 thousand inhabitants. In terms of marital status, the study group was diverse. There were 51.9% married people, it was the largest group, 33,8% declared to be single, 14,3% were divorced.

The conducted study revealed that all respondents had direct contact and cared for a patient infected with coronavirus. Almost 81% of respondents work in a hospital department, 14,3% in A&E/ED, whereas 4,7% in medical rescue services. Most respondents have been in service for less than 15 years – 75,4%, whereas 24,6% of respondents have been in service for more than 15 years.

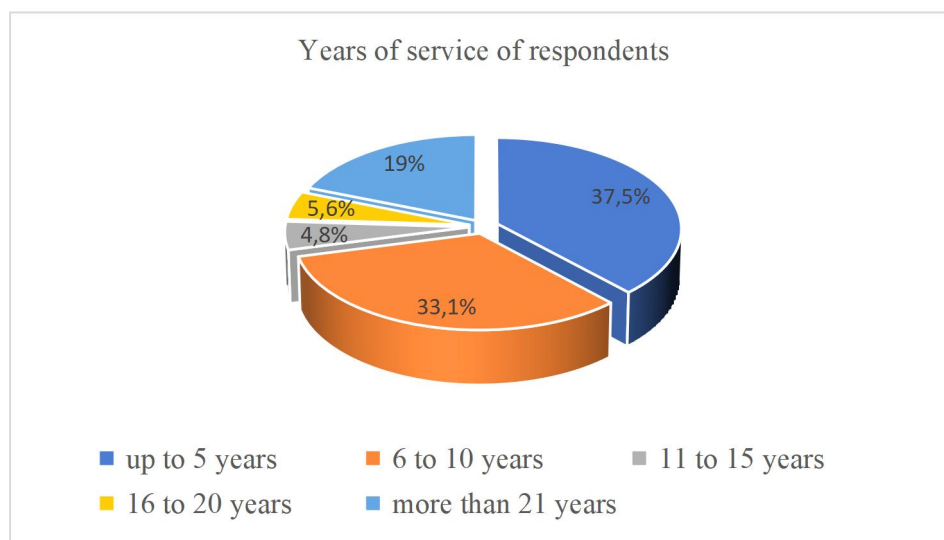


Diagram 1. Years of service of respondents

Source: own elaboration according to conducted research

More than 81% of respondents work in the system of continuous work, while 19% work in a single-shift mode. However, during the Covid-19 pandemic, as much as 75% worked more than the legally regulated number of hours.

Before going to work, nearly 86% of respondents were afraid of getting infected with the virus from an ill patient, they were also experiencing other sensations related with the fear of being infected. When caring for an infected patient, fear, anxiety and stress were feelings dominating within all groups. Simultaneously 75,4% of respondents declared a worsened quality of sleep.

Feelings experienced	Nurses (n=62)	Paramedics (n=46)	Physician (n=19)
Anxiety	71% (n=44)	76% (n=35)	53% (n=10)
Fear	48% (n=30)	65% (n=30)	37% (n=7)
Stress	69% (n=43)	83% (n=38)	63% (n=12)
Frustration	11% (n=7)	9% (n=4)	11% (n=2)
Overwhelm	44% (n=27)	15% (n=7)	37% (n=7)
Irritation	3% (n=2)	9% (n=4)	11% (n=2)
Powerlessness	3% (n=2)	7% (n=3)	21% (n=4)

Diagram 2. Feelings experienced when caring for a patient infected with coronavirus, taking into consideration the division into 3 professional groups. The respondents were allowed to indicate more than one answer. Source: own elaboration according to conducted research

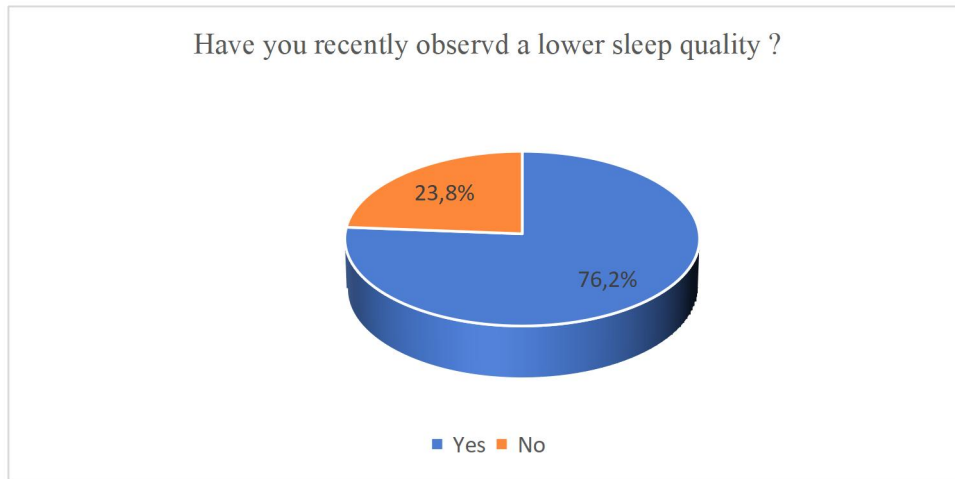


Diagram 3. Lower sleep quality among respondents.

Source: own elaboration according to conducted research

Small group of respondents (9,5%) took advantage of psychological counselling at work, whereas about 75% were not aware that such a possibility even existed. Statistical analysis proved a considerable dependence between gender and experiencing stress when caring for an infected patient. Values <0.05 indicate a significant difference between groups.

Sex				Mann-Whitney U Test	
Female		Male			
M	SD	M	SD	Z	P
3.09	1.73	2.37	1.92	-2.059	0.039

Table 1. Dependence between gender and experiencing stress.

Source: own elaboration according to conducted research

Years of service, along with professional group have an impact on the occurrence of stress at work. 81% of respondents with no more than 5 years of service experienced stress when caring for an infected patient. On the other hand, when focusing on a professional group, as much as 74% of nurses experienced stress when caring for an infected patient.

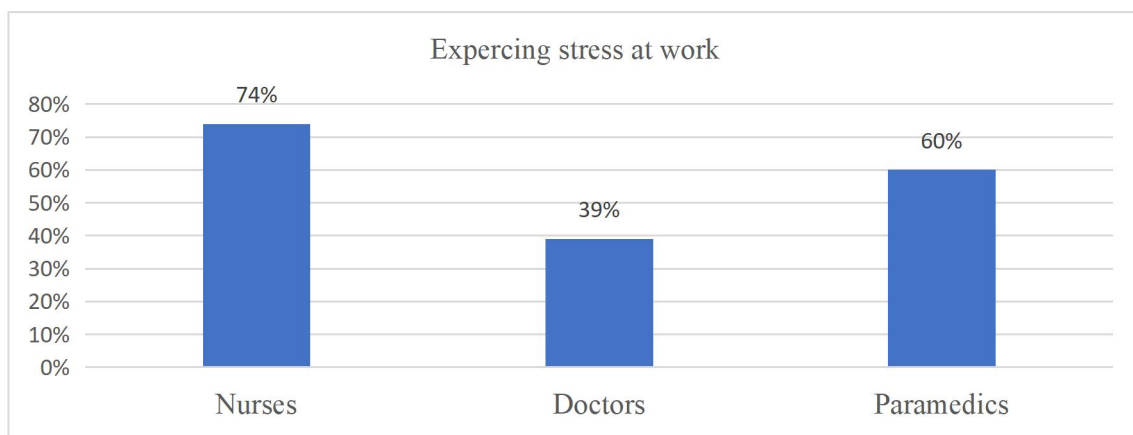


Diagram 4. Experiencing stress by respondents, with division into professional groups.

Source: own elaboration according to conducted research

In order to reduce negative emotions, 71,4% respondents spent time with their families, 19% read books, 15% listened to music, while 14% exercised (more than one answer could be selected). Nonetheless, what was most worrying for 62,2% of respondents, was the fact that friends from outside healthcare sector limited their interpersonal relations.

Discussion

The conducted study revealed that healthcare workers who took care of an infected patient experienced sad feelings – such as stress (83%), fear (65%) and anxiety (76%). Lech Grzelak and Piotr Szwarc are researchers who observed a change in the level of experiencing work-related stress during the pandemic in 98.5% of respondents [11,15, 17].

The conducted study revealed a correlation between negative feeling – stress and the gender of respondents. Women showed a higher level of stress when caring for a patient infected with virus. Therefore, we can only assume that the higher level of stress among women could be caused by other factors (emotional capacity, greater concern about the condition of a patient, family obligations), not related directly with the performed work.

The conducted study showed that there are differences in experiencing stress, as far as healthcare professionals are concerned. 74% of nurses experienced stress when caring for an infected patient, compared to 39% of physicians and 60% of paramedics. People with the least working experience were most prone to stress. As far as the conducted study is concerned, 81% of workers with no more than 5 years of service experienced stress at work

Almost 76% of respondents in individual studies reports lower quality of sleep. Sleep problems may result from long-term stress, which has a negative impact on our health, as well as leads to an increased risk of medical errors and adverse events when caring for a patient [16]. According to studies conducted by Jianbo Lai et al. medical personnel caring for patients during the pandemic is exposed to fear, stress and low quality of sleep [12].

As far as protecting the mental health of medical professionals is concerned, the significant problem lies in lack of public support, which has been pointed out by 9,5% of respondents. This is a crucial element, which stands unnoticed during the current pandemic situation, and even underestimated by employers [19,20]. There is an extensive discussion focusing on the issue of abandoned hospitalized patients, dying alone, isolation of patients, at the same time disregarding the personnel and their real, existing mental health issues that they are experiencing. Regular support from a psychologist considerably reduces the outcomes of social isolation, the feeling of loneliness and fear [13,14].

Limitations of the study: The study was limited by a small group of respondents and a significant disproportion between the number of paramedics and the number of nurses and doctors surveyed

Conclusions

- The pandemic period impacts the occurrence of fear, anxiety and stress among the surveyed medical personnel.
- Women and employees with the least working experience are most prone to experiencing stress.
- Personnel working under stress, cause by the pandemic, along with constant fear of their health and life expects psychological support or, when justified, a care provided by a psychiatrist. It is crucial to ensure constant monitoring concerning this area of professional life.

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