

Transfers of healthcare workers due to the COVID-19 crisis and its impacts

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Abstract

During the coronavirus crisis, healthcare workers are exposed to a large amount of work in high-risk workplaces in very unfavorable conditions. The aim of this seminar paper is to find out what psychological effects the coronavirus crisis has on these healthcare workers and also what are the reasons and procedures for moving workers to other positions. Whether it's transfers between departments within an organization, or transfers between organizations to other cities or regions. To achieve the aim of the research and answer the research questions, data from the existing questionnaires of Suryavanshi et al. (2020) and Lasalvia et al. (2020) are processed and analyzed and our own questionnaire survey is created, which describes the reasons and procedures for relocating workers in times of crisis. The received questionnaires are compared and analyzed. They show that the symptoms of moderate to severe depression and severe anxiety are most common in healthcare professionals who are in direct contact with infected COVID-19 patients and are also more common in women. The questionnaire itself describes that the most common reasons for relocating workers are necessary assistance with vaccinations or with testing, assistance in special wards for patients with COVID-19, but also due to the lack of staff due to COVID-19 infection. Hospitals use various procedures to deal with this crisis; these most often include transfers of workers to work from home, recruitment of new part-time workers and contractors, bans on taking holidays for healthcare staff and mandatory overtime, assistance from students, part-time workers and volunteers, as well as repurposing hospital beds and reorganization of operations.

Keywords: COVID-19, pandemic impact, employees, healthcare workers, mental health, employee transfers

Introduction

At the turn of 2020, COVID-19, caused by the coronavirus SARS-CoV-2, first appeared in Wuhan, China. The virus, which has gradually spread around the world and caused an ongoing pandemic, has also caused huge economic problems.

Employees are a major chapter in the COVID-19 crisis. At a time when the world had to stop, the governments of some of the most affected countries were forced to introduce a so-called lockdown, which suspended the entire economy in the country. The industry and all services stopped, except those that provide essential goods and services. Hospitals were forced to postpone planned procedures and start accepting patients with a serious course of the disease. Governments around the world have responded to the coronavirus crisis by introducing fiscal policies to support increased healthcare spending, income transfers, increased social benefits, and wage subsidies to firms to retain employees and thus minimize short-term unemployment (Makin and Layton, 2021). In both developed and developing economies, the virus has damaged the efficient functioning of companies and their employees in the private sector, while activity and employment in the public sector have been affected much less (Makin and Layton, 2021).

Some companies went bankrupt because they were unable to operate under these conditions. Thus, a large number of employees lost their jobs due to the pandemic, were forced to change their occupation or were transferred to other positions (Chanana and Sangeeta, 2020). This applies in particular to healthcare workers, the military and workers in the integrated rescue system. These workers are exposed to COVID-19 every day, but they are also an indispensable part of combating the disease (Gombar et al., 2020). What are the effects of the crisis on these employees? What does it mean to transfer workers to other positions or retrain them?

Relocation of employees to other workplaces is most often seen in workers in medical facilities. The isolation centers of medical facilities lack a large number of medical staff, and so medical staff from non-intensive care are deployed in these centers. The deployment of these health professionals requires some form of adaptation to the entirely new environment that this work entails (Okediran et al., 2020). In the Czech Republic, governors of regions began to call on, for example, outpatient specialists, employees of day care facilities and inpatient care where they do not yet care for covid patients (Ministry of Health of the Czech Republic, 2021).

The aim of this article is to find out how and to what extent workers in the most risky job positions (health professionals, police officers, etc.) were, and still are, physically and mentally affected during the coronavirus pandemic. In order to meet this goal, the following research questions are defined:

- 1) What are the reasons and procedures for transferring employees to other positions?
- 2) What are the mental or physical impacts on these workers?

Literature research

Healthcare workers deserve nationwide attention during the coronavirus crisis. Not only are they constantly working under stress, but their healthcare organizations are under a lot of pressure and many are trying to deal with providing care to many critically ill patients at the same time (Burdorf, Porru and Rugulies, 2020). These are workers who are in constant contact with infected patients and are therefore at the greatest risk of infection. All of this has significant implications for the mental health of these workers (Bell and Wade, 2021). Xue-Hui et al. (2021) analyzed information on the level of depression, loneliness of health professionals and their knowledge related to COVID-19. They found that workers in the isolation ward suffered from mild to moderate depression. The degree of loneliness was higher for doctors than for workers in the isolation ward. The study also shows that the level of awareness of healthcare professionals about the knowledge of COVID-19 is relatively high.

According to Okediran et al. (2020), the experience of front-line healthcare professionals in isolation centers during the coronavirus pandemic varies from the joy of healing patients to suffering from their deaths. They concluded that there was a need to increase psychosocial support and to provide greater material and financial support to these workers and to ensure a safe working environment. The results of Sahebi et al. (2021) show that the overall prevalence of anxiety and depression among health professionals during the COVID-19 pandemic is 24.94% and 24.83%, respectively. Olagunju et al. (2021) demonstrate the influence of mental well-being on the quality of patient care and the effective functioning of healthcare services. They interviewed 303 healthcare professionals to evaluate mental distress and the Pittsburgh Sleep Quality Index (PSQI), to assess multidimensional aspects of sleep, including quality, latency, duration, use of sleep medications, and daily dysfunction. The value of mental distress was 23.4% and 6 out of 10 participants reported sleep problems. The largest proportion of participants reported problems with sleep latency (81.5%), duration (71.3%) and daily dysfunction (69.6%), while approximately one third (32%) reported sleep medications and had problems with sleep quality.

According to Maltezou et al. (2020), out of 3,398 monitored nurses, 1,599 were exposed to low-risk, 765 to medium-risk, and 1,031 to high-risk coronavirus infection. The study also shows that hospitalization was most common in workers who were at high risk of infection. Johnson et al. (2021) found that another important source of virus transmission between patients and workers is the spread of asymptomatic COVID-19 among healthcare professionals. Coronavirus tests were performed on workers from four metropolitan hospitals, with 439 participants taking a nasopharyngeal swab and 374 participants taking a blood sample. Using nucleic acid-based PCR (NAAT) assays, the incidence of SARS-CoV-2 infection was 0.23% and the antibody level from blood samples was 2.41%.

In order for healthcare professionals to be able to return to work after a positive PCR test, they must spend some time in isolation. An analysis of 150 patients and healthcare professionals who switched from positive to negative PCR test results within 2 months was performed at an academic medical center in the USA. They concluded that until there

is evidence of how long a positively tested person is infectious, the length of quarantine should be more than one month (Gombar et al., 2020).

Petzold, Plag and Ströhle (2020) summarized the recommendations of the World Health Organization, the United Nations and the International Society of the Red Cross to reduce stress and psychological burden on healthcare workers during the COVID-19 pandemic and to identify important factors that senior staff should consider to reduce the psychological burden on their subordinates. According to them, the emphasis is on the normalization of strong emotions and stress, the fulfillment of basic needs, social support, clear communication and division of tasks, flexible working hours and the use of psychosocial and psychological help.

According to Carnevale and Hatak (2020), human resource managers should be able to adapt to unforeseen events that cause increased insecurity among their employees and pose an immediate threat to the performance and viability of organizations. They should react quickly and try to help their employees adapt to and cope with the radical changes in the work environment due to the COVID-19 crisis. For example, employees who previously only worked in their organization must now quickly adapt to remote work environments.

Human resource managers in companies are constantly developing innovative, creative and effective ways to engage their employees in various activities in order to maintain their mental well-being and thus increase their motivation and efficiency at work (Chanana and Sangeeta, 2020).

Jankelová and Mišún (2021) tried to identify the effects of the competencies of crisis managers in the field of agriculture on the performance of employees in the coronavirus crisis, when their performance was influenced by subjective perception and evaluation of their working conditions, satisfaction and safety. They found that the performance of employees in a crisis can be influenced by competent crisis management and increase its impact by sharing information and supporting teamwork.

Ren, Cao and Tachia (2020) show that job creation by employees strengthens their job satisfaction and innovative work behavior in turn strengthens their work commitment. The research provides evidence of how employees involved in job creation have reoriented their careers to cope with high unemployment.

Since the outbreak of the COVID-19 pandemic, the possibility of working from home (home office) has become a common part of many employees' lives. It was recommended to workers as a measure to reduce the risk of infection and thus reduce the spread of the virus. The possibility of working from home can have positive as well as negative effects on working conditions as well as on the physical and mental health of employees (Hallman et al., 2021). Hallman et al. (2021) set to find out what are the differences in the use of time during one day (24 hours) between office workers and home office workers. It was found that workers who worked from home during the COVID-19 pandemic in Sweden slept longer than when they worked in offices. Physical activity did not change significantly during work and leisure. These changes while working from home can be healthy. However, some workers in this study reported that their work performance and

well-being changed for the worse during the pandemic. This suggests that action will be needed to prevent possible health risks.

Methods and Data

Based on a study by Suryavanshi et al. (2020), which provides information on the mental health and quality of life of health professionals during the COVID-19 pandemic in India, we will analyze data from an online structured questionnaire. This questionnaire was opened to respondents from May 5th 2020 to May 16th 2020. Respondents include health professionals (doctors, nurses and trainees) from 30 cities in 12 states of India. The state of Maharashtra has the highest representation. Approximately 1,000 healthcare professionals were interviewed, of which 204 responses were received. The survey contains data on demographic characteristics, the level of depression and anxiety, and the quality of life of health professionals.

Data from Lasalvia et al. (2020) will be processed and analyzed for comparison. The data is obtained from a web-based questionnaire available from April 21st to May 6th 2020. Respondents to this questionnaire include administrative staff and medical staff working at the University Hospital of Verona in the Veneto region of Italy. A total of 2,195 healthcare professionals participated in the survey, and the questionnaire contains personal socio-demographic information and characteristics, including gender, age, living conditions, existing psychological problems, and length of practice.

Data from these two articles will be processed and analyzed in MS Excel software, where basic statistical characteristics (mean, median, variance) will be performed and graphs will be created for comparison.

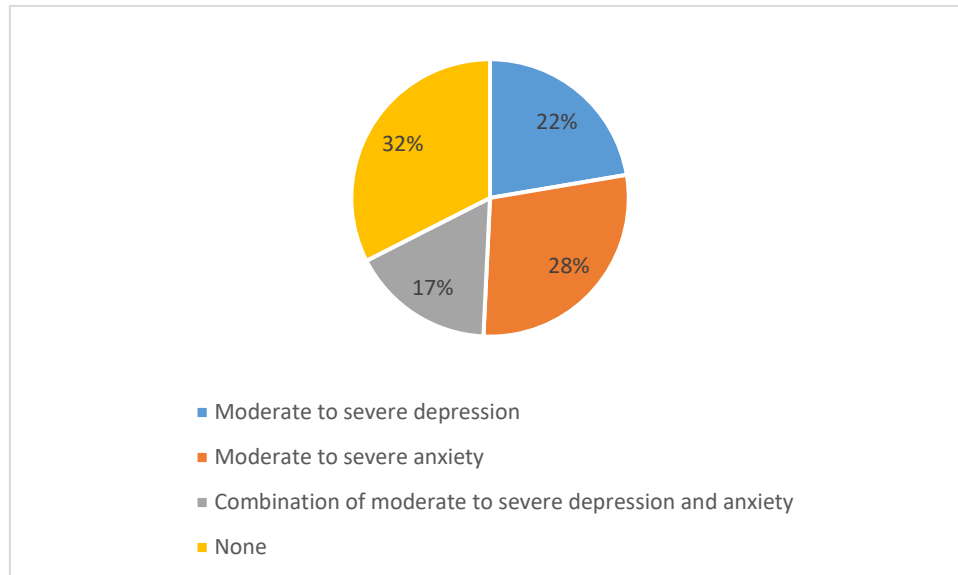
In order to obtain relevant results, which will also be valid for the Czech Republic, a research sample will be created, which will be obtained through a questionnaire survey. From April 19th to April 26th 2021, an online structured questionnaire will be distributed, which will be sent out via e-mail among staff in hospital organizations and the Police of the Czech Republic. The aim of this questionnaire will be to find out the reasons and procedures for relocating employees to other positions. The questionnaire will be in Czech language and will be created using Google Forms. It will contain 6-12 questions of open and closed types. First, the demographic data of the respondents will be analyzed and then information on employee transfers and the reasons for these transfers will be collected. The output data will be presented in MS Excel software through tables and charts.

Results

The questionnaire of Suryavanshi et al. (2020), mediated among health professionals in India, received a total of 197 responses. Graph 1 shows the level of depression and anxiety in all health professionals who participated in the survey. It shows that moderate to severe depression occurred in 44 healthcare professionals (22%), moderate to severe

anxiety in 56 healthcare professionals (28%), and a combination of moderate to severe depression and anxiety in 33 healthcare professionals (17%). The remaining 64 health professionals (32%) had no levels of depression or anxiety.

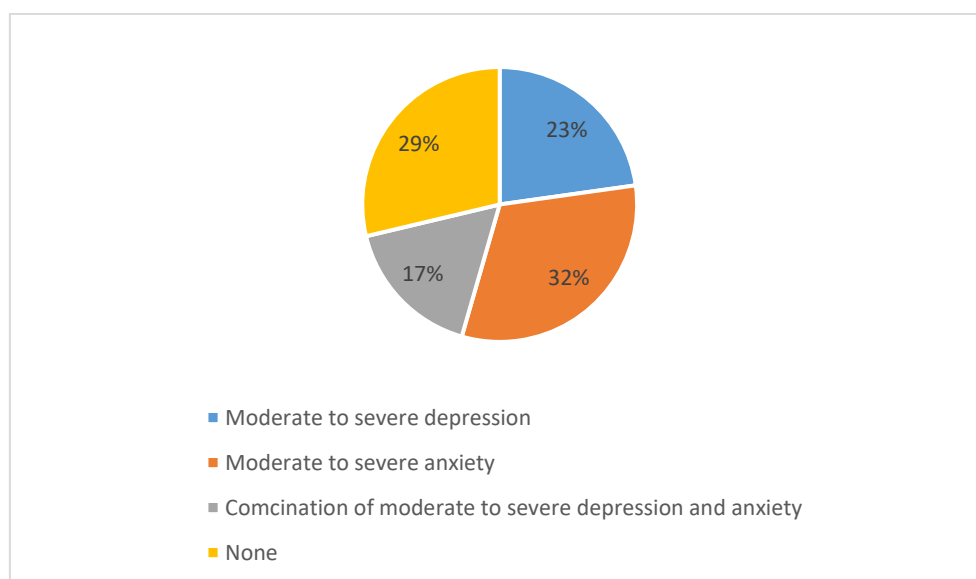
Graph 1: Levels of depression and anxiety in all healthcare workers



Source: Suryavanshi et al. (2020), processed by authors.

The gender distribution of workers showed that out of a total of 101 women, 23 (23%) suffer from moderate to severe depression, 32 (32%) from moderate to severe anxiety, and 17 (17%) reported a combination of moderate to severe depression and anxiety and 29 women (29%) had no levels of depression or anxiety. The overall distribution is shown in Graph 2.

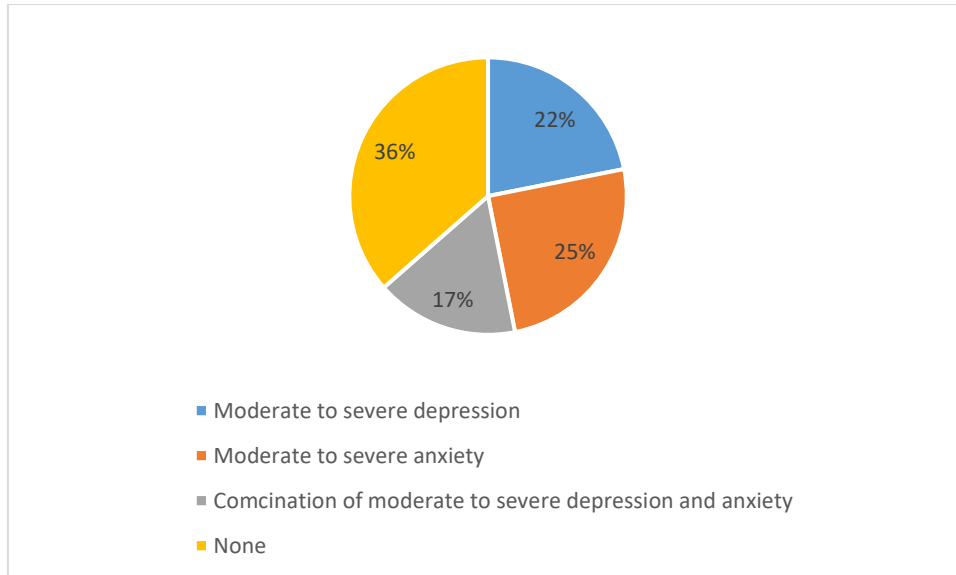
Graph 2: Levels of depression and anxiety in women



Source: Suryavanshi et al. (2020), processed by authors.

A total of 96 men participated in the questionnaire survey. 21 male health professionals (22%) suffer from moderate to severe depression, 24 (25%) from moderate to severe anxiety, and 16 (17%) a combination of moderate to severe depression and anxiety. 35 employees (36%) do not suffer from either, see Graph No. 3.

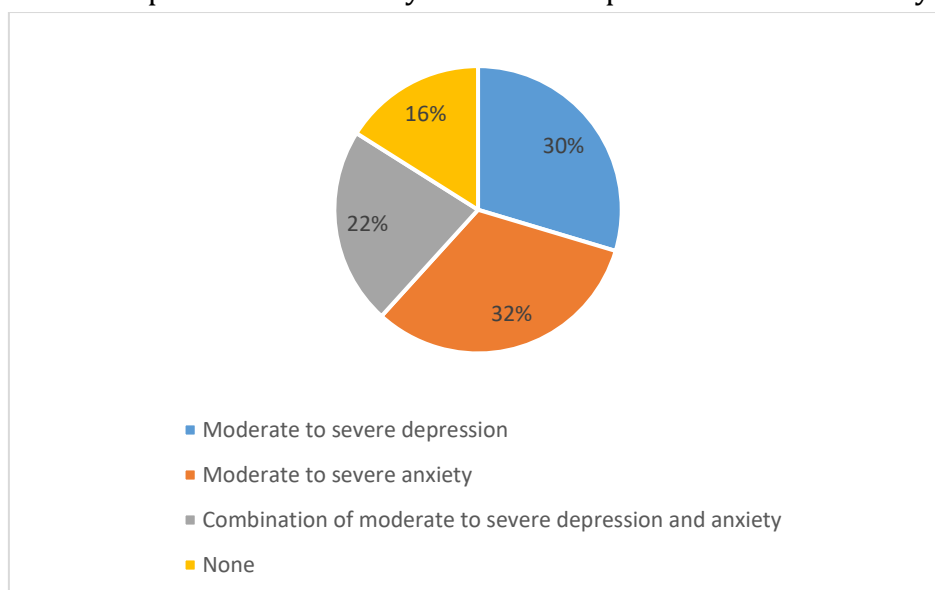
Graph 3: Levels of depression and anxiety in men



Source: Suryavanshi et al. (2020), processed by authors.

Graph 4, 5 and 6 show the distribution of the level of depression and anxiety according to the age of the respondents. There were a total of 81 workers under the age of 30. Four healthcare workers suffer from moderate to severe depression (30%), 26 from moderate to severe anxiety (32%), 18 (22%) and 13 (16%) did not report any depression or anxiety.

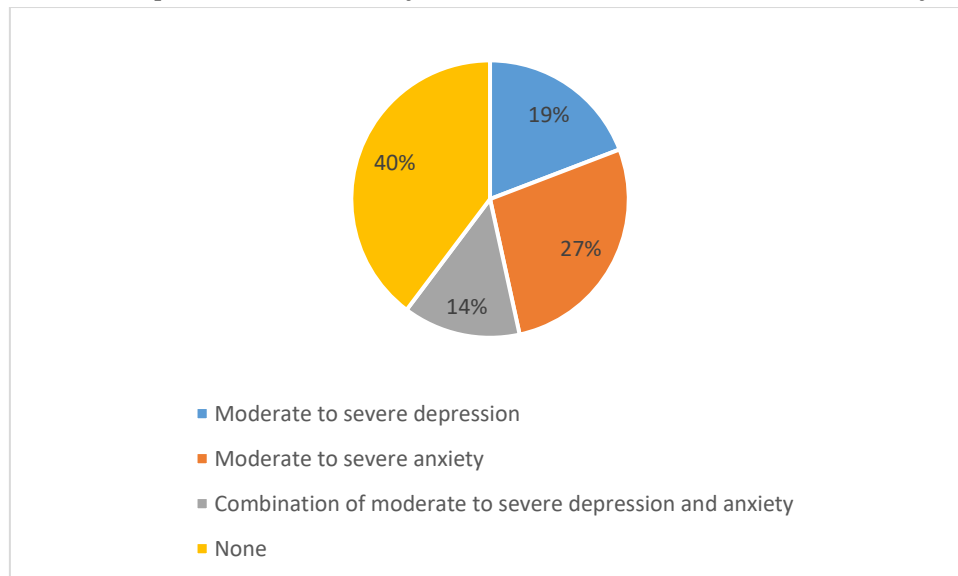
Graph 4: Levels of depression and anxiety in healthcare professionals under 30 years of age



Source: Suryavanshi et al. (2020), processed by authors.

There were 73 workers aged 31-39 years. 14 of them (19%) stated that they suffer from moderate to severe depression, 20 workers (27%) reported that they suffer from moderate to severe anxiety, 10 respondents (14%) reported a combination of moderate to severe depression and anxiety 29 respondents (40%) did not report any depression or anxiety.

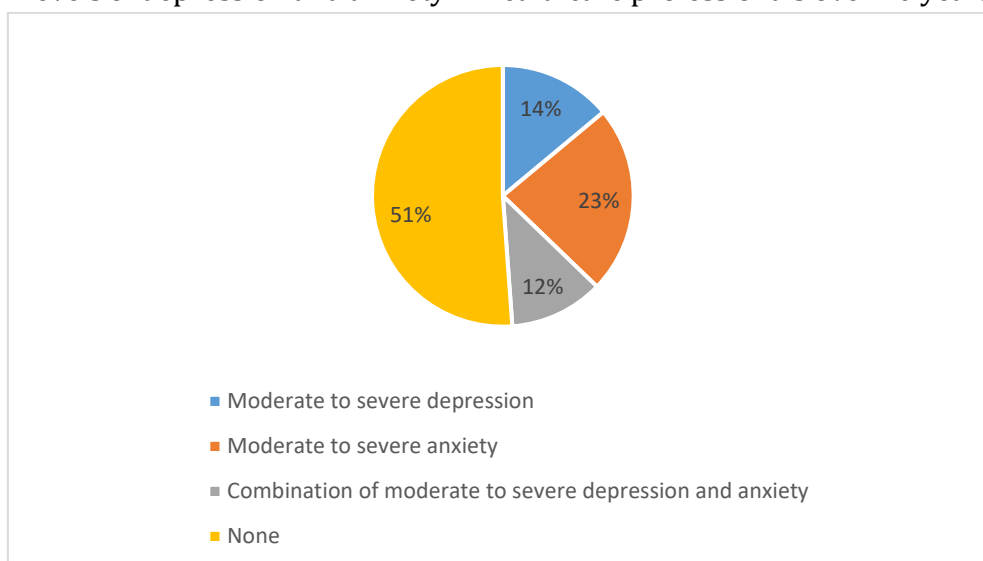
Graph 5: Levels of depression and anxiety in healthcare workers between 31-39 years of age



Source: Suryavanshi et al. (2020), processed by authors.

Among healthcare professional over the age of 40, a total of 43.6 (14%) reported having moderate to severe depression, 10 health professional (23%) reported moderate to severe anxiety, a combination of moderate to severe depression and anxiety was reported by 5 healthcare professional (12%) and 22 healthcare professional (51%) reported no depression or anxiety.

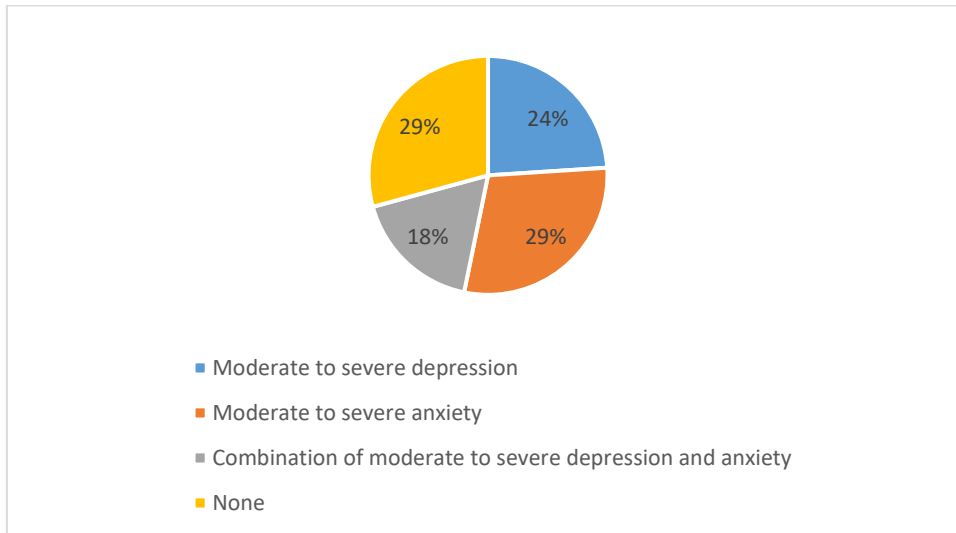
Graph 6: Levels of depression and anxiety in healthcare professionals over 40 years of age



Source: Suryavanshi et al. (2020), processed by authors.

Suryavanshi et al. also processed staff responses, depending on whether or not they were in direct contact with infected COVID-19 patients. Of the 197 workers, 171 were in direct contact with infected patients. Mild to severe depression affects 41 of them (24%), moderate to severe anxiety affects 50 (29%), a combination of moderate to severe depression and anxiety affects 30 workers (18%) and 50 (29%) did not report either, see Graph 7.

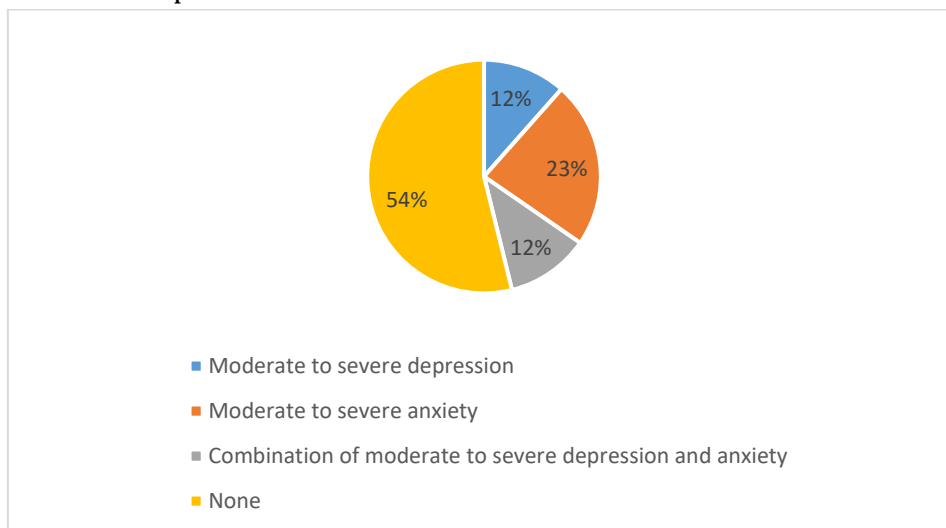
Graph 7: Levels of depression and anxiety in healthcare professionals working in direct contact with infected COVID-19 patients



Source: Suryavanshi et al. (2020), processed by authors.

The remaining 26 staff members were not in direct contact with infected patients. Graph 8 shows that 3 workers (12%) reported having moderate to severe depression, 6 workers (23%) with moderate to severe anxiety, 3 workers (12%) with a combination of moderate to severe depression and anxiety and 14 employees (54%) did not report either.

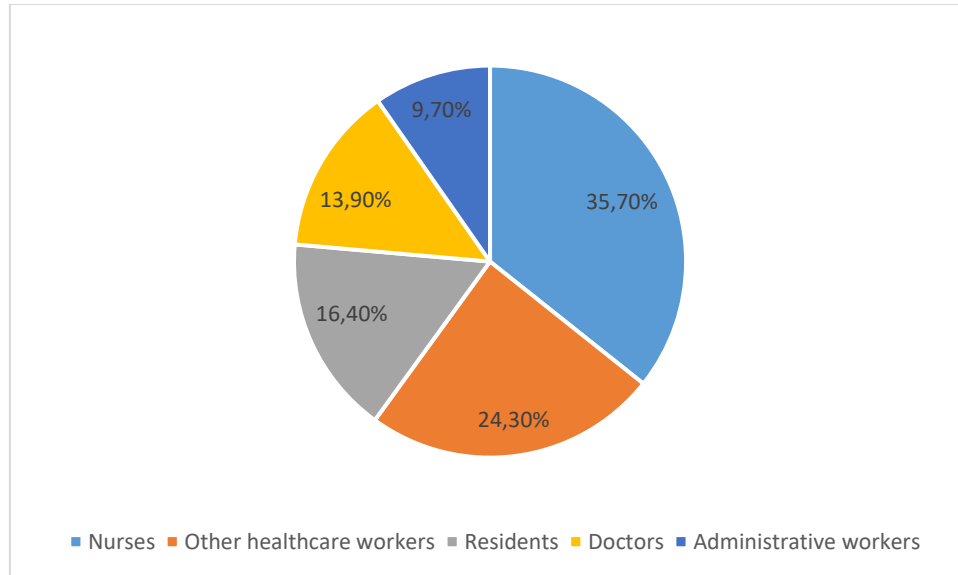
Graph 8: Depression and anxiety levels in healthcare professionals not working in direct contact with infected patients COVID-19



Source: Suryavanshi et al. (2020), processed by authors.

A total of 2,195 respondents participated in the questionnaire survey by Lasalvia et al. (2020). 35.70% participated were nurses, 24.30% were other healthcare professionals, 16.40% were interns, 13.90% were doctors and 9.70% were administrative staff. Graph 9 shows a clear representation of this division of staff in a hospital in north-eastern Italy.

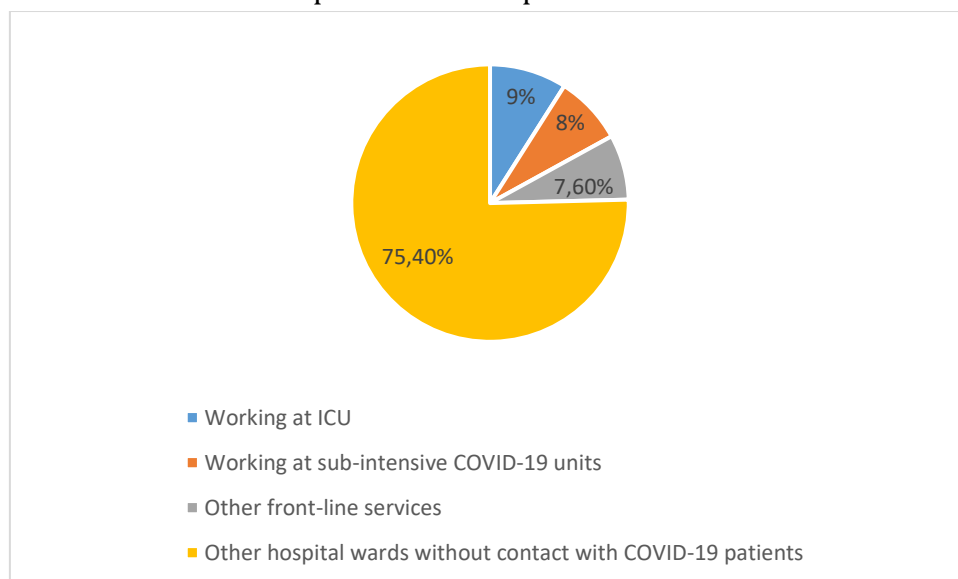
Graph 9: Distribution of staff in a hospital in north-eastern Italy



Source: Lasalvia et al. (2020), processed by authors.

Of the total number of participating employees, as shown in Graph 10, 9% worked in the ICU, 8% worked in COVID-19 sub-intensive units, 7.60% in other front-line services and the remaining 75.40% worked in different hospital ward without contact with COVID-19 patients.

Graph 10: Distribution of work positions of respondents

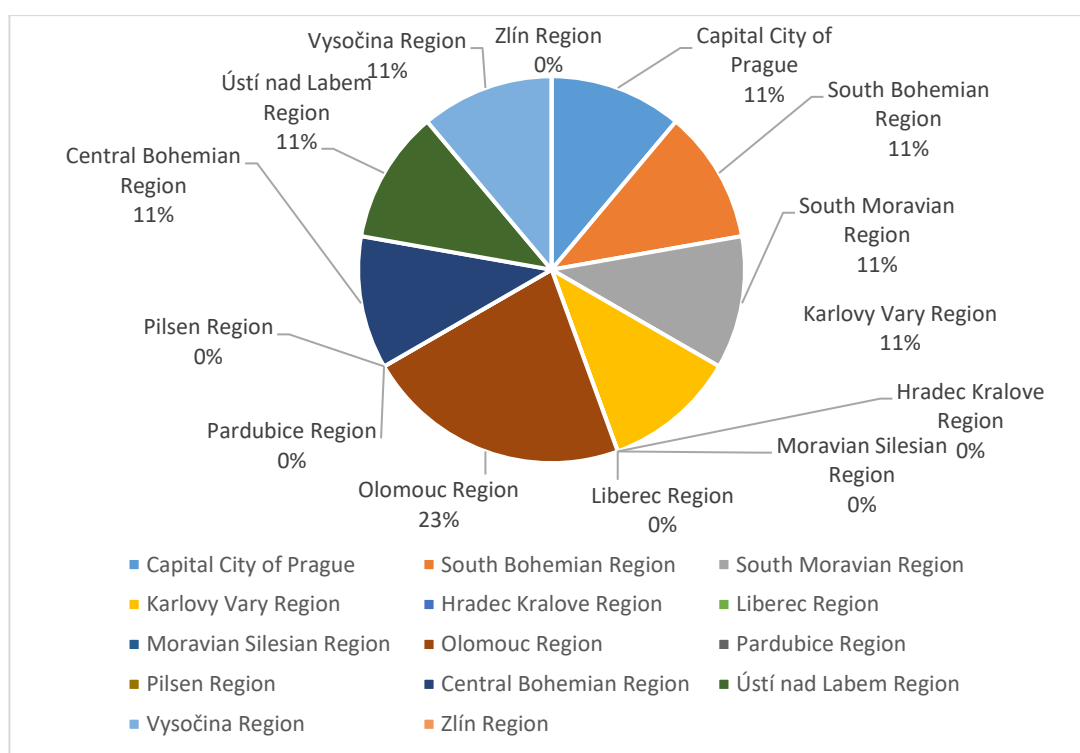


Source: Lasalvia et al. (2020), processed by authors.

The questionnaire survey also shows that out of 2195 respondents, 63.20% stated that they suffer from traumatic experiences associated with COVID-19 at work. 53.80% showed signs of post-traumatic anxiety and in addition 50.1% showed signs of clinically relevant anxiety and 26.60% showed signs of at least mild depression. This research also showed that women, i.e. nurses and other assistants directly associated with patients with COVID-19 and persons with pre-existing psychological problems were at increased risk of psychopathological consequences of the COVID-19 pandemic.

To answer the research questions, a questionnaire was created to find out the reasons and procedures for moving employees to other positions. Of the 30 hospitals randomly contacted in the Czech Republic, 8 responded. Graph 11 shows the distribution of respondents according to their scope within regions of the Czech Republic.

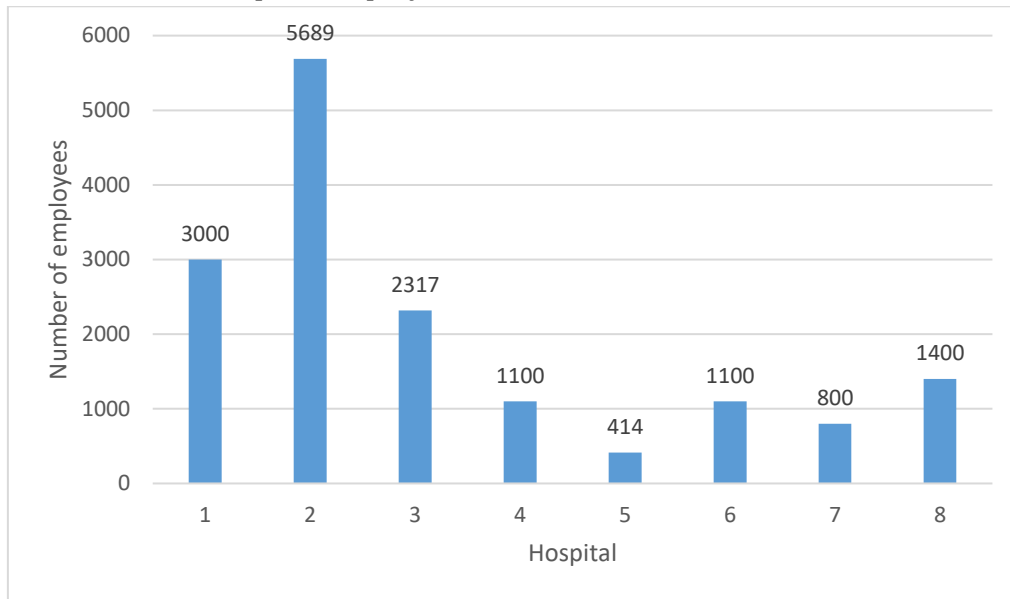
Graph 11: Regional scope of hospitals.



Source: Authors.

The number of employees at these hospitals ranged from 414 to 5,689. Detailed numbers of employees are shown in Graph 12.

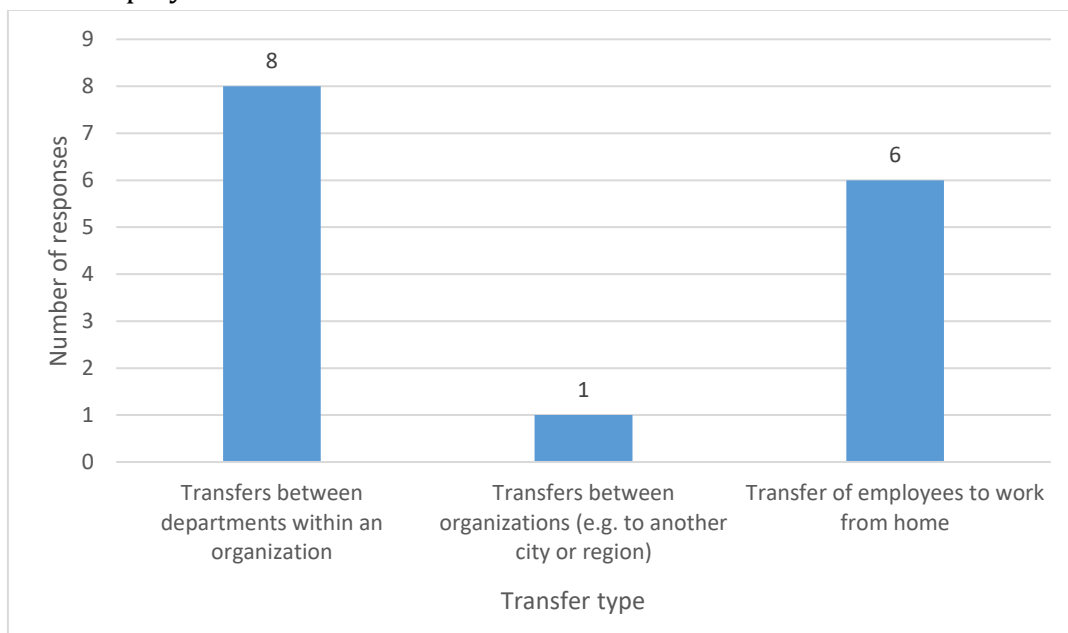
Graph 12: Number of hospital employees



Source: Authors.

When asked whether hospitals had to deal with staff transfers due to the COVID-19 pandemic, 100% of respondents said yes. Graph 13 shows which transfers were involved.

Graph 13: Employee transfers



Source: Authors.

If the hospital had to deal with transfers of staff between organizations (e.g. to another city or region), respondents were asked to indicate the procedures and reasons for the transfer. These relocations concerned only one hospital, which stated that its staff had to provide vaccinations in another city and were also forced to use another building for one ward for a short period of time.

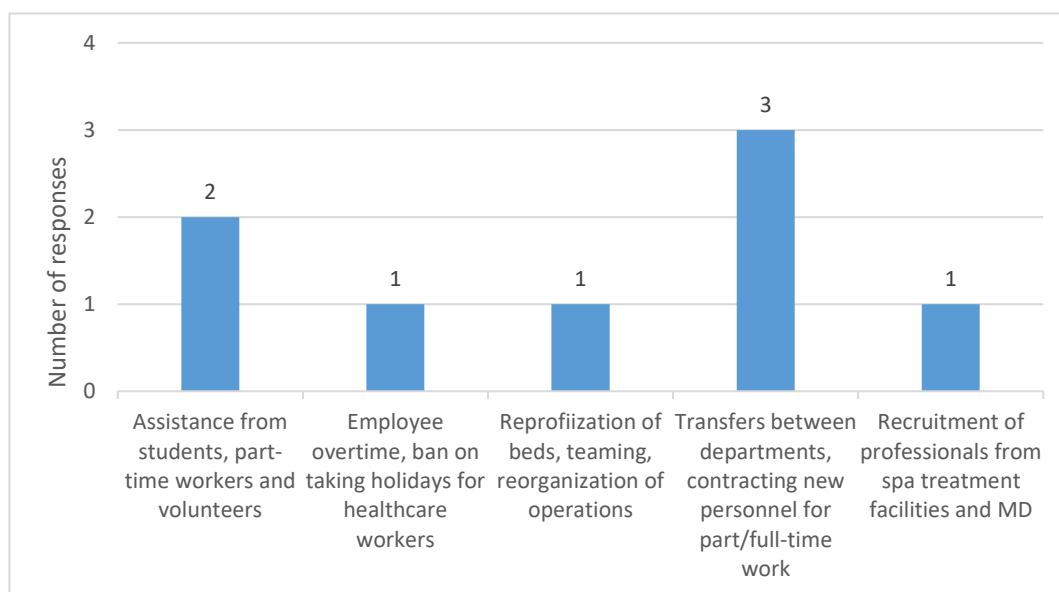
Another question was whether the hospitals were facing a shortage of staff. Of the total number of responses, 7 hospitals (87.5%) answered yes and 1 hospital (12.5%) answered no.

Several answers were received to the open-ended question concerning the main reasons for the redeployment of staff. The most common reasons for relocating employees were:

- assistance in hospital wards with COVID-19 patients,
- assistance with vaccinations or testing,
- rotation of workers in groups due to restrictions or infection,
- reduction or reorganization of operations,
- quarantined staff, closure of some departments,
- establishment of COVID-19 workplaces and staff shortages in these departments.

The last question of this questionnaire survey was how hospitals dealt with staff shortages during the COVID-19 pandemic. Hospitals have addressed this problem by mandatory overtime, by banning taking holidays for medical staff, assistance from students, part-time workers and volunteers, or transfers between departments. Detailed processing of answers is presented in Graph 14.

Graph 14: Ways of solving staff shortage problems



Source: Authors.

Discussion

To answer the research question as to what are the mental or physical impacts on workers in the most risky workplaces, two questionnaires were compared, which related to this issue. The questionnaire of Suryavanshi et al. (2020) examined the impacts on health professionals in India and the questionnaire of Lasalvia et al. (2020) examined how the COVID-19 pandemic affected healthcare and administrative workers in north-eastern Italy.

Suryavanshi et al. (2020) concluded that most of the symptoms of moderate to severe depression or moderate to severe anxiety were reported by workers under the age of 30, but also workers who worked in direct contact with infected patients with COVID-19. A total of 197 respondents took part in this questionnaire survey. Among these respondents, nurses were the most represented - 35.70% followed by other healthcare professionals - 24.30%. Physicians participated in this survey by only 13.90%. It also follows that women suffered the most severe anxiety - 32%, in men it was only 25%. Furthermore, with a slightly smaller difference than in the case of anxiety, women suffered more from moderate to severe depression, namely 23%, in men it was 22%.

In contrast, the results of the questionnaire survey by Lasalvia et al. (2020), which was answered by 2,195 respondents, show that fewer healthcare professionals showed symptoms of at least mild depression. Most workers, exactly 63.20%, answered that they suffered from traumatic experiences associated with COVID-19 at work. At the same time, 53.80% stated that they suffered from post-traumatic anxiety. Also, over 70% of workers reported showing symptoms of clinically relevant anxiety and symptoms of at least mild depression. Lasalvia et al. (2020), as well as Suryavanshi et al. (2020) concluded that women are at increased risk of psychopathological consequences of the COVID-19 pandemic.

To answer the research question, as to what are the reasons and procedures for moving employees to other positions, a questionnaire survey was conducted. 30 randomly selected hospitals from all over the Czech Republic were interviewed and a total of 8 answers were obtained. The number of hospital staff who responded to this questionnaire survey ranged from 414 to 5,689.

All respondents stated that they had to deal with staff transfers. For all hospitals, these were transfers between departments within the organization. Six hospitals stated that they were moving workers to work from home and only one hospital stated that they had to move workers between organizations, to other cities or regions. The main reasons for these transfers for most respondents were help in wards with COVID-19 patients and help with vaccinations or testing. Another reason was the rotation of workers in groups to reduce possible infection, reduction or reorganization of operations, due to quarantined staff and closed departments or due to the establishment of COVID-19 wards and the lack of staff in these departments.

Conclusion

The aim of this article was to analyze the effects of the coronavirus crisis on healthcare professionals and to identify procedures and reasons for relocating employees to other positions.

The aim of the paper was met. The results section analyzes data that show that health professionals who work in direct contact with patients with COVID-19 in most cases show symptoms of moderate to severe depression or severe anxiety to a relatively large extent. Furthermore, the main reasons for moving employees to other positions were identified using a questionnaire survey. Whether it was a transfer within one organization, i.e.

between departments or other organizations in other cities or counties, in all cases these reasons were associated with COVID-19.

Complications during the research arose in the own questionnaire survey, when the questionnaire was sent to a small number of respondents. Of the 30 hospitals sent, only 8 responses were obtained. This is a small sample of responses, but it was sufficient enough to analyze the main reasons for the employee transfers.

The issue of COVID-19 has great potential for further research. It would be very interesting to conduct research analyzing whether individual hospitals returned to their usual regimen before the coronavirus crisis or how healthcare professionals dealt with this crisis and its effects on their mental and physical health.

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