

Milica Ignjatović¹
Gordana Gavrić²
Ljiljana Jovčić³

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Health workforce management during the COVID 19 pandemics

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Abstract: *After having dealt with the growing number of infected health workers in the province of Hubei in China, it was concluded that the most important link in the fight against SARS - CoV - 2 infection was the proper and responsible management of health personnel. The aim of the paper is to determine whether, during the pandemic, human resources were well managed in state health institutions. Discovering the critical points of health workers management is very important in order to raise the overall quality of health services in the future emergency situations. A total of 150 respondents employed in COVID hospitals in Belgrade and Loznica took part in this research. The results of the research obtained using the chi-square test, showed that the received necessary information at the beginning of the pandemic, training courses on the use, removal, putting on and disposal of protective equipment, and psychological support of the authorities significantly related with the perception of the safety of health workers in state health institutions. Management of health workers should be at a high level, with a special emphasis on improving the management of the health of employees and their safety at work.*

Keywords: *pandemic, employee management, health workforce*

¹ Academy of Applied Studies Belgrade, Department of the Health College

² Faculty of business economics and entrepreneurship, gordana.gavric@vspep.edu.rs

³ Academy of Applied Studies Belgrade, Department of the Health College

Upravljanje zdravstvenim radnicima za vreme pandemije COVID 19

Apstrakt: Nakon suočavanja sa sve većim brojem zaraženih zdravstvenih radnika u kineskoj provinciji Hubej, zaključeno je da je najvažnija karika u borbi protiv infekcije SARS-CoV-2 pravilno i odgovorno upravljanje zdravstvenim osobljem. Cilj rada je da se uz pomoć istraživanja pokaže kako državne zdravstvene ustanove u našoj zemlji upravljaju svojim zaposlenima tokom pandemije, sa namerom da se pronađu previdi i daju preporuke za unapređenje upravljanja zdravstvenim radnicima. Otkrivanje kritičnih tačaka upravljanja zdravstvenim radnicima je veoma važno za podizanje ukupnog kvaliteta zdravstvenih usluga u budućnosti u vanrednim situacijama. U istraživanju je učestvovalo ukupno 150 ispitanika zaposlenih u COVID bolnicama u Beogradu i Loznici. Rezultati istraživanja, dobijeni hi-kvadrat testom, pokazali su da su dobijene neophodne informacije na početku pandemije, kursevi obuke o korišćenju, uklanjanju, postavljanju i odlaganju zaštitne opreme i psihološka podrška nadležnih značajno povezani sa percepcijom bezbednosti zdravstvenih radnika u državnim zdravstvenim institucijama. Upravljanje zdravstvenim radnicima treba da bude na visokom nivou, sa posebnim akcentom na unapređenje upravljanja zdravljem zaposlenih i njihovom bezbednošću na radu.

Ključne reči: pandemija, upravljanje zaposlenima, zdravstveni radnici

1. Introduction

Emergencies, such as the situation caused by the corona virus was, occur unexpectedly, abruptly and set managerial tasks that deviate from the standard way organizations operate. Organizations are expected to respond to the new situation with the available funds, and in accordance with specially prescribed procedures, which can be a real challenge for the management.

In the new, emergency situation, it becomes most important for a good manager to find the right techniques to encourage their employees to accomplish and implement the tasks imposed by regulations adopted at the local and national level in the fight against SARS-CoV-2 virus. Also, management must act proactively to eliminate all difficulties and avoid possible problems and conflicts characteristic of the situations that carry high levels of stress, uncertainty and great danger for employees (in this case, it was a high risk of infecting employees). It is in this situation that occurred suddenly, and which the whole world was going through, that the good and bad qualities of management were

shown. According to Azizi et al. (2021) crises create opportunities, so the COVID-19 crisis provided a unique opportunity for companies to review their organizational culture and strategies of human resource management.

Since the majority of health systems had an insufficient number of health workers, who were at the same time faced with a high risk of infection, this situation made them particularly important, hence the additional emphasis was on their health and safety at work.

The aim of the paper is to use the research to show the quality of employees' management in state health institutions in our country during a pandemic and identify critical points that need to be improved. The aim is to improve the quality of health workforce management and in that way improve the overall quality of the health system, which is especially important in emergency circumstances.

2. Theoretical background

On the 12th of March, the World Health Organization declared the outbreak of the pandemic and „by the end of April 2020, there were more than 3 million confirmed cases of the COVID-19 disease distributed among more than 180 world economies“ (Bodroža & Lazić, 2021, p. 31). It's no surprise then that the research results showed that SARS - CoV - 2 virus hit the following sectors the most: healthcare (56%), then mining (55%), manufacture (46%), education (9%), insurance (10%) and finally telecommunication (12%) (Azizi et al., 2021, p. 2).

Healthcare workers constituted the most affected group of people in the fight against the COVID-19 virus, so it was important for healthcare institutions to have a quality approach to human resource management to protect and preserve them. Quality management of human resources means providing them with the necessary conditions and resources in order to perform their work efficiently and effectively. Some of the most important reasons why human resources should be given special attention, as part of the overall management of a health institution, are the following:

1. The health conditions of the population to which the institution provides services depend on the availability, number and quality of health workers.
2. The quality and safety of health services depend directly on the staff who provide them (Dragić, 2016).

According to a report in the publication *Economic and Social Impact of COVID-19 (2020)*, which included a research of the Western Balkan countries (Albania, Bosnia and Herzegovina, Montenegro, Northern Macedonia and Serbia) and which refers to the results of the JEE (Joint External Evaluation) and GHSI (Global Health Security Index), "there is a long-standing structural weakness in

the Western Balkans in terms of funding, service delivery, management and labor management, which makes all health systems in the region vulnerable to adverse events" (p.4). Stamenović & Ćuzović (2020) agree with that the management of health care institutions in Serbia is at a relatively low level in practice. During the pandemic the situation was even more difficult given that leaders themselves were 'living' in the crisis and were equally impacted by it as those who they were leading (Walton, Murray, & Christian, 2020).

According to Lazarević-Moravčević & Kamenkovic (2021, p. 52), "the COVID-19 pandemic brought radical changes to the life of every organization, many activities were stopped or limited, and a large number of organizations were forced to suspend or reduce business". Vnučkova (2020) emphasize that organizations should have ability to respond quickly and have their action plans prepared. A special challenge for managers was to find a way to motivate their employees to did their best in achieving organizational goals. In short, organizations were expected to find and use efficient and effective HR management techniques that would reduce the vulnerability of organizations in emergency circumstances. According to Zhong et al. (2021, p. 1) "the spread of COVID-19 had lasted more than a year, but its effect on HR issues will remain in the long run".

According to the World Health Organization (2020), the dangers to which health workers were exposed in the coronavirus pandemic were: exposure to pathogens, prolonged working hours, psychological pressure and the appearance of mental problems, constant fatigue, burnout, stigma, physical and psychological violence. The management had to take responsibility and take care of its employees by taking all the necessary preventive and protective measures in a timely manner in order to minimize the existence of risks to the health and safety of employees. These measures included a number of procedures, and primarily, according to the Zhejiang School of Medicine in the Manual for Prevention and Treatment of COVID-19 Infection, it was very important to: timely inform employees giving them clear and precise instructions; organize training on safety at work; organize trainings for the renewal of knowledge on infection prevention and control (IPC); organize trainings on the use, putting on, taking off and disposal of personal protective equipment (PPE). Although medical staff were prioritized in many countries, PPE shortages, unfortunately, were reported in the most affected facilities (Lancet, 2020).

In order for employees to protect themselves and feel safe, it was necessary to provide adequate protective equipment (masks, gloves, suits, disinfectants and cleaners...), both for health professionals and for other non-medical staff or technical staff who came into contact with patients or potential patients.

Workers were to be referred to the Covid-19 administration, given appropriate protocols for patient assessment, triage, testing, and treatment. It was important that employees are familiar with the procedures in the protocol, that they find them clear and adhere to them, i.e. implement and respect them. Also, staff must be instructed how to provide patients and the public with information on virus prevention. Limited preparedness of health workers could have led them to physical and psychological problems such as high levels of stress, anxiety, fear, helplessness, hopelessness, anger, and stigma (Koontalay et al., 2021).

A big challenge for managers was to organize appropriate working hours while respecting their time for a break. In quarantine zones, working hours were shortened, while in some other parts, shifts were extended. It was necessary not to overload and exhaust employees. Teams working in isolation wards were not supposed to work longer than 4 hours a day (The First Affiliated Hospital, 2020). Employees also needed to be able to use mental health resources in such circumstances and be provided with professional support as needed. Namely, according to Sangra et al. (2022, p 1) "in this situation healthcare workers were exposed to a broad range of sustained physical, psychological and emotional stressors and were at risk for chronic stress and professional burnout", which impacted on the "efficiency of the entire health organization because it reduced the quality of its services due to occupational stress-related diseases, which led to a high absenteeism rate, and a decrease in the level of job satisfaction" (Hosawi & Angawi, 2022, p. 35). During the times of crisis, essential health services often decline, which can ultimately kill more people than the pandemic itself (Ballard et al., 2020). Bozdog & Ergun (2020, p. 2570) also point that "psychological resilience of healthcare workers needs to be improved and sustained in order to maintain the quality of healthcare services".

In order for all of the above to work in practice, it was necessary to ensure good cooperation, i.e. free communication, between the top management and employees directly or through their managers as intermediaries.

Employees are the most important resource of any organization and method of management has proven to be one of the most important factors in increasing the productivity, efficiency and effectiveness of organizations (Nobakht et al., 2017). Because of this it is important to provide good working conditions for healthcare workers, because people are dissatisfied with poor working conditions, not so much because they are personally uncomfortable with them, but because they hinder them from achieving the expected performance (Ilić Koderman, 2021).

Theoretical characteristics of good-quality human resource management in emergency situations, presented in the theoretical part of the paper, were the

guidelines for defining the hypotheses, creating the questionnaire and carrying out the research, the results of which will be presented further on.

The basic hypothesis of the research is:

HO: In state health institutions, there was high quality management of human resources during the pandemic.

Derived hypotheses:

H1: Safety perception of health workers employed in state health institutions is significantly related to the received necessary information at the beginning of the pandemic.

H2: The perception of safety of health workers, employed in state health institutions, is significantly related to training courses on the use, removal, putting on and disposal of protective equipment.

H3: The perception of safety of healthcare workers, employed in state healthcare institutions, is significantly related to the psychological support of the authorities.

The first part of the paper provided the theoretical background about the necessary conditions of workers in health care during the pandemic needed to keep them motivated in performing their work as well as possible, and therefore to be more efficient and effective at work. In the second part of the paper, the results about real conditions in Serbian COVID hospitals are presented and on the basis of them recommendations for improving the management of healthcare workers are given.

3. Research methodology

The data were collected from the respondents using the survey technique. The survey questionnaire consists of four closed-ended questions related to the characteristics of workers (gender, age, years of service and the level of health care at which they work) and sixteen closed-ended questions about the management of health personnel during the pandemic. The questionnaire was distributed in personal contact with the respondents. Respondents approached the completion of the questionnaire with prior information about the purpose of the questionnaire and the confidentiality of data.

The research involved health workers employed in: Clinical Hospital Center "Zvezdara" (at the time of the survey it had the status of COVID Hospital), Clinical Hospital Center "Dr Dragisa Misovic Dedinje" (has the status of COVID Hospital), Clinical Hospital Center "Zemun" (at the time of the survey, it had the status of a COVID hospital), the Institute of Rheumatology (it has the status of

a COVID hospital), the Vračar Health Center and the Zvezdara Health Center in Belgrade and the General Hospital in Loznica. The total sample included 150 respondents. The research was conducted during June 2020. The hypotheses were tested using the chi-square test. IBM SPSS Statistics 21 program was used for data processing.

3.1. Results and discussion

3.1.1. Research results

Sample

Table 1 displays the socio-demographic characteristics of the 150 healthcare workers who made up the convenient sample.

Table 1. Respondents' socio-demographic characteristics

		Frequency	Percent
Gender	male	24	16,0
	female	126	84,0
Age	19-25	14	9,3
	26-35	34	22,7
	36-45	60	40,0
	46-55	39	26,0
	56-65	3	2,0
Years of work experience	1-10	36	24,0
	11-20	62	41,3
	21-30	44	29,3
	over 30	8	5,3
Level of health care	primary	15	10,0
	secondary	27	18,0
	tertiary	108	72,0

Source: Authors' own calculation

The study involved more female respondents, 84% (126 respondents), while there were significantly fewer male respondents, 16% (24). Of all the respondents, most of them were aged 36-45 years (40%), followed by 46-55 years (26%), slightly fewer respondents belonged to the age group 26-35 years of age (22.7%), while in the smallest percentage were respondents aged 19-25 (9.3%) and 56 – 65 years (2%). The highest percentage of respondents had 11-20 years of work experience (41.3%), followed by 21-30 years of work experience (29.3%). There were 24% of respondents with a work experience of 1-10 years, and the lowest percentage of respondents (5.3%) had over 30 years of work experience. The largest percentage of respondents worked at the

tertiary, 72% - 108 respondents, 18% worked at the secondary level of care (27 respondents) and 10% were employed at the primary level of health care (15 respondents).

Results

The relationship between healthcare workers' safety perception and initial information

The chi-square test was used to ascertain the relationship between healthcare workers' safety perception and obtaining the necessary information about the Sars-CoV 2 virus in their workplace from the very beginning. The results of grouping respondents according to their safety perception and initial information about the Sars-CoV 2 virus are shown in Table 2.

Table 2. Testing independence of variables: safety perception and initial information

		Safety perception			Total
		Yes	No		
Initial information	Yes	Count	36	43	79
		% initial information	45,6	54,4	100,0
		% safety perception	90,0	39,1	52,7
	No	Count	1	13	14
		% initial information	7,1	92,9	100,0
		% safety perception	2,5	11,8	9,3
	Yes, but not enough	Count	3	54	57
		% initial information	5,3	94,7	100,0
		% safety perception	7,5	49,1	38,0
Total		Count	40	110	150
		% initial information	26,7	73,3	100,0
		% safety perception	100,0	100,0	100,0

Source: Authors own calculation

Based on the cross-tabulation of the categorical variables of perceptions of safety and initial information, it can be noted that a higher percentage of healthcare workers do not feel safe (54,4%), as opposed to 45,6% of those who feel safe because they believe they have received the necessary information about Sars CoV 2 virus at the very beginning. On the other hand, from all respondents who answered that they did not have the necessary information about the virus in the beginning, a higher percentage of employees do not feel safe (92,9%) compared to 7,1% of employees, who feel safe despite believing that they did not have the necessary information about the infection. Also, 94,7% of healthcare workers do not feel safe, since they believe they had, but not enough information about the virus, compared to 7,5% of healthcare workers, who feel safe.

Table 3. Chi square test results

	Value	df	Sig. (2-sided)
Pearson Chi-Square	30,517	2	0,000
Likelihood Ratio	34,368	2	0,000
Linear-by-Linear Association	28,166	1	0,000
N of Valid Cases	150		

Source: Authors' own calculation

The chi-square test of independence showed a statistically significant relationship between the perceived safety of healthcare workers and the necessary information about the virus that they received at the beginning of the pandemic $\chi^2 (4, n = 150) = 30,517; p = 0,000 < 0,05$), which means that the level of necessary information at the beginning of the pandemic significantly affects the perception of the safety of healthcare workers (Table 3).

The relationship between healthcare workers' safety perception and training courses

The chi-square test was used to ascertain the relationship between healthcare workers' safety perception and training courses on the use, removal, putting on and disposal of protective equipment. The results of grouping respondents according to their safety perception and training courses on the use, removal, putting on and disposal of protective equipment are shown in Table 4.

Table 4. Testing independence of variables: safety perception and training courses on the use, removal, putting on and disposal of protective equipment

		Safety perception			
		Yes	No	Total	
Training Courses on the use, removal, putting on and disposal of protective equipment	Yes, now because of the pandemic	Count	18	89	107
		% training courses	16,8	83,2	100,0
		% safety perception	45,0	80,9	71,3
	Yes, earlier	Count	11	6	17
		% training courses	64,7	35,3	100,0
		% safety perception	27,5	5,5	11,3
	Yes, earlier and now because of the pandemic	Count	0	1	1
		% training courses	0,0	100,0	100,0
		% safety perception	0,0	0,9	0,7
	No, never	Count	11	14	25
		% training courses	44,0	56,0	100
		% safety perception	27,5	12,7	16,7
Total		Count	40	110	150
		% training courses	26,7	73,3	100,0
		% safety perception	100,0	100,0	100,0

Source: Authors own calculation

Based on the cross-tabulation of the categorical variables of perceptions of safety and training courses on the use, removal, putting on and disposal of protective equipment, it can be noted that a higher percentage of healthcare workers do not feel safe (83.2 %), as opposed to 16.8% of those who feel safe because they have undergone training now due to the pandemic in the use, putting on, removing and disposing of protective equipment. On the other hand, from all respondents who answered that they were trained earlier, a higher percentage of employees feel safe (64.7%) compared to 35.3% of employees, who do not feel safe. In the group of respondents who answered that they had received training both before and now because of the pandemic, everyone feels safe (100%). Also, 56.0% of healthcare workers, who answered that they did not undergo training, do not feel safe, compared to 44.0% of healthcare workers, who feel safe.

Table 5. Chi square test results

	Value	df	Sig. (2-sided)
Pearson Chi-Square	22,086	3	0,000
Likelihood Ratio	20,649	3	0,002
Linear-by-Linear Association	9,732	1	0,000
N of Valid Cases	150		

Source: Authors' own calculation

The chi-square test of independence showed a statistically significant relationship between the perceived safety of healthcare workers and training courses on the use, removal, putting on and disposal of protective equipment ($\chi^2(3, n = 150) = 22,086; p = 0,000 < 0,05$), which means that the training courses on the use, removal, putting on and disposal of protective equipment significantly affects the perception of the safety of healthcare workers (Table 5).

The relationship between healthcare workers' safety perception and support from authorities

The chi-square test was used to ascertain the relationship between healthcare workers' safety perception and support from authorities. The results of grouping respondents according to their safety perception and initial information about the Sars-CoV 2 virus are shown in Table 6.

Table 6. Testing independence of variables: safety perception and support from authorities

		Safety perception			
		Yes	No	Total	
Support from authorities	Yes	Count	33	44	77
		% support	42,9	57,1	100,0
		% safety perception	82,5	40,0	51,3
	No	Count	7	66	73
		% support	9,6	90,4	100,0
		% safety perception	17,5	60,0	48,7
Total	Count	40	110	150	
	% support	26,7	73,3	100,0	
	% safety perception	100,0	100,0	100,0	

Source: Authors own calculation

Based on the cross-tabulation of the categorical variables of perceptions of safety and support from authorities, it can be noted that a higher percentage of healthcare workers do not feel safe (57,1%), as opposed to 42,9% of those who feel safe because they have the support of the authorities. On the other hand, from all respondents who answered that they do not have the support of their authorities, a higher percentage of employees do not feel safe (90,4%) compared to 9,6% of employees, who feel safe regardless of the fact that they do not have support authorities.

Table 7. Chi square test results

	Value	df	Sig. (2-sided)
Pearson Chi-Square	21,208	1	0,000
Likelihood Ratio	19,541	1	0,000
Linear-by-Linear Association	22,677	1	0,000
N of Valid Cases	150		

Source: Authors' own calculation

The chi-square test of independence showed a statistically significant relationship between the perceived safety of healthcare workers and support from authorities $\chi^2(4, n=150) = 21,208; p = 0,000 < 0,05$, which means that support from authorities significantly affects the perception of the safety of healthcare workers (Table 7).

3.1. 2. Discussion

According to the presented results, the highest number of the total number of respondents stated that:

- from the very beginning of the pandemics they received all the necessary information, as well as clear and precise instructions about how to work and act during the pandemic,

- they went through training on work safety, refreshed their knowledge on the prevention and control of the infection, and that they also had training on how to use, put on, take off and dispose of the protective equipment during the pandemic,

- that they had protective equipment provided for them at work, that protective equipment sometimes lacked, that they received protocols on the assessment, triage, testing and treating of patients, that their work hours were respected, that they felt more tired and exhausted during the pandemic than in usual circumstances, that they did not feel safe at their workplace during the pandemic, that their shifts remained the same, that their breaks were as usual, that there was no one in their institution to take care of their mental health and whom they could turn to for help during the pandemic.

A smaller percent of respondents (slightly more than half of the total number) stated that during the pandemic:

- they received valid instructions on how to provide patients and the public with the right information on the prevention of the SARS-CoV2 virus and

- that they had someone senior they could turn to and complain about a problem.

According to the obtained results, it can be noted that the majority of respondents gave a positive mark for different aspects of HR management in the state health sector during the pandemic, but it can also be seen that there is room for progress in all managerial aspects. The most crucial thing that needed immediate attention was the provision of a sufficient quantity of protective equipment during the time of crisis and also the provision of mental health care to health workers, especially because during the pandemic they felt more tired and exhausted than usual, and they also did not feel safe at their workplace. The results of our research are in accordance with "reports from medical staff from other countries which describe physical and mental exhaustion, the torment of difficult triage decisions, and the pain of losing patients and colleagues, all in addition to the infection risk" (Lancet, 2020, p. 922). Research studies also show that derangement and negative emotions were the main challenges for the physicians and nurses who were working in the covid-19 Intensive Care Units (ICU) in Iran and in Canada (Yusefi et al., 2022). Fatigue, exhaustion and the feeling of fear or insecurity are in negative correlation with work performance and productivity, so to have the understanding of managers and support of professional services is of the utmost importance, especially during the time of crisis, which is exactly what

this pandemic was. Given that a very high percent of respondents stated that they occasionally did not have enough protective equipment at their workplace, maybe that would be a good place to start, because they might have felt safer if they always had enough equipment. In short, it is necessary to improve the protection of health and safety at work for employees.

A positive thing is that the highest percent of respondents stated that their work hours were respected during the pandemic, that their shifts were not changed often, and that they could use their breaks as usual. Most of our respondents said that they went through all useful trainings for pandemic, while trainings, for example, were weak in the USA (Yusefi et al, 2022). A positive thing is also the fact that health workers in Serbian COVID hospitals received all the necessary information, as well as clear and precise instructions about how to work and act during the pandemic. In the research conducted in North Macedonia health workers who worked in COVID hospitals "indicated that communication for overcoming organizational issues emerged during the pandemic and access to information regarding the pandemic had positive and statistically significant influence on the employees' satisfaction of the human resource management in the healthcare organizations" (Eftimov & Bozhinovska, 2021, p. 180).

According to the results of the current research, received necessary information at the beginning of the pandemic, training courses on the use, removal, putting on and disposal of protective equipment, and psychological support of the authorities are significantly related to the perception of health workers about safety. The results reported here cannot be compared with those of other studies since, according to the review of the relevant literature, those other studies did not address these difficulties in the same manner. However, Dinić et al. (2021) obtained results according to which, compared to their counterparts, health professionals who were reallocated because of COVID-19 and who were unsatisfied with workplace preparation were 2.61 and 1.38 times more likely, respectively, to think about improvements in health workforce management. Kunin et al. (2013) has demonstrated that primary health care has not proved a high level of readiness to contain epidemics. This is mostly because of challenges in obtaining and utilizing personal protective equipment, a lack of government backing, a lack of expertise and training, and the psychological toll.

Generally speaking, work conditions and relationship with health workers need improvement, so that the aforementioned responses can be more persuasive and in favour of a better HR management in the future.

4. Conclusion

The aim of the paper was to determine whether human resources were well managed in state health institutions during the pandemic. According to the research results, received necessary information at the beginning of the pandemic, training courses on the use, removal, putting on and disposal of protective equipment, and psychological support of the authorities are at a statistically significant level associated with the perception of the safety of healthcare workers. All three auxiliary hypotheses have been confirmed, and for that reason we can say that the initial research hypothesis is also accepted.

If we take into account that health workers in this fight were on the front line and in great danger of being easily infected with the virus, the management of health workers should be improved so that the percentage of positive answers to the mentioned questions is at its highest. Our health care system, like most health care systems in the world, does not have enough health workers who can take care of such a large number of infected patients, and quality management of this valuable resource in the conditions of the pandemic has become even more important. In all aspects of employee management in the public health sector there is room for improvement and the results must be better.

The results of the study show that during public health emergencies, changes in health workforce management are necessary, as highlighted by SARS - CoV - 2 infection. During protracted and dynamic pandemics, an internal event management team and a group of outside experts may offer the resources and direction required to organize, oversee, and manage the medical workforce. The application of evidence generated by these groups can prove advantageous to stakeholders in future public health crises and during the decision-making process.

Due to the pandemic, it was very difficult to find respondents, so the main limitation of this research was the sample size. Future research could include a larger sample so that the results can be generalized to a wider population of healthcare workers. The research was conducted in Belgrade and Loznica, so the question remains as to what the situation was like in other cities in Serbia, and future research could be based on comparing results from different cities, both at the level of primary, as well as at the level of secondary and tertiary health institutions. At the same time, this kind of research could provide a broader picture of how HR management functioned in state health institutions in Serbia during the pandemic and with useful recommendations for improving relations with health workers and improving the quality of health services in an emergency situation.

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