

Stavovi zdravstvenih profesionalaca o odgovoru sustava primarne zdravstvene zaštite Kantona Sarajevo u uvjetima pandemije COVID-19

Healthcare professionals' views on the response of the primary healthcare system of Sarajevo Canton in the conditions of the COVID-19 pandemic

Zineta Mulaosmanović¹, Aida Pilav², Elmedina Mrkulić³, Suada Branković⁴, Jasmina Mahmutović⁴, Hadžan Konjo⁴

¹ Javna ustanova Dom zdravlja Kantona Sarajevo, Vrazova 11, 71 000 Sarajevo, Bosna i Hercegovina, e-mail: zineta988@gmail.com

² Institut za javno zdravstvo Kantona Sarajevo, Mustafe Pintola 1, 71 000 Sarajevo, Bosna i Hercegovina, e-mail: idanap@bih.net.ba

³ Pedijatrijska klinika, Klinički centar Univerziteta u Sarajevu, Patriotske lige 81, 71 000 Sarajevo, Bosna i Hercegovina, e-mail: elmedinamrkulic@gmail.com

⁴ Fakultet zdravstvenih studija Univerziteta u Sarajevu, Stjepana Tomića 1, 71 000 Sarajevo, Bosna i Hercegovina, e-mail: suada.brankovic@fzs.unsa.ba, e-mail: jasmina.mahmutovic@fzs.unsa.ba, e-mail: hadjan.konjo@fzs.unsa.ba

Sažetak

Uvod: Pandemija COVID-19 pokazala je nedostatke zdravstvenih sustava na globalnoj razini, a najveći utjecaj pandemije doživjeli su zdravstveni profesionalci koji rade u izravnom kontaktu s oboljelim pacijentima.

Cilj: Cilj je rada ispitati stavove i mišljenja zdravstvenih profesionalaca koji rade u ruralnim i urbanim područjima Kantona Sarajevo o mjerama zaštite na radnom mjestu, zdravstvenom kadru i organizaciji rada tijekom pandemije COVID-19 od strane nadležnih institucija.

Metode: Ispitani su zdravstveni profesionalci koji rade u urbanim i ruralnim područjima u Kantonu Sarajevo koristeći anonimne anketne upitnike čija je osnova bila *check lista* za provjeru spremnosti zdravstvenih ustanova za pandemiju COVID-19 koju je kreirala Svjetska zdravstvena organizacija. Kriterij za uključivanje u studiju bio je dobrovoljni pristanak ispitanika da sudjeluju u istraživanju.

Rezultati: Analiza ustanove i spremnosti sustava na COVID-19 pandemiju ukazala je na mnoge nedostatke zdravstvenog sustava u Kantonu Sarajevo. Utvrđen je umjeren rizik kod odgovora zdravstvenog sustava primarne zdravstvene zaštite na području cijelog Kantona, s tim da je značajno veći rizik utvrđen u urbanim dijelovima Kantona. Utvrđena je značajna statistička razlika u ukupnom riziku ($p < 0,001$). Na skali od 8 do 40, ukupan rizik u urbanim sredinama iznosio je 21,95 (19 – 25), dok je u ruralnim sredinama iznosio 19,3 (16 – 23).

Zaključak: Uvažavanje stavova i mišljenja zdravstvenih profesionalaca koji rade u izravnom kontaktu s pacijentima trebalo bi biti temelj za donošenje odluka u javnoj zdravstvenoj politici. U našoj se studiji, ali i ranije opisanim studijama, uočava pojam adaptabilnosti koji ukazuje na to da se, prema prijašnjim iskustvima, trebaju napraviti korektivne mjere kako bi zdravstveni sustav bio spreman za moguće epidemije i pandemije u budućnosti.

Ključne riječi: primarna zdravstvena zaštita, zdravstveni profesionalci, COVID-19

Kratak naslov: Odgovor primarne zdravstvene zaštite na pandemiju COVID-19

Abstract

Introduction: The COVID-19 pandemic has revealed shortcomings in healthcare systems worldwide, particularly affecting healthcare professionals working in direct contact with infected patients.

Objective: The objective is to investigate the opinions and viewpoints of healthcare professionals working in both rural and urban areas of Sarajevo Canton regarding workplace protective measures and the organization of work during the COVID-19 pandemic by relevant authorities.

Methods: Healthcare professionals working in urban and rural areas of Sarajevo Canton were surveyed using self-administered, anonymous questionnaires based on the World Health Organization's Checklist for the Readiness of Health Facilities for COVID-19 pandemic. Inclusion criteria for the study required participants' voluntary consent to participate in the research.

Results: The analysis of healthcare facilities and the readiness of the system for the COVID-19 pandemic revealed numerous shortcomings in the healthcare system of Sarajevo Canton. A moderate risk was identified in the response of the primary healthcare system throughout the Canton, with significantly higher risk detected in urban areas. There was a significant statistical difference in the overall risk ($p < 0,001$). On a scale from 8 to 40, the overall risk in urban areas was 21.95 (19-25), while in rural areas, it was 19.3 (16-23).

Conclusion: Decision-makers in public health policy should base their decisions on respecting the opinions and perspectives of healthcare professionals who work directly with patients. Our study, along with previous research, emphasizes the importance of adaptability, indicating that corrective measures based on past experiences should be implemented to ensure the healthcare system is prepared for possible future epidemics and pandemics.

Keywords: primary healthcare, health professionals, COVID-19

Short title: Response to the COVID-19 pandemic

Uvod

U siječnju 2020. godine razvila se epidemija u NR Kini koju je uzrokovao do tada nepoznati koronavirus SARS-CoV-2. Epidemija se proširila diljem svijeta, te je 11. ožujka 2020. godine Svjetska zdravstvena organizacija (SZO) epidemiju službeno proglasila pandemijom. Ekonomski stabilne države, koje su do tada vjerovale da imaju snažan zdravstveni sustav, suočile su se s nizom problema koji se nisu mogli brzo i efikasno riješiti [1].

SZO razvila je strateški plan spremnosti i odgovora na novi koronavirus, poznat kao *check lista*, koji nudi smjernice za mjere javnog zdravlja. Ovaj strateški plan pomaže zemljama da brzo identificiraju relevantne akcije iz svojih nacionalnih planova za zdravstvenu sigurnost i spremnost u suočavanju s pandemijom COVID-19, uzimajući u obzir nove spoznaje o virusu SARS-CoV-2. Primjena ovih nacionalnih mjera pomaže u usmjeravanju i usklađivanju aktivnosti nacionalnih vlada u borbi protiv pandemije COVID-19 [2].

Pandemija COVID-19 zapravo je izložila stanje zdravstvenih sustava diljem svijeta i razotkrila sve njihove slabosti. Potraga za dovoljnom medicinskom opremom, lijekovima, testovima, respiratorima, krevetima na intenzivnoj njezi i medicinskim osobljem postala je ključna na globalnoj razini. Informacije koje su stručnjaci upućivali javnosti bile su nepotpune, često kontradiktorne i nesigurne, što je bilo posljedica suočavanja s novim virusom i otvorilo je prostor za paniku i zbnjenost [1].

Globalno zdravstveno obrazovanje značajno je za zdravstvene profesionalce jer ih priprema da odgovore na neočekivane, akutne ili teške situacije, osobito one koje rezultiraju značajnim nedostatkom resursa [3].

Zdravstveni profesionalci koji rade u primarnoj zdravstvenoj zaštiti (PZZ) ključni su u prepoznavanju novih slučajeva, praćenju onih koji su u riziku i smanjenju neizravne smrtnosti povezane s prekidom zdravstvenih i socijalnih usluga. Također imaju važnu ulogu u obrazovanju zajednice, upravljanju odgovorom javnosti i psihološkim posljedicama pandemije COVID-19 [4].

Paket procjena kapaciteta zdravstvenih usluga u kontekstu pandemije COVID-19 sastoji se od alata za brze i precizne procjene kapaciteta zdravstvenih ustanova tijekom različitih faza pripravnosti, odgovora i oporavka od pandemije COVID-19 [2].

Kad su prvi slučajevi zaraze SARS-CoV-2 virusom evidentirani u BiH, zdravstvene ustanove reagirale su u skladu sa svojim mogućnostima, ali bez preciznih uputa s državnog nivoa vlasti. Uspostavljanje funkcioniranja zdravstvenog sustava primarnog nivoa zdravstvene zaštite u odgovoru na COVID-19 uz sve je prepreke i specifične okolnosti bio svojevrsan izazov, kako za donositelje odluka i poštivanje smjernica, tako i za zdravstvene profesionalce koji su liječili ove pacijente. Pojava pandemije zahtijeva brz i efikasan način organizacije u novim okolnostima.

Ciljevi su ovog istraživanja ispitati stavove i mišljenje zdravstvenih profesionalaca o odgovoru sustava primarne zdravstvene zaštite u uvjetima pandemije COVID-19.

Introduction

In January 2020, an epidemic emerged in the People's Republic of China caused by the previously unknown coronavirus, SARS-CoV-2. The epidemic swiftly spread worldwide, leading the World Health Organization (WHO) to officially declare it a pandemic on March 11, 2020. Economically stable nations, previously confident in their robust healthcare systems, encountered many issues that could not be swiftly and effectively resolved [1].

The WHO developed a strategic preparedness and response plan for the novel coronavirus, known as the "checklist," which offers guidance on public health measures. This strategic plan assists countries in rapidly identifying relevant actions from their national health security and preparedness plans when dealing with the COVID-19 pandemic, taking into consideration emerging knowledge about the SARS-CoV-2 virus. Implementing these national measures aids in directing and aligning the activities of national governments in the fight against the COVID-19 pandemic [2].

The COVID-19 pandemic exposed the state of healthcare systems worldwide and revealed all their weaknesses. The search for an adequate supply of medical equipment, medications, tests, ventilators, intensive care beds, and medical personnel became one of the key global issues. Information disseminated to the public by experts was often incomplete, frequently contradictory, and uncertain, a consequence of dealing with a novel virus, which opened the door to panic and confusion [1].

Global health education is crucial for healthcare professionals as it prepares them to respond to unexpected, acute, or challenging situations, especially those resulting in significant resource shortages [3]. Healthcare professionals working in primary healthcare (PHC) play a crucial role in identifying new cases, monitoring those at risk, and reducing indirect mortality associated with the disruption of health and social services. They also have a crucial role in community education, managing public response, and addressing the psychological consequences of COVID-19 [4].

The package for assessing healthcare service capacity in the context of the COVID-19 pandemic consists of tools for rapid and precise assessments of healthcare facility capacities during various phases of preparedness, response, and recovery from the COVID-19 pandemic [2].

When the first cases of SARS-CoV-2 infection were documented in Bosnia and Herzegovina, healthcare institutions responded according to their capabilities but without precise guidance from the national-level authorities. Establishing the functioning of the primary healthcare system in response to COVID-19, amidst all the obstacles and specific circumstances, posed a unique challenge for decision-makers, compliance with guidelines, and healthcare professionals who treated these patients. The onset of a pandemic demands a swift and efficient way of organizing in new circumstances.

The objectives of this research are to examine the attitudes and opinions of healthcare professionals regarding the primary healthcare system's response to the conditions of the COVID-19 pandemic. Although the study addresses a phe-

Iako je u radu ispitan već poznat fenomen kojim su se bavili i drugi istraživači, ovaj rad predstavlja stavove zdravstvenih profesionalaca iz lokalne perspektive. Istraživanje je provedeno u jednom dijelu Bosne i Hercegovine, na području Kantona Sarajevo.

Metodologija

Istraživanje je studija presjeka provedena deskriptivno-analitičkom metodom na prigodnom uzorku u periodu od 15. 5. 2022. do 30. 6. 2022. godine. Za potrebe provođenja istraživanja dobivena je suglasnost Etičkog komiteta Javne ustanove Dom zdravlja Kantona Sarajevo.

Ispitanici

U istraživanje su uključeni zdravstveni profesionalci koji rade u timovima obiteljske medicine (medicinske sestre i liječnici), kao i zdravstveni profesionalci drugih profila koji su radili s oboljelim pacijentima. Ispitani su zdravstveni profesionalci koji rade u urbanim i ruralnim područjima u Kantonu Sarajevo. Kriterij za uključivanje u studiju bio je dobrovoljni pristanak ispitanika da sudjeluju u istraživanju.

Instrument istraživanja

U istraživanju su korišteni anonimni anketni upitnici za zdravstvene profesionalce o mišljenju i stavovima u odgovoru sustava primarne razine zdravstvene zaštite u COVID-19 pandemiji. Za pitanja obrađena u ovom istraživanju osnova je bila *Check lista* za provjeru spremnosti zdravstvenih ustanova za pandemiju COVID-19 koju je kreirala Svjetska zdravstvena organizacija. Kod odgovora korištena je bodovna skala 1 – 5 (1 = u potpunosti se ne slažem, 2 = djelomično se ne slažem, 3 = i slažem se i ne slažem, 4 = djelomično se slažem, 5 = u cijelosti se slažem).

Statistička obrada podataka

Prikupljeni podaci uneseni su u elektronsku bazu podataka kreiranu u programu Microsoft Office Excel 365. Podaci su analizirani upotrebom SPSS for Windows, verzija 27.0. Upotrijebljena je deskriptivna statistika za prikaz podataka kao apsolutni brojevi ili relativna zastupljenost. Analiza distribucije podataka prikazana je u slučaju normalne distribucije srednjom vrijednosti, a kod neparametrijske distribucije podataka medijanom s interkvartilnim rasponom. Na temelju 8 odabranih pitanja izvršeno je bodovanje rizika na skali od 8 do 40 bodova, pri čemu više vrijednosti ukazuju na veći nivo rizika (nizak rizik od 8 do 18 bodova, umjeren rizik na skali od 18 do 25 bodova, te visok rizik od 25,1 do 40 bodova). Za analizu razlika u distribuciji podataka među grupama korišten je Wilcoxonov test, uz nivo značajnosti $p < 0,05$.

Rezultati

U istraživanje je uključen 331 ispitanik, od kojih je 44,7 % ispitanika muškog spola i 55,3 % ispitanika ženskog spola. Najviše je ispitanika, njih 201 (60,7 %), bilo u dobi između 31 godine i 50 godina. Prema lokaciji zaposlenja, anketirano je 61 % zdravstvenih profesionalaca iz urbanih sredina, dok je

nomenon already explored by other researchers, this paper presents the perspectives of healthcare professionals from a local standpoint. The research was conducted in one part of Bosnia and Herzegovina, specifically in the Sarajevo Canton area.

Methodology

The research is a cross-sectional study conducted using a descriptive-analytical method on a convenience sample from May 15, 2022, to June 30, 2022. Ethical approval for conducting the research was obtained from the Ethics Committee of the Public Health Center of Sarajevo Canton.

Participants

The study included healthcare professionals working in family medicine teams (nurses and doctors) and healthcare professionals from other profiles who worked with infected patients. Healthcare professionals working in both urban and rural areas of Sarajevo Canton were surveyed. The inclusion criterion for the study was the voluntary consent of the participants to participate in the research.

Research instrument

The study utilized self-administered, anonymous questionnaires for healthcare professionals about their opinions and attitudes regarding the response of the Primary Healthcare System to the COVID-19 pandemic. The questions in this research were based on the Checklist for the Readiness of Health Facilities for the COVID-19 pandemic created by the World Health Organization. A scoring scale from 1-5 was used for responses (1=strongly disagree, 2=partially disagree, 3=neutral, 4=partially agree, 5=strongly agree).

Data Analysis

The collected data were entered into an electronic database created in Microsoft Office Excel 365. Data were analyzed using SPSS for Windows, version 27.0. Descriptive statistics were used to present data as absolute numbers or relative percentages. Data distribution analysis was displayed, with the mean for normally distributed data and the median with interquartile range for non-parametrically distributed data. Based on the responses to 8 selected questions, a risk score was calculated on a scale from 8 to 40 points, with higher values indicating a higher level of risk (low risk from 8 to 18 points, moderate risk from 18 to 25 points, and high risk from 25.1 to 40 points). The Wilcoxon test was used to analyze differences in data distribution among groups, with a significance level of $p < 0.05$.

Results

The study included 331 participants, with 44.7% male and 55.3% female participants. Most participants, 201 (60.7%), regarding age, were between 31 and 50. Regarding their workplace locations, 61% of healthcare professionals were from urban areas, while 39% were from rural areas in Sarajevo Canton. The most common professions among participants were nurses, accounting for 203 (61.3%), and doctors, accounting for 105 (31.7%). 92.7% of participants were

TABLICA 1. Karakteristike ispitanika / Participant Characteristics

Broj ispitanika	N 331	100 %
Spol		
m	234	44,7
ž	290	55,3
Dob		
18 – 30	54	16,3
31 – 50	201	60,7
Iznad 50	76	23,0
Sredina u kojoj su zaposleni		
urbana	202	61,0
ruralna	129	39,0
Profesija		
Medicinska sestra	203	61,3
liječnik	105	31,7
laborant	18	5,5
Radiološki inženjer	5	1,5
Jeste li cijepljeni?		
da	307	92,7
ne	24	7,3
COVID-19 infekcija		
da	235	70,9
ne	96	29,1
Mjesto obolijevanja		
N 235	100 %	
Na radnom mjestu	115	48,9
U kontaktu s prijateljima	15	6,4
Od člana obitelji	16	6,8
Nije siguran	89	37,9

TABLICA 2. Stavovi ispitanika / Participant Attitudes

Tvrdnja	Potpuno se ne slažem %	Djelomično se ne slažem %	I slažem se i ne slažem %	Djelomično se slažem %	Potpuno se slažem %
Na održavanju higijene bilo je dovoljno radnika/ca koji su mogli omogućiti sigurnost u radnom procesu.	60,4	9,1	12,4	14,2	3,9
U pandemiji je radio dovoljan broj zdravstvenih radnika.	64,7	6,0	10,6	15,7	3,0
Jeste li informirani o COVID-19 infekciji?	0,9	5,1	10	26,3	57,7
Plašio/la sam se infekcije COVID-19.	36,3	20,8	23,3	20,8	36,3
Zdravstveni radnici odbijali su raditi s COVID-19 pacijentima.	3,3	9,1	18,4	18,7	50,5
U epidemiji je bilo zdravstvenih radnika koji nisu željeli raditi s COVID-19 pacijentima.	3,9	14,7	17,8	10,9	52,7
Ustanova je imala koordinate za posebno postupanje tijekom pandemije.	1,8	2,1	10,9	32,9	52,3
Ustanova je osposobila prostor za rad s pacijentima s COVID-19 infekcijom.	5,7	2,7	21,8	31,1	38,7
Dostupnost osobne zaštitne opreme bila je adekvatna.	3,0	16,3	6,9	26,0	47,7

TABLICA 2. Nastavak

Tvrdnja	Potpuno se ne slažem %	Djelomično se ne slažem %	I slažem se i ne slažem %	Djelomično se slažem %	Potpuno se slažem %
Menadžment Vaše ustanove napravio je brzu internu preraspodjelu kadra.	10,9	5,7	34,7	8,2	40,5
Smatrate li da ste dovoljno educirani za rad s pacijentima inficiranim virusom SARS-CoV-2?	1,2	9,1	10,6	31,4	47,7
Pacijenti su se ponašali odgovorno i poštovali predviđene mjere.	3,6	21,5	25,1	34,7	15,1
Nadležni stožeri gube kontrolu nad pandemijom.	3,0	8,2	38,7	33,2	16,9
Krizni stožeri i menadžment ustanova radili usklađeno.	16,3	12,7	26,0	36,3	8,8
Virus nije toliko opasan i namjerno se širi panika među populacijom iz nekih drugih razloga.	6,6	17,5	39,0	25,9	11,8
Vaši napori pružanja zdravstvenih usluga vrednovani su od strane pacijenata.	23,9	12,4	21,5	36,9	5,4
Uspostavili ste sistem praćanja i vođenja medicinske dokumentacije za COVID-19 oboljele.	2,4	6,0	15,1	46,2	30,2

iz ruralnih sredina anketirano 39 % ispitanika. Najveći broj ispitanika po profesiji činile su medicinske sestre, njih 203 (61,3 %), i liječnici, ukupno 105 (31,7 %). Ukupno 92,7 % ispitanika cijepljeno je, a 70,9 % ispitanika preboljelo je infekciju COVID-19 (Tablica 1.). Većina se ispitanika nije slagala s tvrdnjom da je tijekom pandemije bilo zaposleno dovoljno radnika na održavanju čistoće (60,4 %) ni da je bilo dovoljno zaposlenih zdravstvenih profesionalaca (60,4 %). Ispitanici su u 50,5 % odgovora izjavili da je bilo zdravstvenih profesionalaca koji su odbijali raditi s COVID-19 pozitivnim pacijentima, a njih 52,7 % istaknulo je da je bilo zdravstvenih profesionalaca koji nisu željeli raditi s COVID-19 pozitivnim pacijentima. Ukupno 57,7 % ispitanika izjavilo je da su bili informirani o COVID-19 infekciji, a 47,7 % ispitanika smatralo je da su u potpunosti educirani za rad s COVID-19 pozitivnim pacijentima (Tablica 2.). Analizom bodova u ukupnom riziku utvrđeno je da ispitanici smatraju da je nedostajalo dovoljno radnika na održavanju higijene (prosjeak 4,08, medijan 5). Nedostatak zdravstvenih radnika također je predstavljao visok rizik (prosjeak 4,14, medijan 5). Dostupnost prostora za rad s pacijentima s COVID-19 infekcijom imala je nizak rizik s obzirom na to da je većina imala istu (prosjeak 2,06, medijan 2). Većina ustanova imala je koordinatora za postupanje što je predstavljalo nizak rizik (prosjeak 1,68, medijan 1). Ispitanici su smatrali da su dovoljno informirani o COVID-19 infekciji, te isto smatraju niskim rizikom. Prema ispitanicima, dostupnost osobne zaštitne opreme predstavljala je blag rizik (prosjeak 2,01, medijan 2). Menadžment ustanove po većini je ispitanika činio brzu internu preraspodjelu kadra, što predstavlja umjeren rizik (2,38, medijan 3).

Umjeren se rizik ogleda i u činjenici da krizni stožeri i menadžment ustanova nisu radili usklađeno (2,92, medijan 3). Ukupno promatrano na skali od 0 do 40, ispitanici su u prosjeku imali 20,9 bodova, s medijanom od 22 boda (Tablica 3.). Na temelju distribucije ispitanika u odnosu na domove zdravlja u urbanim i ruralnim područjima, utvrđeno je da su ispitanici iz gradskih sredina imali značajno veći

vaccinated, and 70.9% had previously experienced the infection (Table 1.).

Most participants disagreed that there were enough sanitation workers employed during the pandemic (60.4%), and they also disagreed that there were enough healthcare professionals (60.4%). In responses to questions, 50.5% of participants stated that there were healthcare professionals who refused to work with COVID-positive patients, and 52.7% reported that some healthcare professionals were unwilling to work with COVID-positive patients. 57.7% of participants claimed to be informed about COVID-19 infection, and 47.7% believed they were fully educated to work with COVID-19 positive patients (Table 2.).

In analyzing the risk scores, it was found that participants believed there was a lack of sanitation workers (average 4.08, median 5) and a shortage of healthcare workers (average 4.14, median 5), both representing high risks. The availability of workspace for COVID patients was considered a low risk, as most facilities had adequate space (average 2.06, median 2). The presence of coordinators for handling COVID cases in most institutions was considered a low risk (average 1.68, median 1). Participants felt they were sufficiently informed about COVID-19 infection, which was considered low risk. The availability of personal protective equipment (PPE) was seen as a mild risk (average 2.01, median 2). Most participants believed that the management of institutions made rapid internal staff redistributions, representing a moderate risk (2.38, median 3). Moderate risk was also reflected in the fact that crisis committees and institutional management did not work synchronously (2.92, median 3). Overall, participants had an average score of 20.9 on a scale of 0 to 40, with a median of 22 points (Table 3.).

Based on the distribution of participants in urban and rural health centers, it was determined that participants from urban areas had significantly higher risk due to the lack of sanitation workers ($p < 0.001$) and the shortage of healthcare

TABLICA 3. Analiza rizika kod odgovora sistema primarne zdravstvene zaštite u uvjetima pandemije COVID-19 / Analysis of Risk in the Response of Primary Healthcare System During the COVID-19 Pandemic

	Ukupno		
	Mean	Median	IQ range
Nedovoljno radnik/ca na održavanju higijene	4.08	5.00	3-5
Nedovoljno zdravstvenih radnika	4.14	5.00	3-5
Prostor za rad s pacijentima s COVID-19 infekcijom	2.06	2.00	1-3
Ustanova je imala koordinatora za postupanja	1.68	1.00	1-2
Dovoljno sam informiran o COVID-19 infekciji	1.65	1.00	1-2
Dostupnost osobne zaštitne opreme	2.01	2.00	1-3
Menadžment ustanove napravio je brzu internu preraspodjelu kadra	2.38	3.00	1-3
Krizni stožeri i menadžment ustanova radili usklađeno	2.92	3.00	2-4
Ukupno	20.92	22	18-25

rizik zbog nedostatka radnika na održavanju higijene ($p < 0,001$) kao i nedostatka zdravstvenih radnika ($p < 0,001$). Značajno učestalije ispitanici iz prigradskih zdravstvenih ustanova navode da su imali prostore za rad s pacijentima s infekcijom COVID-19, te je kod njih prisutan i značajno niži rizik ($p < 0,001$). Značajno niži rizik utvrđen je i u odnosu na postojanje koordinatora za postupanja tijekom COVID-19 infekcije ($p < 0,001$). Ispitanici u objema sredinama navodili su da su adekvatno informirani o bolesti COVID-19, što predstavlja nizak rizik ($p = 0,629$). Dostupnost osobne zaštitne opreme bila je veća u domovima zdravlja u gradskim sredinama, dok je isto djelomično nedostajalo u prigradskim sredinama ($p = 0,025$). Menadžment prigradskih ustanova brže je činio internu preraspodjelu kadra ($p < 0,001$), te su im i krizni stožeri s menadžmentima ustanova bolje surađivali. Utvrđena je značajna statistička razlika ($p = 0,027$). Promatrano s aspekta ukupnog rizika, među ispitanicima iz gradskih sredina utvrđen je medijan od 23 s interkvartilnim rasponom od 19 do 25, dok je u prigradskim sredinama medijan iznosio 19 s interkvartilnim rasponom od 16 do 23. Utvrđena je značajna statistička razlika ($p < 0,001$) (Tablica 4.).

workers ($p < 0,001$). Participants from suburban health centers more often reported having workspace for COVID patients, leading to significantly lower risk ($p < 0,001$). Significantly lower risk was also identified in terms of the presence of coordinators for handling COVID-19 cases ($p < 0,001$). Participants in both settings indicated they were adequately informed about COVID-19, which was considered a low risk ($p = 0,629$). The availability of personal protective equipment was higher in urban health centers, with some shortages reported in suburban areas ($p = 0,025$). Management in suburban institutions more rapidly redistributed staff ($p < 0,001$), and crisis committees collaborated better with institutional management. A significant statistical difference was observed ($p = 0,027$). In regards to overall risk, participants from urban areas had a median of 23 with an interquartile range of 19 to 25, while participants from suburban areas had a median of 19 with an interquartile range of 16 to 23. A significant statistical difference was found ($p < 0,001$) (Table 4.).

TABLICA 4. Analiza rizika u odgovoru sistema primarne zdravstvene zaštite u uvjetima pandemije COVID-19 u odnosu urbane i ruralne sredine / Risk Analysis in the Primary Healthcare System's Response to the COVID-19 Pandemic in Urban and Rural Settings

	Urbana			Ruralna			Z	p
	Mean	Median	IQ range	Mean	Median	IQ range		
Nedovoljno radnik/ca na održavanju higijene	4.29	5.00	4-5	3.75	4.00	2-5	-3.69	<0.001
Nedovoljno zdravstvenih radnika	4.34	5.00	4-5	3.81	5.00	2-5	-3.51	<0.001
Prostor za rad s pacijentima s COVID-19 infekcijom	2.20	2.00	1-3	1.83	1.00	1-2	-3.55	<0.001
Ustanova je imala koordinatora za postupanja	1.89	2.00	1-2	1.36	1.00	1-2	-5.06	<0.001
Dovoljno sam informiran o COVID-19 infekciji	1.62	1.00	1-2	1.70	1.00	1-2	-0.48	0.629
Dostupnost osobne zaštitne opreme	1.86	1.00	1-2	2.24	2.00	1-4	-2.25	0.025
Menadžment ustanove napravio je brzu internu preraspodjelu kadra	2.70	3.00	1-3	1.89	1.00	1-3	-5.61	<0.001
Krizni stožeri i menadžment ustanova radili usklađeno	3.04	3.00	2-4	2.72	2.00	2-3	-2.21	0.027
Ukupan rizik	21.95	23	19-25	19.3	19	16-23	-4.795	<0.001

Ukupno 68,8 % ispitanika smatra da treba zaposliti veći broj zdravstvenih radnika. Poboljšanje puta pacijenta preporuka je 40,6 % ispitanika, a ravnopravnija raspodjela rada zdravstvenih radnika savjet je od 31,3 % ispitanika. Ukupno 21,9 % ispitanika smatra da je potrebno uspostavljanje plana pripravnosti za borbu protiv epidemija. Da je neophodno osigurati više medicinske opreme smatra 21,9 % ispitanika. Nadalje, 15,6 % ispitanika misli da treba poboljšati edukacije zdravstvenih radnika. Njih 9,4 % smatra da je potrebna bolja suradnja s epidemiolozima, a 3,1 % ispitanika misli da treba poboljšati edukacije stanovništva (Tablica 5.).

A recommendation to employ a higher number of healthcare workers was given by 68.8% of participants who provided their recommendation. Improving the patient pathway was recommended by 40.6% of participants, and a more equitable distribution of healthcare worker tasks was suggested by 31.3% of participants. Establishing a plan to combat epidemics was mentioned by 21.9% of participants. Providing more medical equipment was considered necessary by 21.9% of participants. Improving healthcare worker education was the stance of 15.6% of participants. The need for better collaboration with epidemiologists was the view of 9.4% of participants, and improving public education was the view of 3.1% of participants (Table 5.).

TABLICA 5. Preporuke zdravstvenih profesionalaca / Recommendations by Healthcare Professionals

Preporuke	N 331	%
Zaposliti veći broj zdravstvenih radnika	225	68,0
Poboljšanje puta pacijenta	134	40,5
Ravnopravniji raspored rada zdravstvenih radnika	104	31,4
Uspostavljanje plana za borbu protiv epidemija	72	21,8
Osigurati više medicinske opreme	72	21,8
Poboljšati edukaciju zdravstvenih radnika	52	15,7
Bolja suradnja s epidemiolozima	31	9,4
Poboljšati edukaciju stanovništva	10	3,0

Rasprava

Primarna zdravstvena zaštita može imati značajnu ulogu u odgovoru na COVID-19 razlikovanjem pacijenata s respiratornim simptomima od onih s COVID-19 infekcijom, postavljanjem rane dijagnoze, pomaganjem ranjivim osobama da se nose sa svojom tjeskobom zbog virusa i smanjenjem potražnje za bolničkim uslugama [5].

U istraživanju Haldane V i sur. (2020) navodi se da su u različitim zemljama date smjernice o pružanju usluga u slučaju bolesti COVID-19, kao i smjernice za provedbu mjera kontrole epidemije. Smjernice koje su bile nedostatne su one za podršku nadzoru kao javnozdravstvenoj funkciji i smjernice za podršku upravljanju opskrbnim lancem i praktičnoj otpornosti u primarnoj zaštiti [6].

U ovom istraživanju ispitani su stavovi i mišljenja zdravstvenih profesionalaca koji rade u ruralnim i urbanim područjima Kantona Sarajevo o mjerama zaštite na radnom mjestu i organizaciji rada u pandemiji COVID-19 od strane nadležnih institucija. Mišljenje zdravstvenih profesionalaca koji rade na primarnoj razini zdravstvene zaštite i koji su u izravnom kontaktu s pacijentima vrlo je značajno kako bi se u budućnosti napravile korektivne mjere na razini primarne zdravstvene zaštite, te pružila što kvalitetnija zdravstvena skrb, ali i zaštitili zdravstveni profesionalci koji su u izravnom kontaktu s pacijentima.

Desborough i suradnici u studiji objavljenoj 2021. godine napravili su pregled literature prijašnjih epidemija.

Discussion

Primary healthcare can play a significant role in responding to COVID-19 by differentiating patients with respiratory symptoms from those with COVID-19, providing early diagnosis, helping vulnerable individuals cope with their virus-related anxiety, and reducing the demand for hospital services [5].

Haldane et al. (2020) noted that various countries provided guidelines for delivering services during the COVID-19 pandemic and guidelines for implementing epidemic control measures. However, some guidelines were lacking, such as guidelines to support surveillance as a public health function and guidelines to support supply chain management and practical resilience in primary care [6].

This study aimed to explore the views and opinions of healthcare professionals working in rural and urban areas of Sarajevo Canton regarding workplace safety measures and the organization of work during the COVID-19 pandemic by relevant institutions. The perspectives of healthcare professionals who are in direct contact with patients and work in primary healthcare are crucial for future corrective measures in primary healthcare and to provide high-quality healthcare while safeguarding healthcare professionals in direct patient contact.

Desborough et al. (2021) conducted a literature review of previous epidemics and identified six key recommendations: improve collaboration, communication, and integra-

Sintezom nalaza identificirano je šest ključnih preporuka: poboljšati suradnju, komunikaciju i integraciju između javnog zdravstva i primarne zdravstvene zaštite; ojačati sustav primarne zdravstvene zaštite; pružiti dosljedne, koordinirane i pouzdane informacije koje potječu iz pouzdanog izvora; definirati ulogu primarne zdravstvene zaštite tijekom pandemija; zaštititi radnu snagu primarne razine i procijeniti učinkovitost intervencija [7].

Chemali S. i suradnici navode nedostatak studija koje istražuju druge zdravstvene profesionalce osim liječnika i medicinskih sestara [8]. Iako su u studiju uključeni i drugi zdravstveni profesionalci, i u ovom istraživanju najveći broj ispitanika čine medicinske sestre i liječnici, što je i očekivano jer liječnici i medicinske sestre najčešće pružaju zdravstvene usluge u kontaktu s pacijentima.

Tijekom COVID-19 pandemije većina ispitanika, njih 64,7 %, smatrala je da nije bio dovoljan broj zdravstvenih radnika, a s istim stavom djelomično se slagalo još 6 % ispitanika. Nedostatak zdravstvenih profesionalaca nije samo problem u našoj zemlji. U svom izvještaju i UN navodi da u 55 država kapaciteti ljudskih resursa u formi zdravstvenih radnika ne mogu ispuniti ni 60 % potreba stanovništva, što predstavlja globalni problem [9].

Osim toga, zdravstveni profesionalci smatraju da je tijekom pandemije COVID-19 bilo zdravstvenih radnika koji su odbijali raditi s COVID-19 pacijentima, ali i zdravstvenih radnika koji nisu željeli raditi s COVID-19 pozitivnim pacijentima, što također predstavlja značajan problem, posebno u sustavima s nedostatkom zdravstvenih profesionalaca, stoga je značajna podrška zdravstvenim radnicima koji su već zaposleni. U 2021. godini objavljeno je pismo autora McNamara u kojem se navodi da je uslijed pretjeranog zamora, manjka opreme i resursa, jedan od pet zdravstvenih radnika u SAD-u razmatrao promjenu karijere ili odjela. Ističu da su uslijed pritiska i konstantnog rada s pacijentima s težim kliničkim slikama osjetili promjene na svojem mentalnom zdravlju [10].

Prema istraživanju Chemali S. i suradnika (2022) iskustva zdravstvenih radnika oblikovala je podrška vlade i mjere odgovora na razini zdravstvene politike [8]. Billings i suradnici (2021) ukazuju na iskustva zdravstvenog osoblja u SAD-u i uspoređuju svoje podatke s podacima iz preglednih članaka i metaanaliza. Zdravstveni radnici cijenili su podršku svojih organizacija, ali su dali mnogo primjera da se nisu osjećali adekvatno potpomognuti. Neki su radnici izjavili da su se osjećali prisiljeni raditi sa zaraženim pacijentima ili u neprikladnim uvjetima [11].

Nešto više od polovice ispitanika, 50,5 % iz urbanih sredina smatralo je da su u potpunosti imali adekvatnu opremu, dok je u ruralnim sredinama ovakav stav imalo 43,4 % ispitanika. Ostali ispitanici djelomično su se ili nikako slagali s ovim stavom.

Nedostatak osobne zaštitne opreme predstavlja ozbiljnu prijetnju pružanju kvalitetne skrbi tijekom pandemije [6], a zdravstvenim radnicima prema istraživanju Yina i Zenga (2020) provedenom među zdravstvenim radnicima u Kini navodi se da je zdravstvenim djelatnicima najveća nada da će osobna zaštitna oprema biti dostupna u svakodnevnom radu [12].

tion between public health and primary healthcare; strengthen the primary healthcare system; provide consistent, coordinated, and reliable information from a trusted source; define the role of primary healthcare during pandemics; protect the primary healthcare workforce and the community; and assess the effectiveness of interventions [7].

Chemali et al. (2022) mentioned the lack of studies exploring healthcare professionals other than physicians and nurses [8]. Although this study included other healthcare professionals, most participants were nurses and doctors, which is expected since doctors and nurses most often provide healthcare services in direct patient contact.

During the COVID-19 pandemic, the majority of respondents, 64.7%, believed there was an insufficient number of healthcare workers, and an additional 6% partially agreed with this statement. The shortage of healthcare professionals is not unique to our country. According to the United Nations, in 55 countries, human resource capacities in the form of healthcare workers cannot meet up to 60% of the population's needs, representing a global problem [9].

Furthermore, healthcare professionals believed that during the COVID-19 pandemic, some healthcare workers refused to work with COVID-19 patients, while others were unwilling to work with COVID-19-positive patients, which is a significant problem, especially in systems with a shortage of healthcare professionals. Support for healthcare workers already employed is crucial. In 2021, McNamara and colleagues reported that due to excessive fatigue and lack of equipment and resources, 1 in 5 healthcare workers in the United States considered changing their careers or departments due to the pressure and constant work with severely ill patients, which affected their mental health [10]. According to Billings et al. (2021), healthcare workers in the United States generally appreciated the support of their organizations but provided many examples of not feeling adequately supported. Some workers felt compelled to work with infected patients or in inadequate conditions [11].

A study from Saudi Arabia in 2021 reported that the majority (90.6%) of healthcare workers contracted COVID-19 in the community, with only 9.4% having work-related infections [13]. That differs from our study, where, although most respondents were vaccinated (92.7%), a significant number (70.9%) had previously contracted COVID. Among these, 48.9% believed they had contracted the infection at work, while 37.9% were unsure about the transmission route. That raises questions about adequate education regarding workplace safety measures and the availability of protective equipment. The most common route of infection is in the workplace, which is consistent with the general population [14].

Slightly over half of the respondents (50.5%) from urban areas believed they had adequate equipment, while 43.4% of respondents from rural areas shared this belief. The remaining respondents partially agreed or did not agree with this statement.

The lack of personal protective equipment poses a serious threat to providing quality care during a pandemic [6]. Yin

U studiji iz Saudijske Arabije iz 2021. godine ističe se da je većina (90,6 %) zdravstvenih djelatnika dobila COVID-19 u zajednici, a samo 9,4 % bile su infekcije povezane s poslom [13], što nije u skladu s našim istraživanjem u kojem je, iako je većina ispitanika cijepljena (92,7 %), značajan broj, njih 235 (70,9 %) preboljelo infekciju COVID-19, od čega njih 115 (48,9 %) smatra da su infekciju dobili na radnom mjestu, a 89 (37,9 %) ispitanika nije sigurno na koji način im je infekcija prenesena, čime se postavlja pitanje dovoljne educiranosti o mjerama zaštite na radu, kao i dovoljno zaštitne opreme. Prijenos infekcije najčešći je na radnom mjestu, što je stav i u generalnoj populaciji [14].

Da su bili informirani o infekciji COVID-19 u potpunosti, smatralo je 57,7 % ispitanika, a s ovim se stavom djelomično slaže još 26,3 % ispitanika. Analizom je utvrđeno da se 36,3 % ispitanika u potpunosti bojalo infekcije COVID-19, dok se još 20,8 % njih djelomično bojalo zaraze. Da su se kolege plašile infekcije COVID-19, u potpunosti se slagalo 51,1 % ispitanika, a djelomično se bojalo 27,5 % ispitanika.

Postojanje koordinatora za posebno postupanje značajno je bolje ocijenjeno u ruralnim sredinama prema odgovorima ispitanika, dok su ispitanici iz gradskih sredina imali više negativan stav ($p < 0,001$). Utvrđeno je da je sa stavom da je ustanova imala adekvatan prostor za rad s COVID-19 pacijentima značajno veće slaganje bilo među ispitanicima iz prigradskih sredina ($p = 0,003$). Također, ispitanici iz ruralnih sredina značajno su više smatrali da je menadžment zdravstvene ustanove izvršio brzu internu preraspodjelu kadra ($p < 0,001$).

Ispitanici iz ruralnih sredina imali su značajno negativniji stav o dovoljnoj educiranosti kadra u odnosu na stavove ispitanika iz urbanih sredina ($p < 0,001$).

U publikaciji autora Hukić M., Ponjavić M., (2020) u istraživanju „COVID-19 pandemija u Bosni i Hercegovini“, ističu da bez obzira na nesebičnu suradnju naučnika i profesionalaca širom svijeta, prednost u borbi s bolešću imale su države s razvijenom ekonomijom, dobrim javnim zdravstvom i snažnim sustavom nauke. Iako po navedenim mjerilima Bosna i Hercegovina ne spada u izrazito otporne države, odgovor na COVID-19 u BiH u tom periodu izgledao je zadovoljavajuće [15].

Analiza ustanove i spremnosti sistema na COVID-19 pandemiju ukazala je na mnoge nedostatke zdravstvenog sustava u Kantonu Sarajevo. Utvrđen je umjeren rizik kod odgovora zdravstvenog sustava primarne zdravstvene zaštite na području cijelog Kantona, s tim da je značajno veći rizik utvrđen u urbanim dijelovima Kantona. Na skali od 8 do 40 ukupan rizik u urbanim sredinama iznosio je 21,95 (19 – 25), dok je u ruralnim iznosio 19,3 (16 – 23). Utvrđena je značajna statistička razlika u ukupnom riziku $p < 0,001$.

Prijedlozi zdravstvenih profesionalaca uključenih u istraživanje i potrebnim korektivnim mjerama na razini primarne zdravstvene zaštite bili su da se zaposli veći broj zdravstvenih djelatnika, što je bila preporuka 68,8 % ispitanika, da se poboljša put pacijenta preporuka je 40,6 % ispitanika, a ravnopravnija raspodjela rada zdravstvenih djelatnika savjet je 31,3 % ispitanika. Uspostavljanje plana pripravnosti za borbu protiv epidemija savjet je 21,9 % ispitanika. Da je

and Zeng (2020) found that healthcare workers' greatest hope was for personal protective equipment to be available in their daily work [12].

About 57.7% of respondents believed they were fully informed about COVID-19 infection, with 26.3% partially agreeing with this statement. The analysis revealed that 36.3% of respondents were completely afraid of COVID-19 infection, with an additional 20.8% partially fearing infection. About 51.1% of respondents completely agreed that their colleagues were afraid of COVID-19 infection, and 27.5% partially agreed.

The presence of coordinators for specific procedures was rated more positively by respondents from rural areas, while respondents from urban areas had slightly more negative views ($p < 0.001$). Respondents from suburban areas were significantly more likely to believe their institutions had adequate space for working with COVID-19 patients ($p = 0.003$). Also, respondents from rural areas think that the management of healthcare institutions performed rapid internal staff redistribution more frequently ($p < 0.001$). Participants from rural areas held significantly more negative views regarding the adequacy of staff education compared to the opinions of participants from urban areas ($p < 0.001$).

In the publication by authors Hukić M. and Ponjavić M. (2020), in the study titled "COVID-19 Pandemic in Bosnia and Herzegovina," it is emphasized that, regardless of the selfless collaboration of scientists and professionals worldwide, countries with developed economies, robust public healthcare systems, and strong scientific foundations had an advantage in the fight against the disease. Although Bosnia and Herzegovina did not fall into the category of highly resilient countries according to these criteria, its response to COVID-19 appeared satisfactory in that period [15].

The analysis of healthcare facilities and the readiness of the healthcare system for the COVID-19 pandemic revealed numerous shortcomings in the healthcare system of Sarajevo Canton. Moderate risk was identified in the responses related to the primary healthcare system throughout Canton, with significantly higher risk observed in urban areas. On a scale of 8 to 40, the overall risk in urban areas was 21.95 (with an interquartile range of 19-25), while in rural areas, it was 19.3 (with an interquartile range of 16-23). A significant statistical difference in overall risk was determined ($p < 0.001$).

The suggestions of the health professionals involved in the research and the necessary corrective measures at the level of primary health care were to employ a larger number of health workers, which was the recommendation of 68.8% of respondents, to improve the patient's journey was the recommendation of 40.6% of respondents, achieving a fairer distribution of healthcare workers' tasks was advised by 31.3% of respondents. Establishing a preparedness plan to combat epidemics is the advice of 21.9% of respondents. 21.9% of respondents believe that it is necessary to provide more medical equipment. A total of 15.6% of respondents believe that the education of healthcare workers should be improved, 9.4% of them think that better cooperation with epidemiologists should be established, and improving the

neophodno osigurati više medicinske opreme smatra 21,9 % ispitanika. Ukupno 15,6 % ispitanika smatra da treba poboljšati edukaciju zdravstvenih radnika, njih 9,4 % misli da je potrebno uspostaviti bolju suradnju s epidemiolozima, a poboljšanje edukacije stanovništva preporuka je 3,1 % ispitanika.

Zaključak

U našoj se studiji, ali i ranije opisanim studijama, ističe pojam adaptabilnosti koji ukazuje na to da se prema ranijim iskustvima trebaju napraviti korektivne mjere kako bi zdravstveni sustav bio spreman za moguće pandemije u budućnosti. Uvažavanje stavova i mišljenja zdravstvenih profesionalaca koji rade u izravnom kontaktu s pacijentima trebalo bi biti osnova za donositelje odluka u javnoj zdravstvenoj politici. Zapošljavanje zdravstvenih profesionalaca, nabava zaštitne opreme, adekvatni uvjeti za rad, podrška zdravstvene politike i suradnja među odjelima, edukacija zdravstvenih profesionalaca i stanovništva mjere su koje u budućnosti trebaju biti bolje koordinirane i pravovremeno osigurane u cilju pružanja kvalitetne zdravstvene skrbi stanovništvu, ali i stvaranja boljih uvjeta zaposlenima u zdravstvu kako bi se osjećali sigurno na svojim radnim mjestima.

Napomena

Rezultati rada predstavljaju dio doktorske disertacije u procesu: „Odgovor sistema primarne zdravstvene zaštite u uslovima pandemije COVID-19“ na Fakultetu zdravstvenih studija Univerziteta u Sarajevu.

Nema sukoba interesa.

education of the population is recommended by 3.1% of respondents.

Conclusion

From our study and previous research, the concept of adaptability becomes evident, indicating that corrective measures should be taken based on past experiences to prepare the healthcare system for possible pandemics in the future. Considering the opinions and views of healthcare professionals who work in direct contact with patients should serve as the foundation for decision-makers in public health policy. Measures such as the employment of healthcare professionals, procurement of protective equipment, providing adequate working conditions, supporting healthcare policy, intersectoral collaboration, and the education of both healthcare professionals and the general population need to be better coordinated and timely secured in the future. That is essential for delivering high-quality healthcare to the population and creating improved working conditions for healthcare employees to ensure they feel safe in their workplaces.

ACKNOWLEDGMENT

The results of this study represent a part of the doctoral dissertation in the process: “Response of primary healthcare system under the conditions of COVID-19 pandemic” at the Faculty of Health Studies, University of Sarajevo.

Authors declare no conflict of interest.

Literatura / References

- [1] David SH, Esam I, Tariq A, Francine N. The continuing 2019-nCoV epidemic threat of novel coronaviruses to global health — The latest 2019 novel coronavirus outbreak in Wuhan, China. *International Journal of Infectious Diseases* 2020. 91: 264–266. doi: 10.1016/j.ijid.2020.01.009
- [2] World Health Organization. (2020). Rapid hospital readiness checklist for COVID-19. World Health Organization. <https://apps.who.int/iris/handle/10665/332778>. (pristupljeno: 21. 3. 2023.)
- [3] Coria AL, Rabin TL, Rule ARL, Haq H, Hudspeth JC, Ratner L, Walker-Descartes I. Global Health Crisis, Global Health Response: How Global Health Experiences Prepared North American Physicians for the COVID-19 Pandemic. *J Gen Intern Med*. 2022 Jan; 37 (1): 217–221. doi: 10.1007/s11606-021-07120-w
- [4] Halcomb E, McInnes S, Williams A, Ashley C, James S, Fernandez R, Stephen C, Calma K. The Experiences of Primary Healthcare Nurses during the COVID-19 Pandemic in Australia. *J Nurs Scholarsh*. 2020; 52 (5): 553–563. doi: 10.1111/jnu.12589.
- [5] World Health Organization. Regional Office for the Western Pacific. Role of primary care in the COVID-19 response. WHO Regional Office for the Western Pacific. 2020. <https://apps.who.int/iris/handle/10665/331921>. (pristupljeno: 21. 3. 2023.)
- [6] Haldane V, Zhang Z, Abbas RF, Dodd W, Lau LL, Kidd MR, Rouleau K, Zou G, Chao Z, Upshur REG, Walley J, Wei X. National primary care responses to COVID-19: a rapid review of the literature. *BMJ Open*. 2020; 10 (12): e041622. doi: 10.1136/bmjopen-2020-041622
- [7] Desborough J, Dykgraaf SH, Phillips C, Wright M, Maddox R, Davis S, Kidd M. Lessons for the global primary care response to COVID-19: a rapid review of evidence from past epidemics, *Family Practice*. 2021; 38 (6): 811–825. doi: 10.1093/fampra/cmaa142
- [8] Chemali S, Mari-Sáez A, El Bcheraoui C, Weishaar H. Health care workers' experiences during the COVID-19 pandemic: a scoping review. *Hum Resour Health*. 2022. 24; 20 (1): 27. doi: 10.1186/s12960-022-00724-1.
- [9] UN news. United Nations. 55 countries face a health worker crunch linked to COVID-19: WHO. Available at: <https://news.un.org/en/story/2023/03/1134562>. (pristupljeno: 28. 4. 2023.)
- [10] McNamara D. Medscape Medical News. About 1 in 5 Clinicians Consider Quitting Due to Pandemic: Survey – Medscape. 2021.
- [11] Billings J, Ching BCF, Gkofa V, Greene T, Bloomfield M. Experiences of frontline healthcare workers and their views about support during COVID-19 and previous pandemics: a systematic review and qualitative meta-synthesis. *BMC Health Serv Res*. 2021 Sep; 21 (1): 923. doi: 10.1186/s12913-021-06917-z
- [12] Yin X, Zeng L. A study on the psychological needs of nurses caring for patients with coronavirus disease 2019 from the perspective of the existence, relatedness, and growth theory. *Int J Nurs Sci*. 2020 Apr 4; 7 (2): 157–160. doi: 10.1016/j.ijnss.2020.04.002.
- [13] Barry M, Robert AA, Temsah MH, Abdul Bari S, Akhtar MY, Al Nahdi F, Erlandez R, Al-Tawfiq JA, Al Khushail A, Al Hebaishi Y. COVID-19 Community Transmission among Healthcare Workers at a Tertiary Care Cardiac Center. *Med Sci (Basel)*. 2021 Jun 30; 9 (3): 49. doi: 10.3390/medsci9030049
- [14] Anand P, Allen HL, Ferrer RL, Gold N, Gonzales Martinez RM, Kontopantelis E, Krause M, Vergunst F. Work-related and personal predictors of COVID-19 transmission: evidence from the UK and USA. *J Epidemiol Community Health*. 2022 Feb; 76 (2):152–157. doi: 10.1136/jech-2020-215208.
- [15] Hukić M, Ponjavić M. Pandemija COVID-19 u Bosni i Hercegovini (COVID-19 pandemic in Bosnia and Herzegovina). ANUBiH Publication, 2020.