Zaštitni i rizični čimbenici u prilagodbi na pandemiju COVID-19 u Republici Hrvatskoj

/ Protective and Risk Factors in Adjusting to the Covid-19 Pandemic in Croatia

Gordana Buljan Flander[1], Romana Galić[2], Mia Roje Đapić[1], Ana Raguž[1], Krešimir Prijatelj[1]

[1]Poliklinika za zaštitu djece i mladih Grada Zagreba; [2]Gradski ured za socijalnu zaštitu i osobe s invaliditetom, Zagreb, Hrvatska

/ [1]Zagreb Child and Youth Protection Center; Office for Social Protection and Disabled Persons of the City of Zagreb, Zagreb, Croatia

orcid.org/0000-0003-3998-3932
orcid.org/0000-0002-6277-4197
orcid.org/0000-0002-2156-6260
orcid.org/0000-0002-8056-3684

Sukladno do sada provedenim istraživanjima u svijetu i Europi pandemija koronavirusa (COVID-19) izazvala je u samo nekoliko tjedana znatne negativne utjecaje na mentalno zdravlje stanovnika zahvaćenih zemalja. Ovaj je rad dio većeg istraživačkog projekta „Neki aspekti mentalnog zdravlja za vrijeme pandemije COVID-19" provedenog u Hrvatskoj. U istraživanju je sudjelovalo 1482 sudionika prosječne dobi 33,3 godine (SD= 12,2). Ispitana je povezanost različitih aspekata pandemije s rizičnim i zaštitnim čimbenicima mentalnog zdravlja sudionika. Kao instrumenti korišteni su Upitnik o određenim aspektima pandemije i Upitnik o sociodemografskim podatcima. Rezultati pokazuju da se sudionici razlikuju u procjenama rizičnosti, ozbiljnosti, praćenju medijskih novosti, percipiranom strahu od zaraze i elementima zdravstvene pismenosti s obzirom na opće demografske varijable (spol, bračni status, broj djece, broj članova kućanstva), ali i s obzirom na karakteristike koje ih stavljaju u rizik kao što su dob, mjere samoizolacije te prisutnost kronične bolesti. U radu su detaljno raspravljeni rezultati i praktične implikacije.

/ According to studies conducted so far both in Europe and globally, the coronavirus pandemic (COVID-19) produced a significant negative impact on population mental health in the affected countries within just a few weeks. This paper is part of a larger research project conducted in Croatia titled Some aspects of mental health during the COVID-19 pandemic. The study was conducted on a sample of 1482 respondents with an average age of 33.3 years (SD = 12.2). The focus of this paper was the correlation between various aspects of the pandemic and risk vs. protective factors for population mental health. The Pandemic Aspects Questionnaire and Questionnaire of Sociodemographic Data were used as research instruments. The results showed that respondents significantly differed in their assessments of risk and severity and in how closely they followed the updates in the media, in their perceived fear of infection, and in health literacy levels with regard to general demographic variables (sex, marital status, number of children, number of household members), but also in their risk characteristics such as age, self-isolation measures, and chronic disease. The results and practical implications are discussed in detail.

UVOD

Od prosinca 2019. godine širi se globalna pandemija koronavirusa (COVID-19). Većina zemalja na svim kontinentima uvela je stroge epidemiološke mjere kojima je cilj sprječavanje širenja virusa, a temelje se na strogom ograničavanju socijalnog kontakta među građanima (1). Neki građani su u karanteni, odnosno socijalno su izolirani i strogo ograničenog radijusa kretanja jer su (u izvjesnoj vjerojatnosti) bili izloženi virusu, koja traje do utvrđivanja njihovoga zdravstvenog statusa (2). Neki su pak u izolaciji, koja se odnosi na razdvajanje građana s potvrđenom dijagnozom od onih građana koji nisu zaraženi (2). Mjere ograničavanja socijalnog kontakta neminovno imaju niz posljedica za gospodarstvo, ali i za mentalno zdravlje građana.

Već sada bilježe se problemi mentalnog zdravlja vezani za globalnu pandemiju COVID-19 (3, 4) slični onima povezanima s epidemijom MERS-CoV (*Middle-East Respiratory Syndrome Coronavirus*) (5,6). U pregledu 24 objavljenih istraživanja o mentalnom zdravlju u prva tri mjeseca 2020. godine otkrivaju se brojni negativni psihološki učinci poput znakova post-traumatskog stresa, zbunjenosti i ljutnje. Incidencija i intenzitet simptoma posredovani su trajanjem mjera, osobnim strahovima od bolesti, doživljajem frustracije, dosade, manjkom ili nedovoljnom kvalitetom osnovnih zaliha, neadekvatnošću informacija, materijalnim gubitcima i stigmom

INTRODUCTION

The coronavirus (COVID-19) pandemic has been spreading globally since December 2019. Most countries on all continents introduced rigorous epidemiological measures to limit the spread. These measures have been based on strict restrictions of personal contacts among citizens (1), some of whom were placed in the quarantine, i.e. socially isolated with a firmly restricted radius of movement because they had been (to a certain level of probability) been exposed to the virus. The quarantine continues until they are diagnosed as healthy (2). Some citizens were placed in isolation, separating those sick with a contagious disease from those who are not sick (2). Measures restricting personal contacts have inevitably resulted in by a number of consequences to economy as well as the mental health of citizens.

Some mental health problems related to the global COVID-19 pandemic have already been recorded (3, 4). They are similar to those in the MERS-CoV epidemic (*Middle-East respiratory syndrome coronavirus*) (5, 6). Review of 24 published papers about mental health in the first three months of 2020 found a number of negative psychological impacts, like the signs of post-traumatic stress disorder, confusion, and anger. The incidence and intensity of symptoms were mediated by the duration of measures, personal fears of disease, frustration experience, boredom, insufficiency and low quality

oboljelih, a neka istraživanja upozoravaju na rizik dugotrajnog zadržavanja i razvijanja simptoma u budućnosti (1). Gao i sur. (7) nalaze klinički značajan porast depresivnosti i anksioznosti u Kini u proteklih tri mjeseca, a Wang i sur. (8) izvještavaju da preko polovine stanovništva Kine smatra da ima negativne posljedice za mentalno zdravlje zbog pandemije, što je u skladu s američkim podatcima (9). U Hrvatskoj prvo istraživanje vezano uz pandemiju pokazuje značajan porast brige građana i shodno tome povećanje potrebe za sigurnosnim ponašanjima, što se najviše utvrđuje kod roditelja, posebice majki i to neovisno o dobi te kod osoba oboljelih od kroničnih bolesti (10).

Kao zaštitni čimbenici identificiraju se socijalna podrška, osobito licem u lice (11) i zdravstvena pismenost (engl. *health literacy*) (12). Zdravstvena pismenost odnosi se na sposobnost pronalaženja, razumijevanja, uvažavanja i primjene adekvatnih informacija povezanih sa zdravljem (13). Rizičnim čimbenicima identificiraju se ženski rod (14,15), mlada odrasla (posredovano izloženosti medijima) i starija životna dob (15), status migranta (15), strah od nemogućnosti kontrole zaraze, nesigurnost u procjenu rizika i ozbiljnosti (3) ili visoke procjene rizika i ozbiljnosti situacije (16), pojačana izloženost medijima (7,16), odnosno informacijama iz medija (3), iskustvo osobne zaraze/sumnje na zarazu i ranije bolesti (12). Rizični i zaštitni čimbenici prikazani su sažeto u tablici 1.

Kako nam je u praksi cilj podržati zaštitne i umanjiti efekte rizičnih čimbenika za mentalno zdravlje, važno je razumjeti koja su obilježja građana i na koji način povezana sa specifičnim čimbenicima, kao i kako su pojedini čimbenici međusobno povezani o čemu se ne nalaze podatci u dosadašnjim istraživanjima. Ovaj rad usmjeren je stoga upravo na istraživanje povezanosti nekih karakteristika građana s aspektima pandemije koji se mogu promatrati kao zaštitni i rizični čimbenici za mentalno zdravlje.

Iz navedenog cilja proizlaze sljedeća dva problema: (1) Ispitati povezanost općih karakteristika

of basic supplies, inadequacy of information, material losses, and the stigma of disease. Some studies warn against long-term risk and symptoms developing in the future (1). Gao et al. (7) found a clinically significant increase of depression and anxiety in China in the past three months, while Wang et al. (8) reported that upward of half the population of China believed they suffered from negative mental health consequences due to the pandemic, which is consistent with American data (9). In Croatia, the first study related to the pandemic showed a significant increase in citizen concern and consequently an increase in the need for safety behaviors, which is mostly found in parents, especially mothers, regardless of age, and in people with chronic diseases (10).

Social support, especially face-to-face (11), and health literacy (12) have been identified as protective factors. Health literacy is related to the ability to find, understand, consider, and apply adequate health information (13). Risk factors have been identified as female sex (14, 15), young adult (due to media exposure) and elderly age (15), migrant status (15), fear of an inability to control the contagion, uncertainty about the perceived risk and severity (3), perception of high risk and severity of the situation (16), increased media exposure (7, 16) or media information (3), personal experience of being infected/suspected to have been infected, and prior diseases (12). Risk and protective factors are summarized in Table 1.

Since our aim in practice is to support protective factors and minimize the effects of risk factors for mental health, it is important to understand the characteristics of citizens and how they are linked to specific factors, as well as how some factors correlate. There are no such data in the existing studies. Therefore, this paper focused on studying the correlation between some citizen characteristics and the aspects of the pandemic which may be considered protective or risk factors for mental health.

Consequently, it was necessary to examine the correlation between the aspects of the

TABLICA 1. Rizični i zaštitni čimbenici za mentalno zdravlje u vrijeme COVID-19
TABLE 1. Risk and protective factors for mental health during the Covid-19 pandemic

Zaštitni čimbenici / Protective factors	Rizični čimbenici / Risk factors
Socijalna podrška općenito / General social support	Ženski rod / Female sex
Socijalna podrška osobnim kontaktom / Social support through social contact	Mlađa odrasla/starija životna dob / Young adult/the elderly
Zdravstvena pismenost / Health literacy:	Status migranta / Migrant status / Fear of (the inability to control) the infection
Pronalaženje adekvatnih informacija / Finding proper information	Strah od (nemogućnosti kontrole) zaraze / Uncertainty/perceived high risk
Razumijevanje adekvatnih informacija / Understanding proper information	Nesigurnost/visoke procjene rizika / Uncertainty/perceived high severity
Uvažavanje adekvatnih informacija / Respecting proper information	Nesigurnost/visoke procjene ozbiljnosti / Increased exposure to the media/information
Pridržavanje adekvatnih informacija/uputa / Following adequate instructions	Pojačana izloženost medijima/informacijama
	Osobno iskustvo zaraze/sumnja / Personal experience of infection/suspected
	Ranije bolesti / Prior diseases

sudionika (spol, bračni status, broj djece, broj članova kućanstva) s aspektima pandemije te (2) Ispitati povezanost karakteristika sudionika koje ih stavljaju u rizik od COVID-19 (dob, ranije kronične bolesti, određena mjera samoizolacije) s aspektima pandemije.

Kao aspekti pandemije definirani su: procjena rizičnosti aktualne situacije, procjena ozbiljnosti aktualne situacije, izloženost medijskim informacijama, osjećaj osobnog straha od zaraze i elementi zdravstvene pismenosti (razumijevanje i pridržavanje adekvatnih informacija/mjera).

METODA

Sudionici

Rezultati navedeni u ovom istraživanju dobiveni su u okviru šireg istraživačkog projekta o određenim aspektima psihičkog zdravlja punoljetnih osoba za vrijeme trajanja pandemije COVID-19, odnosno koronavirusa. Istraživanje je provedeno na prigodnom uzorku od 1482 sudionika, prosječne dobi 33,3 godine (SD= 12,20). Ostali sociodemografski parametri uzorka vidljivi su *u* tablici 2.

pandemics (1) the general characteristics of respondents (sex, marital status, number of children, number of household members) and (2) the risk for COVID-19 characteristics of respondents (age, chronic comorbidity, prescribed self-isolation measures).

The aspects of the pandemic were defined as: risk assessment in the current situation, severity assessment in the current situation, the exposure to media information, a feeling of personal fear of infection, and elements of health literacy (understanding and compliance with adequate information/measures).

METHOD

Sample

The results in this study were obtained within the framework of larger research into some aspects of adult mental health during the COVID-19 (coronavirus) pandemic. The study was conducted on convenience sample, N=1482, at an average age of 33.3 (SD = 12.20). Other sample characteristics are shown in Table 2.

TABLICA 2. Sociodemografske karakteristike uzorka
TABLE 2. Socio-demographic characteristics of the sample

Sociodemografsko obilježje / Socio-demographic characteristic		N	M	SD	%
Dob / Age			33,3	12,2	
Spol / Gender	Žena / Female	1230			83,0
	Muškarac / Male	252			17,0
Bračni status / Marital status	U braku / Married	520			35,0
	Rastavljen/a / Divorced	65			4,4
	Slobodan/na / Single	476			33,1
	U vezi / In relationship	407			27,5
Djeca / Children	Ne / No	910			61,3
	Da / Yes	574			38,7
	Broj djece / Number of children		2,03	1,03	
Broj članova kućanstva / Number of household members			3,8	1,57	
Postojanje kronične bolesti / Chronic disease	Ne / No	1279			82,2
	Da / Yes	205			13,8
Samoizolacija / Self-isolation	Ne / No	1169			78,4
	Da / Yes	315			21,6

Instrumentarij

Pitanja o određenim aspektima pandemije postavljena su na kraju anketnog upitnika *online*, kako bi se izbjeglo dodatno udešavanje sudionika. Određeni aspekti pandemije ispitani su sa 6 pitanja na ljestvici od 5 stupnjeva i jednim pitanjem na dihotomnoj razini („Da"/ „Ne"). Sudionici su inicijalno trebali procijeniti rizik od trenutačne COVID-19 pandemije u tri situacije: U Hrvatskoj, u Europi i u svijetu na ljestvici od 5 stupnjeva, od 1 („Nikakav rizik"), do 5 („Značajan rizik"). Narednim pitanjem sudionici su trebali navesti koliko ozbiljno doživljavaju situaciju povezanu s pandemijom na ljestvici od 5 stupnjeva, od 1 („Ne shvaćam previše ozbiljno, to je vrlo slično gripi") do 5 („Shvaćam veoma ozbiljno, situacija nije niti malo bezazlena"). Idućim pitanjem sudionici su procijenili koliko se pridržavaju uputa nadležnih institucija na ljestvici od 1 do 5, pri čemu veći broj označava veće pridržavanje uputa. Jednim pitanjem sudionici su trebali na ljestvici od 5 stupnjeva odrediti koliko su svojevoljno provjeravali novosti vezano uz pandemiju, od 1 („Niti jednom") do 5 („Vrlo često"). Nakon toga, sudionici su trebali procijeniti svoj strah od moguće zaraze koronavirusom, od 1 („Nisam uopće uplašen/a") do 5 („Veoma

Instruments

Questions about some aspects of the pandemic were asked at the end of the online questionnaire in order to avoid additional response adjustments by respondents. The pandemic aspects were examined by 6 questions with a five-point scales and one dichotomous question ("Yes/No"). Respondents were initially asked to assess the risk of the current COVID-19 pandemic in three situations: In Croatia, in Europe, and globally on a five-point scale, from 1 ("No risk at all") to 5 ("Significant risk"). The next question required them to decide how seriously they experienced the situation related to the pandemic on a five-point scale, from 1 ("I do not consider it to be very serious, it is similar to the flu") to 5 ("I consider it to be very serious, the situation is by no means harmless"). The following questions required them to assess how much they followed the instructions of the institutions in charge. The five-point scale ranged from 1 to 5, where the higher number signified a higher level of following the instructions. One question required the respondents to assess how often they voluntarily followed the news related to the pandemic, by choosing 1 ("Not once") to 5 ("Very

sam uplašen/a"). Posljednjim pitanjem su na ljestvici od pet stupnjeva sudionici procijenili istinitost tvrdnje „Koronavirus izmišljena je ili u najmanju ruku pretjerano napuhnuta priča od strane farmaceuta i vladajućih.", pri čemu se 1 odnosi na „Nimalo istinita", a 5 „Vrlo istinita" tvrdnja. Posljednjim pitanjem o COVID-19 sudionici su upitani nalaze li se u samoizolaciji. Ako su sudionici naveli da su u samoizolaciji, *online* upitnik ih je preusmjerio na pitanje o ukupnoj količini dana provedenih u samoizolaciji (uključujući dan ispunjavanja upitnika).

Pitanja o socio-demografskim obilježjima uključivala su varijable dobi, spola, bračnog statusa (slobodan/na, u vezi, u braku, razveden/a ili ostalo) te broja djece i dobi najmlađeg djeteta (ako imaju dijete/ djecu). Sudionici su dodatno navodili koliko članova živi u njihovom kućanstvu te boluju li od neke kronične bolesti (kardiovaskularne, endokrinološke, bubrežne, probavne, lokomotorne, plućne ili druge).

Postupak

Sudionike su metodom snježne grude regrutirali stručnjaci Poliklinike za zaštitu djece i mladih Grada Zagreba (U nastavku: Poliklinika) slanjem poziva za sudjelovanje u istraživanju s pristupnim linkom na e-poštu liste studenata, objavljivanjem poziva na službenoj *web* stranici Poliklinike, kao i na službenoj *Facebook* stranici Poliklinike. Također, poziv za sudjelovanje u istraživanju i pripadajući link proslijeđeni su i brojnim stručnim suradnicima osnovnih i srednjih škola u Republici Hrvatskoj s molbom da poziv proslijede na e-adresu roditelja učenika. Podatci su prikupljani pomoću *online* upitnika na platformi *Google Forms*, na koji su postavljene ranije navedene ljestvice, u razdoblju od jednog mjeseca, tj. od 19. ožujka do 17. travnja 2020. godine. Istraživanje je bilo u potpunosti anonimno te dobrovoljno. Premda se radi o prigodnom uzorku, sudionike iz ra-

often"). After that they were asked to assess their fear of a possible coronavirus infection from 1 ("Not scared at all") to 5 ("Very much scared"). The final five-point scale question required them to assess the truthfulness of the statement: "Coronavirus is a fictitious or, at least, exaggerated story served up by the "big pharma" and governments." On the five-point scale, 1 indicated "Not true at all" and 5 was "Very true." Finally, the respondents were asked if they were in self-isolation. If they were, the online questionnaire directed them to the questions about the total number of days spent in self-isolation (including the day they were filling in the questionnaire).

Questions related to socio-demographic characteristics included variables of age, sex, marital status (single, being in a relationship, married, divorced, other), the number of children, and the age of the youngest child (if they had children). Participants also provided information about the number of members in their household and if they suffered from some chronic diseases (cardiovascular, endocrinological, renal, locomotor, gastrointestinal, pulmonary, or other).

Procedure

The researchers at the Child and Youth Protection Centre of the City of Zagreb used the snowball sampling method by sending invitations for participating in the study with an access link and also by uploading the invitations on the Centre's web and Facebook pages. The invitations and access links were also forwarded to many professionals working in primary and high schools in Croatia with a request to forward it to e-mail addresses of their students' parents. Data were collected by an online questionnaire on the Google Forms platform, where the above-mentioned scales were available during one month, more precisely from 19 March to 17 April 2020. The study was anon-

znih dijelova Hrvatske nastojalo se obuhvati-ti upravo navedenim slanjem poziva školama diljem Hrvatske s molbom za prosljeđivanje upitnika roditeljima. Ispunjavanje upitnika trajalo je približno 20 minuta, a sudionici su ljestvice ispunjavali redoslijedom navedenim u opisu metode.

REZULTATI

Prosječne vrijednosti dobivene u istraživanju ukazuju da sudionici rizik u Hrvatskoj doživljavaju umjereno visokim (M=3,98; SD=0,91), pandemiju percipiraju ozbiljnom (M=4,36; SD=0,80), procjenjuju da se pouzdano pridržavaju svih propisanih mjera (M=4,58; SD=0,656), novosti prate često (M=3,43; SD=1,3) te izražavaju da doživljavaju umjeren strah od koronavirusa (M=2,82; SD=1,1).

Opće karakteristike sudionika i aspekti pandemije

Kako bi se ispitale spolne razlike u aspektima pandemije proveden je niz Welchevih t-testova. Utvrđeno je da postoji značajna razlika u procjeni rizičnosti pandemije u Hrvatskoj prema spolu [t(332,3) = -5,15; p < ,001 (d = -0,39)], u percepciji ozbiljnosti pandemije [t(318,14) = -4,21; p < ,001 (d = -0,34)], u procjeni pridržavanja mjera [t(321,83) = -3,7; p < ,001 (d = -0,3)] te u strahu od koronavirusa [t(362,66) = -5,47; p < ,001 (d = -0,38)]. U svim su slučajevima žene postizale više rezultate od muškaraca. Razlike s obzirom na spol nisu pronađene u praćenju novosti [t(351,28) = -0,67; p = ,5].

Razlike s obzirom na bračni status ispitane su analizom varijance. S obzirom na bračni status utvrđene su statistički značajne razlike u percepciji ozbiljnosti pandemije [F(3, 1464) = 8,85; p < ,001 (η2 = ,02)], procjeni pridržavanja mjera [F(3, 1464) = 5,32; p = ,001 (η2 = ,01)], kod

ymous and voluntary. Although it was a convenience sample, we aimed to include participants from various parts of Croatia by sending invitations to schools all over Croatia, asking them to forward the questionnaire to their students' parents. Filling in the questionnaire took about 20 minutes, and the participants filled in the scales in the order described in the description of the methods.

RESULTS

The average values obtained in the study indicate that the participants in Croatia experienced the risk as moderately high (M=3.98; SD=0.91), perceived the pandemic as serious (M=4.36; SD= 0.80), intended compliance with all prescribed measures (M=4.58; SD=0.66), often followed the news (M=3.43; SD=1.30), and experienced a moderate fear of the coronavirus (M=2.82; SD=1.10).

General characteristics of the respondents and the pandemic aspects

A series of Welch's t-tests were conducted to examine sex differences in pandemic perception. We found significant sex differences in the perception of pandemic risks in Croatia t(332.3) = -5.15; p<.001 (d=-0.39), in perception of pandemic severity t(318.14) = -4.21; p<.001 (d=-0.34), in perceived compliance with the measures t(321.83) = -3.7; p<.001 (d=-0.3), and in fear of the coronavirus t(362.66) = -5.47; p<.001 (d=-0.38). Women scored higher than men in all tests except in following the news t(351.28) = -0.67; p=.5.

Differences regarding marital status were examined by variance analysis. Statistically significant differences were found in perception of pandemic severity F(3. 1464) = 8.85; p<.001 (η2 = .02), in perceived compliance with the

straha od koronavirusa [F(3, 1464) = 23,56; p < ,001 (η2 = ,05)] i praćenja novosti [F(3, 1464) = 19,73; p < ,001 (η2 = ,04)]. Schefféovi *post-hoc* testovi pokazuju statistički značajnu razliku za sve navedene aspekte pandemije između sudionika koji su u braku i slobodnih sudionika (p < ,001), pri čemu su sudionici koji su u braku postizali više rezultate od sudionika koji su slobodni te između sudionika koji su u braku i sudionika koji su u vezi (p < ,001) pri čemu su sudionici koji su u braku postizali više rezultate od sudionika koji su u vezi. Prikaz ovih razlika nalazi se na sl. 1.

Broj djece i članova kućanstva

Kako bi se ispitala povezanost procjene rizičnosti pandemije i broja djece te broja članova u kućanstvu izračunati su Pearsonovi koeficijenti korelacije. Zbog postojanja *outlier*-a u varijabli broja djece, isključeni su svi rezultati koji su više od tri standardne devijacije udaljeni od aritmetičke sredine. S obzirom da je povezanost između varijabli broja djece i broja člano-

prescribed measures F(3. 1464) = 5.32; p=.001 (η2 = .01), in fear of the coronavirus F(3. 1464) = 23.56; p<.001 (η2 = .05) and in following the news F(3. 1464) = 19.73; p<.001 (η2 = .04). Scheffé post-hoc tests showed statistically significant differences between married participants and those in a relationship in all the above aspects of the pandemic (p<.001), with married participants having higher scores than those in a relationship. These differences are presented in Figure 1.

Number of children and household members

Pearson's correlation coefficients were used to examine the relation between the perceived pandemic risk and the number of children and household members. Due to the existence of outliers in the number of children variable, all the results of more than three standard deviations from the arithmetic mean were excluded. Correlation between the variables of the number of children variable and the number
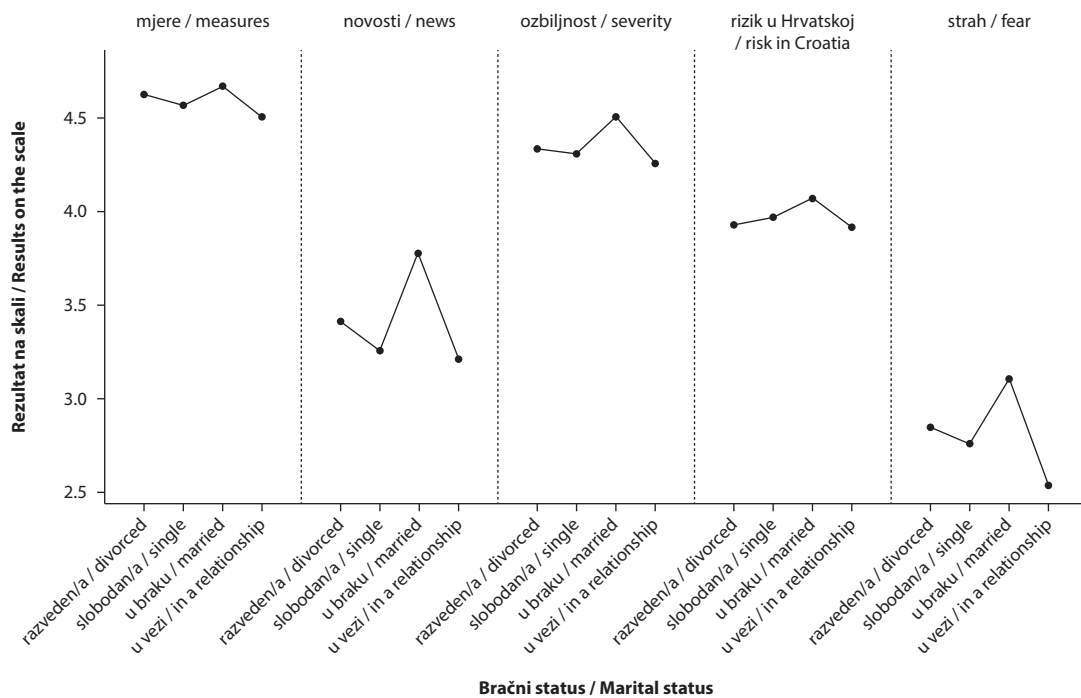
SLIKA 1. Aspekti pandemije s obzirom na bračni status
PICTURE 1. Aspects of the pandemic regarding marital status.

va kućanstva umjereno visoka, ali ne i potpuna (tablica 3), izračunate su zasebne povezanosti s aspektima pandemije.

Iz tablice 3 razvidno je kako je broj djece negativno povezan s procjenom rizičnosti u Hrvatskoj no nisu pronađene značajne povezanosti broja djece s percepcijom ozbiljnosti pandemije, procjenom pridržavanja mjera, praćenjem novosti ni strahom od koronavirusa. Također, nisu utvrđene značajne povezanosti broja članova kućanstva s procjenom rizičnosti, percepcijom ozbiljnosti pandemije, procjenom pridržavanja mjera, praćenjem novosti ni strahom od koronavirusa. S obzirom da je povezanost između varijabli broja djece i broja članova kućanstva umjereno visoka, ali ne i potpuna, u daljnjim su analizama korištene obje varijable.

Dob

S ciljem ispitivanja povezanosti procjene rizičnosti pandemije i dobi izračunati su Pearsonovi koeficijenti korelacije, a zbog postojanja *outlier*-a u varijabli dobi isključeni su svi rezultati koji su više od tri standardne devijacije udaljeni od aritmetičke sredine. Pokazalo se kako je dob negativno povezana s procjenom rizičnosti u pozitivnoj vezi s percepcijom ozbiljnosti pandemije, procjenom pridržavanja mjera, praćenjem novosti te strahom od koronavirusa (tablica 3).

of household members was moderately high but not complete (Table 3), and separate correlations with pandemic aspects were calculated. We found that the number of children negatively correlated with the perceived risk in Croatia. However, no statistically significant correlations were found between the number of children and the perceived severity of the epidemic, perceived compliance with the prescribed measures, following the news, or the fear of the coronavirus (Table 3). No significant correlations were found between the number of household members and the perceived risk, the perceived severity of the pandemic, the perceived compliance with the prescribed measures, following the news, the fear of the coronavirus (Table 3).

Age

Pearson's correlation coefficients were used to examine the relation between the pandemic risk and age. Due to the existence of the outliers in the number of children variable, all the results more than three standard deviations from the arithmetic mean were excluded. Age was found to have a negative correlation with perceived risk and a positive correlation with perceptions of pandemic severity, perceived compliance with the prescribed measures, following the news, and fear of the coronavirus (Table 3).

TABLICA 3. Povezanosti aspekta pandemije s nekim demografskim karakteristikama sudionika
TABLE 3. Correlations of pandemic aspects with some demographic characteristics of the participants

	Procjena rizičnosti u Hrvatskoj / Risk assessment in Croatia	Percepcija ozbiljnosti pandemije / Perception of severity	Procjena pridržavanja mjera / Assessment of compliance	Praćenje novosti / News tracking	Strah od koronavirusa / Fear of COVID-19	Broj djece / Number of children
Broj djece / Number of children	-,09*	-,03	-,03	-,03	-,02	
Broj članova kućanstva / Number of household members	-,07	-,05	,03	-,04	< ,001	,57**
Dob / Age	-,1**	,17**	,1**	,23**	,17**	

*Legenda / Legend: * - p < ,05, ** - p < ,01.*

Kronična bolest

Utvrđene su statistički značajne razlike s obzirom na prisutnost kronične bolesti kod procjene rizičnosti [$t(291,18) = 4,18$; $p < ,001$ ($d = ,29$)], ozbiljnosti pandemije [$t(276,34) = 3,49$; $p < ,001$ ($d = ,26$)], procjene pridržavanja mjera [$t(305,82) = 3,04$; $p = ,003$ ($d = ,2$)], praćenju novosti [$t(275,46) = 3,52$; $p < ,001$ ($d = ,26$)] i strahu od koronavirusa [$t(268,71) = 7,08$; $p < ,001$ ($d = ,55$)].
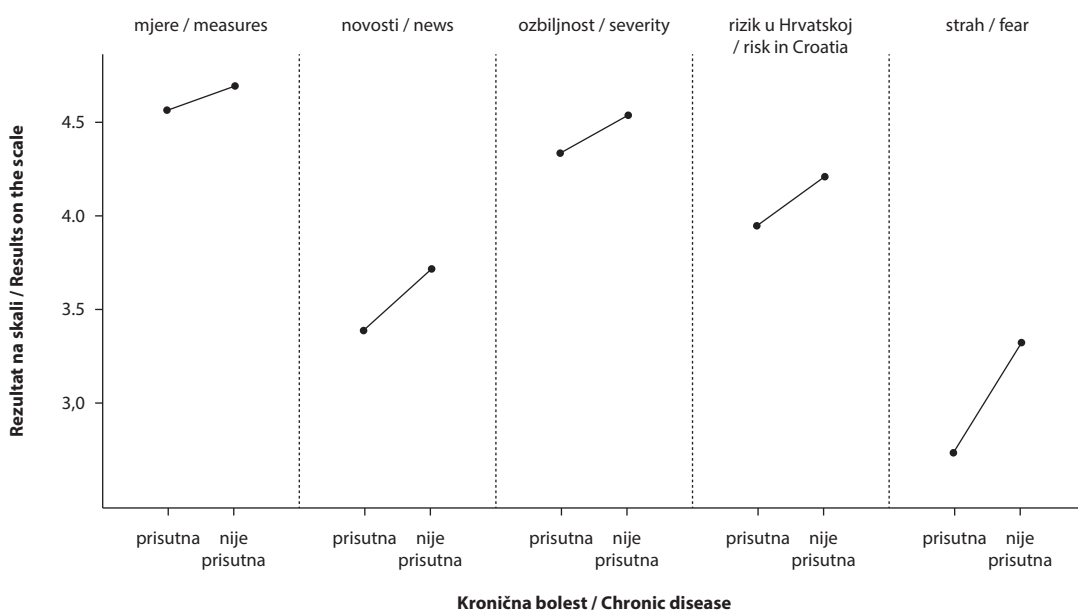
Samoizolacija

Utvrđene su statistički značajne razlike s obzirom na mjere samoizolacije kod praćenja novosti [$t(479,65) = 3,8$; $p < ,001$ ($d = -,25$)] pri čemu osobe koje nisu u samoizolaciji prate više novosti od osoba koje jesu u samoizolaciji. Nisu utvrđene statistički značajne razlike u drugim aspektima pandemije: procjena rizičnosti [$t(479,57) = -0,18$; $p = ,85$], percepcije ozbiljnosti pandemije [$t(489,79) = -0,17$; $p = ,87$], procjene pridržavanja mjera [$t(531,31) = 1,37$; $p = ,17$] i strahu od koronavirusa [$t(456,02) = -1,02$; $p = ,31$].

Chronic disease

We found statistically significant differences regarding the presence of chronic disease in perceived risk $t(291.18) = 4.18$; $p<.001$ ($d=.29$), pandemic severity $t(276.34) = 3.49$; $p<.001$ ($d=.26$), perceived compliance with the prescribed measures $t(305.82) = 3.04$; $p=.003$ ($d=.2$), following the news $t(275.46) = 3.52$; $p<.001$ ($d=.26$), and fear of the coronavirus $t(268.71) = 7.08$; $p<.001$ ($d=.55$).

Self-isolation

Statistically significant differences were found in following the news with regard to self-isolation $t(479.65) = 3.8$; $p<.001$ ($d=-.25$). Individuals who were not in self-isolation followed the news more than those in self-isolation. There were no statistically significant differences in other aspects, i.e. perceived risk of the pandemic $t(479.57) = -0.18$; $p=.85$, perceived severity of the pandemic $t(489.79) = -0.17$; $p = .87$, following the news $t(531.31) = 1.37$; $p=.17$, and the fear of the coronavirus $t(456.02) = -1.02$; $p=.31$.

SLIKA 2. Aspekti pandemije s obzirom na anamnezu kronične bolesti
FIGURE 2. Aspects of the pandemic regarding chronic disease history.
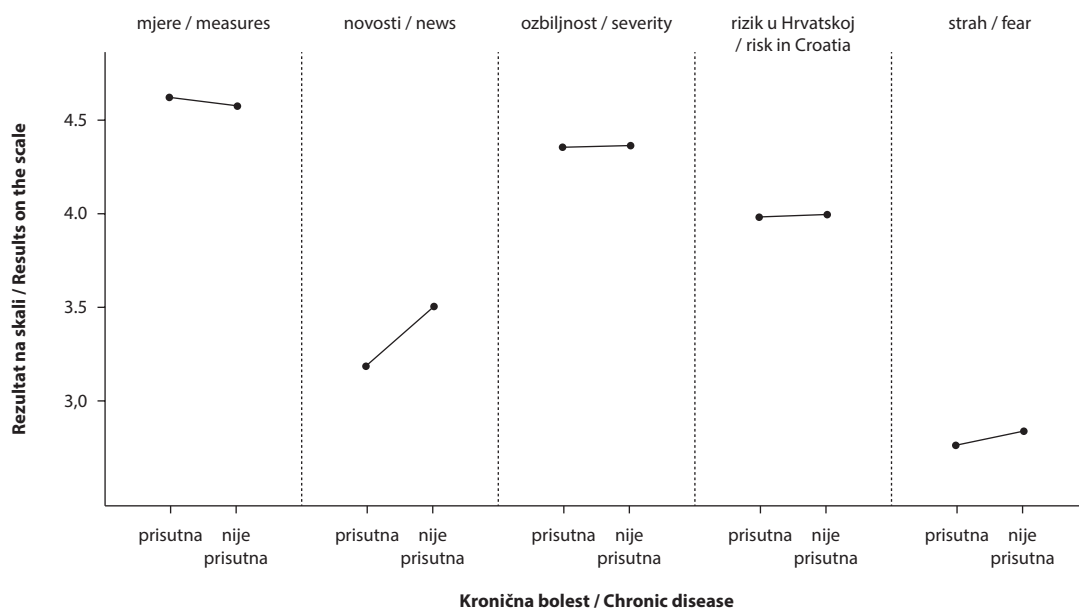
SLIKA 3. Aspekti pandemije s obzirom na propisanu mjeru samoizolacije
FIGURE 3. Aspects of the pandemic regarding prescribed self-isolation.

RASPRAVA

Glavni cilj ovog rada bio je ispitati povezanosti nekih karakteristika građana s aspektima pandemije, koje se mogu promatrati kao zaštitni i rizični čimbenici za mentalno zdravlje, u aktualnoj zdravstvenoj krizi na uzorku punoljetnih građana Republike Hrvatske.

Rezultati pokazuju da žene doživljavaju situaciju više rizičnom, opasnom te da izvještavaju o više subjektivnog straha od muškaraca što je usklađeno s rezultatima zasad dostupnih istraživanja u Hrvatskoj (10). Na razini ličnosti žene svih dobnih skupina doživljavaju dominantno neugodne emocije pri suočavanju sa stresnim situacijama u odnosu na muškarce, odnosno postižu značajno više rezultate na neuroticizmu (17,18), što objašnjava ove nalaze, a i po dosadašnjim istraživanjima ženski rod pokazuje se rizičnijim za mentalno zdravlje zbog pandemije (14,15). Također, na razini ličnosti žene pokazuju višu razinu savjesnosti (19,20), što objašnjava njihovo izraženije pridržavanje mjera u okviru zdravstvene pismenosti u odnosu na muškarce. Muškarci pokazuju veću sklonost preuzimanju rizika u okviru antisocijalnih crta

DISCUSSION

The main aim of this paper was to examine correlations between some citizen characteristics and aspects of the pandemic, as observed on a sample of adults in the Republic of Croatia, as protective or risk factors for mental health in the current health crisis.

Results show that women experienced the situation as riskier and more dangerous and that they reported more subjective fear than men, which is in line with the results of currently available research in Croatia (10). At the level of personality, women of all age groups compared with men experienced dominantly more unpleasant emotions in coping with stress situations, i.e. they showed significantly higher scores on neuroticism scales (17, 18), which explains these findings. The existing research also shows that female sex is riskier for mental health in the pandemic (14, 15). At the level of personality, women showed a higher level of conscientiousness (19, 20), which explains higher scores in the perceived compliance with the prescribed measures by women than by men, within the framework of health literacy. Men showed higher scores in

od žena i u drugim situacijama te procjenjuju manje izvjesnim tragičan ishod, primjerice u rizičnoj vožnji i doživljaju rizika od prometne nesreće koja bi se mogla dogoditi (21). Mlađi sudionici, iako doživljavaju situaciju više rizičnom (moguće zbog veće izloženosti medijima i suvremenim tehnologijama) (22), osjećaju manji strah i slabije pokazuju elemente zdravstvene pismenosti kroz pridržavanje mjera. U funkciji dobi sudionika bilježi se, dakle, porast straha, ali jednako tako i pridržavanja mjera, što je u skladu s činjenicom da su stariji građani i objektivno u većoj opasnosti, a prema karakteristikama ličnosti više savjesni i manje skloni rizičnom ponašanju (23). Nadalje, pokazuje se da su doživljaj ozbiljnosti situacije, subjektivni osjećaj straha, pridržavanje mjera i razina informiranja najviši za osobe u braku, potom osobe u vezi, a najmanje su izraženi kod samaca. Ovi rezultati mogu ukazivati na pojačanu potrebu za zaštitom zajednice u odnosu na zaštitu samih sebe. Zaštitnički stav potencijalno dovodi do izraženijeg percipiranja opasnosti i s tim povezanih ponašanja uklanjanja rizika na što se u ovom kontekstu može promatrati kao na mehanizme preživljavanja u evolucijskoj perspektivi i teoriji srodstva (24).

U skladu s tim, ali i očekivanim efektima direktne socijalne podrške, očekivali bismo neke povezanosti aspekata pandemije s brojem članova kućanstva i brojem djece, no one su vrlo niske ili neznačajne. Broj djece čak je negativno povezan s procjenom rizičnosti situacije, što može ukazivati na veću preokupaciju roditelja svakodnevnim životnim obvezama u obitelji, koje otklanjaju prostor i kapacitet brigama oko pandemije. Ovi rezultati mogu djelomično biti i rezultat mjera zbog kojih određen broj obitelji doživljava ekonomsku nestabilnost, gubitke poslova i redovitih novčanih prihoda. Naime, Unicef (25) upozorava kako 8 od 10 mladih ljudi izražava zabrinutost oko obiteljskih prihoda zbog COVID-19 pandemije. S obzirom na to, nekolicina ljudi može osjećati dodatan pritisak

risk taking than women, consistent with antisocial traits in other situations as well. They also perceived less certainty of tragic outcomes, e.g. in risky driving and perceived risk of a traffic accident happening (21). Younger participants, although they do experience situations as riskier (possibly due to higher exposure to the media and modern technologies) (22), felt less fear and showed lower levels of health literacy elements expressed in the perceived compliance with the prescribed measures. The age function shows an increase in fear but also of the perceived compliance with the prescribed measures, which is consistent with the fact that older citizens have objectively been at higher risk and at the same time their personality characteristics showed that they were more conscientious and less prone to risky behaviors (23).

Furthermore, it was found that the perceived severity of the situation, the subjective feeling of fear, the perceived compliance with the prescribed measures, and the levels of acquired information were highest for married individuals, followed by those in a relationship, and they were lowest in single individuals. These results may indicate that there is an individuals feel more driven to protect the group than themselves. A protective attitude potentially leads to an increased perception of danger and related risk elimination behaviors, which in this context may be considered as mechanisms of survival from an evolutionary family theory perspective (24).

Consistent with the above and also with the expected effects of direct social support, we expected some positive correlations between aspects of the pandemic and the number of household members and children, but they were very low or insignificant. The number of children was even negatively correlated with perceived pandemic risk, which may indicate that parents were more preoccupied with everyday obligations in the family, which reduced the space and capacities for worries about the pandemic. These findings may partially be the

zbog većeg broja članova kućanstva i / ili djece koji objektivno uzrokuju i dodatne financijske izdatke, a što sve zajedno poništava blagotvorne efekte socijalne podrške u okviru obiteljske zajednice s više članova kućanstva.

Neki autori poput Fuller-Iglesiasa, Webstera i Antonuccija (26) napominju kako je razvojna priroda odnosa obiteljske podrške na dobrobit pojedinca promjenjiva s obzirom na dob. S tim u vezi, neki pojedinci će doživljavati više podrške s većim brojem djece, dok kod drugih to neće biti slučaj. Zhang, Wu, Zhao i Zhang (11) nalaze socijalnu podršku kao jedan od zaštitnih čimbenika pri suočavanju s pandemijom CO-VID-19, a sukladno tome ovim je istraživanjem potvrđena njezina povezanost s procjenom ozbiljnosti pandemije i pridržavanjem mjera na hrvatskom uzorku. Još jednom se pokazuje da je važnija percipirana socijalna podrška od realitetnog broja ljudi u bliskom kontaktu za predviđanje raznih ishoda i ponašanja.

Praćenje vijesti i novosti vezanih uz situaciju s pandemijom pokazalo se statistički značajno češće kod osoba koje nisu u samoizolaciji nego kod onih koji imaju veću vjerojatnost da su već zaraženi koronavirusom zbog čega se i nalaze u samoizolaciji. Analizom empirijskih podataka Sairanen i Savolainen (27) izdvojena su dva vodeća razloga izbjegavanja zdravstveno orijentiranih informacija, a to su (a) želja za izbjegavanjem neugodnih emocija i (b) želja za izbjegavanjem informacija koje ne odgovaraju potrebama pojedinaca. Slični podatci dobiveni su i ranijim istraživanjima kod kojih se nakon postavljanja dijagnoze tumora kod sudionika nailazilo na smanjeno traženje informacija o tumoru kako bi se izbjegle dodatne neugodne emocije (28). Ipak, čini se da osobe u povećanom riziku od komplikacija zbog kroničnih bolesti i osobe u akutnom riziku zbog kontakta s oboljelima pokazuju drugačije mehanizme suočavanja. Slično kao što su tijekom epidemije SARS-a 2003. godine teže oblike bolesti i veće stope smrtnosti imale osobe s kroničnim

result of pandemic measures causing economic instability in some families, i.e. loss of employment and regular income. UNICEF (25) warns that 8 out of 10 young people expressed concern regarding family income due to the COVID-19 pandemic. Therefore, some people might be feeling additional pressure with more household members and/or children who objectively increased financial costs, which hampered the beneficial effects of social support in families with several household members.

Some authors, like Fuller-Iglesias, Webster, and Antonucci (26) said that the developmental nature of the relationship of family support varied according to age. Some individuals will experience more support with a larger number of children, while some other individuals will not. Zhang, Wu, Zhao, and Zhang (11) found social support to be one of the protective factors in coping with the COVID-19 pandemic. In line with that, this study has confirmed the correlation between social support and perceived pandemic severity and perceived compliance with the prescribed measures in the Croatian sample. It has again been shown that perceived social support was more important in projecting outcomes and behaviors than the actual number of people in close contact.

Following the news about the pandemic was statistically higher in individuals who were not in self-isolation compared with those at higher risk of already being infected by the coronavirus, which was the reason why they were in self-isolation. The analysis of the empirical data by Sairanen and Savolainen (27) found two main reasons for the avoidance of health-related information, which were: (a) a desire to avoid unpleasant emotions and (b) a desire to avoid information which does not satisfy the needs of the individual. Similar findings were obtained with previous studies where, after a diagnosis of tumor had been established, the participants decreased their requirement for information about the tumor in order to avoid unpleasant emotions

bolestima (29), tako i tijekom pandemije CO-VID-19 rizik za smrtnost je veći kod osoba s pridruženim zdravstvenim stanjima (30). Rezultati ovog istraživanja pokazali su kako je postojanje pridruženih zdravstvenih stanja povezano s više straha, višom razinom doživljaja rizičnosti i ozbiljnosti situacije, više praćenja novosti, ali i izraženijim pridržavanjem mjera, što je konzistentno nalazima istraživanja psihičkih posljedica teškog akutnog respiratornog sindroma (SARS) u Hong Kongu tijekom 2003. godine.

Potencijalna ograničenja ovog istraživanja uglavnom su metodološke prirode s obzirom da je uzorak ovog istraživanja prigodan, a sudionici prikupljani metodom snježne grude. Također, nedostatak provedenog istraživanja je i nesrazmjer u broju sudionika s obzirom na spol/rod, na što bi se u budućim studijama trebala usmjeriti dodatna pozornost. Provođenje istraživanja preko interneta ograničava mogućnost ponavljanja istraživanja na istim sudionicima u drugoj vremenskoj točki. Sukladno tome preporučuje se konstruirati longitudinalne nacrte istraživanja, koji bi mogli osigurati ispitivanje istih sudionika za vrijeme trajanja pandemije i nakon završetka pandemije. Uz to, *online* istraživanje onemogućava sudionicima koji nemaju elektroničke uređaje ili pristup internetu da sudjeluju u istraživanju, čime se dodatno gubi na reprezentativnosti samog uzorka. U nedostatku validiranih ljestvica mjerenje pojedinih varijabli (poput straha od koronavirusa), korištena su pitanja u obliku jedne čestice s ljestvicom slaganja od jedan do pet, što narušava statističko-metodološku snagu.

Glavni doprinos ovog istraživanja jest brzi i akutni probir relevantnih varijabli zbog interesa za mentalno zdravlje građana u pandemiji. Osim na same indikatore mentalnog zdravlja, koji se uobičajeno ispituju u studijama ovakvog tipa, poseban naglasak stavljen je na rizične i zaštitne čimbenike, kako za mentalno zdravlje, tako i za ukupno zdravstveno odgovorno pona-

(28). Still, it seems that individuals at a higher risk of complications due to chronic disease and those at an acute risk due to a contact with the infected individual presented with different coping mechanisms. Similar to the epidemic of SARS in 2003, when individuals with chronic diseases (29) presented more severe forms of the disease and higher mortality rates, the mortality risk during the COVID-19 pandemic has been higher for individuals with comorbidities (30). The results of this study show that the presence of comorbidities correlated with more fear, higher levels of perceived risk and severity of the situation, more closely following the news, and more expressed compliance with the prescribed measures, which is consistent with the findings in studies of the psychological consequences of a severe acute respiratory syndrome (SARS) in Hong Kong during 2003.

The potential limitations of this study are mostly of a methodological nature, given that it has been conducted on a convenient sample collected by the snowball sampling method. Additionally, one limitation of this study is the disproportion in the number of respondents regarding their sex/gender, which would require additional attention in future studies. Furthermore, conducting research via the Internet limits the possibility of repeating it on the same respondents at another time point. Consequently, constructing longitudinal drafts of research which would be able to ensure testing the same respondents during the pandemic and after the end of it is recommended. Online research is also not accessible to the respondents who do not possess electronic devices or internet access, which adds to the sample not being representative. Questions in the form of one item with a scale one to five were used in absence of validated scales to measure some variables (e.g. fear of the coronavirus), which limits the statistical-methodological effectiveness.

The main contribution of this study lies in the fast and focused screening of the rele-

šanje, što omogućava širu praktičnu primjenu u aktualnom vremenu.

ZAKLJUČAK

Zbog aktualne pandemije nalaze se određene karakteristike građana povezane s aspektima pandemije, odnosno rizičnim i zaštitnim čimbenicima za mentalno zdravlje, što je posebno važno s obzirom da će se nakon krize realne psihološke posljedice pratiti i bilježiti mjesecima, a potencijalno i godinama.

Opisani i raspravljeni rezultati zaključno govore o skupinama na koje je potrebno usmjeriti dodatnu pozornost pri prevenciji i ranoj intervenciji u domeni mentalnog zdravlja, ali i zdravstveno odgovornog ponašanja, osobito zbog očekivanja drugog vala pandemije. U jačanju kapaciteta i otpornosti posebno bi se trebalo usmjeriti na žene, starije osobe, samce i osobe s kroničnim bolestima. U promicanju zdravstvene pismenosti i odgovornog ponašanja trebalo bi se dodatno usmjeriti na muškarce, mlade i samce. Aktivnosti bi trebale uključivati vraćanje osobne odgovornosti osnaživanjem i pružanjem dostupne podrške, ali i preporukama medijima u odgovornom izvještavanju vezano uz aspekte pandemije.

vant variables due to the interest in citizens' mental health in the pandemic. In addition to examining mental indicators health, which is usual in studies of this type, a special emphasis was placed on the risk and protective factors regarding both mental health and overall health-responsible behavior, which now enables wider practical application.

CONCLUSION

In brief, these findings indicate which groups require additional attention in the prevention and early interventions in the field of mental health and health literacy, especially due to the expected second wave of the pandemic. In strengthening capacities and resilience, special attention should be given to women, the elderly, single individuals, and those with chronic diseases. Promotions of health literacy and responsibility should additionally focus on men, the young, and single individuals. Activities should include recovering a feeling of personal responsibility by internalizing the locus of control and training in problem-focused coping, as well as promoting social support not only in the form of objective contacts but in the perception of connectedness.

LITERATURA / *REFERENCES*

1. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N *et al*. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. Lancet 2020; 395(10227): 912-20. Available from: doi:10.1016/S0140-6736(20)30460-8

2. Centers for Disease Control and Prevention. Quarantine and isolation. [Internet] 2017. [Cited 2020 Mar 21]. Available from: https://www.cdc.gov/quarantine/index.html

3. Bao, Y, Sun, Y, Meng, S, Shi, J, Lu, L. 2019-nCoV epidemic: address mental health care to empower society. Lancet 2020; 395(10224): e37-e38. Available from: doi:10.1016/S0140-6736(20)30309-3

4. Yao H, Chen JH, Xu YF. Patients with mental health disorders in the COVID-19 epidemic. Lancet Psychiatry 2020; 7(4): e21. Available from: doi:10.1016/S2215-0366(20)30090-0

5. Jack A. Why the panic? South Korea's MERS response questioned. BMJ 2015; 350: h3403. Available from: doi:10.1136/bmj.h3403

6. Abdel-Moneim AS. Middle East respiratory syndrome coronavirus (MERS-CoV): evidence and speculations. Arch Virol 2014; 159(7): 1575-84. Available from: doi:10.1007/s00705-014-1995-5

7. Gao J, Zheng P, Jia Y, Chen H, Mao Y, Chen S. Mental health problems and social media exposure during COVID-19 outbreak. Plos one 2020; 15(4): e0231924. Available from: doi:10.1371/journal.pone.0231924

8. Wang C, Pan R, Wan X, Tan Y, Xu L, MxIntyre RS *et al*. A longitudinal study on the mental health of general population during the COVID-19 epidemic in China. Brain Behav Immun 2020; 87: 40-48. Available from: doi:10.1016/j.bbi.2020.04.028

9. Psychological impact of COVID-19. American psychological association. [Internet]. 2020. [Cited 2020 May 1st]. Available from: https://www.apa.org/topics/covid-19/psychological-impact

10. Lauri Korajlija A, Jokic-Begic N. COVID-19: Concerns and behaviours in Croatia [preprint]. Br J Health Psychol 2020. Available from: doi:10.1111/bjhp.12425

11. Zhang J, Wu W, Zhao X, Zhang W. Recommended psychological crisis intervention response to the 2019 novel coronavirus pneumonia outbreak in China: a model of West China Hospital. Precis Clin Med 2020; 3(1): 3-8. Available from: doi:10.1093/pcmedi/pbaa006

12. Nguyen HC, Nguyen MH, Do BN, Tran CQ, Nguyen TTP, Pham KM *et al*. People with suspected COVID-19 symptoms were more likely depressed and had lower health-related quality of life: The potential benefit of health literacy. J Clin Med 2020; 31(9): 965. Available from: doi:10.3390/jcm9040965

13. The health illiteracy problem in the USA. Lancet. [Internet]. 2009 [Cited 2020 May 4th]. Available from: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)62137-1/fulltext

14. Rohde C, Jefsen OH, Noerremark B, Danielsen AA, Ostergaard SD. Psychiatric Symptoms Related to the COVID-19 Pandemic [preprint]. medRxiv 2020. Available from: doi:10.1101/2020.04.16.20067744

15. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. Gen Psychiatr 2020; 33(2). Available from: doi:10.1136/gpsych-2020-100213

16. Tools for coping with COVID-19. Montana State University. [Internet] 2020. [Cited 2020 May 5th]. Available from: https://www.montana.edu/counseling/covid/index.html

17. Chapman BP, Duberstein PR, Sörensen S, Lyness JM. Gender differences in Five Factor Model personality traits in an elderly cohort. Pers Individ Dif 2007; 43(6): 1594-1603. Available from: doi:10.1016/j.paid.2007.04.028

18. Djudiyah MS, Harding D, Sumantri S. Gender Differences in Neuroticism on College Students. Dalam Asean Conference. 2nd Psychology & Humanity. Psychology Forum UMM, February 19-20, 2016.

19. Weisberg YJ., Deyoung CG, Hirsh JB. Gender differences in personality across the ten aspects of the Big Five. Front Psychol 2011; 2: 178. Available from: doi:10.3389/fpsyg.2011.00178

20. South SC., Jarnecke AM, Vize CE. Sex differences in the Big Five model personality traits: A behavior genetics exploration. J Res Pers 2018; 74: 158-65. Available from: doi:10.1016/j.jrp.2018.03.002

21. Cordellieri P, Baralla F, FerlazzoF, Sgalla R, Piccardi L, Giannini AM. Gender effects in young road users on road safety attitudes, behaviors and risk perception. Front Psychol 2016; 7. Available from: doi:10.3389/fpsyg.2016.01412.

22. Cheng C, Jun H, Liang B. Psychological health diathesis assessment system: a nationwide survey of resilient trait scale for Chinese adults. Stud Psychol Behav 2014; 12(6): 735-42.

23. Körner A, Geyer M, Gunzelmann T, Brähler E. The influence of socio-demographic factors on personality dimensions in the elderly. Z Gerontol Geriatr 2003; 36(2): 130-7. Available from: doi:10.1007/s00391-003-0085-1

24. Salmon C, Shackelford TK. (ed.). The Oxford handbook of evolutionary family psychology. Oxford: Oxford University Press, 2011. Available from: doi: 10.1093/oxfordhb/9780195396690.001.0001

25. 8 in 10 youth worried about their family income due to COVID-19: First survey of its kind in Thailand finds. Unicef. [Internet] 2020. [Cited 2020 April 30th]. Available from: https://www.unicef.org/thailand/press-releases/8-10-youth-worried-about-their-family-income-due-covid-19

26. Fuller-Iglesias HR, Webster Noah J, Antonucci TC. The complex nature of family support across the life span: Implications for psychological well-being. Dev Psychol 2015; 51(3): 277-88. Available from: doi:10.1037/a0038665

27. Sairanen A, Savolainen R. Avoiding health information in the context of uncertainty management. [Internet] 2010. [Cited 2020 May 10th]. Available from: http://informationr.net/ir/15-4/paper443.html

28. Lambert SD, Loiselle CG, MacDonald ME. An in-depth exploration of information-seeking behavior among individuals with cancer: part 2: understanding patterns of information disinterest and avoidance. Cancer Nurs 2009; 32(1): 26-36. Available from: doi:10.1097/01.NCC.0000343373.01646.91

29. Karlberg J, Chong DS, Lai WYY. Do men have a higher case fatality rate of severe acute respiratory syndrome than women do?. Am J Epidemiol 2004; 159(3): 229-31. Available from: doi:10.1093/aje/kwh056

30. Jordan RE, Adab P, Cheng KK. Covid-19: risk factors for severe disease and death. [Internet] 2020. [Cited 2020 April 30th]. Available from: https://www.bmj.com/content/368/bmj.m1198.long