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Psihičko zdravlje geekova

/ Mental Health of Geeks

Una Mikac

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Susresti nekoga koga možemo smatrati *geekom*, odnosno stručnjakom za neki interes vezan za pop kulturu ili izmišljene svjetove kojim se intenzivno bavi, sve je češća pojавa. Uz *geekove* se vežu i negativni stereotipi koji impliciraju da imaju problema s psihičkim zdravljem zbog svojih aktivnosti, pretpostavka koju ovaj rad provjerava na dva načina. Prvo je uspoređeno psihičko zdravlje *geekova* i pripadnika opće populacije, uključujući i psihološku uznemirenost i zadovoljstvo životom. Zatim su ispitani odnosi psihičkog zdravlja i triju motivacija za *geek*-aktivnosti (potreba za pripadanjem, aktivna uključenost i migracija u izmišljeni svijet). Podaci su prikupljeni u Hrvatskoj *online* upitnikom 1219 pojedinaca uključenih u *geek*-aktivnosti. *Geekovi* su imali isto ili bolje psihičko zdravlje u odnosu na uzorke iz opće populacije iz drugih istraživanja. Prihvatanje *geek*-aktivnosti od bliskih osoba te manje izražen grandiozni narcizam i osjećaj povlaštenosti su očekivano bili povezani s manje simptoma psihičkih poremećaja i/ili većim zadovoljstvom životom, dok je viši stupanj uključenosti u kreativne *geek*-aktivnosti neočekivano predviđao više simptoma psihičkih poremećaja. Ovi rezultati impliciraju da je potreba za pripadanjem kao motivacija za *geek*-aktivnosti zaštitni faktor, a migracija u izmišljeni svijet kao motivacija za *geek*-aktivnosti faktor rizika za psihičko zdravlje.

/ Being a geek, i.e., an expert heavily invested in an interest related to pop culture or invented worlds, is becoming more common these days. There are negative stereotypes concerning geeks implying they might have mental health issues due to their geek activities, the assumption this study explores. First, geeks are compared to the general population on mental health – both the psychological distress and life satisfaction. Second, the relationships of mental health to three motivations for geek activities (need for belongingness, desire for engagement and great fantasy migration) are explored. The data were collected via an online questionnaire from 1219 Croatian individuals who participate in geek activities. Geeks had the same amount or less mental health issues compared to general population samples from the previous studies. Acceptance of geek activities by others, lower grandiose narcissism and entitlement predicted lower psychological distress and/or higher life satisfaction in geeks, as expected, while more engagement in creative geek activities unexpectedly predicted higher psychological distress. This implies that the need for belongingness as a motivation for geek activities is a protective factor and that the migration to the fantasy world as a motivation for geek activities is a risk factor for mental health.

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Vjerojatnost da susretnemo osobu koju možemo smatrati *geekom* nije tako mala, pogotovo s obzirom na njihovu učestalost u populaciji i porast njihove popularnosti (1,2). Ako vjerujemo medijima i stereotipima, vjerojatnost je prilično visoka da je taj *geek* osoba koju smo susreli socijalno nesposobna i ima „psihičkih problema“ (3,4,5). Ovaj rad istražuje pretpostavku da *geekovi* imaju ugroženo psihičko zdravlje zbog svojih *geek*-aktivnosti. Ali što je točno *geek* i što ljudi misle da je *geek*?

Različiti autori se uglavnom slažu da je *geek* osoba koja se aktivno i intenzivno bavi interesima vezanim za pop kulturu i izmišljene svjetove i stručnjak je u tom polju (3,4,6,7). Ti interesi uključuju neke opće kategorije kao što su znanstvena fantastika i fantastika, kao i specifične aktivnosti poput igranja računalnih igara i igranja uloga (engl. *role-playing games*). Detaljniji popis ovih interesa nalazi se u radu McCain i sur. (3), a popis prilagođen hrvatskom kontekstu u radu Mikac i sur. (8). Često ne možemo saznati je li netko *geek* tako da ga to izravno pitamo, jer ljudi koje možemo prema prije navedenoj definiciji smatrati *geekovima* često o sebi razmišljaju u terminima interesa koji im je najizraženiji (3,8). Na primjer, ako se netko najviše bavi računalnim igram, reći će za sebe da je igrač računalnih igara (engl. *gamer*), ali ne nužno i da je *geek*. Drugi mogući razlog zašto se pojedinci ne poistovjećuju s izrazom *geek* jest što se uz njega vežu neke negativne osobine zbog mnogobrojnih negativnih stereotipa.

U prošlosti se smatralo da su *geekovi* uglavnom bijelci muškog roda, socijalno nesposobni i nesposobni razlikovati stvarno i izmišljeno, infantilni i nezreli te neuspješni u stvarnom životu (2,3,4,9). Postojali su i neki pozitivni stereotipi, recimo da su inteligentni, tehnološki napredni i zainteresirani za učenje. U zadnje vrijeme, stereotipi postaju sve više pozitivni i biti *geek* je sve više prihvaćeno u društvu (7,10). Jedan

INTRODUCTION

The probability of encountering a geek is not so small, given their frequency in the population and the rise in their popularity (1,2). If we are to trust the media and the stereotypes, the probability that the geek we encountered is socially inept and has “psychological problems” is also quite high (3,4,5). This paper explores the assumption that geeks have mental health issues due to their geek activities. But what exactly is a *geek*, and what do people think a *geek* is?

Different researchers mostly agree that a geek is a person who is heavily and actively invested in an interest related to pop culture and invented worlds and is an expert in that field (3,4,6,7). These interests include general categories, like science fiction and fantasy genres, and specific activities, like computer and role-playing games. An extensive list of these interests can be found in McCain et al. (3), and a list adapted to Croatian context in Mikac et al. (8). It cannot always be determined if someone is a geek by asking them, because people who fit this definition do not necessarily think of themselves as geeks (3,8). Such people often think of themselves mainly in terms of the geek interest that is more dominant than others, e.g. they might consider themselves computer gamers, but not geeks, if computer games are their most prominent interest. Another possible reason for not identifying with the label *geek* is that there are negative connotations related to it due to multiple negative stereotypes.

Until recently, geeks were considered to be mostly white males, socially inept, unable to discern reality from fantasy, infantile and immature, and unsuccessful in real life (2,3,4,9). There were also some positive stereotypes, like geeks being intelligent, technologically advanced, and interested in learning. Recently, the stereotypes have been changing to be gen-

od pokazatelja toga je suvremenim modni trend koji promiče *geek* kulturu, tzv. *geekchic* (10), a drugi su prikazi *geekova* u suvremenim medijima u pozitivnom svjetlu, kao što su serije *The Stranger things* i *The Big Bang Theory* (1). Međutim, čak i u njima su još uvijek prisutni neki negativni stereotipi, kao na primjer socijalna nesposobnost.

Budući da ni za jednu od ovih stereotipnih osobina nije utvrđeno da je zajednička svim *geekovima*, te osobine nisu uključene u definiciju *geek-a* (3,4,6,7). Međutim, upućuju li ovi stereotipi na to kakva je većina *geekova*? Jesu li *geekovi* skloniji neuspjehu i poteškoćama u snalaženju u životu, bilo socijalno, bilo na nekoj općenitoj razini? Ako je to zaista tako, onda možemo očekivati da imaju sniženu kvalitetu života i/ili više simptoma psihičkih poremećaja, odnosno, stereotipi impliciraju da je psihičko zdravlje *geekova* ugroženo samim time što su *geekovi*, odnosno preciznije, samim time što se bave *geek*-aktivnostima s obzirom da je, prema opće prihvaćenoj definiciji bavljenje aktivnostima upravo ono što nekog čini *geekom* (3,4,6,7). No, u podlozi uključivanja u *geek* aktivnosti mogu biti različite motivacije (3), koje mogu biti na različite načine povezane s psihičkim zdravljem zbog čega i samo bavljenje *geek*-aktivnostima može biti različito povezano s psihičkim zdravljem. Iz toga slijedi da je za razumijevanje psihičkog zdravlja *geekova* važno razmotriti i motivacije za uključivanje u *geek* interesu, odnosno u aktivnosti povezane s tim interesima.

McCain i sur. (3) predlažu tri glavne motivacije za uključivanje u *geek* aktivnosti zasnovane na njihovom pregledu antropološke, komunikacijske i psihologische literature. Prva od ovih motivacija je *migracija u izmišljeni svijet*. Ona se zasniva na pretpostavci da se pojedinci koji imaju pretjerano pozitivnu sliku o sebi u odnosu na stvarni svijet i prevelike razlike između svojih očekivanja i stvarnosti ponekad pokušavaju ostvariti u izmišljenim svjetovima, npr. tako da budu junak u igri. Na neki način oni migri-

erally more positive and geeks are more accepted in the society (7,10). One indication of this is the modern fashion movement endorsing the geek culture, so called *geek chic* (10), and another are the instances in the modern media that have multiple positive representations of geeks, like *Stranger Things* and *The Big Bang Theory* series (1). However, even there, some of the negative stereotypes often persist, e.g., social ineptness.

As none of these stereotyped characteristics has been found to be common to all geeks, they were not included in the definition of what a geek is (3,4,6,7). However, might these stereotypes be indicative of what most geeks are like? Are geeks more prone to not finding their way in the world and being unsuccessful, either socially, or on a more general level? If so, they would be expected to have a lower life quality and/or more symptoms of psychological distress. That is, the stereotypes seem to imply that the mental health of geeks is lower simply due to them being geeks, or more precise, due to them engaging in geek activities, since this engagement is what makes one a geek according to the accepted definition (3,4,6,7). However, the motivations for engaging in geek activities may differ, and these motivations can be related differently to mental health, because of which the engagement in geek activities can be differently related to mental health. Therefore, to understand the mental health of geeks, one should take into account the motivation for engaging in geek interests and activities related to them.

McCain et al. (3) propose three main motivations for engaging in geek activities based on their review of anthropological, communications and psychological literature. First of these motivations is the *great fantasy migration*. The idea is that individuals that have inflated self-esteem cannot realize themselves in the real world due to big differences between their expectations and reality, so they try to accom-

raju u izmišljeni svijet gdje mogu biti iznimno uspješni i ostvariti povlašteni status i hvalu koju vjeruju da zaslužuju. Ako je to istina, onda će pojedinci s izraženijim narcizmom (u smislu crte ličnosti, ne poremećaja ličnosti), odnosno oni s izraženjom grandioznom slikom o sebi i izraženijim osjećajem povlaštenosti biti skloniji migraciji u izmišljeni svijet. Ova pretpostavka je već djelomično potvrđena, odnosno pokazalo se da se pojedinci s izraženijim narcizmom više uključuju u *geek* aktivnosti (3,11). Drugi mogući pokazatelji ove motivacije su sklonost maštanju i manja predanost aktivnostima u stvarnom životu, koji također mogu biti povezani s psihičkim zdravljem, no narcizam je od njih najčešće istraživan u kontekstu *geek* aktivnosti, vjerojatno zbog teorijskog značenja za pretpostavljenu motivaciju (3,11).

Druga motivacija koju ovi autori predlažu je osjećaj *pripadanja*. Prema ovoj hipotezi, *geekovi* sudjeluju u *geek* aktivnostima jer to zadovoljava njihovu potrebu za pripadanjem. Pridruživanje skupini sa sličnim (*geek*) interesima utječe na naše samopoštovanje (12), koje ovisi o tome kako su aktivnosti karakteristične za tu skupinu prihvaćene od drugih (13). Dakle, bavljenje *geek* aktivnostima stvara osjećaj da je osoba dio *geek* skupine, a osjećaj da je osoba prihvaćena jer se bavi tim aktivnostima utječe na samopoštovanje, te se time ispunjava potreba za pripadanjem. Ovu hipotezu potvrđuju psihologiska i antropološka istraživanja o tome kako nastaju društvene mreže *geekova* i kako se održavaju odnosi među pripadnicima tih mreža, kao i nalaz o tome da prihvaćenost *geek* aktivnosti od drugih dovodi do pozitivnih emocija (2,3,14).

Treća moguća motivacija u podlozi bavljenja *geek* aktivnostima je želja za *aktivnom uključenosti*. U podlozi te želje je potreba da se bude aktivni sudionik medija, a ne samo pasivni potrošač tog velikog dijela suvremenog načina života. Mnoge *geek* aktivnosti su kreativne [npr., pisanje, izrada kostima i raznih predmeta (3)], što je skladu s hipotezom o aktivnoj uključeno-

plish their grandiose self in the fantasy worlds, e.g., by being a hero in a game. In a way, they migrate to the fantasy world where they can be great and get the status and praise, they feel entitled to. If this is true, the more narcissistic individuals (in terms of personality traits, not the personality disorder), characterized by having a more grandiose sense of self and a sense of entitlement, will be more prone to this migration into the fantasy. Indeed, more narcissistic individuals have been shown to engage in geek activities more (3,11). Other possible indicators of this motivation are fantasy proneness and less engagement in real life goals, which could also be related to mental health. However, narcissism is the most researched indicator in the context of geek activities, probably due to its theoretical relevance to the hypothesised motivation (3,11).

The second motivation these authors propose is the feeling of *belongingness*. According to this hypothesis, geeks participate in geek activities because it fulfils their need to belong. Joining a group with similar (*geek*) interests defines partly one's self-esteem (12), and self-esteem depends on how activities characteristic for this group are accepted by others (13). Therefore, doing geek activities makes one feel part of a geek group and being accepted for doing them defines one's self-esteem, and thus fulfils one's need to belong. This hypothesis is supported by psychological and anthropological studies showing how geek networks are formed and relationships maintained, as well as how acceptance of geek activities by others leads to positive emotions (2,3,14).

The third possible motivation for geek activities is the *desire for engagement*. This desire is characterized by the need to be an active participant in the media, as opposed to being just a passive consumer of this large part of modern life. Many geek activities are creative (e.g., writing, making costumes and accessories (3)), which would be in accordance with the active partici-

sti u sadržaje povezane s medijima. McCain i sur. (3) smatraju da bi ovakav aktivni pristup trebao biti izraženiji kod osoba s većom potrebom za stimulacijom, što su poduprli pokazavši da su osobe otvorenije k iskustvu više uključene u *geek* aktivnosti. Isti autori pretpostavili su druge korelate ove motivacije kao što su traženje uzbudjenja i inteligencija, no njihovo istraživanje nije potvrdilo ta očekivanja (3).

Ove motivacije mogu dovesti do različitih ishoda što se tiče psihičkog zdravlja. Ako su *geek* aktivnosti motivirane potrebom za pripadanjem, što je ta potreba više zadovoljena uključivanjem u *geek* aktivnosti, to će psihičko zdravlje biti bolje jer je više zadovoljena jedna od bazičnih ljudskih potreba (15). Slično se može pretpostaviti i ako je motivacija za *geek* aktivnosti aktivna uključenost, iako potreba za stimulacijom nije jedna od bazičnih potreba (15). Za razliku od toga, ako su *geek* aktivnosti uglavnom motivirane migracijom u izmišljeni svijet, to može dovesti do veće psihološke uznemirenosti. Naime, iako je potreba za postignućem zadovoljena u izmišljenom svijetu, pojedinci se svejedno u jednom trenu moraju vratiti u stvarni svijet gdje je ova potreba osjećena, što može dovesti do javljanja simptoma psihičkih poremećaja (15).

Pri ispitivanju psihičkog zdravlja važno je uzeti u obzir da njega čine dva povezana ali različita aspekta, pozitivno psihičko zdravlje i psihički poremećaji (16). Dugo je dominantan pristup psihičkom zdravlju pretpostavljao da se ono može opisati jednom bipolarnom dimenzijom na čijem se jednom kraju nalazi psihičko zdravlje, a na drugom psihički poremećaji. Istraživanja pokazuju da je psihičko zdravlje bolje opisati s dvije međusobno povezane dimenzije: pozitivno psihičko zdravlje (engl. *mental health* ili *positive mental health*) koje opisuju subjektivna dobrobit, zadovoljstvo životom i srodnii konstruktii, te psihički poremećaji (engl. *mental illness* ili *psychological distress*) koji se odnose na prisutnost odnosno odsutnost psihičkih poremećaja. Pret-

pation in media related activities. McCain et al. (3) propose that this active approach might be more pronounced for those with a greater need for stimulation, which they supported by showing that individuals more open to experience are more engaged in geek activities. The same authors proposed other possible correlates of this motivation, such as sensation seeking and intelligence, however, their research did not confirm the initial expectations (3).

These motivations may lead to different outcomes regarding mental health. If geek activities are motivated by the need to belong, then the more that need is fulfilled by being a geek, the better one's mental health will be because one of the basic human needs is more fulfilled (15). Similar might be valid if the motivation for geek activities is the desire for engagement, although the need for stimulation might not be considered one of the basic needs (15). On the contrary, if geek activities are mainly motivated by the great fantasy migration, this might lead to more psychological distress. Namely, although the need for accomplishment is fulfilled in the fantasy world, eventually the individuals must come back to the real world where this need is thwarted, perhaps leading to a further escalation of mental illness symptoms (15).

An important point to take into account when examining mental health is that it is composed of two interrelated but distinct aspects, positive mental health and psychological distress (16). For a long time, the dominant approach to mental health was based on the assumption that mental health is a bipolar dimension, with mental health on one end, and mental illness on the other. However, research has shown that it can be better described with two interrelated dimensions: positive mental health (or mental health) described by subjective wellbeing, life satisfaction and similar constructs; and mental illness (or psychological distress), which refers to presence or absence of psychopathology. That is, while assuming the bipolar dimension

postavimo li bipolarnu dimenziju, možemo razlikovati osobe kod kojih nisu prisutni psihički poremećaji i zadovoljni su životom te osobe koje imaju psihičke poremećaje i nisku kvalitetu života, dok dvojni model pretpostavlja da postoje i osobe koje imaju psihičke poremećaje ali i osjećaj subjektivne dobrobiti, kao i oni koji nemaju psihičke poremećaje, ali su nezadovoljni životom (16). Ove dvije dimenzije psihičkog zdravlja imaju i različite prediktore i posljedice. Neki od tih prediktora su i potrebe, odnosno ove dvije dimenzije psihičkog zdravlja nisu na isti način povezane sa zadovoljavanjem i osujećivanjem potreba (15). Zbog toga je pri ispitivanju povezanosti psihičkog zdravlja *geekova* s njihovom motivacijom za *geek* aktivnosti potrebno uzeti u obzir obje ove dimenzije psihičkog zdravlja.

meant that people can be thought of as either not having a psychological disorder and being satisfied with life, or as having a psychological disorder and having a low quality of life, dual-factor model assumes there are people who have a psychological disorder but have a sense of wellbeing, as well as people who do not have a psychological disorder, but are unsatisfied with their life (16). These two dimensions of mental health have different antecedents and consequences. Some of these antecedents included needs, that is, these two dimensions are not related in the same way to need satisfaction and thwarting (15). Therefore, both of these dimensions need to be accounted for when exploring the relations of mental health of geeks to the motivations for engaging in geek activities.

CILJ

Kako bi se istražila prepostavka koja proizlazi iz stereotipa da *geekovi* imaju lošije psihičko zdravlje samim time što su *geekovi*, odnosno zbog *geek* aktivnosti kojima se bave i koje su definirajuća osobina *geekova*, psihičko zdravlje *geekova* je uspoređeno sa zdravljem opće populacije. To je uključivalo zadovoljstvo životom kao pokazatelja pozitivnog psihičkog zdravlja i simptome depresije, anksioznosti i stresa kao pokazatelje psihičkih poremećaja. S obzirom da su podatci o psihičkom zdravlju *geekova* prikupljeni u specifičnom kontekstu pandemije, za usporedbu su korišteni podatci iz drugih istraživanja o psihičkom zdravlju provedenih u slično vrijeme u Hrvatskoj (17,18). Zatim je ispitano može li se, unutar skupine *geekova*, lošije psihičko zdravlje objasniti različitim motivacijama za uključivanje u *geek* aktivnosti. Kako bismo zahvatili različite motivacije, korišteni su pokazatelji predloženi kao relevantni za svaku od pojedinačnih motivacija u prijašnjim istraživanjima (3,11). Kao pokazatelj intenziteta migracije u izmišljeni svijet kao motivacije za *geek* aktivnosti korišten je narcizam kao osobina lič-

OBJECTIVE

In order to explore the assumption implied by the stereotypes that geeks have mental health issues due to them being geeks, i.e., due to them engaging in geek activities, which is their defining characteristic, first, the mental health levels of geeks were compared to that of a general population. This included the positive mental health indicated by life satisfaction, and psychological distress indicated by depression, anxiety and stress symptoms. Considering the data on geek mental health was collected during the specific context of the pandemic, data from other research on mental health collected at a similar time in Croatia was used for comparison (17,18). Second, it was explored whether, among geeks, lower mental health can be explained by the motivations for engaging in geek activities. To capture the different motivations, indicators proposed by previous research as relevant for each of the motivations were used (3,11). The intensity of great fantasy migration as a motivation was indicated by narcissistic personality, the need

nosti, kao pokazatelj potrebe za pripadanjem korištena je percipirana razina prihvaćenosti pojedinčevih *geek* aktivnosti, a kao pokazatelj aktivne uključenosti korištena je razina uključenosti u kreativne *geek* aktivnosti.

METODE

Sudionici i postupak istraživanja

Poziv za sudjelovanje u istraživanju provedenom putem *online* upitnika upućen je u lipnju i srpnju 2020. preko e-pošte, *facebook* grupa i plakata raznim organizacijama i pojedincima koji su uključeni u geek aktivnosti (npr. organizatorima geek konvencija, ljubiteljima društvenih igara, obožavateljima Harryja Pottera). Popis *geek* aktivnosti korišten za određivanje ovih kontakata nastao je prilagodbom popisa iz istraživanja McCain i sur. hrvatskom kontekstu (3,8). Svi sudionici su dali informirani pristanak prije početka ispunjavanja upitnika. U skladu s definicijom da je *geek* osoba koja se aktivno bavi interesima vezanim za pop kulturu i izmišljene svjetove, sudionici su smatrani *geekovima* ako su označili da se aktivno bave barem jednom od aktivnosti koje su klasificirane kao specifične za *geekove* (3,8), a popis kojih je prezentiran sudionicima u sklopu Ljestvice uključenosti u *geek* zajednicu. Od 1318 osoba koje su pristupile upitniku, 99 nije izjavilo da su uključeni u ijednu *geek* aktivnost te ih nismo mogli smatrati *geekovima* prema utvrđenoj definiciji zbog čega njihovi podatci nisu korišteni u dalnjim obradama. Istraživanje je odobrilo Etičko povjerenstvo Odsjeka za psihologiju Filozofskog fakulteta Sveučilišta u Zagrebu.

Osnovni uzorak je sačinjavalo 1219 osoba, od kojih su 52,3 % muškarci, a 46,5 % žene. Prosjecna dob je bila 30,8 ($SD=7,94$) godina. Karakteristike uzorka prikazane su u tablici 1. Dio obrada podataka je napravljen na čitavom uzorku (povezanost motivacija i psihičkog zdravlja) koristeći metodu maksimalne vjerojatnosti

for belongingness by the perceived level of acceptance of one's geek activities, and the desire for engagement by the level of engagement in creative geek activities.

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METHODS

Participants and procedure

The invitation to participate in the study by taking an online questionnaire was distributed in June and July of 2020 via emails, Facebook groups and posters to various organizations and individuals involved in geek activities (e.g., geek convention organisers, board game enthusiasts, Harry Potter fans). The list of geek activities used to identify contacts was adapted to Croatian context from McCain et al. (3,8). All participants gave an informed consent before starting the questionnaire. In accordance with the geek being defined as a person actively invested in an interest related to pop culture and invented worlds, the participants were considered to be geeks if they stated they are actively engaged in at least one of the activities classified as specific to geeks (3,8), the list of which was presented to participants as part of the Geek Culture Engagement Scale. Out of 1318 individuals who started the questionnaire, 99 did not indicate they were involved in any of the geek activities and could not therefore be considered geeks according to the used definition and were excluded from further analyses. This study was approved by the Ethical Committee of the Department of Psychology, Faculty of Humanities and Social Sciences of the University of Zagreb.

The main sample consisted of 1219 individuals, 52.3% of which were men, and 46.5% women. The mean age was 30.8 ($SD = 7.94$). The characteristics of this sample are shown in Table 1. Part of the analyses was done on this sample (the relations of motivations and mental health) with full information maximum likeli-

sa svim informacijama (engl. *full information maximum likelihood*) kao metodu postupanja s podatcima koji nedostaju (19). Analize razina psihičkog zdravlja su pak rađene na poduzorku. Naime, kod usporedbe s drugim istraživanjima bilo je bitno provjeriti usporedivost uzoraka prema sociodemografskim karakteristikama te su stoga te analize rađene na poduzorku od 725 sudionika koji su imali podatke na relevantnim varijablama. Njihova prosječna dob bila je 31,8 ($SD = 7,81$) godina, u prosjeku 2,5 godine viša od sudionika čiji podatci nisu bili uključeni u te analize [$t(1214) = 5.94, p < .001$]. Ova dva poduzorka su uspoređena χ^2 testom i prema drugim sociodemografskim karakteristikama (tablica 1). S obzirom na osjetljivost ovog testa na velike uzorke, pri interpretaciji razlika korišten je i Cramerov V za procjenu veličine učinka (20,21,22). Poduzorak korišten za analize razina psihičkog zdravlja imao je manje sudionika sa srednjoškolskim obrazovanjem, više zaposlenih i manje studenata nego poduzorak koji nije korišten u analizama. Razlike u statusu veze vjerojatno nisu bile od praktičnog značenja (s obzirom na malu veličinu učinka), dok u drugim sociodemografskim karakteristikama nije bilo statistički značajnih razlika (tablica 1).

Mjerni instrumenti i korištene mjere

Online upitnik je uključivao više različitih mjera od kojih smo u ovom radu koristili sljedeće:

Od *sociodemografskih podataka* prikupljeni su podatci o rodu, dobi, razini obrazovanja, statusu romantične veze i roditeljstva na početku upitnika, te o radnom statusu, mjestu prebivališta i subjektivnom socioekonomskom statusu na kraju upitnika.

Geek aktivnosti smo mjerili pomoću hrvatske adaptacije Ljestvice uključenosti u *geek* zajednicu (engl. *Geek Culture Engagement Scale*) (3,8). Ova ljestvica sadržava popis 17 aktivnosti prepoznatih kao karakteristične za *geekove* od McCain i

hood as missing data treatment method (19). The analyses of mental health levels were performed on a subsample. Specifically, when comparing with other research, comparability of samples regarding the sociodemographic characteristics needed to be established, so these analyses were performed on a subsample of 725 participants that had the data on relevant variables. Their mean age was 31.8 ($SD = 7.81$), on average 2.5 years older than the participants whose data was not used in these analyses, $t(1214) = 5.94, p < .001$. These two subsamples were further compared with chi square tests on other sociodemographic characteristics (Table 1). Given the sensitivity of this test to large samples, the effect size, as indicated by Cramer's V, was also taken into account when judging the relevance of the difference (20,21,22). The subsample used in the mental health levels analyses had less participants with high school as education attainment, more of them employed and less students than the subsample not used in these analyses. The differences in relationship status were probably not of practical relevance (as indicated by the small effect size) and there were no statistically significant differences in other sociodemographic characteristics (Table 1).

Instruments and measures

The online questionnaire included multiple measures, out of which the following were used in this study:

Sociodemographic data collected included gender, age, educational attainment, status of romantic relationship and parenthood at the beginning of the questionnaire, and working status, place of residence and subjective socioeconomic status at the end of the questionnaire.

Geek activities were measured by the Croatian adaptation of the Geek Culture Engagement Scale (3,8). This scale includes a list of 17 activities recognized as characteristic for geeks by

TABLICA 1. Sociodemografske karakteristike čitavog uzorka ($N = 1219$) i poduzorka korištenog u analizama razina psihičkog zdravlja ($n = 725$) u usporedbi s poduzorkom koji nije korišten

TABLE 1. Sociodemographic characteristics of the whole sample ($N = 1219$) and the subsample used in the analyses of mental health levels ($n = 725$) compared to the subsample not used

Karakteristika / Characteristic	Kategorija / Category	Čitav uzorak / Whole sample		Poduzorak / Subsample		Usporedba / Comparison ^b	
		n ^a	%	%	$\chi^2(df)$	Cramer v <i>p</i>	
Rod / Gender	Muškarci/ Men	1217	52.4	53.9	1.93 (2) .38	.04	
	Žene/ Women		46.6	45.2			
	Drugo / Other		1.0	0.8			
Razina obrazovanja / Educational attainment	Osnovna škola / Elementary school	1216	1.4	0.8	46.32 (4) <.001	.2	
	Srednja škola / High school		29.9	24.0			
	Preddiplomski studij/ Bachelor's degree		22.3	22.9			
	Diplomski studij / Master's degree		37.4	40.3			
	Poslijediplomski studij / Postgraduate studies		9.0	12.0			
Status romantične veze / Romantic relationship	Ne u vezi / No relationship	1217	37.9	33.9	14.26 (2) .001	.11	
	Veza bez zajedničkog života/ Relationship without cohabitation		19.8	19.7			
	Veza uključujući zajednički život / Relationship including cohabitation		42.3	46.3			
Predškolska ili školska djeca / Preschool or school children	Da / Yes	1217	18.7	17.9	0.62 (1) .433	.02	
	Ne / No		81.3	82.1			
Radni status / Working status	Zaposlen / Employed	777	60.5	63.2	50.42 (4) <.001	.25	
	Privremeno zaposlen / Temporary position		3.5	3.7			
	Nezaposlen / Unemployed		8.4	8.0			
	Student ili učenik / Student or pupil		23.8	21.1			
	Umirovljenik / Retired		3.9	4.0			
Mjesto prebivališta / Place of residence	>500 000	778	42.5	42.6	4.81 (3) .186	.08	
	100 000-500 000		10.4	9.9			
	10 000-100 000		24.7	24.4			
	<10 000		22.4	23.0			
Subjektivni socioekonomski status / Subjective socioeconomic status ^c	Izrazito lako / Very easy	733	15.8	16.0	8.24 (5) .143	.11	
	Prilično lako / Quite easy		26.6	26.8			
	Lako / Easy		29.5	29.4			
	Malo teže / A bit hard		22.5	22.5			
	Prilično teško / Quite hard		5.2	5.0			
	Izrazito teško / Very hard		0.4	0.4			

Legenda. ^aVeličine uzorka razlikuju se zbog podataka koji nedostaju i položaja pitanja u upitniku (na početku/ na kraju); ^bUsporedba između poduzoraka koji jesu i nisu uključeni u analize kojima se uspoređuju razine psihičkog zdravlja geekova s onima iz drugih istraživanja; ^cKako izlazite na kraj s troškovima života?

/Note. ^aThe sample size varies due to missing data and placement at the start/end of the questionnaire; ^bComparison between the subsamples used and not used in analyses comparing mental health levels of geeks to that in other studies; ^cHow easy it is for you to cope with living expenses?

sur. (3) te hrvatskih geekova (8), kao što su *znanstvena fantastika* ili *računalne igre*. Za svaku aktivnost sudionici procjenjuju koliko se često bave njome na ljestvici od 1 (*nimalo*) do 5 (*mnogo*). Odgovori sudionika na ovaj upitnik su u ovom radu korišteni na tri načina. Prvo, korišteni su za isključivanje sudionika koji nisu odgovorili više od 1 na jednu od aktivnosti, što znači da nisu aktivno uključeni ni u jednu *geek* aktivnost te se zbog toga ne mogu smatrati *geekovima*.

Drugo, pokazatelj *uključenosti u kreativne geek aktivnosti* je izražen kao zbroj odgovora za tri aktivnosti koje se mogu smatrati kreativnima: *Cosplay* (*izrada i nošenje kostima likova iz igranih i animiranih filmova, serija, stripova itd.*), *Kreativno pisanje* (*prozne fikcije, poezije itd.*) i *Crafts* (*kreativni ručni rad, npr. crtanje, izrada nakita i oružja, bojenje minijatura*). Ova mjeru je pokazala jednofaktorsku strukturu kojom je objašnjeno 32 % ukupne varijance te pouzdanost McDonald's $\omega = .55$ / Cronbach $\alpha = .52$.

Treće, rješavaču su prikazane *geek* aktivnosti za koje je dao najviše odgovore te je njegov zadatak bio izabrati tri najvažnije i poredati ih po važnosti od najvažnije do najmanje važne. Ova informacija je korištena u sljedećoj mjeri:

Prihvaćenost geek aktivnosti izmjerena je pomoću tri pitanja. Zadatak rješavača bio je procijeniti kako njima bliski ljudi reagiraju kad se rješavač uključi u određenu *geek* aktivnost na ljestvici od 1 (*mnogi me ljudi odbacuju ili izbjegavaju*) do 5 (*mnogi me ljudi prihvataju*). Ovo pitanje je postavljeno za svaku od tri aktivnosti koje je rješavač prethodno izabrao kao najvažnije. Uкупni rezultat je izražen kao prosjek odgovora na ova tri pitanja. Mjera je pokazala jednofaktorsku strukturu kojom je objašnjeno 59 % varijance i pouzdanost $\omega/\alpha = .81$.

Upitnik narcisoidne ličnosti (engl. *The Narcissistic Personality Inventory*, NPI-16) (23) [hrvatski prijevod iz (8)] je upitnik koji mjeri narcizam kao osobinu ličnosti koja se normalno distribuirala u nekliničkoj populaciji. Sastoji se od 16 pari

McCain et al. (3) and Croatian geeks (8), e.g., *science fiction, computer games*. For each activity the participants have to rate how often they engage in them on a scale from 1 (*Not at all*) to 5 (*A lot*). The responses on this scale were used in three ways in this study. First, they were used to exclude participants that did not have an answer higher than 1 on any activities, indicating they are not actively invested in any *geek* interest, and therefore cannot be considered geeks.

Second, the indicator of *engagement in creative geek activities* was formed as the sum of responses to three activities that can be considered creative, i.e., *Cosplaying (making and wearing costumes of characters from movies, cartoons, TV series, comics, etc.)*, *Creative Writing (fiction, poetry, etc.)*, and *Crafts (creative handwork; e.g., drawing, crafting jewellery and weapons, miniatures)*. This measure showed a one-factor structure with 32% of the variance common and reliability of McDonald's $\omega = .55$ / Cronbach $\alpha = .52$.

Third, *geek activities* for which the participants had the highest responses were presented to the participant and they had to choose the three most important ones and order them from least to most important. This information was used in the following measure.

The acceptance of one's geek activities by others was measured by three questions. The participants had to rate how the people close to them react when the participants engage in a certain *geek* activity on a scale from 1 (*many people reject or avoid me*) to 5 (*many people accept me*). This question was asked for each of the three activities chosen as most important ones previously. The score was expressed as an average of response to these three questions. This measure showed a one-factor structure with 59% of the variance common and reliability of $\omega/\alpha = .81$.

The *Narcissistic Personality Inventory* (NPI-16) (23) [Croatian translation by (8)] is a question-

tvrđnji i zadatak rješavača je u svakom paru izabratiti tvrdnju koja ga bolje opisuje. Upitnik nije pokazao jasnu faktorsku strukturu pri čemu je paralelna analiza ukazivala na pet faktora, a *scree* prikaz nije bio jednoznačan. Zadržano je najinterpretabilnije rješenje, trofaktorsko koje su predložili i autori upitnika, čime je objasnjeno 25 % varijance. Ukupni rezultati su izraženi kao prosjeci na tri podljestvice: Grandiozni ($k = 4$, $\omega/\alpha = .53/.67$) i Ranjivi narcizam ($k = 4$, $\omega/\alpha = .38/.52$), te Osjećaj povlaštenosti (engl. *entitlement*; $k = 8$, $\omega/\alpha = .51/.51$) pri čemu viši rezultati upućuju na viši narcizam.

Ljestvica depresivnosti, anksioznosti i stresa (engl. *Depression Anxiety Stress Scales*, DASS-21) (24,25) je upitnik namijenjen mjerenu simptoma u nekliničkim i kliničkim uzorcima. Rješavači procjenjuju svoje slaganje s jednom od 21 čestice na ljestvici od 0 (*uopće se nije odnosilo na mene*) do 3 (*gotovo u potpunosti ili većinu vremena se odnosilo na mene*). Utvrđena je očekivana trofaktorska struktura, pri čemu je objašnjeno 62 % varijance, kao i očekivane razine pouzdanosti ($\omega = .84-.91$, $\alpha = .85-.90$). Ukupni rezultati su izraženi kao prosjeci na tri podljestvice: Depresija ($k = 7$), Anksioznost ($k = 7$) i Stres ($k = 7$) pri čemu viši rezultati upućuju na više razine psihološke uznemirenosti.

Zadovoljstvo životom je jednočestična mjera subjektivne dobrobiti i pozitivnog psihičkog zdravlja, koja je u prethodnim istraživanjima pokazala zadovoljavajuću pouzdanost i valjanost (26). Zadatak rješavača je procijeniti koliko su zadovoljni životom na ljestvici od 0 (*potpuno nezadovoljan*) do 10 (*potpuno zadovoljan*).

REZULTATI

Obrane podataka napravljene su pomoću računalnih programa IBM SPSS Statistics 25, Excel 2013 i R 4.0.2 (paket lavaan, psych, MVN).

Kako bismo usporedili razine psihičkog zdravlja geekova s onima pripadnika opće populacije,

naire that measures narcissism as a personality trait normally distributed in the non-clinical population. It is composed of 16 pairs of statements and the respondents have to choose the one that better describes them. The factor solution was inconclusive, with parallel analyses indicating five factors and scree plot being unclear. The most interpretable solution was the three-factor solution suggested by the authors of the instrument, in which 25% of the variance was explained. The scores were expressed as averages on three subscales: Grandiose ($k = 4$, $\omega/\alpha = .53/.67$) and Vulnerable narcissism ($k = 4$, $\omega/\alpha = .38/.52$), and Entitlement ($k = 8$, $\omega/\alpha = .51/.51$), with higher results indicating higher narcissism.

Depression Anxiety Stress Scales (DASS-21) (24,25) is a questionnaire aimed at measuring symptoms in non-clinical and clinical samples. The respondents rate their agreement with one of the 21 items on a scale from 0 (*Did not apply to me at all*) to 3 (*Applied to me very much, or most of the time*). The expected three-factor structure was established with 62% of the variance explained, as well as expected levels of reliability ($\omega = .84-.91$, $\alpha = .85-.90$). The results were expressed as averages on three subscales, depression ($k = 7$), anxiety ($k = 7$) and stress ($k = 7$), with higher results indicating higher levels of psychological distress.

Life satisfaction is a one-item measure of subjective well-being and positive mental health, which showed good reliability and validity (26). The respondents' task is to rate how satisfied they are with life on a scale from 0 (*completely unsatisfied*) to 10 (*completely satisfied*).

RESULTS

The analyses were performed with IBM SPSS Statistics 25, Excel 2013 and R 4.0.2 (packages lavaan, psych, MVN).

To compare the levels of mental health of geeks to that of a general population, we compared

usporedili smo psihičko zdravlje ovog uzorka s psihičkim zdravljem dva uzorka za koje su podatci prikupljeni u sličnom kontekstu (tablica 2). Ajduković i sur. (17) imali su nacionalno reprezentativan uzorak, međutim uzorak *geekova* razlikovao se od njihovog prema svim sociodemografskim karakteristikama osim po rodu, $\chi^2(1) = 1.2$, $p = .268$, Cramerov V = .02. U *geek* uzorku sudionici su bili uglavnom mlađi ($\chi^2(5) = 554.8$, $p < .001$, Cramerov V = .47), viših razina obrazovanja ($\chi^2(3) = 93.9$, $p < .001$, Cramerov V = .19), manje ekstremnih prihoda (i visokih i niskih, $\chi^2(4) = 144.4$, $p < .001$, Cramerov V = .27), češće su bili studenti ($\chi^2(4) = 79.8$, $p < .001$, Cramerov V = .2), te su rjeđe živjeli s partnerom ($\chi^2(2) = 125.2$, $p < .001$, Cramerov V = .22), a češće u velikom gradu ($\chi^2(2) = 241.9$, $p < .001$, Cramerov V = .35) pri čemu su sve veličine učinka bile srednje do velike (20,21). Uzorak *geekova* imao je jednake razine anksioznosti kao i uzorak opisan u Ajduković i sur. (17), no imao je statistički značajno manje simptoma depresije i stresa, iako je veličina učinka bila relativno mala, te više zadovoljstvo životom, pri čemu je veličina učinka bila srednja do velika (tablica 2).

Geek uzorak razlikovao se prema sociodemografskim karakteristikama i od sudionika u istraživanju Jokić-Begić i sur. (18). *Geekovi* su bili mlađi ($t(3747) = 6.57$, $p < .001$), bilo je manje žena ($\chi^2(1) = 493.8$, $p < .001$, Cramerov V = .35) i više sudionika višeg socioekonomskog statusa ($\chi^2(5)$

the mental health of our sample to the mental health of two samples for which the data was collected in a similar context (Table 2). Ajduković et al. (17) used a nationally representative sample, however our sample differed from it on all measured sociodemographic characteristics except gender, $\chi^2(1) = 1.2$, $p = .268$, Cramer's V = .02. The participants in our sample were mostly younger ($\chi^2(5) = 554.8$, $p < .001$, Cramer's V = .47), with higher education attainment ($\chi^2(3) = 93.9$, $p < .001$, Cramer's V = .19), had less extreme income (both low and high, $\chi^2(4) = 144.4$, $p < .001$, Cramer's V = .27), were more often students ($\chi^2(4) = 79.8$, $p < .001$, Cramer's V = .2), less often in cohabitation with their partner ($\chi^2(2) = 125.2$, $p < .001$, Cramer's V = .22), and more often living in a large city ($\chi^2(2) = 241.9$, $p < .001$, Cramer's V = .35), with all of these effect considered medium to large (20,21). The geek sample had the same levels of anxiety symptoms as the sample in Ajduković et al. (17), but statistically significantly fewer symptoms of depression and stress, although the effect size was quite small, and higher satisfaction with life, with medium to large effect size (Table 2).

Our participants were also significantly different in sociodemographic characteristics from participants in Jokić-Begić et al. (18). They were younger ($t(3747) = 6.57$, $p < .001$), there were less women ($\chi^2(1) = 493.8$, $p < .001$, Cra-

TABLICA 2. Razlike u psihičkom zdravlju između *geekova* i uzoraka koji predstavljaju opću populaciju
TABLE 2. Differences in mental health between geeks and samples representing the general population

Pokazatelj psihičkog zdravlja / Mental health indicator	<i>Geekovi / Geeks^a</i>		<i>Ajduković et al. (16)^b</i>		<i>Jokić-Begić et al. (17)^c</i>		
	<i>M</i> <i>(SD)</i>	<i>M</i> <i>(SD)</i>	<i>t (df)</i> <i>p</i>	<i>d</i>	<i>M</i> <i>(SD)</i>	<i>F (df)</i> <i>p</i>	η^2
Depresija / Depression	0.81 (0.75)	0.97 (1.22)	3.6 (1978) <i>< .001</i>	0.159	0.90 (0.87)	8.8 (1, 1405) .003	.006
Anksioznost / Anxiety	0.57 (0.64)	0.57 (0.99)	0.04 (1987) .969	0.002	0.55 (0.69)	0.4 (1, 1406) .528	.000
Stres / Stress	1.03 (0.78)	1.19 (1.3)	3.3 (1973) <i>< .001</i>	0.145	1.05 (0.85)	1.5 (1, 1406) .217	.001
Zadovoljstvo životom / Life satisfaction	7.16 (1.98)	5.6 (2.19)	16.7 (1884) <i>< .001</i>	0.747	6.75 (2.09)	6.7 (1, 1394) .010	.005

Legenda. Rezultati različitih istraživanja svedeni su na istu ljestvicu u svrhu lakše usporedbi. ^aN = 787-827. ^bN = 1201. ^cN = 686-701.
 / Note. Results from different studies were transformed to the same scale to ease comparison. ^aN = 787-827. ^bN = 1201. ^cN = 686-701.

$\chi^2 = 135.5$, $p < .001$, Cramerov V = .22). Postojale su i statistički značajne razlike u razini obrazovanja ($\chi^2(4) = 27.3$, $p < .001$, Cramerov V = .08) i statusu romantične veze ($\chi^2(2) = 68.7$, $p < .001$, Cramerov V = .14), no uzmemu li u obzir osjetljivost χ^2 testa kod velikih uzoraka i ostvarenu malu veličinu učinka (20,21), ove razlike vjerojatno nisu bile od praktične važnosti. U radnom statusu nije bilo značajnih razlika ($\chi^2(4) = 6.2$, $p = .188$, Cramerov V = .04). Osobnom korespondencijom s autorima (18) dobiveni su podatci na kojima su provedene sekundarne analize kojima smo pokušali statistički kontrolirati postojeće razlike. U svrhu usporedbe uzoraka iz ovog i prijašnjeg istraživanja provedene su analize kovarijance, jedna za svaki od pokazatelja psihičkog zdravlja, pri čemu je istraživanje bilo glavna nezavisna varijabla, a psihičko zdravlje zavisna varijabla. Rod, dob i socioekonomski status su statistički kontrolirani. Kako bismo ostvarili slične veličine podgrupa, što je preduvjet za provedbu analize kovarijance, ujednačili smo proporcije sudionika prema rodu tako da smo po slučaju izbrisali podatke za dio žena u uzorku Jokić-Begić i sur. (18), što je metoda koju preporučuju Tabachnik i Fidell (27). Preliminarne analize su pokazale da dob pokazuje homogenost regresije te ju je bilo moguće uključiti u analize kao kovarijatu (28). Međutim, povezanost socioekonomskog statusa i psihičkog zdravlja nije bila podjednaka u svim podgrupama te je stoga nismo mogli uključiti kao kovarijatu. Zbog toga smo sudionike podijelili prema socioekonomskom statusu u tri skupine podjednake veličine i uključili tu varijablu u analize kovarijance kao dodatni nezavisni faktor, na isti način kako smo uključili i rod, u skladu s preporukama Tabachnik i Fidell (27). Dakle, ukratko, provedene su četiri analize kovarijance s četiri pokazatelja psihičkog zdravlja kao zavisnim varijablama, s istraživanjem, rodom i socioekonomskim statusom kao nezavisnim varijablama, i s dobi kao kovarijatom na uzorku od 1426 sudionika [725 iz geek uzorka i 701 iz uzorka Jokić-Begić i sur. (18)]. Prepostavke za provedbe analize kovarijance su uglavnom bile

mer's V = .35) and more participants with a higher socioeconomic status ($\chi^2(5) = 135.5$, $p < .001$, Cramer's V = .22). There were also statistically significant differences in education attainment ($\chi^2(4) = 27.3$, $p < .001$, Cramer's V = .08) and relationship status ($\chi^2(2) = 68.7$, $p < .001$, Cramer's V = .14), but giving the sensitivity of χ^2 test to large samples and small effect size (20,21), they were probably not practically relevant. There were no significant differences in the working status ($\chi^2(4) = 6.2$, $p = .188$, Cramer's V = .04). In personal correspondence with the authors (18), we obtained the data for secondary analysis in which we tried to control these differences. To compare the samples from the previous and the present study, the analyses of covariance were performed, one for each of the mental health indicators, with study being the main independent factor and mental health being the dependent variable. Gender, age, and socioeconomic status were statistically controlled. In order to achieve similar sample sizes, a prerequisite for analysis of covariance, the gender proportions were equalized in two data sets by random deletion of women in Jokić-Begić et al. (18), a technique recommended by Tabachnik and Fidell (27). Preliminary analyses indicated age showed homogeneity of regression and was therefore included as a covariate (28). However, the relationship of socioeconomic status and mental health indicators was not the same in all of the groups, and therefore the socioeconomic status could not be included as a covariate. We therefore categorized participants in three groups of similar size regarding their socioeconomic status and included it in the analysis of covariance as an additional independent factor together with gender, as recommended by Tabachnik and Fidell (27). To summarize, we performed four analyses of covariance with four mental health indicators as dependent variables; study, gender, and socioeconomic status as independent variables; and age as a covariate on sample of 1426 [725 from our sample, and

zadovoljene: podatci su u određenoj mjeri odstupali od normalne distribucije (na što su ukazivali značajni Shapiro-Wilk testovi), ali ne previše i na sličan način u svim podskupinama (što je bilo vidljivo u Q-Q prikazima); omjer najveće i najmanje varijance u podskupinama je bio manji od 4; i kovarijata i zavisna varijabla su pokazale linearnu povezanost homogenu po podskupinama (29).

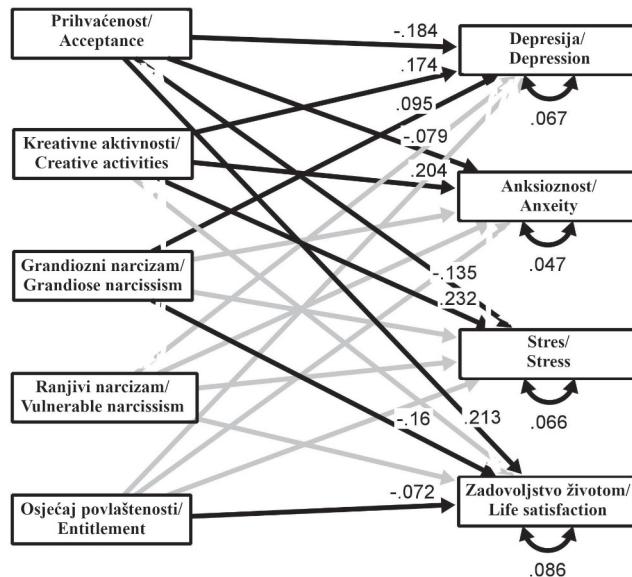
Ove analize kovarijance pokazale su da *geek* uzorak ima jednake razine anksioznosti i stresa kao i uzorak Jokić-Begić i sur. (18), te statistički značajno manje simptoma depresije i više zadovoljstvo životom, iako su veličine učinka (η^2) bile vrlo male (tablica 2). Postojali su i značajni efekti roda, dobi i socioekonomskog statusa za većinu pokazatelja psihičkog zdravlja, no neće biti predstavljeni jer nisu relevantni za ovo istraživanje. Nijedna interakcija nije bila značajna osim interakcije istraživanja i socioekonomskog statusa za depresiju, $F(2, 1405) = 5.7, p = .003, \eta^2 = .008$. Kod osoba visokog i srednjeg socioekonomskog statusa nije bilo razlika među uzorcima, dok su kod osoba niskog socioekonomskog statusa sudionici iz *geek* uzorka imali manje simptoma depresije nego sudionici iz drugog istraživanja.

Drugi dio cilja istraživanja bio je ispitati odnose motivacija za *geek* aktivnosti i psihičkog zdravlja. U tu svrhu provedena je analiza traga pomoću robusne metode maksimalne vjerojatnosti sa svim informacijama (engl. *full information maximum likelihood*), koja je bila izabrana zbog odstupanja distribucija od normalnih (Henze-Zirkler test multivarijatnog normaliteta = 1.46, $p < .001$) i postojanja podataka koji nedostaju (30,31). Četiri pokazatelja psihičkog zdravlja bili su zavisne varijable koje su predviđali Prihvaćenost *geek* aktivnosti od drugih ljudi kao pokazatelj potrebe za pripadanjem, Uključenost u kreativne *geek* aktivnosti kao pokazatelj aktivne uključenosti te Grandiozni i Ranjivi narcizam i Osjećaj povlaštenosti kao pokazatelji migracije u izmišljeni svijet (slika 1).

701 from the Jokić-Begić et al. sample (18)]. The assumptions for analysis of covariance were mostly met: the data deviated from normal distribution (as indicated by Shapiro-Wilk test) but not a lot and in a similar way in all groups (as indicated by Q-Q plots); the ratio of largest to smallest variance was smaller than 4; and the covariate and dependent variables had a linear relationship homogenous across groups (29).

These analyses indicated that the *geek* sample had the same anxiety and stress levels as the one in Jokić-Begić et al. (18), and statistically significantly fewer depression symptoms and higher life satisfaction, although the effect sizes (η^2) were very small (Table 2). There were also significant main effects of gender, age and socioeconomic status for most mental health indicators, but they will not be presented as they are not relevant for this study. No interaction was significant, except that of sample and socioeconomic status for depression, $F(2, 1405) = 5.7, p = .003, \eta^2 = .008$. For those of high and middle socioeconomic status, there were no differences between the samples, while for those with low socioeconomic status, the *geek* sample showed fewer depression symptoms than the other sample.

The second part of the objective was exploring the relationships of motivations for *geek* activities and mental health. A path analysis model was estimated with robust full information maximum likelihood due to the non-normal distributions (Henze-Zirkler test of multivariate normality = 1.46, $p < .001$), and missing data (30,31). Four mental health indicators were dependent variables predicted by Acceptance by others to one's *geek* activities as an indicator of need for belongingness, Engagement in creative *geek* activities as an indicator of desire for engagement, and Grandiose and Vulnerable narcissism and Entitlement as indicators of great fantasy migration motivation (Figure 1).



SLIKA 1. Odnosi pokazatelja različitih geek motivacija s pokazateljima psihičkog zdravlja ($N = 1217$). Standardizirani značajni putevi prikazani su crnom bojom, a neznačajni ($p > .05$) sivom. Zakriviljene strjelice označuju postotak objašnjene varijance.

Kovarijance nisu prikazane zbog jasnijeg prikaza.

FIGURE 1. Relations of indicators of different geek motivations with mental health indicators ($N = 1217$). Standardized significant paths are displayed in black and non-significant paths ($p > .05$) in grey. Curved arrows indicate percent of variance explained. Covariances omitted for clarity.

Prihvaćenost od drugih bila je povezana s manjim brojem simptoma na svim DASS ljestvica-ma (β od -.08 do -.18) i s višim zadovoljstvom životom, za koje je bila najsnažniji prediktor ($\beta = .21$). Uključenost u kreativne aktivnosti bila je najsnažniji prediktor za većinu DASS ljestvica, ali u neočekivanom smjeru: viša uključenost predviđala je više rezultate na DASS ljestvicama (β od .17 do .23). Grandiozni narcizam i Osjećaj povlaštenosti predviđali su zadovoljstvo životom ($\beta = -.16/-0.07$), a Grandiozni narcizam predviđao je i depresiju ($\beta = .10$), dok Ranjivi narcizam nije bio povezan s psihičkim zdravljem.

Acceptance by others was related to fewer symptoms on all DASS scales (β from -.08 to -.18), and to higher life satisfaction, for which it was the strongest predictor ($\beta = .21$). Engagement in creative activities was the strongest predictor of most DASS subscale scores, but in an unexpected direction: higher engagement was related to higher DASS scores (β from .17 to .23). Grandiose narcissism and Entitlement predicted life satisfaction ($\beta = -.16/-0.07$), and Grandiose narcissism predicted depression ($\beta = .10$), while Vulnerable narcissism was not related to mental health.

RASPRAVA

Stereotipovi o *geekovima* impliciraju da imaju poteškoća u prilagodbi životnim zahtjevima (2,3,4,9), što bi moglo dovesti do lošeg psihičkog zdravlja, te je to pretpostavka istražena u ovom radu. U svrhu njene provjere razine psihičkog zdravlja *geekova* uspoređene su s psihičkim zdravljem opće populacije te je ispitano može li

DISCUSSION

The stereotypes about geeks imply they have problems adapting to life demands (2,3,4,9), which might lead to mental health issues, an assumption we explored in this study. To test this, the mental health levels of geeks were compared to that of general population, and it was explored if mental health of geeks can

se psihičko zdravlje *geekova* objasniti različitim motivacijama u pozadini *geek* aktivnosti.

Razine psihičkog zdravlja

Podatci o psihičkom zdravlju *geekova* prikupljeni su tijekom pandemije COVID-19 te je zbog toga bilo važno naći uzorak koji je usporediv s obzirom da je pandemija utjecala na psihičko zdravlje (17,32). U sklopu dvaju istraživanja prikupljeni su podatci o psihičkom zdravlju u Hrvatskoj u sličnom razdoblju [svibanj (18) i srpanj 2020 (17)], čime je ostvarena sličnost u fazi pandemije i kulturnom kontekstu, odnosno u dva faktora za koje je utvrđeno da su važne odrednice psihičkog zdravlja tijekom pandemije (17,32). Ajduković i sur. (17) su koristili probabilističko stratificirano kvotno uzorkovanje kako bi ostvarili nacionalno reprezentativni uzorak prema osnovnim sociodemografskim karakteristikama. U usporedbi s takvim uzorkom, *geekovi* su imali slično ili čak bolje psihičko zdravlje (tablica 2). Za Depresiju i Stres veličina učinka za dobivenu razliku bila je mala, te su aritmetičke sredine u oba uzorka bile 1 (na ljestvici 0-3 mogućih odgovora), odnosno, iako su razlike bile statistički značajne, vjerojatno zbog veličine uzorka, uzorci se čine vrlo slični prema pokazateljima psihološke uznemirenosti. Za zadovoljstvo životom veličina učinka je bila relativno velika ($d = 0.75$). Međutim, s obzirom da su se uzorci razlikovali prema sociodemografskim karakteristikama, moguće je da su ove razlike u psihičkom zdravlju, a možda čak i nedostatak razlika, rezultat razlika u sociodemografskim karakteristikama, a ne rezultat nekih osobina specifičnih za *geekove*. U uzorku *geekova* bilo je manje pojedinaca s niskim prihodima, što je povezano s višim zadovoljstvom životom tijekom pandemije (33), odnosno zbog toga je zadovoljstvo životom u uzorku *geekova* moglo biti veće. Međutim, u tom je uzorku također bilo i više mlađih sudionika, što je pak povezano s nižim zadovoljstvom životom tijekom pandemije (34,35). Implikacije prijašnjih istraživanja

be explained by different motivations for geek activities.

Mental health levels

The data on mental health of geeks was collected during the COVID-19 pandemic so it was important to find a comparable sample, since the pandemic affected mental health (17,32). Two studies collected the data on mental health in Croatia at a similar point in time (May (18) and July 2020 (17)), thus assuring the comparability of the phase of the pandemic and cultural context, which are both important determinants of mental health in the pandemic (17,32). Ajduković et al. (17) used probabilistic stratified quota sampling as to achieve a nationally representative sample regarding basic sociodemographic characteristics. Compared to such a sample, geeks had the same amount or even less of mental health issues (Table 2). However, for Depression and Stress the effect size was small, and means indicate that both samples on average have an answer 1 (on a 0-3 scale of possible responses). Thus, although statistically significant, probably due to large sample size, the samples could be considered very similar regarding the psychological distress indicators. For life satisfaction the effect size was quite large ($d = 0.75$). However, since the samples differed in sociodemographic characteristics (Table 1), these differences in mental health, and maybe even the lack of differences, might be better explained by these sociodemographic differences than by some geek-specific characteristics. The geek sample had less individuals with low income, characteristic that is related to higher life satisfaction during the pandemic (33), so this might be the reason why life satisfaction in the geek sample was higher. However, it also had more participants of younger age, which is related to lower life satisfaction during the pandemic (34,35). The implications are inconsistent for psychological distress also: younger age of the geek sample

za zaključivanje o psihološkoj uznemirenosti su također proturječne: mlađa dob u uzorku *geekova* implicira da su možda imali više razine simptoma psihičkih poremećaja, no manje sudionika s osnovnom školom i niskim prihodom implicira da su možda u prosjeku imali manje simptoma. Zbog toga je za valjano zaključivanje o razlikama u psihičkom zdravlju bila potrebna kontrola sociodemografskih karakteristika.

Kontrola razlika u sociodemografskim karakteristikama ostvarena je sekundarnim analizama podataka iz istraživanja Jokić-Begić i sur. (18) zajedno s podatcima prikupljenima u ovom istraživanju *geekova*. Analize koje su uzele ove razlike u obzir upućivale su na slične zaključke – ponovo nisu postojale razlike među uzorcima u anksioznosti, ali ovaj put nisu bile značajne ni razlike u stresu. Za depresiju veličina učinka je ponovo bila vrlo mala (tablica 2), i upućivala je da, iako razlika postoji, u suprotnosti je sa stereotipovima – *geekovi* su imali manje simptoma depresije. Također je ponovo postojala razlika u zadovoljstvu životom pri čemu su *geekovi* imali više zadovoljstvo nego sudionici drugog istraživanja. Međutim, ovaj put je veličina učinka bila vrlo mala ($\eta^2 = .01$), a oba uzorka imala su u prosjeku isti odgovor 7 (na ljestvici 0-10 mogućih odgovora). Na temelju toga možemo zaključiti da je psihičko zdravije ovog uzorka *geekova* slično onom sudionika istraživanja Jokić-Begić i sur. (18).

Pri generalizaciji sličnosti između uzoraka u istraživanju *geekova* i u istraživanju Jokić-Begić i sur. (18) na sličnost *geekova* i opće populacije treba uzeti u obzir da su oba istraživanja imala prigodne uzorce što može dovesti do pristranosti. Međutim, pozivi za ova dva istraživanja bili su dosta različiti – istraživanje Jokić-Begić i sur. (18) započinjalo je pozivom sudionicima da saznaju kako se nose s pandemijom, a u istraživanju *geekova* poziv je bio upućen onima koji se smatraju *geekovima* da pomognu istraživačima otkriti nešto o *geekovima* u Hrvatskoj. Zbog toga nije vrlo vjerojatno da su uzorci bili pristrani na sličan način, odnosno da su privukli

implies it could have more mental health issues, but less participants with primary education and low income imply it might have less mental health issues. Therefore, the control of sociodemographic characteristics was required in order to enable valid conclusions.

The control of differences in sociodemographic characteristics was achieved by secondary analyses of data used in Jokić-Begić et al. (18) together with the data collected in this study on geeks. This led to similar conclusions – again, there were no differences between samples in anxiety, but this time neither in stress. For depression the effect size was again quite small (Table 2), and indicated that if there is any difference, it is contrary to the stereotypes – geeks had fewer depression symptoms. There was again a difference in life satisfaction, with geeks having higher levels than the other sample. However, this time, the effect size was quite small ($\eta^2 = .01$), with both samples having the same average response 7 on the scale 0-10. Based on this, we can conclude the mental health of this geek sample is similar to that of participants in the study of Jokić-Begić et al. (18).

When generalizing the similarity between this sample of geeks and the sample in Jokić-Begić et al. (18) to similarity between geeks and general population, it should be taken into account that both studies used convenience sampling that might lead to bias. However, the invitations for these two studies were quite different – the research presented in Jokić-Begić et al. (18) begun with an invitation for participants to find out how they cope with the pandemic, and the research on geeks invited those who consider them geeks to help the researchers find out something about geeks in Croatia. Therefore, it does not sound probable that they were biased in the same way in terms of attracting participants of certain levels of mental health. Another methodological issue to take into account when interpreting these

sudionike određenih razina psihičkog zdravlja. Još jedan metodološki aspekt koji je važno uzeti u obzir pri interpretaciji ovih rezultata jest što su ove analize provedene na poduzorku *geekova*. Teško je s velikom točnošću ustvrditi bi li psihičko zdravlje čitavog uzorka bilo različito od tog poduzorka da smo imali sve podatke. Ne znamo je li razlika u dobi (2,5 godine) i manji broj zaposlenih sudionika u poduzorku onih koji nisu uključeni u analize dovoljno da psihičko zdravlje, ako bi se gledao čitav uzorak, bude niže, pogotovo zato jer su proporcije nezaposlenih i sudionika s osnovnom školom, što su oboje izraženiji rizični faktori za psihičko zdravlje tijekom pandemije (34,35), slične u oba poduzorka.

Čini se da *geekovi* nemaju višu psihološku uznenamrenost niti niže zadovoljstvo životom nego pojedinci iz opće populacije, odnosno čini se da se ne razlikuju ni na jednoj od dimenzija psihičkog zdravlja pretpostavljenih dvojnim modelom. Prema našim saznanjima, ovo je prvo istraživanje koje je na taj način istraživalo psihičko zdravlje ove skupine. Ako pogledamo definiciju *geeka*, ovo nije toliko iznenađujuće – u nju nije uključena ni jedna osobina koju bi općenito mogli smatrati bilo adaptivnom bilo neadaptivnom (3,4,6,7). Stereotipi koji impliciraju lošu snalažljivost *geekova* u stvarnom životu (2,3,4,9) vjerojatno proizlaze iz povjesnog razvoja izraza *geek*, a ne njihovih karakteristika u današnje vrijeme. Ovaj izraz u početku se koristio za pojedince koji su vrlo inteligentni i snalaze se s tehnologijom, ali se ne snalaze u društvu, uglavnom kao suprotnost „cool“ pojedincima koji su bili usredotočeni na fizičke aktivnosti i popularni u društvu (7). Kako je tehnologija postojala sve značajniji dio svakodnevnog života, tako je stručnost u tehnologiji bila sve manje povezana s nižim društvenim statusom (7), što je vjerojatno dovelo do toga da društveni aspekt prestane biti dio definicije *geekova*. Istovremeno, čini se da se definicija proširila u smislu da uključuje i stručnost u drugim područjima osim tehnologije, što se

results is that these analyses were performed on a subsample of geeks. It is hard to ascertain if the mental health of the whole sample would be different from that of the subsample used if we had all the data. We do not know if the age difference (2.5 years) and the smaller number of employed participants (in the sample not included in the analyses) are sufficient to decrease the mental health of the sample as a whole, especially because proportions of those unemployed and with primary school education, as the more pronounced risk factors for mental health during the pandemic (34,35), are similar in both samples.

It seems geeks do not experience more psychological distress nor lower life satisfaction than the general population, i.e., they do not differ in any of the dimensions of mental health suggested by the dual-factor model. To our knowledge, this is the first research to explore the mental health of this group in this way. If we go back to the definition of the geek, this is not surprising – it does not include any characteristic that could be considered either generally adaptive or maladaptive (3,4,6,7). The stereotypes regarding the low functionality of geeks in real life (2,3,4,9) probably stem from the historical evolution of the term, and not their characteristics nowadays. The term *geek* was at first used to describe individuals who are highly intelligent and good with technology, but socially awkward, mostly as a contrast to “cool” individuals focused on physical activities and popular (7). As technology became a bigger part of everyday life, proficiency in using technology was less and less related with lower social status (7), which probably led to the social aspect being dropped from the definition of what a geek is. At the same time, it seems that the definition has widened to include proficiency in other fields besides technology, which is probably related to close relationships of technology and science fiction and the historical development of the science

vjerojatno može objasniti bliskošću tehnologije i znanstvene fantastike i s tim povezanim povijesnim razvojem žanrova znanstvene fantastike i fantastike i *geek* konvencija (9,36).

Psihičko zdravlje i motivacija za *geek* aktivnosti

Pokazano je da, u prosjeku, *geekovi* nemaju lošije psihičko zdravlje. Međutim, to ne znači da ne postoje *geekovi* koji nemaju slabije psihičko zdravlje, bilo da je to manje zadovoljstvo životom, više simptoma psihičkih poremećaja ili oboje. Sljedeće je provjereno postoje li neke karakteristike *geek* aktivnosti koje možemo smatrati rizičnim ili zaštitnim faktorom za psihičko zdravlje, konkretnije, motivacije za *geek* aktivnosti. U skladu s očekivanjima, što su *geekovi* osjećali da su njihove *geek* aktivnosti prihvaćenije, to su osjećali manju uzinemirenost i više zadovoljstvo. Ovo bi moglo ukazivati da je njihova potreba za pripadanjem zadovoljena uključivanjem u *geek* aktivnosti (3), što onda dovodi do boljeg psihičkog zdravlja, posebice do većeg zadovoljstva životom. Naša očekivanja su djelomično potvrđena i za narcizam s obzirom da su grandiozni narcizam i osjećaj povlaštenosti bili povezani s višom depresijom i nižim zadovoljstvom životom. Međutim, nisu predviđali anksioznost i stres. Brailovskaia i sur. (37) su već ranije utvrdili da narcizam nedoslijedno korelira s depresijom, anksioznosću i stresom u nekliničkim uzorcima te možda postojanje tih korelacija ovisi o uzorku o kojem je riječ. Rezultati na ovom uzorku *geekova* su u skladu s hipotezom migracije u izmišljeni svijet po kojoj su razlozi za migraciju grandiozna slika o sebi i povlašteni status koji osoba smatra da zaslužuje. Oni također pokazuju da osuđenost potrebe za postignućem u stvarnom svijetu dovodi do snažnog raspoloženja, ali ne nužno i do anksioznosti i stresa, što bi mogao biti pokazatelj osjećaja bespomoćnosti u vezi stvarnog svijeta.

Izraženija uključenost u kreativne aktivnosti neočekivano je bila povezana s višim razinama

fiction and fantasy genre and geek conventions (9,36).

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Mental health and motivations for geek activities

We have shown that, on average, geeks do not have worse mental health. However, that does not mean that there are no geeks with mental health issues, whether it is low satisfaction with life, more psychological distress, or both. What we wanted to see next is if there were some aspects of geek activities that could be considered as risk or protective factors for mental health, namely the motivations for geek activities. As expected, the more accepted the geeks feel in their geek activity, the less distress and more life satisfaction they feel. This could indicate that their need for belonging is fulfilled by engagement in geek activities (3), which leads to better mental health, and especially to greater life satisfaction. Our expectations were partly confirmed for narcissism, with grandiose narcissism and entitlement being related to higher depression and lower life satisfaction. However, they were not predictive for anxiety and stress. Brailovskaia et al. (37) found inconsistent relations between narcissism and depression, anxiety, and stress scores in non-clinical samples, so maybe the existence of these relations depends on the sample in question. The results in the geek sample are in accordance with the great fantasy migration hypothesis – the suggested reasons for the migration are the grandiose sense of self and the praise individuals think themselves entitled to. It also indicates that the thwarting of the need for accomplishment in the real world leads to lower mood, but not necessarily a rise in anxiety and stress, which might be indicative of the feeling of helplessness concerning the real world.

Most surprisingly, higher engagement in creative activities was related to higher psycho-

psihološke uznemirenosti. Ako su kreativne aktivnosti pokazatelj aktivne uključenosti, to bi značilo da je psihološka uznemirenost to viša što je želja za aktivnom uključenosti jača. U tom slučaju očekivali bismo da su i drugi konstrukti koji bi trebali biti indikativni za ovu želju, kao što su traženje uzbudjenja, potreba za kognicijom i otvorenost k iskustvu (3), također povezani s psihičkim zdravljem. Prema našim saznanjima, ne postoje podatci o *geekovima*, ali u uzorcima pojedinaca koji nisu *geekovi* povezanosti ovih konstrukata i psihičkog zdravlja variraju od pozitivnih do negativnih, uključujući i neznačajne (38,39,40), što ni podržava ni osporava hipotezu o povezanosti želje za aktivnom uključenosti i psihičkog zdravlja. Također je moguće da kreativne aktivnosti nisu dobar pokazatelj želje za aktivnom uključenosti. Vrstu kreativnosti koja je izmjerena u ovom istraživanju istraživači nazivaju mala-k ili svakodnevna kreativnost (41), i ona u prosjeku ima neznačajnu povezanost s psihopatologijom prema meta-analizi Paek i sur. (42). U toj meta-analizi je također pokazano da povezanost kreativnosti i psihopatologije varira od pozitivne do negativne ovisno o različitim faktorima, uključujući vrstu i stupanj izraženosti psihopatologije te način na koji su psihopatologija i kreativnost mjereni. Autori su pretpostavili da tu heterogenost djelomično mogu objasniti modeli koji pretpostavljaju da je ta povezanost nelinearna pri čemu umjerene razine određenih simptoma odgovaraju najvišim razinama kreativnosti. Ovo bi moglo objasniti i nalaze ovog istraživanja *geekova* s obzirom da psihološka uznemirenost u ovom istraživanju uglavnom varira od uobičajene do umjerene. Također je zanimljivo uzeti u obzir i različite motive u podlozi kreativnosti – to su uživanje, izražavanje, izazov, suočavanje, prosocijalnost, društveni motivi, materijalni motivi, prepozнатost i obaveza, pri čemu je uživanje obično najizraženiji motiv (43). Međutim, ako je sudionicima u ovom istraživanju glavni motiv bio suočavanje, onda bi kreativne aktivnosti mogle biti pokazatelj izloženosti stresu, koji bi onda mogao dovesti do psihološke uznemirenosti.

logical distress. If creative activities are an indicator of the desire for engagement, this would mean that the stronger the desire for engagement, the more psychological distress one experiences. If so, we would expect other constructs that should be indicative of this desire, like sensation seeking, need for cognition, and openness to experience (3), to be related to mental health as well. There are no data on geeks (to my knowledge), but in non-geek samples the correlations of these constructs and mental health varied from positive to negative, including non-significant (38,39,40), which neither supports nor disproves the relation of the desire for engagement and mental health. It might also be that creative activities are not a good indicator of desire for engagement. The type of creativity measured here is what researchers define as little-c or everyday creativity (41), which on average has a non-significant correlation with psychopathology, as established in the meta-analysis by Paek et al.(42). The same study also established that this correlation of creativity and psychopathology varies from positive to negative, depending on multiple factors, like type and severity of mental illness, and the way psychopathology and creativity are measured. The authors proposed that this heterogeneity could be partly explained by models that suppose that this relationship is non-linear, with moderate levels of certain symptoms corresponding to highest creativity. This might be the case in our sample, given that distress levels in our sample mostly vary from normal to moderate. It is also interesting to take into account the possible motives for creativity - enjoyment, expression, challenge, coping, prosocial, social, material, recognition, and duty - out of which enjoyment is usually the strongest (43). However, if for our participants the motive was coping, then creative activities might also be an indicator of individuals being exposed to stress, which could lead to psychological distress, if the coping is not effective. This is

sti, ako suočavanje nije uspješno. Ovu hipotezu podržava to što je najjača povezanost kreativnih aktivnosti bila upravo sa stresom. Ove hipoteze je potrebno dalje provjeriti. Međutim, čak i ako su točne, nejasno je jesu li *geekovi* koristili kreativne aktivnosti kao metodu suočavanja sa stresorima povezanim s pandemijom u čemu su bili neuspješni zbog pandemije, ili je to njihov uobičajeni (ne)uspješni način suočavanja sa stresom.

Dakle, ako je motivacija za uključenost u *geek* aktivnosti potreba za pripadanjem, *geek* aktivnosti mogu biti zaštitni faktor, pogotovo za zadovoljstvo životom. Međutim, ako je motivacija migracija u izmišljeni svijet, *geek* aktivnosti mogu biti faktor rizika za oba aspekta mentalnog zdravlja. Slično možda vrijedi i za kreativne aktivnosti i aktivnu uključenost, no to nije sasvim razjašnjeno u ovom istraživanju. Količina objašnjene varijance nije bila velika ni za jedan od pokazatelja psihičkog zdravlja, što ukazuje da *geek* aktivnosti doprinose psihičkom zdravlju, ali ne previše. Ovo nije iznenadujuće s obzirom na složenu prirodu psihičkog zdravlja, a pogotovo s obzirom na kontekst pandemije u kojem su prikupljeni podaci koji je već sam po sebi imao veliki utjecaj na psihičko zdravlje (17,32).

Također je zanimljivo primjetiti da prihvaćenost najviše doprinosi zadovoljstvu životom, dok kreativne aktivnosti najviše doprinosi psihološkoj uznemirenosti, što ukazuje na to da različite motivacije za *geek* aktivnosti različito doprinose različitim aspektima psihičkog zdravlja, odnosno i kvaliteti života i prisutnosti odnosno odsutnosti simptoma psihičkih poremećaja. Naši rezultati tako daju daljnju potporu dvojnom modelu psihičkog zdravlja potvrđujući dvije njegove pretpostavke. S jedne strane potvrđuju da su predložene dimenzije djelomično preklapajuće s obzirom da su neki prediktori zajednički (prihvaćenost i grandiozni narcizam). S druge strane, potvrđuju da se ove dimenzije opravdano razdvajaju s obzirom da su neki prediktori jedinstveni za pojedine dimenzije (kreativne aktivnosti i osjećaj povlaštenosti).

supported by our data that indicate that the strongest relation is with stress. These hypotheses need further verification. However, even if they were true, it is unclear whether geeks used creative activities as a coping mechanism to deal with the pandemic-related stressors and were unsuccessful due to the pandemic, or if they are their usual (un)successful coping mechanism.

Therefore, if the motivation for geek engagement is the need for belongingness, geek activities may be a protective factor, especially regarding life satisfaction. However, if the motivation is the migration into the fantasy world, geek activities can be a risk factor for both aspects of mental health. Similar might be valid for creative activities and desire for engagement, but this remained unclear in our data. The amount of variance explained was not large for any of the mental health indicators, indicating that geek activities contribute to mental health, but not strongly. This is not surprising, given the complexity of mental health, and even more so given the pandemic context that itself had a great influence on mental health (17,32).

It is also interesting to note that acceptance contributes most strongly to life satisfaction, while creative activities contribute most to psychological distress, indicating that different motivations for geek activities contribute to different aspect of mental health, i.e., both to quality of life and (absence of) mental illness symptoms. Our results thus support the dual-factor model of mental health by endorsing two of its assumptions. First, the existence of common predictors (acceptance and grandiose narcissism supports the assumption that the suggested dimensions of mental health partly overlap. On the other hand, the existence of predictors unique for each of the dimensions (creative activities and entitlement, Figure 1) support the assumption that these mental health dimensions are separate constructs.

Ograničenja i implikacije

S obzirom na specifični kontekst pandemije moguće je da je općeprisutno pogoršanje psihičkog zdravlja (35) prikrilo razlike koje inače postoje između *geekova* i ostalih. Međutim, to bi bilo proturječno nalazima istraživanja koji pokazuju da je kod osoba kod kojih je psihičko zdravlje bilo lošije prije pandemije povećana vjerojatnost daljnog pogoršanja psihičkog zdravlja zbog pandemije (33). U tom slučaju ne bismo očekivali da razlike nestanu već da postanu još izraženije. Neke od tipičnih *geek* aktivnosti bile su dostupne tijekom pandemije, kao što su računalne igre, te je prilika da se tijekom pandemije u većoj mjeri bave njima važnim aktivnostima kod dijela *geekova* mogla dovesti do viših razina mentalnog zdravlja u obliku povećanja kvalitete života, ili djelovati kao zaštitni faktor te umanjiti psihološku uznenamirenost. No u nekim od *geek* aktivnosti, kao što su društvene igre i igre igranja uloga (RPG), *geekovi* su bili sprječeni sudjelovati. Moguće je da zbog toga nije došlo do razlikovanja od opće populacije, u kojoj su vjerojatno također postojali pojedinci kojima su aktivnosti koje su mogle doprinijeti psihičkom zdravlju bile dostupne, kao i oni kojima nisu bile dostupne. No također je moguće da je mogućnost bavljenja željenim interesima kod *geekova* prikrila razliku koja inače postoji između *geekova* i opće populacije. Stoga bi ipak zaključke ovog istraživanja o sličnosti trebalo provjeriti izvan konteksta pandemije te uzeti u obzir tip aktivnosti. Iako naše istraživanje ukazuje da *geekovi* nisu skloniji psihološkoj uznenamirenosti, naši zaključci su ograničeni izborom mjera simptoma psihičkih poremećaja. S obzirom na uobičajene stereotipe o *geekovima* možda bi trebalo detaljnije istražiti socijalnu anksioznost kao mogući izvor razlika u psihičkom zdravlju između *geekova* i opće populacije, što bi svakako trebalo detaljnije istražiti. Međutim, s obzirom na visoki komorbiditet socijalne anksioznosti s depresijom i anksioznošću (44), očekivali bismo da u slučaju da je socijalna

Limitations and implications

Because of the specific context of the pandemic, there is a possibility that the general degradation in mental health (35) has hidden the usually existing differences between geeks and others. However, this would be in contradiction with the research indicating that those with previous mental health problems are at a special risk for mental health issues because of the pandemic (33). In that case, we would not expect the difference to disappear, but maybe even get larger. Some of the typical geek activities were available during the pandemic, such as computer games, so maybe the pandemic enabled some of the participants to engage in activities they find important more than usual, thus leading to greater quality of life and higher positive mental health during the pandemic or acting as a protective factor and lowering psychological distress. On the other hand, some of the geek activities, like board games and role-playing games (RPG), were not available due to the pandemic. This might have led to the similarity between the geeks and the general population, since the general population also probably included individuals to whom the activities that they find beneficial to their mental health were available during the pandemic, and individuals to whom they were not available. However, it is also possible that the possibility of geeks to engage in preferred activities decreased the otherwise existing difference in mental health between geeks and general population to non-significant. Therefore, the presented conclusions on the similarity should be tested outside the context of the pandemic while taking into account the type of activity. While our research indicates geeks are not more prone to psychological distress, our data is limited by the choice of measures of psychological distress. Given the stereotypes regarding geeks, maybe social anxiety would be another candidate for discerning geeks from general population in

anksioznost stvarno češća kod *geekova*, razlike u odnosu na opću populaciju dobijemo već u mjerama korištenim u ovom istraživanju.

U ovom istraživanju kao pokazatelj svake od predloženih motivacija za *geek* aktivnosti korišten je jedan konstrukt. U budućim istraživanjima bilo bi korisno provjeriti konvergiraju li mjere različitih konstrukata, pogotovo uvezvi u obzir da su ove hipoteze o *geek* motivaciji relativno nove i ne previše provjerene (3). Ovo istraživanje pokazuje da je to posebno bitno za aktivnu uključenost s obzirom da je jedno od mogućih objašnjenja neočekivanih rezultata u vezi kreativnih aktivnosti to da one nisu dobar pokazatelj želje za aktivnom uključenosti. Naši zaključci su osim toga ograničeni i niskom pouzdanošću nekih od ovih pokazatelja, odnosno u budućim istraživanjima bilo bi dobro koristiti druge mjere s boljim psihometrijskim karakteristikama.

Ovo istraživanje pokazuje da pojedinci koji se intenzivno bave izmišljenim svjetovima i drugim interesima vezanim za pop kulturu nemaju nužno više simptoma psihičkih poremećaja ili manje zadovoljstvo životom. Stoga, pri komunikaciji s takvim pojedincima, bilo u profesionalnom ili svakodnevnom okruženju, treba biti osjetljiv na vlastite pristranosti koje bi mogle biti rezultat stereotipa. Ako smo pak u prilici pomoći *geekovima* koji traže pomoć u vezi svog psihičkog zdravlja, raspitivanje o njihovim *geek* aktivnostima može biti korisno pri pružanju podrške (45). Ako se želimo usmjeriti na poboljšanje kvalitete života možemo im predložiti da potraže druge pojedince sa sličnim interesima koji bi ih prihvatali čime bismo ih potaknuli na zadovoljenje potrebe za pripadanjem. Međutim, ako postoje naznake grandiozne slike o sebi ili osjećaja povlaštenosti ili neki drugi pokazatelj da su *geek* aktivnosti neki oblik eskapizma, takve pojedince bilo bi dobro potaknuti na suočavanje s problemima u stvarnom svijetu. Njihov interes za izmišljene svjetove može pomoći pri ostvarivanju kontakta i suočavanju

terms of mental health. This should be further explored. However, given the high comorbidity of social anxiety with depression and anxiety (44), if social anxiety had a higher prevalence among geeks, we would expect some differences even in the measures of psychological distress we used.

In this study, each of the suggested motivations for geek activities was indicated by only one construct. Future research would profit in testing the convergence of multiple indicators, especially given the novelty of these hypotheses of geek motivation (3). Our study indicates this issue is particularly relevant for the desire for engagement, since one of the reasons for unexpected findings regarding creative activities could be that they are not a good indicator of desire for engagement. Our conclusions are further limited by low reliability of some of these indicators, so other measures with better psychometric qualities are needed in future research.

This study has shown that individuals who are heavily invested in invented worlds and other pop culture related interests do not necessarily have more mental health issues or lower life satisfaction. Therefore, when interacting with them, either professionally or personally, one should be careful not to be biased by the stereotypes. However, if one encounters a geek seeking support regarding their mental health, further inquiry about their geek activities might be informative in assisting them (45). In order to strengthen the quality of life, finding others with similar interests who would accept them could be suggested, thus helping them satisfy their need for belongingness. However, if there are symptoms of grandiose sense of self or entitlement, or other indicators that geek activities might be a form of escapism, they should be supported in coping with problems outside the fantasy world. Their interest in the invented worlds might be used to help them deal with real-life issues and they might be prone to ac-

s izazovima stvarnog svijeta te bi možda bili skloni prihvatići terapijske pristupe kao što su superherojska ili *geek* terapija (46,47,48).

cepting therapeutical approaches like superhero or geek therapy (46,47,48).

ZAKLJUČCI

Ovo istraživanje pokazalo je da *geekovi* u usporedbi s općom populacijom imaju jednake ili nešto niže razine psihološke uznenamirenosti i jednako ili nešto više zadovoljstvo životom. Psihološka uznenamirenost geekova je niža, a zadovoljstvo životom više, ako imaju osjećaj da bliske osobe prihvataju njihove *geek* aktivnosti i ako imaju niže razine grandioznog narcizma i osjećaja povlaštenosti, a psihološka uznenamirenost je viša, ako su više uključeni u kreativne *geek* aktivnosti. Ovo implicira da je potreba za pripadanjem kao motivacija za *geek* aktivnosti zaštitni faktor, a da je migracija u izmišljeni svijet kao motivacija za *geek* aktivnosti faktor rizika za psihičko zdravlje.

ZAHVALA

Autorica bi željela zahvaliti suvoditeljima i sudionicima 30. psihologičke ljetne škole na suradnji koja je omogućila ovo istraživanje.

CONCLUSION

This study indicates that geeks, compared to the general population, have the same or slightly lower levels of psychological distress and the same or slightly higher life satisfaction. Psychological distress of geeks is lower and life satisfaction higher if they feel those close to them accept their geek activities and if they have lower levels of grandiose narcissism and entitlement, and psychological distress higher if they engage in more creative geek activities. This implies that the need for belongingness as a motivation for geek activities is a protective factor and that the migration to the fantasy world as a motivation for geek activities is a risk factor for mental health.

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Odnos između percepcije situacije, anksioznosti i nekih aspekata ponašanja povezanih s korištenjem digitalne tehnologije tijekom pandemije bolesti COVID-19

/ Relationship Between Situation Perception, Anxiety and some Aspects of Cyber Behaviour During the COVID-19 Pandemic

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Pandemija koronavirusa nezaobilazna je tema današnjice kako u medijima, tako u svakodnevnim razgovorima svakoga od nas. Na samom početku pandemija je predstavljala svojevrsni akutni stres i činilo se da će brzo proći. Međutim, odmakom vremena pretvorila se u kroničan stres. Kao i svaki drugi kroničan stres, ova je pandemija ostavila, i još uvijek ostavlja, značajne posljedice na naše mentalno zdravlje. U skladu s time ciljevi ovoga rada bili su provjeriti povezanost između percepcije situacije (procjene ozbiljnosti i ugroženosti), anksioznosti i nekih aspekata ponašanja povezanih s korištenjem digitalne tehnologije - nomofobije i kiberohondrije. Istraživanje je provedeno u dvije točke mjerjenja (u prvom i četvrtom tjednu od početka pandemije, točnije od 13. do 20. ožujka i 3. do 10. travnja 2020.) na uzorku studenata i studentica u Republici Hrvatskoj ($N_1=358$; $N_2=196$). Za potrebe ovoga istraživanja korišteni su sljedeći mjerni instrumenti: *Ljestvica anksioznosti, depresivnosti i stresa, Upitnik nomofobije i Kratka ljestvica kiberohondrije*. Ovim je istraživanjem utvrđeno da pojedinci koji percipiraju svoju ugroženost većom i situaciju ozbiljnijom doživljavaju više razine anksioznosti, nomofobije i kiberohondrije. Shodno tome, rezultati ukazuju kako anksiozniji studenti doživljavaju i više razine nomofobije, odnosno kiberohondrije. Osim toga, utvrđena je značajna pozitivna povezanost nomofobije i kiberohondrije. Provjerom uloge anksioznosti u objašnjenju povezanosti između percepcije situacije i ponašanja povezanih s korištenjem digitalne tehnologije, pokazalo se da je anksioznost djelomični medijator kada je ishodišna varijabla nomofobia, a potpuni medijator u modelu u kojem je kiberohondrija ishodišna varijabla.

/The coronavirus pandemic is an inevitable topic nowadays, both in the media and our everyday conversations. At the very beginning, the pandemic was a kind of acute stress and it seemed that it would pass quickly. However, over time, it turned into chronic stress. Like any other chronic stress, this pandemic has left, and is still leaving significant consequences for mental health. Accordingly, the objectives of this study were to examine the relationship between situation perception (severity and vulnerability), anxiety, and some aspects of cyber behaviour – nomophobia and cyberchondria. The research was conducted of two measurement points (in the first and fourth week since the start of the pandemic, more precisely from March 13 to 20 and April 3 to 10, 2020), on a sample of male and female students in the Republic of Croatia ($N_1=358$; $N_2=196$). For the purposes of this study, the following measurement instruments were used: The Depression Anxiety Stress Scale, Nomophobia Questionnaire, and Short Cyberchondria Scale. Results of the study suggest those individuals who perceive their vulnerability as greater and the situation as more serious experience higher levels of anxiety, nomophobia, and cyberchondria. Furthermore, the results indicate that students who experience more anxiety symptoms also experience higher levels of nomophobia, or cyberchondria. By examining the role of anxiety in explaining the connection between the perception of the situation and behaviour related to the use of digital technology, it was shown that anxiety is a partial mediator when the source variable is nomophobia, and a complete mediator in the model where cyberchondria is the source variable.

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UVOD

Pandemija koronavirusa utječe na život cijeloga čovječanstva. Posljednjih mjeseci svjedočili smo teškoj i neizvjesnoj borbi protiv virusa koji predstavlja prijetnju fizičkom zdravlju i psihičkom zdravlju pojedinca i zajednice. Najčešće psihološke posljedice poznate iz dosadašnjih epidemija su osjećaj nesigurnosti i neizvjesnosti, zabrinutost za vlastito i zdravlje bližnjih, strah zbog odvojenosti od obitelji, strah potaknut širenjem nepouzdanih i lažnih informacija (1). Međutim, čini se kako za razliku od ranijih pandemija s kojima se svijet suočavao, pandemiju COVID-19 karakterizira korištenje digitalnih tehnologija, a posebno ekscesivno pretraživanje zdravstvenih informacija. Događaji poput ovoga od pojedinca iziskuju brzu prilagodbu i stoga mogu biti značajan izvor stresa i tjeskobe. Prema rezultatima dosadašnjih istraživanja osobito je u porastu prevalencija mentalnih teškoća kod mlađih odraslih osoba (3). U spomenutoj se životnoj dobi i inače razvija većina psihičkih poremećaja te se pojedinci suočavaju s vrlo specifičnim stresorima (3). Za početak, promjene u svakodnevnom akademskom funkciranju od studenata su iziskivale značajne napore i prilagodbu. Odgađanje važnih životnih događaja u ovom razdoblju te nedostatak druženja zasigurno su bili izvori stresa i frustracija (3). Međutim, s druge strane, visoka razina informatičke pismenosti kao i dostupnost digitalne tehnologije i svih nje-

INTRODUCTION

The coronavirus pandemic affects the lives of all mankind. In recent months, we have witnessed a difficult and uncertain struggle against the virus that threatens the physical and psychological health of individuals and communities. The most common psychological consequences known from previous epidemics are a sense of insecurity and uncertainty, concern for one's own health and the health of loved ones, fear of separation from family, and fear of the spread of unreliable and false information (1). However, it seems that the COVID-19 pandemic, unlike previous pandemics the world has faced, is characterized by the use of digital technologies and, in particular, by the excessive search for health information. Events such as these require individuals to adapt quickly and can therefore be a significant source of stress and anxiety. According to the results of previous studies, the prevalence of mental health problems is increasing, especially among younger adults (3). Most mental disorders develop at this age, and individuals face very specific stressors (3). First, changes in academic life require students to make significant efforts and adjustments. The postponement of important life events during this period and the lack of social contacts were certainly a source of stress and frustration (3). On the other hand, the high level of literacy (IT) and the availability of digital technologies and all their benefits made it easier for students to live in (self-)isolation. One of the pronounced undesirable consequences of

nih prednosti i olakšala je studentima život u (samo)izolaciji. Jedna od izraženih neželjenih posljedica u uvjetima izolacije je preplavljenost informacijama s društvenih medija koje koronavirus ističu kao jedinstvenu, globalnu prijetnju šireći pritom katastrofične i često lažne informacije o bolesti COVID-19 (4,5). Nadalje, rezultati nekih istraživanja pokazuju da konstantna izloženost ovakvim informacijama vodi ka povećanju razina anksioznosti i stresa koje mogu imati značajne negativne efekte na cjelokupnu psihofizičku dobrobit (6,7).

Važnost digitalne tehnologije za vrijeme koronakrize gotovo da je neupitna. Može se reći da ova pandemija ima za posljedicu značajno ubrzanje tehnološkog razvoja. Digitalna tehnologija omogućila je funkcioniranje u brojnim aspektima života: održavanje socijalnih kontakata s bližnjima, praćenje nastave i ispunjavanje akademskih i poslovnih obveza i sl. Osim toga, sve važne informacije vezane za koronakrizu distribuiraju se upravo putem digitalne tehnologije i medija. Zahvaljujući sve boljim performansama i mnoštvu aplikacija na pametnim telefonima moguće je održati socijalne kontakte i bliskost s drugima, čak i u razdobljima kada je nužno održavati fizičku distancu. Međutim, važno je istaknuti i potencijalne negativne aspekte digitalne tehnologije. Jedan od njih je i nomofobia, odnosno fobija koja se odnosi na strah od nedostupnosti virtualne komunikacije kod osoba koje imaju naviku korištenja pametnih telefona (8). Rezultati istraživanja novijeg datuma ukazuju da ova moderna fobija obuhvaća niz psiholoških i bihevioralnih obrazaca povezanih s korištenjem pametnih telefona (9). Tipično nomofobično ponašanje uključuje provođenje značajne količine vremena u korištenju pametnih telefona, osjećaje anksioznosti i tjeskobe na samu pomisao o nedostupnosti pametnog telefona i/ili internetske povezanosti, repetitivno i učestalo provjeravanje potencijalno pristiglih obavijesti i poruka, te stalnu dostupnost i držanje pametnog telefona u vidnom polju (10).

this isolation is the inundation with information from social media, which present the coronavirus as a unique, global threat while spreading disastrous and often false information about the COVID-19 disease (4,5). In addition, the results of some studies show that constant exposure to this type of information leads to increased levels of anxiety and stress, which can have significant negative effects on overall psychophysical well-being (6,7).

The importance of digital technology during the corona crisis is almost undeniable. It can be said that this pandemic led to a significant acceleration of technological development. Digital technology has made it possible to function in many areas of life, i.e., maintaining social contact with loved ones, participating in classes and fulfilling academic and business obligations, etc. In addition, all important information about the corona crisis is disseminated precisely through digital technology and the media. Thanks to the increasingly powerful and numerous applications on smartphones, it is possible to maintain social contacts and proximity to other people, even at times when physical distance is required. However, it is important to point out the possible negative aspects of digital technology. One of them is nomophobia, which is a phobia that refers to the fear of unavailability of virtual communication in people who have the habit of using smartphones (8). Recent research suggests that this modern phobia encompasses a range of psychological and behavioural patterns related to smartphone use (9). Typical nomophobic behaviours include spending a great deal of time on the smartphone, experiencing anxiety and worry at the mere thought of not having a smartphone and/or Internet connection, repeatedly and frequently checking potentially incoming notifications and messages, and keeping the smartphone constantly available and in sight. (10). Because the nature of nomophobia has not yet been adequately explored, researchers studying it generally hold one of two predominant views. According to one point of view, nomophobia is a specific phobia

Budući da je priroda nomofobije još uvijek nedovoljno istražena, znanstvenici koji se bave njenim proučavanjem najčešće se priklanjaju jednom od dvaju dominantnih stajališta. Prema jednom je stajalištu nomofobia specifična fobija koja se najčešće javlja u komorbiditetu s drugim maladaptivnim obrascima ponašanja i doživljavanja čije je temeljno obilježje pretjerana zabrinutost i strah u situacijama onemogućene virtualne komunikacije (10). S druge strane, prema suprotnom stajalištu, nomofobia se opisuje kao skupina pokazatelja ili simptoma koji se javljaju zbog izostanka ponašanja tipičnog za bihevioralnu ovisnost o internetu (11). Neovisno o stajalištu, znanstvenici se slažu da je veliki problem značajan porast prevalencije nomofobije među mladima. Tome u prilog idu i nalazi istraživanja provedenog na uzorku hrvatskih studenata prema kojima su izraženi simptomi nomofobije praćeni povećanim razinama anksioznosti i stresa (12).

Uz nomofobijsku konstruktu kiberohondrije često je spominjan u kontekstu maladaptivnih obrazaca ponašanja i doživljavanja povezanih s korištenjem interneta. Naime, prema nekim je znanstvenicima internet prvi izvor informacija kada su u pitanju zdravstveni problemi za gotovo 70 % korisnika, budući da su tu informacije brzo dostupne, nisu skupe ili su besplatne, te je anonimnost osigurana (13). Unatoč tome, stručnjaci upozoravaju na opasnosti koje može imati traženje zdravstvenih informacija na internetu. Jedna od osnovnih opasnosti jest nekritičnost pri prosuđivanju valjanosti pretraživanih sadržaja (14). Čak što više, pokazalo se da osobe koje imaju sklonost traženja zdravstvenih informacija na internetu iskazuju visoku razinu povjerenja u pronađene informacije, iako internetske stranice sadržavaju mnoštvo netočnih i nepotpunih informacija (15,16). Tendencija pretraživanja informacija o zdravlju, te izloženost stručnoj medicinskoj terminologiji, zajedno sa zakonitostima funkciranja internetskih stranica (broj klikova određuje rang

that usually occurs in conjunction with other maladaptive patterns of behaviour and experience, and its basic characteristic is excessive apprehension and anxiety in situations involving disabled virtual communication (10). According to the opposite view, nomophobia is described as a group of indicators or symptoms that occur due to the absence of behaviours typical of an Internet behavioural addiction (11). Regardless of the viewpoint, researchers agree that the major problem is the significant increase in nomophobia among young people. This is supported by the results of a study conducted on a sample of Croatian students, according to which pronounced symptoms of nomophobia are associated with increased levels of anxiety and stress (12).

In addition to nomophobia, the construct of cyberchondria has often been mentioned in the context of maladaptive behavioural patterns and experiences associated with internet use. That is, according to some scientists, the Internet is the first source of information when it comes to health problems for almost 70% of users, since this information is quickly available, not expensive or free, and anonymity is ensured (13). Despite this, experts are increasingly warning of the dangers that searching for health information online can have. One of the main dangers is the lack of criticism when judging the validity of searched content (14). Moreover, people who tend to seek health information on the Internet show a high level of confidence in the information found, even though the website contains plenty of inaccurate and incomplete information (15,16). The tendency to search for information about health status or observed symptoms and exposure to complex medical terminology, together with the laws of the website (number of clicks determines the ranking of the site) often lead to self-diagnosis of disease and excessive health concerns, i.e., cyberchondria. Given that the nature of cyberchondria is still relatively insufficiently explored, two dominant views have been identified so far. According to one, cyberchondria is a modern version of hypochondria,

stranice) često dovode do samodijagnosticiranja bolesti i pretjerane zabrinutosti za zdravlje, tj. kiberohondrije. S obzirom na to da je priroda kiberohondrije još uvijek relativno nedovoljno istražena, za sada se prepoznaju dva dominanta stajališta. Prema jednom kiberohondrija je moderna inačica hipohondrije, dok je prema drugom ona novi psihički poremećaj (17). U definicijama kiberohondrije znanstvenici najčešće navode dvije ključne karakteristike: pretjerano pretraživanje informacija na internetu i neugodno emocionalno stanje koje prati ovu bihevioralnu komponentu (18). Na tragu navedenog jedna od najcitanijih definicija kiberohondrije jest „pretjerano ili repetitivno pretraživanje zdravstvenih informacija na Internetu potaknuto uznemirenošću i anksioznošću radi zdravlja, a koje samo pojačava takvu uznemirenost i anksioznost“ (18). U literaturi se navodi nekoliko čimbenika koji imaju značajnu ulogu u pojavljivanju, odnosno održavanju ponašanja i doživljavanja tipičnih za kiberohondriju. Neki od najčešće navođenih su zdravstvena anksioznost, netolerancija neizvjesnosti te anksiozna osjetljivost (17). U recentnoj se literaturi sve češće spominje model kiberohondrije specifičan za pandemiju virusa COVID-19 (18). Navedeni model čine ukupno četiri komponente: strah od neizvjesnosti, upitna vjerodostojnost informacija, otežano nošenje s informacijama te neučinkovito traganje za potvrdom sigurnosti. Strah od neizvjesnosti potaknut je činjenicom da se radi o novoj i nepoznatoj situaciji i očekivana je reakcija da ga se pokušava smanjiti traženjem odgovora i informacija *online*. Uz to se onda nadalje veže pitanje vjerodostojnosti dostupnih informacija. Učestalo i pretjerano pretraživanje informacija na internetu povećava vjerojatnost izloženosti netočnim podatcima i tzv. infodemiji, odnosno pandemiji informacija o virusu COVID-19 i pandemiji općenito. Sve navedeno s vremenom vodi k otežanom nošenju i preopterećenosti informacijama. Konstantne promjene, kontradiktorne informacije te zahtjevi za brzom prilagodbom

while according to another it is a completely new mental disorder (17). But either way, in their definitions of cyberchondria, scientists most often cite two key characteristics: excessive search of information on the Internet; this behavioural component is accompanied by an unpleasant emotional state (18). Following this, one of the most cited definitions of cyberchondria is “excessive or repetitive search for health information on the Internet prompted by disquiet and anxiety for health’s sake, which only intensifies such anxiety and worry” (18). The literature lists several factors that play a significant role in the occurrence or maintenance of behaviours and experiences typical of cyberchondria. Some of the most commonly cited are health anxiety, intolerance of uncertainty, and anxious sensitivity (17). The cyberchondria-specific pandemic model of COVID-19 virus has been increasingly mentioned in the recent literature (18). This model consists of four components: fear of uncertainty, questionable credibility of information, difficulty in dealing with information, and ineffective search for security assurance. The novelty and unfamiliarity with the situation we face has contributed, and still is contributing to the fear of uncertainty that we try to reduce by seeking answers and information online. Related to this is the question of the credibility of the available information. Frequent and excessive searching for information on the Internet increases the likelihood of being exposed to false information and the so-called infodemic, i.e., the pandemic of information about the virus COVID-19 and the pandemic in general. All this leads to difficult handling and information overload over time. Constant changes, contradictory information and demands for quick adaptation of the individual to the new situation are factors that greatly contribute to the difficulty of dealing with the information we are exposed to and the growing demand for new “verified information”, or, ultimately, cyberchondria. The last component of the described model is an inefficient online search for security confirmation. Individuals who need a significant amount of

pojedinca na novonastalu situaciju faktori su koji uvelike doprinose otežanom nošenju s informacijama i još većem traženju novih „provjernih informacija“ i kiberohondriji. Posljednja komponenta opisanog modela jest neučinkovito *online* traganje za potvrdom sigurnosti. Pojedinci kojima je potrebna značajna količina informacija kako bi se osjećali sigurnima podložniji su razvoju kiberohondričnih obrazaca ponašanja i doživljavanja, jer najčešće nastavljaju tražiti informacije beskonačno dugo s namom da će kompulzivnom pretragom doći do relevantnih informacija i na taj način umanjiti strah i povećati osjećaj sigurnosti i izvjesnosti. Upravo opisani model najčešće se ostvaruje kod psihološki vulnerabilnijih osoba koje prijetnju doživljavaju vjerojatnjom. Percepcija ozbiljnosti situacije i vlastite ugroženosti rezultira pretraživanjem informacija u svrhu smanjenja neizvjesnosti i straha. U slučaju povećanja prijetnje ili nedostatnih resursa za suočavanje s neizvjesnosti pretraživanje informacija postaje kompulzivno. U obzir se uzimaju sve informacije vezane za COVID-19, neovisno o njihovoj relevantnosti i točnosti. Naponsjetku, nemogućnost pronalaska sigurnih informacija vodi k sve većem osjećaju straha i distresa što zauzvrat jača percepciju prijetnje i neizvjesnosti. Na taj način kiberohondrija podupire samu sebe u začaranom krugu.

Uzimajući u obzir prirodu upravo opisanih konstrukata, ali i karakteristike situacije u kojoj se nalazimo, može se prepostaviti da je anksioznost zajednički nazivnik opisanim konstruktima (12,17). S tom se anksioznosti osobe nose na razne načine, od traženja emocionalne i socijalne podrške učestalom komunikacijom s prijateljima do traženja informacija o simptomima i pokušaja točnog prepoznavanja simptoma COVID-19. Stoga je glavni cilj ovoga istraživanja bio ispitati u uzorku studenata neke obrasce ponašanja povezane s korištenjem digitalne tehnologije u doba neizvjesnosti, izazova i velikih zahtjeva za prilagodbu.

information to feel safe are more susceptible to developing cyberchondrial patterns of behavior and experience because, most often, they continue to search for information indefinitely in the hope that compulsive search will find relevant information to reduce fear and increase a sense of security and certainty. The model just described is most often realized in psychologically more vulnerable people who perceive the threat as more probable. Perceptions of the seriousness of the situation, and then their own threats, result in a search for information in order to reduce uncertainty and fear. In the event of an increase in threat or insufficient resources when dealing with uncertainty, the search for information becomes compulsive. Searching for information is hampered by the questionable credibility of the information and the inability to filter reliable sources. The amount of information also makes online search more difficult, which is becoming increasingly excessive, and all information related to COVID-19 is taken into account, regardless of the relevance and accuracy of that information. Ultimately, the inability to find unambiguous and secure information leads to a growing sense of fear and distress, which in turn, reinforces the perception of threat and uncertainty. In this way, the cyberchondria supports itself in a vicious circle through an uncontrolled search for information potentiated by fear.

Considering the nature of the constructs just described, as well as the characteristics of the situation in which we find ourselves, it can be assumed that fear is their common denominator (12,17). People deal with this anxiety in different ways, from seeking emotional and social support through frequent communication with friends to seeking information about symptoms and trying to accurately identify the symptoms of COVID -19. Therefore, the main objective of this research was to examine, in a sample of undergraduate students, some behavioural patterns related to the use of digital technology in an era of uncertainty, challenges, and great demands for adaptation.

Sudionici

U istraživanju su sudjelovali studenti različitih studijskih usmjerenja s više sveučilišta u Republici Hrvatskoj. Istraživanje je provedeno na istom uzorku u osam mjerena, a od ukupno osam mjerena za potrebe ovoga istraživanja korišteni su podatci iz dvije točke mjerena: u prvom i četvrtom tjednu od početka pandemije (točnije od 13. do 20. ožujka i od 3. do 10. travnja 2020.). U prvom mjerenu bilo je ukupno 358 (80,9 % studentica i 19,12 % studenata) prosječne dobi 23,07 (SD = 2,18). S vremenom je došlo do osipanja uzorka, tako da je u drugom mjerenu bilo 196 sudionika.

Mjerni instrumenti

Sudionici su u početku odgovarali na pitanja o sociodemografskim podatcima (spol, dob, mjesto boravka), a zatim su procjena ozbiljnosti situacije i zdravstvene ugroženosti u kontekstu pandemije koronavirusa ispitane s po jednom česticom. Dodatno, za potrebe ovoga istraživanja korištene su *Ljestvica anksioznosti, depresivnosti i stresa, Upitnik nomofobije i Kratka ljestvica kiberohondrije*.

Ljestvica anksioznosti, depresivnosti i stresa (DASS-21, *Depression Anxiety Stress Scale* (19-21) sastoji se od ukupno 21 čestice podijeljene u 3 podljestvice: depresivnost, anksioznost i stres. Svaka podljestvica sastoji se od 7 čestica, a za potrebe ovoga rada korišteni su rezultati iz podljestvice anksioznosti. Navedena podljestvica obuhvaća procjene koje se odnose na autonomno uzbudjenje i neke fiziološke promjene svojstvene anksioznosti, a primjer čestice je „*Bio/la sam uplašen/na bez opravdanog razloga*.“ Zadatak ispitanika je da na ljestvici od 0 („uopće se nije odnosilo na mene“) do 3 („u potpunosti ili većinu vremena se odnosilo na mene“) procijene u kojoj mjeri tvrdnja opisuje njihove doživljaje u proteklih tjedan dana.

Participants

Students of various disciplines from several Croatian universities participated in the study. The research was conducted on the same sample in eight measurements, and from the total of eight measurements, data from two measurement time points were used for the purposes of this research: in the first and fourth weeks since the beginning of the pandemic, more precisely from March 13 to 20 and from 3 to 10 April 2020). At the first measurement, there were a total of 358 (80.9% female students and 19.12% male students) with a mean age of 23.07 years (SD=2.18). Over time, the sample decreased so that by the second measurement there were 196 participants.

Instruments

In the first part of the questionnaire, participants answered questions about sociodemographic characteristics (gender, age, place of residence), and furthermore they assessed the severity of the situation on a scale from 1 ("not at all serious") to 5 ("very serious") and their own vulnerability in the context of a coronavirus pandemic on a scale from 1 ("not at all endangered") to 5 ("very endangered"). In addition, the following measurement instruments were used for the purposes of this study: The Depression Anxiety Stress Scale, Nomophobia Questionnaire, and Short Cyberchondria Scale.

The Depression Anxiety Stress Scale (DASS-21, The Depression Anxiety Stress Scale (19, 20, 21) consists of a total of 21 items from which a total of three factors are extracted by factor analysis to make up 3 subscales: depression, anxiety and stress. Each subscale consists of 7 items. For the purpose of this study, the results from the anxiety subscale were used. This subscale includes estimates related to autonomic arousal and some physiological changes inherent in anxiety. An example of an item is "I was scared for no good reason." The task of the respondents is to esti-

Ukupan rezultat postignut na cijeloj ljestvici, ali i na pojedinim podljestvcima formiran je kao zbroj procjena na pripadajućim česticama određenih dimenzija. Viši rezultat upućuje na intenzivnije doživljavanje anksioznosti. Cronbach alfa za podljestvicu anksioznosti u ovom istraživanju iznosi $\alpha = .87$.

Upitnik nomofobije (NMP-Q - *Nomophobia Questionnaire* (12,22) samoizvještajna je mjeru kojom se ispituje anksioznost, strah od nedostupnosti pametnih telefona i nemogućnosti komuniciranja putem virtualnih mreža. Sastoji se od 20 čestica koje tvore četiri dimenzije: *nemogućnost pristupa informacijama, odricanje udobnosti, nemogućnost komunikacije i gubitak povezanosti*. Dimenzija *nemogućnost pristupa informacijama* opisuje tjeskobu nastalu kao rezultat nemogućnosti traženja i/ili primanja informacija iz virtualnog svijeta. Dimenzijom *odricanje udobnosti* obuhvaćeni su osjećaji neglazde zbog izloženosti situacijama odricanja pogodnosti pametnih telefona koje reflektiraju snažnu želju za njihovim korištenjem. *Nemogućnost komunikacije* najprezentativnija je faceta nomofobije, kojom se ispituje anksioznost zbog onemogućene virtualne komunikacije, dok se dimenzija *gubitak povezanosti* odnosi na osjećaje potencirane gubitkom sveprisutne povezanosti koju omogućuju pametni telefoni. Primjer čestice iz upitnika je „Osjećao/la bih se tjeskobno jer bi stalna veza s mojom obitelji i prijateljima bila prekinuta.“ Zadatak sudionika jest procijeniti stupanj slaganja s pojedinim tvrdnjama na ljestvici od pet stupnjeva (od 1 „u potpunosti se ne slažem“, do 5 „u potpunosti se slažem“). Ukupan rezultat ispitnika na pojedinoj podljestvici, ali i na cijelom upitniku formiran je kao zbroj procjena na česticama pripadajuće dimenzije. Pri tome viši rezultat na svakoj podljestvici označava višu razinu pojedine dimenzije nomofobije. Pouzdanost unutrašnje konzistencije u ovom istraživanju iznosi $\alpha = .94$ što je komparabilno s nalazima ranijih istraživanja.

mate on a scale from 0 (“not at all about me”) to 3 (“completely or most of the time about me”) to what extent the statement describes the feelings experienced in the past week. The total result achieved on the whole scale, but also on individual subscales is formed as the sum of estimates on the corresponding items of certain dimensions. A higher score indicates a more intense experience of anxiety. Cronbach’s alpha for the anxiety subscale in this study was at $\alpha = .87$.

Nomophobia Questionnaire (12,22) is a self-reported measure that examines anxiety, fear of unavailability of smartphones, and, consequently, the inability to communicate via virtual networks. It consists of a total of twenty items, which form four dimensions: inability to access information, denial of comfort, inability to communicate and loss of connection. Dimension of inability to access information examines the anxiety resulting from the inability to seek and/or receive information from the virtual world. The dimension of denial of comfort examines feelings of discomfort due to exposure to situations of denial of convenience of smartphones that reflect a strong desire to use them. The inability to communicate is the most representative facet of nomophobia, which examines anxiety due to disabled virtual communication, while the dimension of loss of connection refers to feelings potentiated by the loss of omnipresent connectivity provided by smartphones. An example of an item from the questionnaire used was “I would feel anxious because the constant connection with my family and friends would be severed.” The task of the participants is to assess the degree of agreement with individual statements on a five-point scale (from 1 “strongly disagree” to 5 “I completely agree”). The total result of the respondents on each subscale, but also on the entire questionnaire was formed as the sum of estimates on the items of the corresponding dimension. A higher score on each subscale indicates a higher level of a particular dimension of nomophobia. The reliability of the internal consistency (Cronbach alpha) in this study is $\alpha = .94$ which is comparable to the findings of previous studies.

Kratka ljestvica kiberohondrije (SCS – Short Cyberchondria Scale, 23) standardizirana je mjera kojom se ispituju maladaptivni aspekti *online* pretraživanja zdravstvenih informacija. Ljestvica se sastoji od ukupno četiri čestice. Primjer čestice je „*Nakon pretrage zdravstvenih informacija osjećam se frustrirano.*“ Zadatak sudionika jest na ljestvici od 1 („uopće se ne slažem“) do 5 („u potpunosti se slažem“) procijeniti u kojoj se mjeri sadržaj svake tvrdnje odnosi na njihovo ponašanje i doživljavanje. Ukupan rezultat formiran je kao suma procjena na svakoj od čestica, a viši rezultat ukazuje na više razine kiberohondrije. Cronbach alfa koeficijent pouzdanosti u ovom istraživanju iznosi $\alpha = .89$.

Postupak

Provedeno istraživanje dio je longitudinalnog istraživanja u okviru projekta pod nazivom „*Pandemija i ja – Psihološki aspekti krize izazvane pandemijom virusa COVID-19*“ koji je pokrenut na Odjelu za psihologiju Sveučilišta u Zadru 20. ožujka 2020. U ovom radu prikazani su rezultati prikupljeni u dvije od ukupno osam točaka mjerjenja. Prvo mjerjenje provedeno je u tjednu od 13. do 20. ožujka 2020. Taj tjedan bio je obilježen zatvaranjem škola, fakulteta i kafića, a prema podatcima Stožera civilne zaštite RH za sprječavanje zaraze koronavirusom u tom je razdoblju potvrđeno ukupno 128 oboljelih i ni jedna preminula osoba. Druga točka mjerjenja iz koje su korišteni podatci za ovaj rad bila je tri tjedna kasnije, točnije u razdoblju između 03. i 10. travnja 2020. godine, kada je koronavirus „ušao“ u domove za umirovljenike diljem RH. Tada je potvrđeno ukupno 1495 oboljelih osoba, a preminula je 21 osoba.

Distribucija upitnika i prikupljanje podataka provodilo se *online* koristeći *Google forms* platformu, metodom snježne grude, putem društvenih mreža *Facebook*, *Whatsapp* i *Instagram*. Na samom početku svakog upitnika bila je opća uputa s napomenom da je ispunjavanje potpu-

The Short Cyberchondria Scale (23) is a standardized measure that examines the maladaptive aspects of online health information retrieval. The scale consists of a total of four items. An example of an item is “After looking for health information, I feel frustrated.” The task of the participants is to assess the extent to which the content of each statement relates to their behaviour and experience on a scale from 1 (“strongly disagree”) to 5 (“strongly agree”). The total score was formed as the sum of the estimates on each of the items, and the higher score indicates higher levels of cyberchondria. The Cronbach’s alpha reliability coefficient in this study is $\alpha = .89$.

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Procedure

The conducted research is part of a longitudinal project entitled “Pandemic and I - Psychological aspects of the crisis caused by the COVID-19 virus pandemic” started at the beginning of the pandemic outbreak in Croatia, more precisely on March 20, 2020. This paper presents the results collected at two of the total eight measurement points. The first measurement was taken during the week of March 13-20, 2020. This week was characterised by the closure of schools, colleges and cafes. According to the data of the Central Office of the Civil Defence of the Republic of Croatia for the Prevention of Infections with Coronavirus, a total of 128 patients were confirmed during this period and there were no deaths. The second measurement point, whose data were used for this article, was three weeks later, more precisely in the period between April 3 and April 10, 2020, when the coronavirus “invaded” nursing homes throughout the Republic of Croatia and a total of 1,495 ill people were confirmed. and 21 people died.

The distribution of the questionnaire, that is, data collection, was carried out online using the Google forms platform, using the snowball method, to its members support groups via social networks Facebook, WhatsApp, and Instagram. At the very beginning of each questionnaire there was a general instruction for solving all the ques-

no dobrovoljno i anonimno, te da se u svakom trenutku može odustati. Istraživanje je odobrilo Etičko povjerenstvo Odjela za psihologiju Sveučilišta u Zadru (klasifikacijska oznaka br. 602-04/20-01/05).

Statistička obrada podataka

Deskriptivni podatci su prikazani kao prosječne vrijednosti i standardne devijacije (SD), te kao postotci. Za provjeru značajnosti razlika korišten je t-test za nezavisne varijable. Odnos između varijabli provjeren je korištenjem Pearsonovog koeficijenta korelacije, odvojeno za rezultate u svakom mjerenu. Medijacijska uloga anksioznosti u objašnjenju povezanosti percepcije situacije i nomofobije / kiberohon-drije provjerena je metodom struktturnog modeliranja (SEM – *Structural equation modeling*). Navedeni postupak proveden je u programu Mplus 6.12., procjene parametara izvršene su pomoću algoritma maksimalne vjerojatnosti (engl. *Maximum likelihood estimation method*) a matrica sa sirovim podatcima služila je kao ulazna matrica. Ispitani indeksi pristajanja modela podatcima su: 1) *hi-kvadrat test* (χ^2 test) čija bi vrijednost trebala biti statistički neznačajna da bi se moglo reći da model adekvatno pristaje podatcima (24). Budući da ovisi o veličini uzorka, ovaj je pokazatelj statistički značajan čak i ako model dobro pristaje podatcima. Zbog toga se nerijetko računa 2) *omjer vrijednosti χ^2 testa i stupnjeva slobode* koji bi za adekvatan model-fit trebao biti manji od 3; 3) vrijednosti inkrementalnih indeksa CFI (*Comparative Fit Index*) i 4) TLI (*Tucker-Lewis Index*) prema Hu i Bentler (24) trebale bi se kretati iznad .90; dok bi indeks 5) RMSEA (*Root Mean Square Error Approximation*) trebao poprimiti vrijednost manju od .08, kao i indeks 6) SRMR (*Standardized Root Mean Square*) koji bi trebao biti manji ili jednak vrijednosti od .08. Na temelju zadovoljavanja navedenih kriterija u konačnici donosimo odluku o adekvatnom, odnosno neadekvatnom pristajanju modela podatcima.

tionnaires with the remark that filling in is completely voluntary and anonymous, and that they can give up at any time. The entire research was approved by the Ethics Committee of the Department of Psychology, University of Zadar (classification code no. 602-04/20-01/05).

Statistical analysis

Descriptive data are presented as mean values and standard deviations (SD), and as percentages. A t-test for independent variables was used to check the significance of the differences between them. The relationship between the variables was examined using Pearson's correlation coefficient, separately for the results in each measurement. The mediating role of anxiety in explaining the connection between situation perception and nomophobia/cyberchondria was investigated using the method of structural modeling (SEM – *Structural equation modeling*). The mentioned procedure was carried out in the Mplus 6.12 program, parameter estimations were performed using the Maximum likelihood estimation method, and the raw data matrix served as an input matrix. Tested indices of fit of the model to the data are: 1) chi-square test (χ^2 test), the value of which should be statistically insignificant in order to say that the model adequately fits the data (24). Because it depends on the sample size, this indicator is statistically significant even if the model fits the data well. For this reason, it is often calculated 2) the ratio of the χ^2 test value and the degrees of freedom, which should be less than 3 for an adequate model-fit; 3) the values of the incremental indices CFI (*Comparative Fit Index*) and 4) TLI (*Tucker-Lewis Index*) according to Hu and Bentler (24) should be above .90; while index 5) RMSEA (*Root Mean Square Error Approximation*) should take on a value less than .08, as well as index 6) SRMR (*Standardized Root Mean Square*) which should be less than or equal to a value of .08. Based on the satisfaction of the mentioned criteria, we ultimately decide on the adequate or inadequate fit of the model to the data.

Nadalje, jedan od koraka u okviru traženja odgovora na postavljeni istraživački problem odnosi se na izračun razlike hi-kvadrata. Ovim testom dobiva se informacija o tome koji od provjeravanih modela bolje pristaje podatcima. Kada dobiveni rezultat ukazuje na postojanje značajne razlike u pristajanju modela odabire se model s manjom vrijednosti hi kvadrata - model djelomične medijacije. Taj model pretpostavlja postojanje indirektnе veze između varijabli i potrebno je testirati statističku značajnost indirektnih efekata. U okviru navedenog statističkog postupka pomoću tehnike *bootstrap* određene su 95 %-tne i 99 %-tne graniče pouzdanosti indirektnih efekata. Preduvjeti za provedbu navedenih statističkih postupaka provjereni su te nisu dobiveni rezultati koji bi ukazivali na neopravdanost provedbe parametrijskih statističkih postupaka.

Furthermore, one of the steps in the search for an answer to the set research problem refers to the calculation of the chi-squared difference. This test provides information about which of the tested models fits the data better. When the obtained result indicates the existence of a significant difference in model fit, the model with a smaller chi-square value is selected - the partial mediation model. This model assumes the existence of an indirect relationship between the variables, and it is necessary to test the statistical significance of the indirect effects. Confidence limits of indirect effects of 95% and 99% were determined within the framework of the above-mentioned statistical procedure using the bootstrap technique. The prerequisites for the implementation of the mentioned statistical procedures were checked, and no results were obtained that would indicate that the implementation of parametric statistical procedure was unjustified.

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REZULTATI

Uvidom u deskriptivne podatke (tablica 1) može se zaključiti kako su sudionici na samom početku pandemije situaciju procjenjivali vrlo ozbiljnom, ali se pritom nisu osjećali osobno ugroženi. Točnije, čak 79,1 % sudionika tadašnju situaciju procijenilo je ozbiljnom i vrlo ozbiljnom. S druge strane, 64,28 % sudionika izjavilo je da se osjećaju malo ili nimalo ugroženi. Slične procjene dobivene su i tri tjedna kasnije: 61,74 % sudionika situaciju procjenjuje

RESULTS

Looking at the descriptive data (Table 1), it can be concluded that the participants at the very beginning of the pandemic assessed the situation as very serious, but did not feel personally threatened. To be more precise, as many as 79.1% of the participants assessed the current situation as serious or very serious. On the other hand, 64.28% of the participants stated that they felt little or no threat. Similar assessments were obtained three weeks later: 61.74% of participants assessed the

TABLICA 1. Deskriptivni pokazatelji za procjenu ozbiljnosti i ugroženosti, anksioznosti, nomofobije i kiberohondrije
(1. mjerjenje $N_1=358$; 2. mjerjenje $N_2=196$)

TABLE 1. Descriptive indicators for assessing severity and vulnerability, anxiety, nomophobia and cyberchondria
(1. measurement; $N_1=358$; 2. measurement; $N_2=196$)

	M ₁	M ₂	SD ₁	SD ₂	Raspon ₁	Raspon ₂
Percipirana ozbiljnost situacije / Perceived severity of the situation	4.25	3.71	0.76	0.91	2-5	1-5
Percipirana ugroženost / Perceived vulnerability	2.12	2.13	0.92	0.91	1-5	1-5
Anksioznost / Anxiety	3.20	2.37	4.12	3.65	0-20	0-18
Nomofobija / Nomophobia	66.92		15.69		20-99	
Kiberohondrija / Cyberchondria		7.92		4.12		4-20

ozbiljnom i vrlo ozbiljnom, a 69,39 % osjećalo se malo ili nimalo ugroženo.

Testirana je i značajnost razlike u percipiranoj ozbiljnosti situacije i ugroženosti u navedene dvije točke mjerjenja i pokazalo se da postoji statistički značajna razlika u prosječnim procjenama percipirane ozbiljnosti situacije ($t = 6,39$; $df = 195$, $p < 0,01$): sudionici su procjenjivali situaciju u prvom mjerenu ozbilnjom nego u drugom mjerenu. S druge strane, u oba mjerena sudionici su osjećali da je njihovo zdravlje podjednako ugroženo, tj. nije utvrđena statistički značajna razlika u percipiranoj ugroženosti ($t = 0,38$, $df = 195$, $p > 0,70$) između dva mjerena.

Uvidom u izračunate koeficijente korelacije (tablica 2 i tablica 3) može se konstatirati kako je percipirana ozbiljnost situacije pozitivno povezana s percipiranom ugroženosti u oba mjerena: studenti koji percipiraju situaciju ozbilnjom ujedno procjenjuju i veću ugroženost. U drugom, ali ne i u prvom mjerenu (tablica 3) utvrđene su pozitivne povezanosti percipirane

situation as serious or very serious, and 69.39% felt little or no threat.

The significance of differences in the perceived severity of the situation, and vulnerability at different time points during the pandemic, were also tested, and it was found that there was a statistically significant difference in the perceived severity of the situation ($t = 6.39$, $df = 195$, $p < 0.01$). In the first measurement participants assessed the situation more seriously than in the second measurement. On the other hand, no significant difference in perceived vulnerability ($t = 0.38$, $df = 195$, $p > 0.70$) was found between the two measurements.

Through insight into the calculated Pearson correlation coefficients shown in Table 2 and 3, it can be concluded that the perceived severity of the situation is positively related to the perceived vulnerability. This means that students who perceived the situation as more serious also assessed greater vulnerability. In the second measurement (Table 3), positive correlations were found between the perceived severity of the situation and anxiety, which means that individuals who perceived their own vulnerability were more likely to experience

TABLICA 2. Pearsonovi koeficijenti povezanosti između procjene ozbiljnosti situacije i ugroženosti, anksioznosti i nomofobije (N=358) prvo mjerjenje

TABLE 2. Pearson's correlation coefficients between assessment of the severity of the situation and vulnerability, anxiety, and nomophobia (N=358)

	1	2	3	4
1 Percipirana ozbiljnost situacije / Perceived severity of the situation	-	.23*	.04	.09
2 Percipirana ugroženost / Perceived vulnerability		-	.19*	.17*
3 Anksioznost / Anxiety			-	.35*
4 Nomofobija / Nomophobia				-

* $p < .05$

TABLICA 3. Pearsonovi koeficijenti povezanosti između procjene ozbiljnosti situacije i ugroženosti, anksioznosti i kiberohondrije (N=196) drugo mjerjenje

TABLE 3. Pearson's correlation coefficients between assessment of the severity of the situation and vulnerability, anxiety, and cyberchondria (N=196)

	1	2	3	4
1 Percipirana ozbiljnost situacije / Perceived severity of the situation	-	.37*	.18*	.32*
2 Percipirana ugroženost / Perceived vulnerability		-	.22*	.25*
3 Anksioznost / Anxiety			-	.34*
4 Kiberohondrija / Cyberchondria				-

* $p < .05$

M. Bodrožić Selak, A. Vulić-Prtorić, P. Sturnela: Odnos između percepcije situacije, anksioznosti i nekih aspekata ponašanja povezanih s korištenjem digitalne tehnologije tijekom pandemije bolesti COVID-19. Soc. psihijat. Vol. 50 (2022) Br. 3, str. 297-319.

ozbiljnosti situacije i anksioznosti, što znači da su studenti koji su percipirali vlastitu ugroženost većom ujedno doživljavali i intenzivnije simptome anksioznosti. Nadalje, percipirana ugroženost pozitivno je povezana s anksioznosti, nomofobiom i kiberohondrijom u oba mjerena, a navedene varijable su i međusobno bile značajno povezane. Budući da se radi o uzorcu sa različitim brojem sudionika, provjerene su značajnosti razlika između korelacija u prvom i drugom mjerenu. Jedino su koeficijenti povezanosti između percipirane ozbiljnosti i nomofobije u prvom mjerenu bili značajno niži od povezanosti između percipirane ozbiljnosti i kiberohondrije u drugom mjerenu ($p = 0,007$). Medijacijska uloga anksioznosti u objašnjenju povezanosti percepције situacije i nomofobije, odnosno kiberohondrije provjerena je metodom struktturnog modeliranja (SEM). Pri tome su testirana dva strukturalna modela za svaki aspekt korištenja digitalne tehnologije. Prvi je model potpune medijacije, koji polazi od pretpostavke da subjektivna percepција situacije isključivo neizravno (putem anksioznosti) doprinosi simptomima nomofobije, odnosno kiberohondrije. Drugi, model djelomične medijacije, pretpostavlja da subjektivna percepција situacije izravno i neizravno doprinosi nomofobiji, odnosno kiberohondriji. U testiranim modelima percipirana ozbiljnost situacije i ugroženost predstavljaju manifestne varijable. Manifestnu varijablu anksioznosti čini rezultat na ljestvici anksioznosti koji je sumativna vrijednost priпадajućih čestica u *Ljestvici depresivnosti anksioznosti i stresa*. Nadalje, latentna varijabla nomofobije mjerena je preko četiri manifestna indikatora (rezultati na pojedinim podljestvcima iz *Upitnika nomofobije* (22) – nemogućnost pristupa informacijama, odricanje udobnosti, nemogućnost komunikacije i gubitak povezanosti). Podatci za varijable percipirane ugroženosti i ozbiljnosti situacije, anksioznosti i nomofobije prikupljeni su u prvoj valu istraživanja. Latentnu varijablu kiberohondrije čini ukupan re-

more intense symptoms of anxiety. Furthermore, perceived vulnerability is positively associated with anxiety, nomophobia, and cyberchondria. In other words, individuals who perceive their vulnerability are more likely to experience higher levels of anxiety, nomophobic, and cyberchondric symptoms. Furthermore, a significant, positive correlation between anxiety, nomophobia and cyberchondria was found, i.e., students who experienced more anxiety symptoms also experienced higher levels of nomophobia and cyberchondria, respectively. Since these were samples with a different number of participants, the significance of the differences between the correlations in the first and second measurements was checked. Only the correlation coefficients between perceived severity and nomophobia in the first measurement were significantly lower than the correlation between perceived severity and cyberchondria in the second measurement ($p=0.007$).

The mediating role of anxiety in explaining the relationship between situational perception and nomophobia, i.e., cyberchondria, was verified using the structural modelling method (SEM - Structural equation modelling). In doing so, two structural models were tested for each aspect of the use of digital technology. The first is the model of complete mediation, which starts from the assumption that the subjective perception of the situation exclusively indirectly (through anxiety) contributes to the symptoms of nomophobia, i.e., cyberchondria. The second, the model of partial mediation, assumes that the subjective perception of the situation directly and indirectly contributes to nomophobia, i.e., cyberchondria. In the tested models, the perceived severity of the situation and vulnerability are manifest variables. The manifest anxiety variable is the score on the anxiety scale, which is the summative value of the corresponding particles in the Depression Anxiety Stress Scale. What is more, the latent variable of nomophobia was measured through four manifest indicators [results on individual subscales from the Nomophobia Questionnaire (22) - inability to access information, denial of comfort, inability to communicate and loss of connectivity]. Data for

zultat na česticama koje zajedno tvore *Kratku ljestvicu kiberohondrije* (23). Podatci za varijablu kiberohondrije prikupljeni su u četvrtome valu istraživanja. Navedene varijable uvedene su u analizu, prethodno navedenim redom - najprije je testiran model potpune, a potom model djelomične medijacije. No prije toga provjeren je mjerni dio modela. Indeksi slaganja testiranih modela prikazani su u tablici 4.

Strukturni model s nomofobijskom varijablom kao izlaznom varijablom

Uvidom u rezultate dobivene metodom strukturnog modeliranja (tablica 4) i referentne vrijednosti pojedinih indikatora propisane u literaturi može se zaključiti kako vrijednost χ^2 testa, te omjer χ^2 testa i stupnjeva slobode i RMSEA upućuju na loše, dok vrijednosti CFI, TLI i SRMR upućuju na dobro pristajanje modela potpune medijacije podatcima. S druge strane, svi ispitani indeksi, osim vrijednosti χ^2 testa, upućuju na dobro pristajanje modela djelomične medijacije podatcima. Dobiveni rezultat ($D\chi^2 = 16,549$; $Ddf = 2, p < 0,01$) ukazuje na postojanje značajne razlike u pristajanju modela pa je stoga odabran model djelomične medijacije. Dalnjom obradom rezultata tehnika Bootstrap je pokazala da testirani indirektni efekti nisu statistički značajni. Rezultati su prikazani u tablici 4.

Strukturni model s kiberohondrijom kao izlaznom varijablom

Statističkom analizom testiranih modela (tablica 4) može se zaključiti kako svi indikatori, osim vrijednosti χ^2 testa upućuju na dobro pristajanje testiranih modela podatcima. Izračun testa razlike hi kvadrata testiranih modela ($D\chi^2 = 3,592$; $Ddf = 2, p < 0,01$) upućuje na nepostojanje značajne razlike u pristajanju modela čime se odabire jednostavniji model – model potpune medijacije. Budući da prihvaćeni model pretpostavlja postojanje indirektne veze

the variables of perceived threat and seriousness of the situation, anxiety and nomophobia were collected in the first wave of research. The latent variable of cyberchondria is the total score on the particles that together form the Short Cyberchondria Scale (23). Data for the cyberchondria variable were collected in the fourth wave of research. These variables were introduced into the analysis, in the order given above - first the full mediation model was tested, and then the partial mediation model. But before that, the measuring part of the model was checked. The agreement indices of the tested models are shown in Table 4.

Structural model with nomophobia as an output variable

Through insight into the results obtained by implementing the method of structural modelling (Table 4) and the reference values of individual indicators prescribed in the literature, it can be concluded that the value of χ^2 test, and the ratio of χ^2 test and degrees of freedom and RMSEA indicate poor, while CFI values The TLI and SRMR suggest a good fit of the full media data model. On the other hand, all examined indices, except for the values of the χ^2 test, indicate a good fit of the partial data mediation model. The obtained result ($\Delta \chi^2 = 16.549$, $\Delta df = 2, p < 0.01$) indicates the existence of significant differences in the fit of the model, so the model of partial mediation was accepted. Further processing of the results, Bootstrap technique showed that the tested indirect effects are not statistically significant. The results are shown in Table 4.

Structural model with cyberchondria as an output variable

Statistical analysis of the tested models (Table 4) lead to a conclusion that all indicators, except the value of χ^2 test, indicate a good fit of the tested models to the data. The calculation of the chi squares difference test of the tested models ($\Delta \chi^2$)

TABLICA 4. Rezultati usporedbe stupnja slaganja modela s podacima – model potpune i model djelomične medijacije
TABLE 4. Results of comparing the degree of agreement of the model with the data - the model of complete and the model of partial mediation

Nomofobija / Nomophobia (N=358)			Kiberohondrija / Cyberchondria (N=196)		
Mjerni model / Measuring model	Model potpune medijacije / Model of complete mediation	Model djelomične medijacije / Model of partial mediation	Mjerni model / Measuring model	Model potpune medijacije / Model of complete mediation	Model djelomične medijacije / Model of partial mediation
X ²	85.877	47.541	30.992	86.536	36.725
Df	17	13	11	17	13
X ² /df	5.05	3.657	2.817	5.09	2.825
CFI	0.897	0.947	0.970	0.841	0.945
TLI	0.873	0.919	0.945	0.804	0.915
RMSEA (90% C.I.)	0.106 <0.085-0.129>	0.086 <0.061-0.113>	0.071 <0.042-0.101>	0.104 <0.083-0.126>	0.069 <0.044-0.097>
SRMR	0.107	0.072	0.031	0.149	0.055
					0.035

percipirane ozbiljnosti situacije i percipirane ugroženosti i kiberohondrije testirana je statistička značajnost indirektnih efekata. Dobiveni rezultati prikazani su u tablici 5, a ukazuju na značajan indirektan doprinos percipirane ugroženosti preko anksioznosti na simptome kiberohondrije ($p < 0,05$). Drugim riječima, osobe koje percipiraju veću osobnu ugroženost, doživljavaju intenzivnije simptome anksioznosti, što je značajno za doživljavanje kiberohondrije. Međutim, važno je spomenuti kako unatoč dobrom pristajanju testiranih modela podatcima, dobiveni su parametri, kao i postotak objašnjene varijance relativno mali, što ne daje veliku podršku modelima.

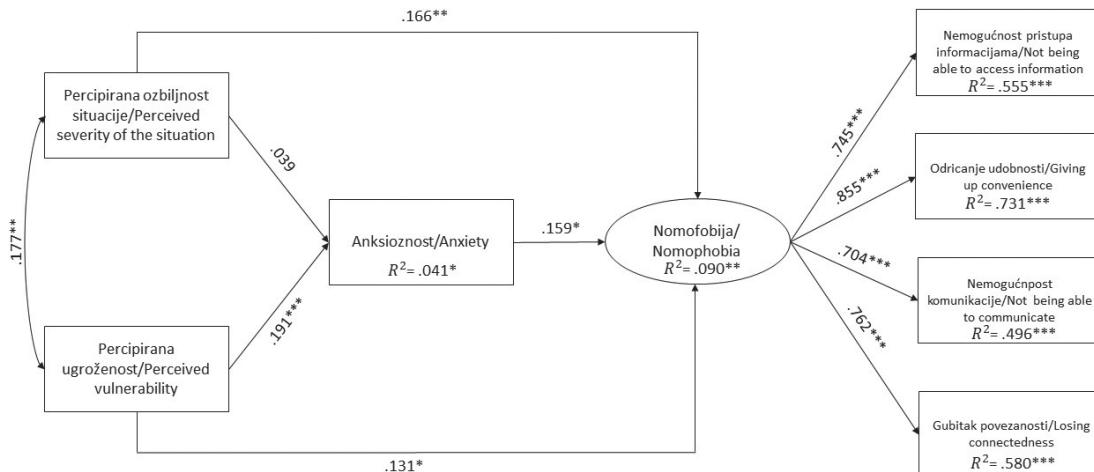
Testirani modeli prikazani su na slikama 1. i 2.

= 3.592, Δdf = 2, p > 0.01) indicates the absence of a significant difference in the model fit, thus a simpler model is selected - the full mediation model. Since the accepted model assumes the existence of an indirect relationship between the perceived severity of the situation and the perceived vulnerability and cyberchondria, the statistical significance of the indirect effects was tested. The obtained results are presented in Table 5 and indicate a significant indirect contribution of perceived threat through anxiety to the symptoms of cyberchondria ($p < 0.05$). In other words, people who perceived greater personal threat experienced more intense symptoms of anxiety, which is significant for experiencing cyberchondria.

The tested models are shown in Figures 1 and 2.

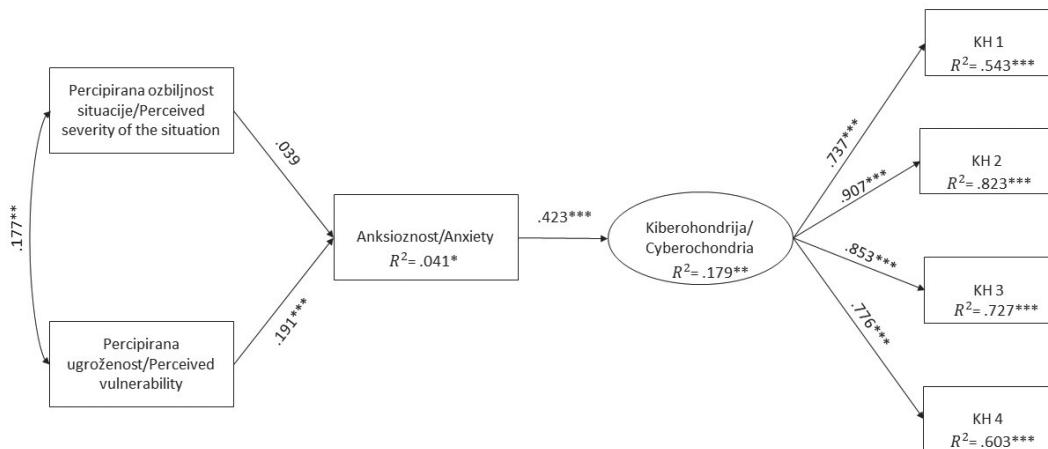
TABLICA 5. Prikaz statističke značajnosti testiranih indirektnih doprinosa
TABLE 5. Overview of statistical significance of tested indirect effects

	Indirektni efekt / Indirect effect	Procjena / Estimate	95% C.I.	99% C.I.
Nomofobija / Nomophobia (N=358)	Percipirana ozbiljnost situacije – anksioznost – nomofobija / Perceived severity of the situation – anxiety – nomophobia	0.006	<-0.011-0.024>	<-0.017-0.030>
	Percipirana ugroženost – anksioznost – nomofobija / Perceived vulnerability – anxiety – nomophobia	0.030	<-0.001-0.061>	<-0.010-0.071>
Kiberohondrija / Cyberchondria (N=196)	Percipirana ozbiljnost situacije – anksioznost – kiberohondrija / Perceived severity of the situation – anxiety – cyberchondria	0.017	<-0.026-0.059>	<-0.059-0.073>
	Percipirana ugroženost – anksioznost – kiberohondrija / Perceived vulnerability – anxiety – cyberchondria	0.081	<0.016-0.145>	<-0.005-0.166>



SLIKA 1. Prikaz modela djelomične medijacije anksioznosti u odnosu percepcije ozbiljnosti situacije, vlastite ugroženosti i nomofobije

FIGURE 1. Overview of the model of partial mediation of anxiety in relation to the perception of the severity of the situation, self-risk and nomophobia



SLIKA 2. Prikaz modela potpune medijacije anksioznosti u odnosu percepcije ozbiljnosti situacije, vlastite ugroženosti i kiberohondrije

FIGURE 2. Overview of the model of complete mediation of anxiety in relation to the perception of the severity of the situation, self-risk and cyberchondria

RASPRAVA

Pandemija koronavirusa uvelike je obilježila naš svakodnevni život koji se u vrijeme lockdowna gotovo u potpunosti preselio u virtualni svijet. Rezultati dobiveni ovim istraživanjem upućuju kako su studenti na početku pandemije u Hrvatskoj (tj. u razdoblju od sredine ožujka do sredine travnja 2020.) cjelokupnu situaciju percipirali vrlo ozbiljnom, ali ne i ugrožavajućom za vlastito zdravlje. Jedan od razloga za to

DISCUSSION

The coronavirus pandemic has largely marked our daily lives, which at the time of lockdown almost completely moved into the virtual world. The results obtained by this research indicate that students at the beginning of the pandemic in Croatia (i.e., in the period from mid-March to mid-April 2020) perceived the whole situation as very serious, but not to the same extent as their own vulnerability. One of the reasons

vjerojatno leži u činjenici da su tada gotovo svi znanstveni podaci pokazivali, a mediji prenosili tu informaciju, da mladi nisu zdravstveno rizična skupina. Osim toga, kao što je i očekivano, rezultati ovoga istraživanja ukazuju na značajnu pozitivnu povezanost percepције ozbiljnosti situacije i vlastite ugroženosti, što znači da su oni sudionici koji su situaciju procjenjivali jako ozbilnjom, sukladno tome procijenili i ugroženost vlastitog zdravlja visokom. Nalaz koji je u nekoj mjeri bio neočekivan jest da se percepција ozbilnosti situacije nije pokazala statistički značajno povezanim s anksioznosti, nomofobiom, a ni kiberohondrijom. Dobiveni je rezultat moguće tumačiti osobitostima situacije koronakrise i broja zaraženih i hospitaliziranih osoba u vrijeme provođenja istraživanja. Naime, za razliku od kasnijih statističkih podataka u listopadu ili studenom 2020. godine, prema kojima broj zaraženih koronavirusom premašuje 1000, u prvom valu pandemije, tj. u ožujku kada su podaci za ovo istraživanje prikupljeni, broj zaraženih nije prelazio 100. To je jedan od važnih objektivnih indikatora ozbiljnosti situacije s kojom su se studenti suočavali. Subjektivna procjena ugroženosti vlastitog zdravlja, s druge strane, značajno je povezana s anksioznosti i ispitivnim aspektima ponašanja povezanih s korištenjem digitalne tehnologije. Dobiveni rezultat se može razumjeti u kontekstu situacija kada osoba procjenjuje visoku osobnu ugroženost i kada se aktiviraju svi oni biološki mehanizmi koji su tipični za stanje anksioznosti. Budući da nomofobia i kiberohondrija imaju zajednički nazivnik, tj. povišene razine anksioznosti, ne iznećuju njihova povezanost s anksioznosti, kao i njihova međusobna povezanost (12,17). Osim toga, u situacijama ugroženosti, odnosno u situacijama intenzivne anksioznosti povećava se i potreba za socijalnom podrškom i informacijama o samoj prijetnji, u ovom slučaju o pandemiji i koronavirusu. U situaciji *lockdowna* održavanje socijalnih kontakata preusmjereno je u virtualni svijet, pa su osobe koje su percipirale svoju ugroženost velikom, ujedno i doživljavale veće razine

lies in the fact that at that time all scientific data showed, and the media transmitted this information, that young people were not a risk group. In addition, as expected, the results of this study indicate a significant positive relationship between the perception of the severity of the situation and their own vulnerability, which means that those participants who assessed the situation as very serious, accordingly assessed personal vulnerability as high. However, it should be noted that the perception of the severity of the situation was not statistically significantly associated with anxiety, nomophobia, nor cyberchondria. The obtained result can be interpreted within the then situation of coronavirus pandemic and the number of infected and hospitalized people. Namely, unlike recent statistics in October or November according to which the number of coronavirus infected exceeds 1000, in the first wave of the pandemic, i.e., in March when data for this study were collected, the number of infected did not exceed 100. This is one of the important objective indicators of the seriousness of the situation, which the students faced. Subjective assessment of one's own vulnerability, on the other hand, is significantly associated with anxiety and examined aspects of cyber behaviour. The obtained result can be understood in the context of situations when a person assesses high personal vulnerability and when all those biological mechanisms that are typical for the state of anxiety are activated. Since nomophobia and cyberchondria have a common denominator - elevated levels of anxiety, their association with anxiety, their interrelationship is not surprising (12, 17). Additionally, in situations of vulnerability, i.e., in situations of intense anxiety, the need for social support and information about the threat itself, in this case about the pandemic and coronavirus, is growing. In the lockdown situation, maintaining social contacts was redirected to the virtual world, so people who perceived their vulnerability as great also experienced higher levels of nomophobia, because the smartphone was the only means of

nomofobije, jer je pametni telefon u tom trenutku bio jedino sredstvo održavanja socijalnih kontakata i informiranja. Također, pojedinci čija je prosudba o ugroženosti bila visoka osjećali su i simptome tipične za kiberohondriju, budući da je njihova anksioznost potaknuta percepcijom vlastite ugroženosti potencirala ponašanje i doživljavanje tipično za kiberohondriju. U kontekstu kiberohondrije pretraživanje informacija o koronavirusu, koje je potaknuto anksioznošću, zapravo je tzv. sigurnosno ponašanje koje daje osjećaj smanjenja anksioznosti (26).

Medijatorska uloga anksioznosti u objašnjenju povezanosti kognitivnih procjena (ozbiljnosti i ugroženosti) i nomofobije odnosno kiberohondrije provjerena je ranije opisanim strukturnim modelima. Rezultati provedenih analiza ukazuju na to da anksioznost nije značajan medijator u odnosu između procjena ozbiljnosti situacije i vlastite ugroženosti te nomofobije. Drugim riječima, percipirana ozbiljnost situacije i ugroženost mogu samo direktno pojačati nomofobijsku. Promatramo li nomofobijsku u kontekstu socijalne podrške, ali i pristupa važnim informacijama u situaciji izolacije, dobiveni rezultati nisu iznenadujući. Naime, konstrukt nomofobije u svojoj srži obuhvaća strah od onemogućene virtualne komunikacije i nedostupnosti informacija (8). S obzirom da je u situaciji *lockdowna* cjelokupni društveni život preseljen u virtualno i da je stvarnost zapravo bila ona virtualna, sama percepcija ozbiljnosti situacije i vlastite ugroženosti izravno je intenzivirala strah od moguće nedostupnosti te stvarnosti u virtualnim sferama. Dominantan aspekt tadašnje situacije bile su propisane mjere zaštite od zaraze i praćenje nastave *online*. U tom kontekstu važnost pametnih telefona za pristup informacijama gotovo je neupitna. Stoga, kad se uzmu u obzir važnost održavanja socijalnih kontakata, ispunjavanja akademskih obaveza, ali i pravovremenog informiranja o situaciji koja je iznimno dinamična i neizvjesna, jasna je uloga kognitivnih aspekata procjene situacije u doživljavanju simptoma nomofobije. S druge strane, kada je ishodišna varijabla bila kiberohondrija,

maintaining social contacts and information at the time. Also, individuals whose judgment of vulnerability was high also experienced symptoms typical of cyberchondria as their anxiety triggered by the perception of their own vulnerability potentiated behaviour and experience typical for cyberchondria. In the context of cyberchondria, frequent search for information about coronavirus triggered by anxiety actually represents the so-called safety behaviours that seemingly reduce anxiety levels (26).

This study examined the potential mediator role of anxiety in explaining the association between cognitive assessments and nomophobia, or cyberchondria, respectively. The results of the conducted analyses indicate that anxiety is not mediator in the relationship between assessments of the severity of the situation and one's own vulnerability and nomophobia. In other words, perceived severity of the situation and vulnerability can only directly increase nomophobia. If we look at nomophobia in the context of social support, but also access to important information in a situation of isolation, the results are not surprising. In other words, the construct of nomophobia at its core encompasses the fear of disabled virtual communication and the unavailability of information (8). Given that in the lockdown situation, all social life was moved to the virtual and that reality actually became virtual, the very perception of the severity of the situation and one's own vulnerability directly intensified the fear of the unavailability of reality in virtual spheres directly. An important aspect of the situation at the time was the prescribed measures for protection against infection and monitoring of classes online. In this context, the importance of smartphones to access important information is almost unquestionable. In summary, considering the importance of maintaining social contacts, fulfilling academic obligations, but also timely information in a situation that is very dynamic and uncertain, the contribution of cognitive aspects of assessing the situation in experiencing symptoms of nomophobia is not surprising.

anksioznost se pokazala kao potpuni medijator. Drugim riječima, percepcija ozbiljnosti situacije i vlastite ugroženosti isključivo indirektno, posredstvom anksioznosti doprinosi simptomima kiberohondrije. Dalnjom obradom rezultata utvrđen je značajan indirektni efekt percipirane ugroženosti preko anksioznosti na simptome kiberohondrije. To znači da percepcija ugroženosti pojačava anksioznost i tako doprinosi razvoju kiberohondrije. Dobiveni je rezultat logičan, ako uzmemu u obzir samu prirodu kiberohondrije i s njom povezanih ponašanja. Naime, bihevioralni i emocionalni aspekt pretjeranog i repetitivnog pretraživanja zdravstvenih informacija potaknut je uznemirenosću i anksioznosću, a ta stanja izazvana su percipiranom ugroženosti. S obzirom na navedeno, pojedinci koji su procjenjivali vlastitu ugroženost visokom, doživljavali su intenzivnije simptome anksioznosti zbog kojih su bili skloniji pretraživanju informacija o pandemiji. Nužno je napomenuti i to da su procjene ozbiljnosti situacije, vlastite ugroženosti i anksioznosti uzete iz prvoga mjerjenja, dok je ishodišna varijabla kiberohondrija ispitana u četvrtom mjerjenju. Shodno tome, može se reći kako je „primarna“ kognitivna procjena ugroženosti dobar prediktor ponašanja i osjećaja koji su se manifestirali s vremenskim odmakom.

Nadalje, budući da se radi o različitim vrstama ponašanja povezanih s korištenjem digitalne tehnologije u čijoj je osnovi zajednički čimbenik - pretjerana zabrinutost, odnosno anksioznost - nakon usporedbe testiranih modela zanimljivo je uočiti da kognitivne procjene ozbiljnosti situacije i ugroženosti direktno doprinose nomofobiji, ali ne i kiberohondriji. Upravo je navedene nalaze moguće tumačiti još uvijek nedovoljno poznatom prirodnom konstrukta nomofobije. Naime, istraživači u čijem je fokusu nomofobia još uvijek nisu postigli konsenzus oko konceptualizacije ovoga konstrukta, odnosno je li nomofobia specifična fobija (agorafobija) (10) ili spada u skupinu simptoma povlačenja zbog izostanka ponašanja koje karakterizira bihevioralnu ovisnost o internetu (11). Djelomična

On the other hand, when the initial variable was cyberchondria, anxiety proved to be a complete mediator. In other words, the perception of the severity of the situation and one's own vulnerability contribute only indirectly, through anxiety, to cyberchondria. Further processing of the results revealed a significant indirect effect of perceived vulnerability through anxiety on cyberchondric symptoms. This means that the perception of vulnerability intensifies anxiety and thus contributes to the development of cyberchondria. The result obtained is logical if we consider the very nature of cyberchondria and related behaviours. Specifically, the behavioural and emotional aspect of excessive and repetitive search for health information is triggered by anxiety and worry, and these conditions are caused by perceived vulnerability. Given the above, individuals who rated their own vulnerability as high experienced more intense symptoms of anxiety that made them more inclined to search for pandemic information. It is also interesting to note that estimates of the severity of the situation, self-risk, and anxiety were taken from the first measurement, while the baseline variable cyberchondria was examined in the fourth measurement. Consequently, it can be said that "primary" cognitive assessments are a good predictor of behaviours and feelings that have manifested over time.

Furthermore, since these are different types of cyber behaviour based on excessive anxiety, when comparing the tested models, it is interesting to note that cognitive assessments of the severity of the situation and vulnerability directly contribute to nomophobia, but not cyberchondria. These findings can be interpreted by the still unknown nature of the nomophobia construct. Namely, researchers focusing on nomophobia have not yet reached a consensus on the conceptualization of this construct, i.e., whether nomophobia is a specific phobia (agoraphobia) (10) or belongs to the group of withdrawal symptoms due to lack of behaviour that characterizes behavioural Internet addiction (11). More specifically, the partial medi-

medijacija anksioznosti u odnosu između kognitivnih procjena situacije i nomofobije može se objasniti dvojakom prirodnom nomofobičnih obrazaca ponašanja koji imaju određene karakteristike iz spektra ovisnosti o internetu, a ne isključivo anksioznosti. Dobiveni rezultat može se objasniti i tzv. *teorijom kompenzacijskog korištenja* (25) prema kojoj se mijenja razinu korištenja interneta u funkciji životnih problema. Drugim riječima, pri suočavanju s različitim problemima pojedinci su skloni pretjeranom korištenju interneta u svrhu reguliranja vlastitog raspoloženja. U prilog tome ide i nalaz da je u izrazito stresnim situacijama eskapizam pozitivno koreliran s upotrebnom pametnih telefona (25). S druge strane, prema nekim istraživačima, kiberocondrija je bihevioralna komponenta zdravstvene anksioznosti (18) i pojavljuje se samo kod osoba koje već jesu pretjerano zdravstveno anksiozne. Shodno tome, uloga anksioznosti kao potpunog medijatora u odnosu između kognitivnih procjena situacije i kiberocondrije može se objasniti njihovom temeljnom odrednicom, tj. anksioznosti, koja ujedno čini i motivacijsku i ishodišnu komponentu u začaranom krugu kiberocondričnog ponašanja i doživljavanja. S obzirom na navedeno, dvojaka uloga anksioznosti u testiranim modelima ima logičnu podlogu.

Istraživanja uloge suvremenih tehnologija u vrijeme koronakrize imaju važne praktične implikacije, pa tako i rezultati provedenog istraživanja. Kao što je već istaknuto, važnost digitalne tehnologije u životu modernog čovjeka neupitna je, no ono što dolazi u pitanje je način korištenja. Naime, u izvanrednim situacijama poput pandemije, koje iziskuju velike napore i značajnu prilagodbu funkcioniranja u gotovo svim aspektima, javlja se potreba za novim načinima obavljanja svakodnevnih životnih zadaća. U situaciji *lockdowna* digitalni mediji su značajno olakšali prilagodbu na novonastalu situaciju. Međutim, pretjerana izloženost digitalnoj tehnologiji zasigurno ima posljedice za mentalno zdravlje. Stoga je promicanje mentalno-zdrav-

ation of anxiety in the relationship between cognitive assessments of the situation and nomophobia can be explained by the dual nature of nomophobic patterns of behaviour that have certain characteristics from the spectrum of Internet addiction, not exclusively anxiety. The obtained result can be explained by the so-called compensatory use theory (25), according to which users change the level of Internet use as a function of life problems. In other words, when faced with various problems, individuals tend to overuse the Internet for the purpose of moderating their own mood. This is supported by the finding that escapism was positively correlated with the use of smartphones when stress was high (25). On the other hand, when the construct of cyberchondria is in focus, according to some researchers cyberchondria is a behavioural component of health anxiety (18), that is, it occurs only in people who are already overly anxious about health. Consequently, the role of anxiety as a complete mediator in the relationship between cognitive assessments of the situation and cyberchondria can be explained by its fundamental determinant, that is, anxiety, which is both a motivational and initial component in the vicious circle of cyberchondric behaviour and experience. Given the above, the dual role of anxiety in the tested models has a logical basis.

Finally, it is important to highlight the potential practical implications of the research conducted. As already pointed out, the importance of digital technology in the life of a modern society is unquestionable, but what comes into question is how to use it. Namely, in emergency situations, such as a pandemic, which require great effort and a significant adjustment of functioning in almost all aspects, there is a need for new ways of performing everyday life tasks. In the lockdown situation, digital media has made it significantly easier to adapt to the new situation. However, exposure to digital technology and their maladaptive use has certainly had an impact on mental health. Consequently, the promotion of mental health and digital literacy in such times is of great

stvene i digitalne pismenosti u vremenima put ovih od velike važnosti za očuvanje zdravlja pojedinca i zajednice u cijelini. U skladu s navedenim, psihološka djelatnost od krucijalne je važnosti u ovakvim izvanrednim okolnostima.

Ograničenja provedenog istraživanja

Unatoč tome što su provedenim istraživanjem dobivena neka korisna saznanja o ponašanjima vezanim za korištenje digitalne tehnologije, dobivene rezultate treba uzeti s oprezom posebno kada se radi o generalizaciji dobivenih rezultata. Kao prvo, u istraživanju su sudjelovali studenti psihologije koji su bili pozvani na ispunjavanje upitnika, te zamoljeni da na isti način uključe 5 do 10 svojih prijatelja ili poznanika, također studenata. Dakle, radi se o skupini u kojoj su se sudionici međusobno poznivali (premda je ispunjavanje upitnika bilo anonimno) i poticali da međusobno komentiraju ispitivanje i konstrukte koji su upitnicima ispitivani. U tom smislu može se pretpostaviti da se radi o uzorku kod kojeg je mentalno-zdravstvena i digitalna pismenost na nešto višoj razini nego u populaciji. Nadalje, uopćavanje dobivenih rezultata ograničeno je prije svega zbog primjene *online* istraživanja. Iako je korištena metoda, prije svega, vremenski i financijski ekonomična, nedostatci poput ograničene kontrole istraživača nad time tko zapravo ispunjava upitnik i nemogućnosti pojašnjavanja u slučaju mogućih dvojbi, također treba uzeti u obzir. Nadalje, kada je riječ o istraživanjima longitudinalne prirode, za očekivati je osipanje sudionika, što je vidljivo i u ovom istraživanju.

ZAKLJUČAK

Provedenim istraživanjem utvrđeno je kako studenti koji percipiraju koronakrizu ozbilnjom, ujedno procjenjuju veću osobnu ugroženost, te izvještavaju o višim razinama anksio-

importance for preserving the health of the individual and the community as a whole. Accordingly, psychological activity is crucial in extraordinary circumstances like today.

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Limitations of the conducted research

Despite the fact that the conducted research has yielded some useful knowledge about behaviours related to the use of digital technology, the obtained results should be taken with caution, especially when it comes to generalization of the results. Firstly, psychology students participated in the research and were invited to fill out a questionnaire and asked to include 5 to 10 of their friends or acquaintances, also students, in the same way. Therefore, it is a group in which the participants knew each other (although filling in the questionnaire was anonymous) and were encouraged to comment on the survey and the constructs examined by the questionnaires. In this sense, it can be assumed that this is a sample where mental health and digital literacy is at a slightly higher level than in the population. Furthermore, the generalization of the obtained results is limited primarily due to the application of online research. Although the method used is, above all, economical financially and time-wise, disadvantages, such as the limited control of the researcher over who actually filled out the questionnaire and the impossibility of clarification in case of possible doubts, should also be taken into account. Furthermore, when it comes to research of a longitudinal nature, attrition of participants is to be expected, which is also evident in this research.

CONCLUSION

The research found that students who perceived the corona crisis as serious, at the same time assessed a higher personal risk, and reported higher levels of anxiety symptoms, as well as nomophobia and cyberchondria. Consequently, students

znosti, nomofobije i kiberohondrije. Nadalje, studenti koji su anksiozniji, doživljavaju i više razine nomofobije i kiberohondrije. Na temelju rezultata na upitniku nomofobije moguće je predvidjeti rezultat na ljestvici kiberohondrije pri čemu studenti koji su skloniji nomofobičnim obrascima ponašanja skloniji su i kiberohondriji. Dodatni nalaz ovoga istraživanja jest uloga anksioznosti u odnosu između kognitivnih procjena situacije i nomofobije odnosno kiberohondrije. Naime, anksioznost se pokazala kao djelomični medijator kada je ishodišna varijabla nomofobija, a potpuni u modelu u kojem je kiberohondrija ishodišna varijabla. To znači da percipirana ozbiljnost situacije i ugroženost mogu direktno pojačati nomofobiju, dok percepcija ugroženosti pojačava anksioznost i tako doprinosi razvoju kiberohondrije.

who experienced more anxiety symptoms also experienced higher levels of nomophobia, or cyberchondria. Based on the results of the nomophobia questionnaire, it is possible to predict the result on the cyberchondria scale, where students who were more prone to nomophobic behavioural patterns, were also more prone to cyberchondria. An additional finding of this research is the role of anxiety in the relationship between cognitive assessments of the situation and nomophobia, that is, cyberchondria. Namely, anxiety has been shown to be a partial mediator when the source variable was nomophobia, and a complete mediator in a model in which cyberchondria was the source variable. This means that perceived severity of the situation and vulnerability can directly increase nomophobia, while the perception of vulnerability intensifies anxiety and thus contributes to the development of cyberchondria.

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Neke odrednice psihološke dobrobiti majki iz jednoroditeljskih obitelji

/ Some Indicators of Psychologic Wellbeing of Mothers from Single parent Families

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Struktura obitelji i kvaliteta obiteljskih odnosa važne su odrednice psihološke dobrobiti i kvalitete života djece i roditelja. Istraživanja u području psihološke dobrobiti u kontekstu obitelji većinom su bila usmjerena na djecu u odnosu na roditelje. Kad je riječ o jednoroditeljskim obiteljima poznato je da se susreću s brojnim izazovima koje jednoroditeljstvo donosi, što uključuje materijalne, socijalne, psihološke i druge aspekte. Dosadašnja istraživanja u području mentalnog zdravlja roditelja iz jednoroditeljskih obitelji su prilično oskudna. U našem radu je prikazano istraživanje provedeno s majkama iz jednoroditeljskih i dvoroditeljskih obitelji kojemu je cilj bio ispitati razlike između njih prema materijalnom statusu, razini roditeljskog stresa, socijalnoj podršci i psihološkoj dobrobiti te ispitati neke odrednice psihološke dobrobiti majki ovisno o roditeljskom statusu u obitelji. Rezultati pokazuju da se majke iz jednoroditeljskih obitelji ne razlikuju prema ukupnoj psihološkoj dobrobiti u odnosu na majke iz dvoroditeljskih obitelji, no iskazuju tendenciju veće razine depresivnosti. Majke iz jednoroditeljskih obitelji percipiraju manju socijalnu podršku te slabiji materijalni status. Kao značajni prediktori psihološke dobrobiti pokazali su se različiti aspekti materijalnog statusa i roditeljski stres, dok se socijalna podrška pokazala značajnim prediktorom psihološke dobrobiti kod majki iz dvoroditeljskih obitelji.

/ Family structure and the quality of family relationships are important determinants of psychological wellbeing and quality of life of children and parents. Research in the field of psychological wellbeing in family context has been mainly focusing on children in relation to parents. As regards single parent families, it is known that they face a number of challenges of single parenting, including material, social, psychological and other aspects. Previous research in the field of mental health of parents from single parent families is quite scarce. Our paper presents a study conducted with mothers from single and two-parent families with the aim to examine the differences between the two categories according to their economic status, level of parental stress, social support and psychological wellbeing as well as some determinants of psychological wellbeing, depending on parental status of the family. The results show that mothers from single parent families did not differ in overall psychological wellbeing compared to mothers from two-parent families, but indicated a tendency to a higher level of depression. Mothers from single parent families perceived a lesser degree of social support and had a less affluent material position. Various aspects of material position and parental stress were shown to be significant predictors of psychological wellbeing, while social support proved to be a significant predictor of psychological wellbeing in mothers in two-parent families.

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UVOD

Struktura i kvaliteta obiteljskih odnosa važne su odrednice psihološke dobrobiti i općenito kvalitete života djece i roditelja (1-8). Psihološka dobrobit se može definirati na različite načine te ju neki autori definiraju kao prisutnost ili odsutnost psihičkih simptoma poput depresivnosti, anksioznosti i tzv. negativnih i pozitivnih emocija (9,10). Stalne transformacije društva dovode do transformacije obitelji koja se postupno mijenja i prilagođava društvenim zahtjevima i potrebama. Neosporno je da je obiteljska dinamika u jednoroditeljskim obiteljima drugačija od one u cjelovitim obiteljima. Već i sama činjenica da jedan roditelj obavlja većinu zadataka sam stavlja dodatna vremenska, finansijska i fizička opterećenja na tog roditelja. Takva dugoročna situacija će neizostavno rezultirati i intenzivnjim psihičkim opterećenjima. U dosadašnjoj literaturi je moguće pronaći razmjerno velik broj istraživanja orijentiranih na psihološku dobrobit djece iz jednoroditeljskih obitelji (1,2), no nešto je manje sveobuhvatnih istraživanja o psihološkoj dobrobiti roditelja iz jednoroditeljskih obitelji. Međutim, dobrobit maloljetne djece i roditelja koji su njihovi primarni skrbnici gotovo je nemoguće jasno odvojiti, jer se dobrobit roditelja vrlo često odražava na dobrobit djece. Tako, primjerice, neka istraživanja (11) pokazuju da postoji razlika u tipu obitelji i rizičnog ponašanja mladih gdje su mlađi iz jednoroditeljskih

INTRODUCTION

Family structure and the quality of family relationships are important determinants of psychological wellbeing and quality of life of children and parents (1-8). Psychological wellbeing can be defined in different ways and some authors define it as the presence or absence of psychological symptoms such as depression, anxiety and so-called negative or positive emotions (9,10). Constant transformation of society leads to transformation of the family that is gradually changing and adapting to social requirements and needs. It is undeniable that family dynamic in single parent families varies from that of two-parent families. The very fact that one parent performs most of family tasks implies additional time and financial and physical burdens on that parent. In the long run, such a situation will inevitably result in more intense psychological burdens. In the existing literature, there is a relatively large number of studies focusing on the psychological wellbeing of children from single parent families (1,2) and somewhat less comprehensive study of the psychological wellbeing of parents in single parent families. However, it is almost impossible to separate the wellbeing of minor children and parents who are their primary caregivers given that the wellbeing of parents is very often reflected in the wellbeing of children. Some studies (11) indicate that there is a difference in the type of family and risk behaviour of young people where young people from single parent families were more prone to abusing psychoactive substanc-

obitelji bili skloniji uzimanju psihoaktivnih tvari od mladih iz dvoroditeljskih obitelji. Neki autori nalaze (12) da osim roditeljske dobrobiti jednoroditeljstvo ima utjecaja i na dječju dobrobit te su neka istraživanja utvrdila (13) kako su djeca iz jednoroditeljskih obitelji općenito sklonija problemima u ponašanju od djece iz dvoroditeljskih obitelji, posebice u jednoroditeljskim obiteljima čiji su nositelji očevi. Na istom tragu neki podatci pokazuju kako su djeца iz jednoroditeljskih obitelji sklonija kršenju zakona odnosno činjenju kažnjivih djela (14). Stoga je važno razumjeti mehanizme i faktore koji su u vezi s dobrobiti primarnih skrbnika iz jednoroditeljskih obitelji, jer ti mehanizmi aktivno djeluju u cjelokupnoj obiteljskoj dinamici.

Osim objektivnih okolnosti koje roditeljima iz jednoroditeljskih obitelji čine život težim, mnoštvo drugih faktora, poput socijalne podrške, odnosa s drugim roditeljem (bivšim partnerom), materijalnog statusa, zadovoljstva roditeljstvom, roditeljskog stresa pa i različitih osobina ličnosti može utjecati na njihovu psihološku dobrobit. Dosadašnja istraživanja (8, 11, 15-18) jasno ukazuju da ova veza između obiteljske strukture i psihološke dobrobiti nije jednodimenzionalna pri čemu su potvrđila vezanost između psihološke dobrobiti roditelja i podrške koju roditelji pružaju djeci te njihovu uključenost u odgoj (19-21). Depresivnost je najčešće proučavana mjera psihološke dobrobiti gdje se pokazala značajnim činiteljem rizika za uspješno roditeljstvo (22) te za zlostavljanje i/ili zanemarivanje djeteta (23). S obzirom da depresivnost može biti posljedica anksioznosti u novonastalim uvjetima na koje osoba ima mali ili nikakav utjecaj, samohrani¹ roditelji

es than young people from two-parent families. While some studies have found (12) that in addition to parental wellbeing, single parenting also has an impact on children's wellbeing, others have established (13) that children from single parent families are generally more prone to behavioural problems than children from two-parent families, especially in single parent families where fathers are the main carers. Following in the same direction, some data indicate that children from single parent families are more prone to breaking the law or committing offences (14). It is therefore important to understand the mechanisms and factors related to the wellbeing of primary caregivers in single parent families given that these mechanisms have a direct impact on the overall family dynamics.

Apart from objective circumstances that make life more difficult for parents in single parent families, a multitude of other factors, such as social support, relationships with the other parent (ex-partner), economic status, parenting satisfaction, parental stress as well as various personality traits, can affect their psychological wellbeing. Previous research (8, 11, 15-18) clearly indicates that the link between family structure and psychological wellbeing is not one-dimensional, confirming the correlation between the psychological wellbeing of parents, support that parents provide to children and their involvement in upbringing (19-21). Depression is the most commonly studied measure of psychological wellbeing and it has been shown to be a significant risk factor of successful parenting (22) and child abuse and/or neglect (23). Given that depression can be the result of anxiety in newly created conditions on which a person has little or no influence, single¹ parents make a particularly

¹ Ovdje je važno napomenuti da su obitelji sa samohranim roditeljima podskupina jednoroditeljskih obitelji u kojima drugi roditelj, iz bilo kojeg razloga, više nije dio djetetovog života. Samohrani roditelj je roditelj koji sam skrbi za svoje dijete i uzdržava ga dok je jednoroditeljska obitelj ona koju čine dijete, odnosno djeca i jedan roditelj. Autori vrlo često izjednačavaju ova dva termina iako je važno voditi računa da se ne radi o istom obliku roditeljstva.

¹ It is important to note that families with a single parent fall under a subgroup of single-parent families in which the other parent, for whatever reason, is no longer part of the child's life. A single parent is a parent who cares for and supports his or her child and a single-parent family is the family made up of one or more children and one parent. Researchers very often equate the two terms although it is important to take into account that they do not define the same form of parenting.

posebno su ranjiva skupina za njen razvoj (21). Neki nalazi pokazuju (24) kako su, kada se kontroliraju razlike među roditeljima s obzirom na dob, prihode i obrazovanje, samohrane majke najviše sklone razvoju depresivnosti.

Roditelji iz jednoroditeljskih obitelji suočeni su s većim brojem objektivnih stresora od roditelja iz cjelovitih obitelji (3,25-28). Samim time pretpostavka je da će ti roditelji prijavljivati niže razine psihološke dobrobiti i zadovoljstva životom. Istraživanja pronalaze da razvedeni roditelji imaju nižu dobrobit i kvalitetu života (4,7,8,29,30), da su razvedene majke sklonije depresiji, anksioznosti i stresu te su slabije socijalno prilagođene (8,31,32). Međutim, ovi nalazi nisu jednoznačni. Nekoliko istraživanja pokazuje da ne postoji značajna razlika u psihološkoj dobrobiti između udanih i razvedenih majki, odnosno da razvedene majke ponekad čak imaju i višu razinu dobrobiti (8,33-36). Ovakvi dvojni rezultati mogu biti posljedica kompleksnog sklopa unutarnjih, vanjskih i relacijskih faktora koji mogu utjecati na dobrobit roditelja nakon razvoda. Neki od vanjskih faktora mogu biti vezani uz ekonomsku situaciju roditelja, njihovo obrazovanje, radni status i sl. (8). Odnosni faktori podrazumijevaju socijalnu podršku i odnos s bivšim supružnikom odnosno partnerom, dok su važni psihološki faktori percepcija prošlih i trenutnih životnih okolnosti, roditeljske vještine, stavovi prema braku i razvodu, roditeljski stres te strategije suočavanja sa stresom. Kad je riječ o roditeljskom stresu definicije najčešće uključuju varijable dostupnosti i percipirane raspoloživosti resursa koji se odnose na zahtjeve roditeljstva (37). Način na koji će roditelji reagirati na određene događaje i hoće li ih percipirati kao stresne ili ne, ovisi o više faktora. Neki od tih faktora su osobine ličnosti roditelja i djece, kvaliteta braka odnosno partnerskog odnosa, socijalna podrška i roditeljska uvjerenja (38). Općenito, nalazi pokazuju da je roditeljstvo stresnije kada roditelji imaju manje znanja i kompetencija o

vulnerable group to develop it (21). Some findings (24) indicate that, if differences between parents with regard to age, income and education are controlled, single mothers are most prone to developing depression.

Parents in single parent families face a greater number of objective stressors than parents in two-parent families (3,25-28). Therefore, the assumption is that they are more likely to report lower levels of psychological wellbeing and life satisfaction. Research finds that divorced parents have lower wellbeing and quality of life (4,7,8,29,30) and that divorced mothers are more prone to depression, anxiety, stress, and are less socially adjusted (8,31,32). However, these findings are not unambiguous. Several studies show that there is no significant difference in psychological wellbeing between married and divorced mothers, i.e., sometimes a higher level of wellbeing is found in divorced mothers (8,33-36). Such dual findings can be explained due to a complex combination of internal, external and relational factors affecting the wellbeing of parents after divorce. Some of the external factors may be related to the economic situation of parents, their education, employment status, etc. (8). Relative factors include social support and relationship with the former spouse or partner, while important psychological factors include the perception of past and current life circumstances, parental skills, attitudes towards marriage and divorce, parental stress and coping strategies. In terms of parental stress, various definitions most often include availability variables and perceived resource availability related to parenting requirements (37). The way parents react to certain events and whether they perceive them as stressful or not depends on a number of factors. Some of these factors are personality traits of parents and children, quality of marriage or partnership, social support and parental beliefs (38). In general, the findings show that parenting is more stressful if parents have less knowledge and competence about parenting requirements and less emotional and instrumental support (38). Most research

zahtjevima roditeljstva te manje emocionalne i instrumentalne podrške (38). Većina istraživanja roditeljskog stresa uglavnom su usmjereni na njegove prediktore ili psihološke posljedice. Neki od najvažnijih čimbenika stresa su socijalni i ekonomski činitelji poput niskih prihoda, nezaposlenosti ili teškoća u razvoju djeteta (39-41). Istraživanja naglašavaju kako se roditelji općenito suočavaju sa stresorima, a negativni učinci tih stresora mogu se kumulirati i utjecati na kvalitetu roditeljstva te odnosa roditelja i djeteta (38,39,41). Stres koji proizlazi iz dnevnih zahtjeva i teškoća povezuje se s ishodima po djecu (41,42), ali i s roditeljskim postupanjem (37,41). S obzirom na povećane dnevne zahtjeve koji uobičajeno pogađaju roditelje u jednoroditeljskim obiteljima očekivano je, ali i istraživanjima potvrđeno (26,41), da će upravo ti roditelji biti izloženi višoj razini roditeljskog stresa od onih iz cjelovitih obitelji. Neki nalazi pokazuju da su finansijski problemi i odnos između supružnika odnosno partnera važni medijatori roditeljstva i osjećaja dobrobiti roditelja, neovisno o tome žive li zajedno ili ne (43). Drugim riječima, za očekivati je da ovi faktori imaju efekt na osjećaj dobrobiti kod obje skupine roditelja, onih iz tzv. cjelovitih i onih iz jednoroditeljskih obitelji, međutim kod jednoroditeljskih obitelji njihov će efekt vjerojatno biti značajniji. Općenito, kad je riječ o zdravlju, pokazalo se da roditelji u jednoroditeljskim obiteljima, osim što češće imaju probleme s mentalnim zdravljem, češće pokazuju i neka rizična ponašanja u usporedbi s roditeljima iz dvoroditeljskih obitelji (15), dok djeca iz jednoroditeljskih obitelji, primjerice, češće obolijevaju od kroničnih bolesti (44). Jedno istraživanje je pokazalo da roditelji s višim razinama depresivnih simptoma, koji koriste supstance te koji su doživjeli roditeljski stres, imaju veću vjerojatnost odvajanja od djece te prepustaju skrbništvo drugom roditelju (45). Isto istraživanje je pokazalo da će roditelji s više ekonomskih i socijalnih resursa vjerojatnije ostati zajedno, ali ako se rastanu, roditelj s većim resursima

into parental stress is mainly focused on its predictors or psychological consequences. Some of the most important factors related to stress are social and economic factors, such as low income, unemployment or developmental difficulties of the child (39-41). Research highlights various ways in which parents generally cope with stressors, whereas the negative effects of these stressors may be accumulated to affect the quality of parenting and parent-child relationships (38,39,41). The stress arising from daily tasks and difficulties is associated with outcomes for children (41,42) as well as with parenting practices (37,41). Due to an increased number of daily tasks that usually affect parents in single parent families, it is expected and confirmed by research (26,41) that they are exposed to a higher level of parental stress than parents in two-parent families. Some findings indicate that financial problems and the relationship between spouses or partners are important mediators of parenting and parents' sense of wellbeing, regardless of whether they live together or not (43). In other words, it is to be expected that these factors have an effect on the sense of wellbeing in both groups, i.e., two-parent and single parent families, however, their effect is likely to be more significant in single parent families. Generally speaking, when it comes to health, parents in single parent families do not only face mental health problems more frequently, but also exhibit patterns of risky behaviour more frequently than parents in two-parent families (15) while children from single parent families, for example, are more likely to suffer from chronic diseases (44). One study found that parents with higher levels of depressive symptoms, those abusing substances and those who have experienced parental stress are more likely to be separated from their children and leave custody in the hands of the other parent (45). The same study found that parents with more affluent economic and social resources are more likely to stay together, but if they separate, the parent with more resources is more likely to have custody of the children. The study in ques-

vjerojatnije će imati skrbništvo nad djecom. Opisano istraživanje zapravo ukazuje na kompleksne odnose između psihološke dobrobiti i jednoroditeljstva zbog kojih je ponekad teško ustanoviti što je uzrok, a što posljedica.

Kao što je ranije navedeno, ekonomski aspekt funkciranja obitelji je značajan faktor u kontekstu jednoroditeljstva. Naime, jedan od čestih rizika koji se pojavljuje u jednoroditeljskim obiteljima jest rizik od siromaštva² (46). Neka istraživanja pokazuju da je pet puta veća vjerojatnost da samohrane majke s djecom žive u siromaštvu nego obitelji u kojima djeca žive s oba roditelja (47). Ekonomski status se pokazao važnim faktorom dobrobiti roditelja iz jednoroditeljskih obitelji što se manifestira i u psihološkim problemima poput anksioznosti i depresivnosti, kao i tjelesnom zdravlju te općenito kvaliteti života koja ima efekt na cjelokupno funkcioniranje obitelji (48). Prema istraživanju UNICEF-a o siromaštvu djece predškolske dobi u Hrvatskoj (49) djeca iz jednoroditeljskih obitelji imaju stope siromaštva iznad nacionalnog prosjeka i značajno veće od stopa siromaštva predškolske djece koja žive s oba roditelja. Stopa rizika od siromaštva za stanovništvo RH u 2021. godini iznosila je 19,2 %, dok je stopa rizika od siromaštva za jednoroditeljske obitelji iznosila čak 37,5 %, što je povećanje za čak 3,5 % u odnosu na prethodnu godinu. Godišnji statistički podatci Državnog zavoda za statistiku kontinuirano pokazuju da su u najranjivijem položaju s obzirom na stopu siromaštva kad je riječ o obiteljima s uzdržavanom djecom, upravo jednoroditeljske obitelji.

Na samom početku je navedeno da se koncept psihološke dobrobiti u najširem smislu odno-

tion actually points to complex relationships between psychological wellbeing and single parenting due to which it is sometimes difficult to determine the cause and effect nature.

As noted earlier, the economic aspect of family functioning is a significant factor in context of single parenting. One of the common risks arising in single parent families is the risk of poverty² (46). Some research indicates that single mothers living with their children are five times more likely to live in poverty than families where children live with both parents (47). Economic position is proved to be a significant factor for the wellbeing of parents in single parent families, which is also manifested in psychological problems such as anxiety and depression, as well as physical health and overall quality of life affecting the overall functioning of the family (48). According to the UNICEF survey on the poverty of pre-school children in Croatia (49), poverty rates for children in single parent families are above the national average and significantly higher than the poverty rates of preschool children living with both parents. The at-risk-of-poverty rate for the population of the Republic of Croatia in 2021 amounted to 19.2%, while the at-risk-of-poverty rate for single parent families was as high as 37.5%, which was an increase of as much as 3.5% compared to the previous year. The annual statistics published by the Croatian Bureau of Statistics continuously indicate that single parent families fall under the category of the most vulnerable group with regard to the poverty rate when it comes to families with dependent children.

At the very beginning, it was stated that the concept of psychological wellbeing in the broadest sense refers to the optimal psychological

² Osnovni je pokazatelj rizika od siromaštva stopa rizika od siromaštva. To je postotak osoba koje imaju raspoloživi ekvivalentni dohodak ispod praga rizika od siromaštva. Stopa rizika od siromaštva ne pokazuje koliko je osoba stvarno siromašno, nego koliko osoba ima dohodak ispod praga rizika od siromaštva. Prag rizika od siromaštva postavljen je na 60 % od srednje vrijednosti (medijana) ekvivalentnog raspoloživog dohotka svih osoba.

² The main indicator of the risk of poverty is the at-risk-of-poverty rate. This is the percentage of individuals who have equivalent disposable income below the at-risk-of-poverty threshold. The at-risk-of-poverty rate does not indicate the individual level of poverty but rather how much the individual income is below the at-risk-of-poverty threshold. The at-risk-of-poverty threshold is set at 60% of the national median of individual equivalised disposable income.

si na optimalno psihološko funkcioniranje i iskustvo te ga nije moguće jednoznačno razmatrati i definirati. To podrazumijeva različite perspektive odnosno konceptualizacije ovog konstrukta pri čemu se psihološka dobrobit najčešće razmatra unutar dvije ključne paradigme: hedonizma i eudemonizma. Koncept razmatranja psihološke dobrobiti paradigmom hedonizma sagledava se u dimenziji zadovoljstva i sreće pri čemu se psihološka dobrobit razmatra komponentama zadovoljstva životom, prisutnosti pozitivnog raspoloženja odnosno odsutnosti negativnog raspoloženja (50). S druge strane, psihološka dobrobit unutar paradigme eudemonizma razmatra se ljudskom aktualizacijom. Tako, primjerice, autori koji su ponudili pristup konceptualizacije psihološke dobrobiti u okviru eudemonizma pristupaju višedimenzionalno pri čemu je svaka od šest dimenzija određeni aspekt aktualizacije kod pojedine osobe (51). Radi se o dimenzijama koje su autori definirali kao: samoprihvaćanje, pozitivne odnose s drugima, autonomiju, ovladavanje okolinom, smislen život te osobni rast i razvoj. No, psihološka dobrobit se konceptualizira i kao kombinacija pozitivnih afektivnih stanja kao što su sreća (hedonistička perspektiva) i funkcioniranje s optimalnom učinkovitošću u individualnom i društvenom životu (eudaimonska perspektiva) (52). Pritom osobe koje imaju visoku razinu psihološke dobrobiti navode da se osjećaju sretno, sposobno, podržano, i zadovoljno životom (52). U našem istraživanju smo konceptu psihološke dobrobiti pristupili kao prisutnosti ili odsutnosti psihičkih simptoma poput depresivnosti, anksioznosti i tzv. negativnih i pozitivnih emocija (9,10) što se u recentnim istraživanjima ne naziva psihološkom dobrobiti već se razmatra u kontekstu psihičkih teškoća (52). Osim psihološke dobrobiti majki istražili smo i neke druge relevantne značajke kada je riječ o jednoroditeljstvu, kao što su materijalni aspekti života, roditeljski stres te socijalna podrška.

functioning and experience, and, therefore, it is not possible to unambiguously consider and define it. This implies various perspectives or conceptualizations of this construct whereby psychological wellbeing is most often considered in the framework of two key paradigms: hedonism and eudemonism. The concept of considering psychological wellbeing as a paradigm of hedonism is examined in the dimension of satisfaction and happiness, where psychological wellbeing is considered through various components of life satisfaction, presence of a positive frame of mind, or the absence of a negative frame of mind (50). On the other hand, psychological wellbeing within the paradigm of eudemonism is considered in the light of self-actualization. Thus, for example, authors who approach the conceptualization of psychological wellbeing through the lens of eudemonism use a multidimensional approach according to which each of the six dimensions represents a certain aspect of self-actualization (51). These dimensions are defined as: self-acceptance, positive relations with others, autonomy, environmental mastery, meaningful life, and personal growth and development. However, psychological wellbeing is also conceptualized as a combination of positive affective states, such as happiness (hedonistic perspective) and functioning with optimal efficiency in personal and social life (eudaimonic perspective) (52). Individuals with a high level of psychological wellbeing report that they feel happy, capable, supported and satisfied with life (52). In our research, the concept of psychological wellbeing was examined as the presence or absence of psychological symptoms, such as depression, anxiety, and so-called negative and positive emotions (9,10). In recent studies, those do not fall under the category of psychological wellbeing, but, instead, they are examined in the context of psychological problems (52). In addition to the psychological wellbeing of mothers, we also explored some other significant aspects of single parenting, such as material aspects of life, parental stress and social support.

Cilj istraživanja je ispitati razlike između majki iz jednoroditeljskih i dvoroditeljskih obitelji prema materijalnom statusu, razini roditeljskog stresa, socijalnoj podršci i psihološkoj dobrobiti te ispitati odrednice psihološke dobrobiti majki iz jednoroditeljskih i dvoroditeljskih obitelji prediktorskim skupom koji uključuje različite pokazatelje materijalnog statusa, roditeljskog stresa i socijalne podrške. Kod majki iz jednoroditeljskih obitelji dodatno se ispitao prediktorski doprinos učestalosti kontakata i kvalitete odnosa s drugim roditeljem.

METODA

Sudionici

U istraživanju su sudjelovale ukupno 722 majke od kojih 99 iz jednoroditeljskih i 623 iz dvoroditeljskih obitelji, te će svi rezultati biti prikazani odvojeno za sudionice iz jednoroditeljskih i dvoroditeljskih obitelji. Razlog zbog kojeg su uključene samo majke je značajno manja zastupljenost očeva kao nositelja jednoroditeljskih obitelji pri čemu nije bilo moguće ostvariti dovoljan obuhvat takvih očeva s obzirom da je u Hrvatskoj pet puta više jednoroditeljskih obitelji gdje je nositelj obitelji majka (53). Također, pokazalo se da je odaziv majki na roditeljske sastanke (na kojima je podijeljen anketni upitnik) veći te su one općenito značajno sklonije sudjelovati u istraživanjima koja se tiču obitelji, djece odnosno roditeljstva. Radilo se o prigodnom uzorku majki s barem jednim osnovnoškolskim djetetom u dobi od 11 do 15 godina (od petog do osmog razreda osnovne škole) s područja grada Zagreba. Istraživanje je provedeno u 10 osnovnih škola i jednoj podružnici osnovne škole u Zagrebu na način da su zastupljene gotovo sve bivše općine grada. Dob sudionica kretala se od 30 do 59 godina pri čemu je prosječna dob bila 42 godine za majke iz jednoroditeljskih, odnosno 43 godine za majke iz dvoroditeljskih obitelji (tablica 1.).

RESEARCH OBJECTIVE

The objective of the research was to examine the differences between mothers in single and two-parent families by analysing their economic status, level of parental stress, social support and psychological wellbeing and to find determinants for the psychological wellbeing of mothers in single and two-parent families by applying a predictor set including various indicators of economic status, parental stress and social support. In mothers from single parent families, the predictor contribution to the frequency of contacts and the quality of relationships with the other parent was additionally examined.

METHOD

Participants

A total of 722 mothers participated in the study, of which 99 mothers were from single parent and 623 from two-parent families. All results will be presented separately, for participants from single and two-parent families, respectively. The reason why only mothers were included lies in the fact that fathers were significantly less represented as the main carers in single parent families. Given the fact that in Croatia there are five times more single parent families with mothers as the main carers (53), it was not possible to adequately cover this group. Also, it has been shown that the response of mothers to parent meetings (where a questionnaire was distributed) was higher and they were generally more inclined to participate in research on family, children or parenting. A convenience sample of mothers with at least one elementary school child aged 11 to 15 years (from the fifth to the eighth grade of elementary school) from the city of Zagreb was used. The study was conducted in 10 primary schools and one branch of an elementary school in Zagreb to cover almost all former municipalities of the city. The age of the participants ranged from 30 to 59 years, with a mean age of 42 for mothers in single parent and 43 for mothers in two-parent families (Table 1). In line

TABLICA 1. Dob sudionica i broj djece
TABLE 1. Age of participants and number of children

	Majke iz jednoroditeljskih obitelji / Mothers from single parent families				Majke iz dvoroditeljskih obitelji / Mothers from two-parent families				t (d)
	min	max	M	SD	min	max	M	SD	
Dob / Age	32	58	41,83	5,250	30	59	42,90	4,695	2,072* (0,22)
Broj djece / Number of children	1	7	2,00	1,097	1	9	2,34	0,928	3,286** (0,36)

*p<0,05; **p<0,01

U skladu s očekivanjima s obzirom na obiteljsku strukturu, sudionice iz dvoroditeljskih obitelji imale su u prosjeku nešto veći broj djece.

U obrazovanju nije bilo razlika između majki iz dva poduzorka te ih je većina završila srednju školu, a potom slijedi viša škola ili fakultet (tablica 2.). Iako su u radnom statusu sudionica uočene značajne razlike, veličina učinka bila je zanemariva te se dobiveni rezultat uvelike može pripisati većem udjelu majki iz dvoroditeljskih obitelji koje su označile „ostalo“, pri čemu se većinom radilo o majkama korisnicima mjere roditelj odgojitelj³. Budući da je za stjecanje toga statusa jedan od uvjeta upravo veći broj djece, dobivena razlika između dvije skupine sudionica ne začuđuje. Većina je sudionica iz obje skupine zaposlena ili samozaposlena. Također, većina ih živi u vlastitoj ili obiteljskoj kući ili stanu. Ipak, zamjetna je značajna razlika u udjelu sudionica koje žive u podstanarstvu, gdje je vidljivo da čak petina majki iz jednoroditeljskih obitelji živi u podstanarstvu, naspram svega 5 % majki iz dvoroditeljskih obitelji (tablica 2.). Već taj podatak upućuje na lošije ekonomske prilike kod majki iz jednoroditeljskih obitelji na što ukazuju i neki podatci o obilježjima materijalnog statusa sudionica koji će biti prikazani u poglavljju s rezultatima.

Kod sudionica iz jednoroditeljskih obitelji do datno su ispitani razlozi jednoroditeljstva i

with expectations with regard to the family structure, participants from two-parent families had a slightly higher number of children on average.

There were no differences in education between mothers in the two subsamples as most of them graduated from high school, followed by high school or college (Table 2). Although significant differences were observed in the employment status of the participants, the magnitude of the effect was negligible and the result obtained can largely be attributed to the higher share of mothers in two-parent families who answered with “other”. It is important to note that mothers in this category were, in most cases, beneficiaries of the parent teacher measure³. Taking into account that one of the preconditions for acquiring the status of a parent teacher is related to a larger number of children in a family, the resulting difference between the two groups of participants does not come as a surprise. Most of the participants in the study from both groups were employed or self-employed. Most of them lived in their own or family owned homes or apartments. However, there was a significant difference in the share of participants who were sub-tenants. It is evident that as many as one fifth of mothers in single parent families were sub-tenants, compared to only 5% of mothers in two-parent families (Table 2). This information indicates much poorer economic conditions in mothers in single parent families, which is indicated by the data

³ Odluka o novčanoj pomoći za roditelja odgojitelja, Grad Zagreb; <http://www1.zagreb.hr/zagreb/slglasnik.nsf/rest-akt/19c009fab8f26513c1258286003d5d88?OpenDocument&Click=>

³ Decision on financial assistance for parent teachers, City of Zagreb; <http://www1.zagreb.hr/zagreb/slglasnik.nsf/rest-akt/19c009fab8f26513c1258286003d5d88?OpenDocument&Click=>

TABLICA 2. Sociodemografska obilježja sudionica
TABLE 2. Sociodemographic characteristics of participants

		Majke iz jednoroditeljskih obitelji / Mothers from single parent families		Majke iz dvoroditeljskih obitelji / Mothers from two-parent families		χ^2 (Cramerov V) / χ^2 (Cramer V)
		N	%	N	%	
Obrazovni status / Educational status	Nezavršena osnovna škola / Unfinished primary school	-	-	1	0,2	1,512 (0,05)
	Završena osnovna škola / Primary education completed	2	2,0	17	2,7	
	Srednja škola / Secondary education	53	53,5	298	48,0	
	Viša škola ili fakultet / College or university	36	36,4	259	41,7	
	Magisterij ili doktorat znanosti / Master's degree or PhD	8	8,1	46	7,4	
Radni status / Employment status	U radnom odnosu ili samozaposlena / Employed or self-employed	82	84,5	534	86,5	10,897* (0,12)
	Povremeno zaposlena / Occasionally employed	7	7,2	20	3,2	
	Nezaposlena / Unemployed	5	5,2	31	5,0	
	Umirovljenica / Retired	2	2,1	2	0,3	
	Ostalo / Other	1	1,0	30	4,9	
Stambene prilike / Housing situation	U vlastitoj ili obiteljskoj kući/stanu / In own or family home/apartment	74	74,7	579	93,2	35,273** (0,22)
	U socijalnom stanu / Social housing	3	3,0	7	1,1	
	U podstanarstvu / Subletting	20	20,2	31	5,0	
	Negdje drugdje / Other	2	2,0	4	0,6	

*p<0,05; **p<0,01

obilježja odnosa s drugim roditeljem (tablica 3.). Majke iz jednoroditeljskih obitelji u većini su slučajeva kao razlog jednoroditeljstva navodile razvod, odnosno prekid veze. Pritom su navodile širok raspon trajanja jednoroditeljstva, od 3 mjeseca do 14 godina, s prosjekom od oko 6 godina (u mjesecima: $M = 76,06$; $SD = 46,604$). Pokazalo se da velik dio očeva pridonosi financijski u podmirivanju potreba djece, no treba istaknuti da ih i dalje manje od polovice to čini uvijek, dok ih preko trećine to čini tek povremeno ili rjeđe. Kontakti između roditelja također postoje u većini slučajeva te su kod više od polovice majki česti, no ponovo su kod gotovo 20 % uzorka prilično rijetki ili ih uopće nema. Majke iz jednoroditeljskih

on the characteristics of the economic status of participants that will be presented in the chapter focusing on the results of the study.

Participants from single parent families were further asked to explain the reasons for single parenthood and to describe their relationship with the other parent (Table 3). In most cases, mothers in single parent families stated that the reason for single parenthood was divorce or termination of the relationship. The duration of single parenthood ranged from 3 months to 14 years, with the median of approximately 6 years (in months: $M = 76.06$; $SD = 46.604$). The data indicates that many fathers financially contributed to meeting the needs of children, but it should be noted that less than half of fathers did it on permanent basis while over one

TABLICA 3. Razlozi jednoroditeljstva i obilježja odnosa s drugim roditeljem kod majki iz jednoroditeljskih obitelji
TABLE 3. Reasons for single parenthood and characteristics of relationships with the other parent in mothers from single parent families

		Frekvencija / Frequency	%	M	SD
Razlozi jednoroditeljstva / Reasons for single parenting	Razvod/rastava braka, prekid veze / Divorce/separation, breakup	78	78,8	-	-
	Smrt partnera / Death of a partner	7	7,1		
	Od početka otac djeteta nije živio s djetetom/djecom / The father did not live with the child/children from the beginning	12	12,1		
	Nešto drugo / Other	2	2,0		
Financijski doprinos drugog roditelja u podmirivanju potreba zajedničkog djeteta/djece / Financial contribution of the other parent in meeting the needs of the common child/children	Nikad / Never	9	10,0	3,76	1,327
	Rijetko / Seldom	6	6,7		
	Povremeno / Occasionally	20	22,2		
	Često / Often	18	20,0		
	Uvijek / Always	37	41,1		
Učestalost kontakta s drugim roditeljem / Frequency of contact with the other parent	Nikad / Never	5	5,4	3,54	1,171
	Rijetko / Seldom	12	13,0		
	Povremeno / Occasionally	27	29,3		
	Često / Often	24	26,1		
	Uvijek / Always	24	26,1		
Kvaliteta odnosa s drugim roditeljem / Quality of relationship with the other parent	Vrlo lošim / Very poor	17	18,7	3,09	1,339
	Lošim / Poor	11	12,1		
	Osrednjim / Mediocre	25	27,5		
	Dobrim / Good	23	25,3		
	Vrlo dobrim / Very good	15	16,5		

obitelji u prosjeku kvalitetu odnosa s očevima procjenjuju osrednjom, no ovdje je posebno izražena njihova podijeljenost u odgovorima koji su raspodijeljeni od izrazito niskih do izrazito visokih procjena.

Postupak

Prije provedbe istraživanja zatražena je i dobivena suglasnost za njegovo provođenje od Etičkog povjerenstva ustanove u okviru koje je istraživanje provedeno. Suglasnost za provođenje istraživanja u osnovnim školama dao je i Gradski ured za obrazovanje Grada Zagreba te ravnatelji pojedinačnih škola koje su odabrane u uzorak. Stručni suradnici iz škola obučeni su

third did so only occasionally or less frequently. In most cases, contacts between parents were persistent. More than half of mothers declared that they were frequent, but almost 20% of the sample declared that they were rare or non-existent. On average, mothers in single parent families assessed the quality of relationship with fathers as mediocre. However, this question indicated that they were very much divided in their responses, ranging from extremely low to extremely high assessments.

Procedure

Ahead of the study, consent was requested and obtained from the Ethics Committee of the institution within which the study was conducted. The Zagreb City Office for Education and the

za provedbu istraživanja te su na roditeljskim sastancima objasnili roditeljima svrhu i postupak istraživanja kao i etičke aspekte provedbe. Roditelji su dobili i pismene informacije o istraživanju s kontakt podatcima istraživača te zatvorene omotnice s upitnicima. Zamoljeni su da upitnik ispuni samo majka, udomiteljica ili ženska skrbnica djeteta te da ispunjeni upitnik po djetetu u zatvorenoj omotnici pošalje u školu. Predviđeno trajanje ispunjavanja upitnika bilo je oko 30 minuta.

Tijekom provedbe istraživanja vodilo se računa o tome da sudionice budu dobro informirane o svim aspektima istraživanja kao i da im se omogući naknadno dobivanje informacija u slučaju potrebe. Također im je jasno objašnjeno da odbijanje ili odustajanje od sudjelovanja neće za njih imati nikakve posljedice. Sudionice nigdje u upitniku nisu navodile osobne podatke na temelju kojih bi ih se moglo identificirati, a pristup upitnicima imali su samo istraživači koji ih osobno ne poznaju, čime su osigurane anonimnost i povjerljivost. Podaci su obradivani isključivo na grupnoj razini te su sudionice upućene gdje se mogu javiti ako trebaju stručnu pomoć vezano uz neku od tema koje su se istraživale.

Mjerni instrumenti

Na početku upitnika ispitana su sociodemografska obilježja sudionica od kojih su u ovom radu korišteni podatci o dobi, broju djece, obrazovnom i radnom statusu te stambenim prilikama. Također je ispitana financijski status sudionica subjektivnom procjenom materijalnog statusa i stambenih uvjeta, uz korištenje ljestvica od 1 (vrlo loš/izrazito loši) do 5 (odličan/izrazito dobri). Majkama iz jednoroditeljskih obitelji su dodatno postavljena pitanja o razlogu i trajanju jednoroditeljstva te obilježjima odnosa s drugim roditeljem. Konkretno, ispitano je koliko često drugi roditelj pridonosi financijski i koliko su često u kontaktu na lje-

principals of the schools selected for the sample gave the consent to conduct the study in primary schools. Professional associates from schools were trained to conduct the study and they explained to parents the purpose and the method of the study as well as ethical aspects of its implementation at parent meetings. Parents also received written information about the study together with the researchers' contact information and sealed envelopes containing the questionnaires. Only mothers, female foster parents or guardians were asked to fill out and send questionnaires to schools in a sealed envelope. It was estimated that 30 minutes would be needed to fill out the questionnaire.

During the course of the study, all participants were well informed about all aspects of the study and provided with additional information, if necessary. They were also given clear guidance that their refusing or withdrawing from participation would not result in any consequences. In order to guarantee anonymity and confidentiality, the participants did not provide any personal information on the basis of which they could be identified and only researchers who did not know them personally had access to the questionnaires. The data obtained were processed only at the group level and participants were referred to points of contact in case they needed professional help in relation to a particular topic that was examined.

Measuring instruments

At the beginning of the questionnaire, sociodemographic characteristics of the participants were examined concerning their age, number of children, educational and employment status and housing opportunities and then used in this paper. The financial status of the participants was also examined by subjective assessment of economic status and housing conditions, using the scale scores ranging from 1 (very bad/ extremely bad) to 5 (excellent/extremely good). The mothers from single parent families were additionally asked questions about the reason and duration of single parenthood and the characteristics of the

stvici od 1 (nikad) do 5 (uvijek) te kako opisuju taj odnos na ljestvici od 1 (vrlo lošim) do 5 (vrlo dobrim).

Upitnik učinka finansijskih poteškoća na odnose u obitelji

Upitnik učinka finansijskih poteškoća na odnose u obitelji (54) sastoji se od 6 čestica kojima sudionice procjenjuju u kojoj mjeri se finansijske poteškoće odražavaju na obiteljske odnose. Sudionice su odgovarale na ljestvici od 1 (nikad) do 5 (uvijek), a primjer čestice je „Novac je izvor sukoba u mojoj obitelji“. Dvije čestice se obrnuto kodiraju, a ukupni rezultat dobiva se kao prosjek svih odgovora pri čemu veći rezultat ukazuje na višu razinu utjecaja finansijskih poteškoća na obiteljske odnose. Pouzdanost ljestvice u ovom istraživanju iznosila je $\alpha = 0,84$.

Ljestvica roditeljskog stresa

Ljestvica roditeljskog stresa (*Parental Stress Scale*, 55) sastoji se od 18 tvrdnji (npr. „Zbog djeteta/djece mi je teško uskladiti različite obaveze i odgovornosti“), a sudionice su svoje odgovore davale na ljestvici od 1 (uopće se ne slažem) do 5 (u potpunosti se slažem). Pojedine čestice se obrnuto kodiraju, a ukupni rezultat dobiven je kao prosjek svih odgovora. Viši rezultat ukazuje na veći stupanj roditeljskog stresa. U ovom istraživanju pouzdanost ljestvice iznosila je $\alpha = 0,86$.

Upitnik socijalne podrške

Upitnik socijalne podrške (49) sastoji se od 13 čestica koje se dijeli u dvije podljestvice, formalne i neformalne izvore podrške roditeljima i njihovoj djeci. Njime je ispitivano koliko sudionice smatraju da mogu računati na pomoć iz 5 neformalnih (npr. obitelj, prijatelji, susjedi) i 8 formalnih izvora podrške (npr. centar za socijalnu skrb, liječnik, škola). Ponuđeni odgovori bili su na ljestvici od 1 (nikad) do 4 (uvijek), a ukupni rezultat izračunat je zasebno za neformalne i formalne izvore podrške kao prosjek

relationship with the other parent. In particular, it was examined how often the other parent contributed financially and how often they were in contact on the scale ranging from 1 (never) to 5 (always) as well as how they described this relationship on the scale ranging from 1 (very bad) to 5 (very good).

The questionnaire on the impact of financial difficulties on relationships in the family

The questionnaire on the impact of financial difficulties on family relationships (54) consisted of 6 items assessing to what extent these reflected on family relationships. The participants answered on the scale ranging from 1 (never) to 5 (always). An example of an item is “Money is a source of conflict in my family.” Two items were coded in reverse order and the overall score was obtained as an average of all responses where a higher score indicated a higher level of impact of financial difficulties on family relationships. The reliability of the scale in this study was at $\alpha = 0.84$.

Parental Stress Scale

The Parental Stress Scale (55) is an 18-item questionnaire (e.g. “It is difficult to balance different responsibilities because of my child(ren)”). The participants gave their answers on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Individual items were coded in reverse order and the overall result was calculated as an average of all responses. A higher score indicated a higher degree of parental stress. In this study, the reliability of the scale was at $\alpha = 0.86$.

Social Support Questionnaire

The social support questionnaire (49) consisted of 13 items divided into two subscales describing formal and informal sources of support to parents and their children. The questionnaire examined to what extent the participants believed that they could count on help from 5 informal (e.g. family, friends, neighbours) and 8 formal

odgovora na pripadajućim česticama. Pritom veći rezultat označava veću percipiranu dostupnost podrške iz neformalnih odnosno formalnih izvora. Pouzdanost je za podljestvicu neformalne podrške u ovom istraživanju iznosila $\alpha = 0,79$, a za podljestvicu formalne podrške $\alpha = 0,88$.

Višedimenzionalna ljestvica percipirane socijalne podrške

Višedimenzionalna ljestvica percipirane socijalne podrške (*Multidimensional Scale of Perceived Social Support*, MSPSS, 56) mjeri percepciju socijalne podrške od bliskih osoba (obitelji, prijatelja i „posebne osobe“, poput partnera, vrlo bliskog prijatelja/prijateljice ili člana obitelji) i sastoji se od 12 čestica na koje su sudionice odgovarale na ljestvici od 1 (uopće se ne slažem) do 7 (u potpunosti se slažem). Primjer čestice je „Moja mi obitelj zaista nastoji pomoći“. Iako je moguće računati i percipiranu socijalnu podršku primljenu iz pojedinih izvora, u ovom je istraživanju korišten ukupni rezultat izračunat kao prosjek svih odgovora na ljestvici pri čemu veći rezultat ukazuje na veću percipiranu socijalnu podršku. Pouzdanost ljestvice bila je visoka i iznosila $\alpha = 0,94$.

Ljestvica psihološke dobrobiti

Ljestvica psihološke dobrobiti (*Adult Well-Being Scale*, AWBS, 57) sastoji se od 18 čestica kojima se ispituju četiri aspekta psihološke dobrobiti: depresivnost ($k = 5$), anksioznost ($k=5$), te razdražljivost prema unutra ($k = 4$) i prema van ($k = 4$). Primjer čestice je „Osjećam se veselo“. Ponuđeni odgovori na ljestvici od četiri stupnja sadržajno se razlikuju ovisno o tvrdnji na koju se odnose, a kodiraju se brojkama od 0 do 3. Pojedine čestice obrnuto se kodiraju prije računanja ukupnih rezultata i to na različit način, tako da veći ukupni rezultat na cijeloj ljestvici ukazuje na veću općenitu psihološku dobrobit, dok veći rezultati na pojedinim podljestvcima ukazuju na veću izraženost depresivnosti,

sources of support (e.g. social welfare centre, medical doctor, school). The answers were set on the scale ranging from 1 (never) to 4 (always) and the overall score was calculated separately for informal and formal sources of support as the average of responses given for the associated items. A higher result indicated a higher level of perceived availability of support from informal or formal sources. The reliability for the informal support subscale in this study was at $\alpha = 0.79$, and for the formal support subscale at $\alpha = 0.88$.

Multidimensional Scale of Perceived Social Support

The Multidimensional Scale of Perceived Social Support (MSPSS, 56) measured perceived social support from closest persons (family, friends, and “significant other,” i.e., a partner, very close friend or a family member) and consisted of 12 items to which participants responded on the scale ranging from 1 (I strongly disagree) to 7 (I fully agree). An example of an item is “My family is really trying to help me.” Although it is possible to calculate the perceived social support from individual sources, this study used the overall score calculated as the average of all answers on the scale, whereby a higher result indicated a higher level of perceived social support. The reliability of the scale was at $\alpha = 0.94$.

Adult Wellbeing Scale

The Adult Wellbeing Scale, (AWBS, 57) consisted of 18 items examining four aspects of psychological wellbeing: depression ($k = 5$), anxiety ($k=5$), inward irritability ($k=4$) and outward irritability ($k=4$). An example of an item is “I feel cheerful.” The answers on the scale consisting of four degrees varied in content depending on the claim to which they referred and were coded by numbers ranging from 0 to 3. Prior to calculating the overall score, individual items were coded in reverse order and in a differentiated way, so that a higher overall score on the scale indicated a higher level of general psychological wellbeing whereas higher scores on individual subscales indicated a greater

anksioznosti, razdražljivosti prema unutra i razdražljivosti prema van. Svi ukupni rezultati izračunati su kao prosjeci odgovora na pripadajućim česticama. Pouzdanost cijele ljestvice bila je $\alpha = 0,85$, a podljestvica redom: depresivnost $\alpha = 0,54$, anksioznost $\alpha = 0,71$, razdražljivost prema unutra $\alpha = 0,70$ i razdražljivost prema van $\alpha = 0,67$.

Analiza podataka

Za ispitivanje razlika između jednoroditeljskih i dvoroditeljskih obitelji korišteni su t-test i hi-kvadrat test, dok su kao indikatori veličine učinka korišteni Cohenov d i Cramerov V. Za ispitivanje povezanosti između varijabli prije njihovog uključivanja u daljnje analize korišten je Pearsonov koeficijent korelacije. Također je za svaki prediktor izračunat VIF (engl. *variance inflation factor*) kako bi se provjerilo postoji li multikolinearnost te su rezultati pokazali da taj problem nije bio prisutan u ovom istraživanju. Kako bi se ispitala prediktivna valjanost seta odabranih prediktorskih varijabli, korištena je hijerarhijska regresijska analiza koja je provedena odvojeno na poduzorcima majki iz jednoroditeljskih i dvoroditeljskih obitelji. Za provedbu analiza korišten je statistički paket SPSS 23.0.

REZULTATI

Razlike između majki iz jednoroditeljskih i dvoroditeljskih obitelji

U ovom istraživanju poseban je naglasak stavljen na ispitivanje potencijalnih razlika u materijalnom statusu majki različitih struktura obitelji te ulozi koju takve različite prilike mogu imati u njihovoј psihološkoj dobrobiti. Stoga je prvo ispitano postoje li razlike između majki iz jednoroditeljskih i dvoroditeljskih obitelji u pojedinim obilježjima materijalnog statusa (tablica 4.). Rezultati su pokazali da značajna

expression of depression, anxiety and inward and outward irritability. Overall scores were calculated as the averages of answers to the corresponding items. The reliability of the overall scale was at $\alpha = 0.85$ whereas the reliability of the subscales was at $\alpha = 0.54$ for depression, at $\alpha = 0.71$ for anxiety, at $\alpha = 0.70$ for inward irritability and at $\alpha = 0.67$ for outward irritability.

Data analysis

The t-test and the Chi-Quadrat test were used to examine differences between single parent and two-parent families while Cohen's d and Cramer V were used as indicators of the magnitude of the effect. Pearson correlation coefficient was used to examine the correlation between variables before their inclusion in further analysis. Variance inflation factor (VIF) was used to check for multicollinearity and the results showed that this problem was not present in this study. In order to examine the predictive validity of a set of selected predictor variables, hierarchical regression analysis was used and performed separately on the two subsamples, i.e., mothers in single parent and two-parent families. SPSS 23.0 was used for statistical analysis.

RESULTS

Differences between mothers from single parent and two-parent families

In this study, a special emphasis was given to the analysis of potential differences in the economic status of mothers in the two different family structures and the role that such different circumstances may play for their psychological wellbeing. For that reason, it was first examined whether there were differences between mothers from single parent and two-parent families in terms of individual characteristics of their economic status (Table 4). The results indicate that there was a significant difference in the subjective assessment of economic status as a general

TABLICA 4. Razlike između majki iz jednoroditeljskih i dvoroditeljskih obitelji u obilježjima materijalnog statusa i ispitanim psihosocijalnim karakteristikama

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TABLE 4. Differences between mothers from single parent and two-parent families regarding the characteristics of economic status and psychosocial characteristics

		N	M	SD	t (d)
Subjektivna procjena materijalnog statusa / Subjective assessment of economic status	Jednoroditeljske obitelji / Single parent families	96	3,05	0,863	5,062** (0,56)
	Dvoroditeljske obitelji / Two-parent families	614	3,53	0,856	
Subjektivna procjena stambenih uvjeta / Subjective assessment of housing conditions	Jednoroditeljske obitelji / Single parent families	98	4,19	0,668	1,678 (0,18)
	Dvoroditeljske obitelji / Two-parent families	621	4,31	0,647	
Percepcija učinka finansijskih poteškoća na odnose u obitelji / Perception of the effect of financial difficulties on relationships in the family	Jednoroditeljske obitelji / Single parent families	97	2,14	0,677	-1,608 (0,18)
	Dvoroditeljske obitelji / Two-parent families	617	2,01	0,730	
Roditeljski stres / Parental stress	Jednoroditeljske obitelji / Single parent families	96	1,86	0,451	-0,700 (0,09)
	Dvoroditeljske obitelji / Two-parent families	618	1,82	0,472	
Neformalna podrška / Informal support	Jednoroditeljske obitelji / Single parent families	96	2,65	0,745	2,839** (0,32)
	Dvoroditeljske obitelji / Two-parent families	610	2,87	0,667	
Formalna podrška / Formal support	Jednoroditeljske obitelji / Single parent families	87	1,71	0,560	1,758 (0,21)
	Dvoroditeljske obitelji / Two-parent families	536	1,84	0,633	
Percepcija socijalne podrške / Perception of social support	Jednoroditeljske obitelji / Single parent families	95	5,83	1,261	3,024** (0,43)
	Dvoroditeljske obitelji / Two-parent families	611	6,23	0,859	
Psihološka dobrobit / Psychological wellbeing	Jednoroditeljske obitelji / Single parent families	98	2,19	0,407	1,255 (0,14)
	Dvoroditeljske obitelji / Two-parent families	620	2,24	0,354	
Poddjeljstvice psihološke dobrobiti / Subscales of psychological wellbeing					
Depresivnost / Depression	Jednoroditeljske obitelji / Single parent families	97	0,85	0,424	-2,477* (0,26)
	Dvoroditeljske obitelji / Two-parent families	620	0,75	0,383	
Anksioznost / Anxiety	Jednoroditeljske obitelji / Single parent families	98	0,98	0,548	-0,186 (0,02)
	Dvoroditeljske obitelji / Two-parent families	621	0,97	0,528	
Razdražljivost prema unutra / Inward irritability	Jednoroditeljske obitelji / Single parent families	98	0,40	0,448	-1,777 (0,20)
	Dvoroditeljske obitelji / Two-parent families	620	0,32	0,399	
Razdražljivost prema van / Outward irritability	Jednoroditeljske obitelji / Single parent families	97	0,96	0,545	-0,211 (0,04)
	Dvoroditeljske obitelji / Two-parent families	620	0,94	0,481	

*p < 0,05; **p < 0,01

razlika postoji u subjektivnoj procjeni materijalnog statusa kao općenitoj mjeri ekonomske situacije obitelji te da je ta procjena bolja kod majki iz dvoroditeljskih obitelji. S druge strane, razlike u doživljaju učinka finansijskih poteškoća na odnose u obitelji te subjektivnoj procjeni stambenih uvjeta nisu se pokazale značajnima, a ranije prikazane razlike u karakteristikama poduzoraka ukazuju da je kod majki iz jednoroditeljskih obitelji značajno rjeđe prisutno trajno riješeno stambeno pitanje u obliku vlasništva nad stanom ili kućom.

Nadalje su ispitane razlike u psihosocijalnim karakteristikama između majki iz jednoroditeljskih i dvoroditeljskih obitelji. Pokazalo se da majke iz jednoroditeljskih obitelji u značajno manjoj mjeri smatraju da mogu računati na podršku i pomoći iz neformalnih izvora te da općenito primljenu socijalnu podršku percipiraju nižom od majki iz dvoroditeljskih obitelji (tablica 4.). Formalni izvori su jedini ispitivani aspekt podrške u kojem nije dobivena značajna razlika, no ovdje treba napomenuti da su sudionice iz oba poduzorka dostupnost pomoći i podrške iz ovih izvora procijenile vrlo niskom. U roditeljskom stresu i psihološkoj dobrobiti također nisu dobivene značajne razlike, kao ni u većini podljestvica psihološke dobrobiti, no razlika je dobivena u depresivnosti. Pokazalo se da je ona veća kod majki iz jednoroditeljskih u odnosu na one iz dvoroditeljskih obitelji, no treba uzeti u obzir da je veličina učinka bila mala.

Predviđanje psihološke dobrobiti kod majki iz jednoroditeljskih i dvoroditeljskih obitelji

Prije računanja hijerarhijskih regresijskih analiza ispitane su povezanosti između odabranih prediktorskih i kriterijske varijable (tablica 5.). Pokazalo se da trajanje jednoroditeljstva i finansijski doprinos drugog roditelja nisu povezani s psihološkom dobrobiti majki iz jednoroditeljskih obitelji pa te dvije varijable nisu uključene u daljnje obrade.

measure of the economic situation of the family and that the assessment in question was better in mothers from two-parent families. On the other hand, the differences relating to the experience of the effect of financial difficulties on relationships in the family and the subjective assessment of housing conditions proved to be insignificant whereas the previously presented differences in the characteristics of the subsamples indicated that mothers from single parent families had significantly lower scores for permanent housing solutions in the form of ownership of an apartment or house.

Furthermore, differences in psychosocial characteristics between mothers in single and two-parent families were examined respectively. The mothers in single parent families felt that they could count on support and assistance from informal sources to a significantly lesser degree compared to the mothers in two-parent families and, in general terms, they perceived the social support received to be at the lower level than the support received by the mothers in two-parent families (Table 4). Formal sources were the only examined aspect of support in which there was no significant difference observed. However, it should be noted that participants from both subsamples assessed the availability of assistance and support from formal sources as very low. There were no significant differences observed for parental stress and psychological wellbeing as well as in most of the psychological wellbeing subscales. The only difference was observed in the depression subscale. This difference was higher in the mothers in single parent families compared to those from two-parent families but it should be taken into account that the magnitude of the effect was small.

Prediction of psychological wellbeing in mothers in single parent and two-parent families

Prior to conducting hierarchical regression analyses, the associations between the selected predictor and criterion variables were examined (Table 5). It turned out that the duration of single

TABLICA 5. Međusobne povezanosti ispitivanih varijabli
TABLE 5. Interrelationships of the examined variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
Trajanje jednoroditeljstva / Duration of single parenting	-	-	-	-	-	-	-	-	-	-	-	-
Finansijski doprinos drugog roditelja / Financial contribution of the other parent		-,139	-	-	-	-	-	-	-	-	-	-
Učestalost kontakta s drugim roditeljem / Frequency of contact with the other parent		-,181	,495**	-	-	-	-	-	-	-	-	-
Kvaliteta odnosa s drugim roditeljem / Quality of relationship with the other parent		,021	,378**	,771**	-	-	-	-	-	-	-	-
Subjektivna procjena materijalnog statusa / Subjective assessment of economic status		-,101	,323**	,305**	,254*	-	,516**	-,545**	-,090*	,108**	,019	,155**
Subjektivna procjena stambenih uvjeta / Subjective assessment of housing conditions		,017	,183	,067	,252*	,384**	-	-,458**	-,242**	,220**	,106*	,220**
Percepcija učinka finansijskih poteškoća na odnose u obitelji / Perception of the effect of financial difficulties on relationships in the family		,002	-,301**	-,311**	-,320**	-,411**	-,444**	-	,331**	-,282**	-,121**	-,354**
Roditeljski stres / Parental stress		-,180	,065	-,107	-,163	-,058	-,114	,310**	-	-,364**	-,193**	-,387**
Neformalna podrška / Informal support		-,003	,206	,168	,175	,261*	,096	-,350**	-,327**	-	,458**	,510**
Formalna podrška / Formal support		,048	-,025	,044	,057	,078	,050	-,227**	-,259*	,507**	-	,248**
Percepcija socijalne podrške / Perception of social support		,059	,230*	,133	,112	,258*	,165	-,361**	-,279**	,638**	,284**	-
Psihološka dobrobit / Psychological wellbeing		,112	,135	,354**	,330**	,281**	,270**	-,513**	-,482**	,275**	,257*	,232*

*p < 0,05; **p < 0,01

Napomena: S gornje strane dijagonale prikazane su korelacije dobivene na poduzorku majki iz dvoroditeljskih obitelji, a s donje strane dijagonale korelacije dobivene na poduzorku majki iz jednoroditeljskih obitelji

/ Note: The top of the diagonal shows the correlations obtained on the subsample of mothers in two-parent families whereas the bottom of the diagonal shows the correlations obtained on the subsample of mothers in single parent families.

U prvom bloku hijerarhijskih regresijskih analiza uvedene su varijable jednoroditeljstva te je taj blok prediktora korišten samo kod majki iz jednoroditeljskih obitelji (tablica 6.). Njime je objašnjeno 11,7 % varijance psihološke dobrobiti, no niti jedna od prediktorskih varijabli se sama za sebe nije pokazala značajnom. Takav nalaz se vjerojatno može pripisati njihovoj međusobnoj visokoj interkorelaciji, no, zajednički gledajući, dobiveni rezultati upućuju da veću psihološku dobrobit majki iz jednoroditeljskih obitelji predviđaju učestaliji i kvalitetniji kontakti s drugim roditeljem.

Kod oba poduzorka varijable materijalnog statusa objasnile su dodatni postotak varijance kriterija (14,6 % kod majki iz jednoroditeljskih, odnosno 22,1 % kod majki iz dvoroditeljskih obitelji) te se percepcija većeg utjecaja finansijskih poteškoća na odnose u obitelji pokazala značajnim negativnim prediktorom psihološke dobrobiti, kako kod majki iz jednoroditeljskih obitelji, tako i kod majki iz dvoroditeljskih obitelji.

parenthood and the financial contribution of the other parent were not related to the psychological wellbeing of mothers in single parent families and, therefore, these two variables were not included in further analysis.

In the first block of hierarchical regression analyses, single parenting variables were introduced and this predictor block was used only in mothers in single parent families (Table 6). The predictor was used to explain 11.7% of the variance of psychological wellbeing, however, none of the predictor variables proved to be significant on their own. This finding can probably be attributed to their high intercorrelation, but, considered together, the results obtained suggest that a higher level of psychological wellbeing in mothers in single parent families can be predicted by more frequent and better contacts with the other parent.

In both subsamples, the variables related to economic status explained an additional percentage of the variance of the criterion (14.6% in single parent mothers and 22.1% in mothers in

TABLICA 6. Rezultati hijerarhijskih regresijskih analiza za predviđanje psihološke dobrobiti majki iz jednoroditeljskih i dvoroditeljskih obitelji

TABLE 6. Results of hierarchical regression analyses used to predict psychological wellbeing of mothers in single parent and two-parent families

	Majke iz jednoroditeljskih obitelji / Mothers from single parent families	Majke iz dvoroditeljskih obitelji / Mothers from two-parent families		
	b	β	b	β
1. blok: Varijable jednoroditeljstva / 1st block: Single parenting variables	$R = ,376; R^2 = ,142$ $\Delta R^2 = ,142^{**}; R^2_{corr} = ,117$		-	
Učestalost kontakta s drugim roditeljem / Frequency of contact with the other parent	,040	,114		-
Kvaliteta odnosa s drugim roditeljem / Quality of relationship with the other parent	,085	,280		
2. blok: Varijable materijalnog statusa / 2nd block: Economic status variables	$R = ,560; R^2 = ,313$ $\Delta R^2 = ,172^{**}; R^2_{corr} = ,263$		$R = ,475; R^2 = ,225$ $\Delta R^2 = ,225^{**}; R^2_{corr} = ,221$	
Učestalost kontakta s drugim roditeljem / Frequency of contact with the other parent	,015	,043		-
Kvaliteta odnosa s drugim roditeljem / Quality of relationship with the other parent	,060	,197		
Subjektivna procjena materijalnog statusa / Subjective assessment of economic status	-,017	-,036	,013	,031
Subjektivna procjena stambenih uvjeta / Subjective assessment of housing conditions	,016	,028	,029	,053
Percepcija učinka finansijskih poteškoća na odnose u obitelji / Perception of the effect of financial difficulties on relationships in the family	-,256	-,440**	-,210	-,431**
3. blok: Roditeljski stres / 3rd block: Parental stress	$R = ,674; R^2 = ,455$ $\Delta R^2 = ,142^{**}; R^2_{corr} = ,406$		$R = ,595; R^2 = ,354$ $\Delta R^2 = ,128^{**}; R^2_{corr} = ,349$	
Učestalost kontakta s drugim roditeljem / Frequency of contact with the other parent	,040	,116		-
Kvaliteta odnosa s drugim roditeljem / Quality of relationship with the other parent	,045	,147		
Subjektivna procjena materijalnog statusa / Subjective assessment of economic status	-,014	-,029	,043	,104*
Subjektivna procjena stambenih uvjeta / Subjective assessment of housing conditions	,020	,034	-,008	-,014
Percepcija učinka finansijskih poteškoća na odnose u obitelji / Perception of the effect of financial difficulties on relationships in the family	-,195	-,335**	-,146	-,299**
Roditeljski stres / Parental stress	-,356	-,390**	-,287	-,385**
4. blok: Podrška / 4th block: Support	$R = ,678; R^2 = ,460$ $\Delta R^2 = ,005; R^2_{corr} = ,384$		$R = ,644; R^2 = ,415$ $\Delta R^2 = ,061^{**}; R^2_{corr} = ,407$	
Učestalost kontakta s drugim roditeljem / Frequency of contact with the other parent	,043	,125		-
Kvaliteta odnosa s drugim roditeljem / Quality of relationship with the other parent	,040	,133		
Subjektivna procjena materijalnog statusa / Subjective assessment of economic status	-,007	-,015	,047	,113**
Subjektivna procjena stambenih uvjeta / Subjective assessment of housing conditions	,021	,035	-,016	-,029
Percepcija učinka finansijskih poteškoća na odnose u obitelji / Perception of the effect of financial difficulties on relationships in the family	-,202	-,347**	-,110	-,226**
Roditeljski stres / Parental stress	-,359	-,393**	-,227	-,303**
Neformalna podrška / Informal support	-,011	-,019	,002	,005
Formalna podrška / Formal support	,043	,055	,015	,026
Percepcija socijalne podrške / Perception of social support	-,018	-,057	,106	,267**

* p < 0,05; ** p < 0,01

telji. U sljedećem koraku analize uveden je roditeljski stres za koji se također pokazalo da negativno predviđa psihološku dobrobit obje skupine sudionica. Ovime je objašnjeno dodatnih

two-parent families). The perception of a greater impact of financial difficulties on family relationships proved to be a significant negative predictor of psychological wellbeing, both in mothers

14,3 % varijance kriterija kod majki iz jednoroditeljskih obitelji, odnosno 12,8 % kod majki iz dvoroditeljskih obitelji. Treba napomenuti da se kod potonjih u ovom koraku kao dodatni značajni prediktor psihološke dobrobiti izdvojila i samoprocjena boljeg materijalnog statusa.

U posljednjem koraku uključene su varijable koje su se odnosile na podršku koju majke primaju ili smatraju da im je dostupna. Dodavanjem ovih varijabli kod majki iz jednoroditeljskih obitelji nije došlo do značajne promjene u objašnjenju kriterija, no kod majki iz dvoroditeljskih obitelji objašnjeno je dodatnih 5,8 % varijance. Percepcija primanja veće socijalne podrške od bliskih osoba kod njih predviđa veću psihološku dobrobit. Konačno, odabranim prediktorima kod majki iz jednoroditeljskih obitelji objašnjeno je ukupno 38,4 %, a kod onih iz dvoroditeljskih obitelji 40,7 % varijance psihološke dobrobiti.

RASPRAVA

Cilj ovog istraživanja bio je ispitati razlike između majki iz jednoroditeljskih i dvoroditeljskih obitelji prema materijalnom statusu, razini roditeljskog stresa, socijalnoj podršci i psihološkoj dobrobiti kao i odrednice psihološke dobrobiti majki iz jednoroditeljskih i dvoroditeljskih obitelji prediktorskim skupom koji uključuje različite pokazatelje materijalnog statusa, roditeljskog stresa i socijalne podrške. Ujedno, kod majki iz jednoroditeljskih obitelji dodatno se ispitao prediktorski doprinos učestalosti kontakata i kvalitete odnosa s drugim roditeljem.

Utvrđeno je da se majke iz jednoroditeljskih i dvoroditeljskih obitelji značajno razlikuju s obzirom na neke parametre materijalnog statusa kao i psihološke dobrobiti, dok kada je riječ o prediktorima psihološke dobrobiti kod majki iz jednoroditeljskih i dvoroditeljskih obitelji, nisu utvrđena veća odstupanja u ove dvije skupine, osim kad je riječ o doprinosu socijalne podrške.

from single parent families and in mothers from two-parent families. In the next step of the analysis, parental stress was introduced, which was also shown to negatively predict the psychological wellbeing of both groups of participants. This explained the additional 14.3% of the variance of the criterion in mothers in single parent families, that is 12.8% in mothers in two-parent families. It should be noted that for the latter group, in this step, the self-assessment of better economic status proved to be an additional significant predictor of psychological wellbeing.

In the last step, the variables related to the support that mothers received or felt available to them were included. When these variables were added, there was no significant change in the explanation of the criterion in mothers in single parent families. However, in mothers from two-parent families this addition explained an additional 5.8% of variance. The perception of receiving more social support from closest persons predicted a higher level of psychological wellbeing. Finally, the selected predictors in mothers in single parent families explained a total of 38.4% variance and 40.7% of variance of psychological wellbeing in mothers in two-parent families.

DISCUSSION

The aim of this study was to examine the differences between mothers in single and two-parent families according to their economic status, level of parental stress, social support and psychological wellbeing as well as the determinants of psychological wellbeing of mothers in single and two-parent families using a predictor set including various indicators related to economic status, parental stress and social support. In parallel with that, the predictor contribution of the frequency of contacts and the quality of relationship with the other parent was additionally examined in the single parent mothers.

It was found that the two groups of mothers differed significantly with regard to certain parameters of economic status and psychological

Varijabla kontakta s drugim roditeljem bila je namijenjena samo majkama iz jednoroditeljskih obitelji. Rezultati pokazuju da su majke iz jednoroditeljskih obitelji uglavnom nezadovoljne kontaktom s drugim roditeljem te da razmjerno visok postotak (82 %) majki ima barem povremen kontakt s ocem djece, što ukazuje na to da je i većina djece u povremenom kontaktu s ocem. No, također se pokazalo da je čak 58 % majki u osrednjem, lošem ili vrlo lošem odnosu s drugim roditeljem, što može biti izvor stresa kako za majku tako i za djecu. Rezultati su pokazali da, gledajući zajedno, učestaliji i kvalitetniji kontakti s drugim roditeljem predviđaju i veću psihološku dobrobit kod tih majki. Učestalost kontakata s drugim roditeljem u nekim se istraživanjima (58) pokazala kao važan zaštitni faktor kad je riječ o djeci, osobito kod dječaka koji ostvaruju češći kontakt s drugim roditeljem. S druge strane, česti kontakti ponekad mogu biti i rizičan čimbenik zbog povećanog stresa zbog čestog mijenjanja mjesta boravljenja, promjene u dnevnoj rutini, dnevnom rasporedu djeteta i slično (58).

Kada je riječ o važnosti različitih aspekata materijalnog statusa u kontekstu roditeljstva te njegovog doprinosa objašnjenu psihološke dobrobiti kod majki, pokazalo se da majke iz jednoroditeljskih obitelji općenito svoj materijalni status procjenjuju lošijim u odnosu na majke iz dvoroditeljskih obitelji. Ovakvi rezultati nisu novost kad je riječ o jednoroditeljskim obiteljima s obzirom da i ranija istraživanja pokazuju da osobe koje žive u jednoroditeljskim obiteljima imaju prosječno slabiji socioekonomski status od osoba u dvoroditeljskim obiteljima (15, 59, 60) dok neki naglašavaju da su jednoroditeljske obitelji u visokom riziku od siromaštva (61, 62). Jedno od relativno rijetkih istraživanja u Hrvatskoj o potrebama jednoroditeljskih obitelji (60) pronalazi da zaposleni roditelji iz jednoroditeljskih obitelji s višom ili visokom stručnom spremom imaju manje financijskih teškoća. Iako različita istraživanja (63-66) pokazuju da financijske poteškoće, osobito subjektivne

wellbeing, whereas no significant deviation was found in the two groups for the predictors of psychological wellbeing, with the exception of the contribution of social support.

Contact with the other parent as a variable was examined only in single parent mothers. The results obtained indicate that mothers in single parent families were mostly dissatisfied with the contact with the other parent and that a relatively high percentage (82%) of mothers had at least occasional contacts with the father of their children, indicating that most children also had occasional contacts with their fathers. It has also been shown that as many as 58% of mothers had a mediocre, bad or very bad relationship with the other parent, which may be a source of stress for both the mother and children. Considered together, the results obtained indicate that more frequent and better contacts with the other parent can be a predictor of a higher level of psychological wellbeing in single parent mothers. In some studies (58), the frequency of contact with the other parent has been shown to be an important protective factor when it comes to children, especially in boys who have more frequent contacts with the other parent. On the other hand, frequent contacts can sometimes be a risk factor due to increased stress resulting from frequent change of place of residence and changes in the daily routine and schedule of the child (58).

In terms of the importance of various aspects of economic status and its contribution to the explanation of psychological wellbeing in mothers, it has been shown that the mothers in single parent families generally assessed their economic status as less affluent than the mothers in two-parent families. Such results are not unprecedented when it comes to single parent families having in mind that previous research shows that individuals in single parent families have lower socioeconomic status on average than individuals in two-parent families (15, 59, 60) whereas some emphasize that single parent families are at high risk of poverty (61, 62). One of the relatively rare studies conducted in Croatia on the needs of single parent families (60) found that work-

procjene materijalnog statusa, imaju direktni efekt na psihološku dobrobit roditelja, te posredno, putem roditeljskog stresa i smanjene psihološke dobrobiti mogu biti povezane s odnosima u obitelji (67,68). U ovom istraživanju, kao što je spomenuto, nije utvrđena razlika između jednoroditeljskih i dvoroditeljskih obitelji u efektu finansijskih poteškoća na odnose u obitelji. Neki autori naglašavaju da ekonomski poteškoće u jednoroditeljskim obiteljima često uzrokuju i druge probleme te imaju kratkoročne, ali i dugoročne posljedice na djecu. Tako neki ukazuju da niži ekonomski status uzrokuje manje ulaganje majki iz jednoroditeljskih obitelji u zdrav život što uzrokuje češće kronične bolesti djece iz jednoroditeljskih obitelji u usporedbi s djecom iz dvoroditeljskih obitelji (15). Materijalna nesigurnost i nesigurno stanovanje mogu biti rizični čimbenici kod zlostavljanja djece (54) i funkcionalnog oštećenja djece (69). S druge strane, razlike u doživljaju učinka finansijskih poteškoća na odnose u obitelji te subjektivnoj procjeni stambenih uvjeta nisu se pokazale značajnima, no ranije prikazane razlike u karakteristikama poduzoraka ukazuju da je kod majki iz jednoroditeljskih obitelji značajno rjeđe prisutno trajno riješeno stambeno pitanje u obliku vlasništva nad stanom ili kućom. Također se pokazalo da je percepcija većeg utjecaja finansijskih poteškoća na odnose u obitelji značajan negativan prediktor psihološke dobrobiti i to za obje podskupine majki.

S obzirom na socijalnu podršku pokazale su se razlike na način da majke iz jednoroditeljskih obitelji percipiraju socijalnu podršku značajno nižom te ujedno smatraju da u značajno manjoj mjeri mogu računati na neformalnu podršku (obitelj, rodbina, prijatelji, susjedi) u odnosu na majke iz dvoroditeljskih obitelji. Istovremeno, majke iz obje podskupine formalnu socijalnu podršku (npr. liječnika, obiteljskih savjetovališta, centra za socijalnu skrb i dr.) procjenjuju vrlo niskom te nisu utvrđene razlike u njihovoj percepciji u tom aspektu. Nisku razinu formalne podrške nalaze i autori koji su ranije istraži-

ing parents in single parent families with higher education qualification or a university degree had fewer financial difficulties. Although various studies (63-66) show that financial difficulties, in particular subjective assessments of economic status, have a direct effect on the psychological wellbeing of parents, and can be indirectly associated with relationships in the family through parental stress and reduced psychological wellbeing (67,68). As mentioned above, the present study did not establish a difference between single parent and two-parent families regarding the effect of financial difficulties on family relationships. Some authors emphasize that economic difficulties in single parent families often result in other problems and have short-term and long-term consequences on children. Thus, some authors indicate that lower economic status can cause that mothers in single parent families invest less in a healthy life-style, which, in turn, results in more frequent chronic diseases of children in single parent families compared to children in two-parent families (15). Material insecurity and precarious housing can be risk factors for child abuse (54) and functional impairments in children (69). On the other hand, the differences in the perceived effect of financial difficulties on family relationships and subjective assessment of housing conditions did not prove to be significant, but the previously presented differences in the characteristics of subsamples indicate that mothers in single parent families had significantly lower scores for permanent housing solutions in the form of ownership of an apartment or house. It has also been shown that the perception of greater effect of financial difficulties on relationships in the family was a significant negative predictor of psychological wellbeing for both subgroups of mothers.

In view of social support, mothers in single parent families perceived social support at a significantly lower level and believed that they could count on informal support (family, relatives, friends, neighbours) to a significantly lesser extent compared to mothers from two-parent families. At the same time, mothers from both

vali ovu temu (49) gdje se pokazalo da je većina roditelja bila nezadovoljna dostupnošću informacija o vlastitim pravima u ovim sustavima. Razlika je, međutim, pronađena u doprinosu socijalne podrške razini psihološke dobrobiti, pri čemu se pokazalo da je ona značajan prediktor samo kod majki iz dvoroditeljskih obitelji. Zbog čega je tome tako odnosno zašto socijalna podrška ne doprinosi razini psihološke dobrobiti kod majki iz jednoroditeljskih obitelji bilo bi potrebno dalje istražiti. Istraživanja u tom smjeru do sada nisu rađena, a jedno od mogućih objašnjenja možda se može tražiti u potencijalno višoj razini oslonjenosti na vlastite resurse majki iz jednoroditeljskih obitelji s obzirom da najčešće veći teret skrbi za dijete nose upravo one, kao nositeljice obitelji. Istraživanja ukazuju na to da je socijalna podrška važna odrednica psihološke dobrobiti roditelja (70). Ona se odnosi na podršku izvan obitelji, ali i podršku koju partneri u (bračnoj) zajednici pružaju jedno drugome pri odgoju djeteta. Neki autori u istraživanju veze između socijalne podrške i dobrobiti roditelja pronalaze da je razina socijalne podrške roditelja važan prediktor stupnja depresivnosti te bolja podrška pomaže i boljoj psihološkoj prilagodbi u zahtjevima roditeljstva nakon rođenja djeteta (71). Pritom je najvažniji oblik socijalne podrške upravo partner, što neizostavno stavlja roditelje iz jednoroditeljskih obitelji u nepovoljniju situaciju.

Kod psihološke dobrobiti nisu utvrđene značajne razlike između poduzoraka majki sagledavajući ukupni rezultat na ovom upitniku. No, s obzirom da je rezultat na upitniku psihološke dobrobiti moguće sagledavati i prema podljestvcima, jedina utvrđena razlika između ovih dviju podskupina majki je na podljestvici depresivnosti gdje se pokazalo da majke iz jednoroditeljskih obitelji iskazuju višu razinu depresivnosti. Ove rezultate treba ipak razmatrati s oprezom, jer ograničenje predstavlja prilično velika razlika u broju između poduzoraka majki, a snaga zaključaka bi bila značajnija da je u istraživanje uključen veći broj majki iz jednoroditeljskih obitelji.

subgroups assessed the formal social support (e.g. doctors, family counselling centres, social welfare centres, etc.) as very low and there were no differences found in their perception of this aspect. A low level of formal support was also found by authors who have previously researched this topic (49) indicating that most parents were dissatisfied with the availability of information about their rights in these systems. However, a difference was found regarding the contribution of social support to the level of psychological wellbeing, which was shown to be a significant predictor only in mothers in two-parent families. Why this is the case, or why social support does not contribute to the level of psychological wellbeing of mothers in single parent families, would need to be investigated further. So far, there has been little research in this direction and one of the possible explanations might be that mothers in single parent families rely more on their own resources as they, in most cases, bear the greatest burden of caring for children as the main carers for family members. Research suggests that social support is an important determinant of the psychological wellbeing of parents (70). It refers to the support outside of the family as well as the support that (married) partners provide to each other in raising a child. While researching the link between social support and parental wellbeing, some authors found that the level of social support provided to parents was an important predictor of the degree of depression and that better support contributed to better psychological adaptation to demands of parenthood following the birth of a child (71). The support of the partner is the most important form of social support, which inevitably puts parents from single parent families in a less favourable position.

No significant differences were found for psychological wellbeing between the two subsamples of mothers in the overall score of this questionnaire. However, given that the result on the psychological wellbeing questionnaire can also be viewed according to the subscales, the only difference between the two subgroups of mothers was established on the depression subscale indicating

Ipak, možemo reći da tendencija k izraženijim depresivnim simptomima kod majki iz jednoroditeljskih obitelji postoji, a rezultate koji upućuju na isto pronalazimo i u ranijim istraživanjima (16,17). Tako se u jednome od njih pokazalo da su majke iz jednoroditeljskih obitelji imale veću vjerojatnost pojave barem jedne depresivne epizode u 12 mjeseci koji su prethodili istraživanju (16). Kao i u našem istraživanju te su majke prijavljivale i niže razine socijalne podrške i bile su manje uključene u komunikaciju s obitelji i prijateljima (izvorima neformalne podrške) od majki iz dvoroditeljskih obitelji.

Iako ranija istraživanja ukazuju na neposrednu (16,39,41) i posrednu (39-41) vezu između roditeljskog stresa i strukture obitelji, u našem istraživanju nismo pronašli razlike u tom smjeru. No, unatoč tome pokazalo se da varijabla roditeljskog stresa negativno predviđa psihološku dobrobit kod obje skupine sudionica. Naime, kada je riječ o prediktorima psihološke dobrobiti kod majki iz jednoroditeljskih i dvoroditeljskih obitelji, nisu utvrđena veća odstupanja u ove dvije skupine. Razlog tome možda treba tražiti u načinu mjerena psihološke dobrobiti u ovom istraživanju koje uključuje varijable koje se odnose na pojedine poteškoće mentalnog zdravlja ne obuhvaćajući sve aspekte psihološke dobrobiti, o čemu će kasnije biti više riječi. Još jednom je potrebno istaknuti da je s obzirom na korištene prediktore objašnjen zadovoljavajući postotak varijance psihološke dobrobiti pri čemu kod jednoroditeljskih obitelji iznosi 38,4% , a kod onih iz dvoroditeljskih obitelji 40,7 %. U tom je smislu svojevrsni doprinos ovog istraživanja uključivanje prediktorskog skupa varijabli koji se odnosio na materijalni aspekt obitelji, a koji je dao značajan doprinos u objašnjenju psihološke dobrobiti. Naime, različiti aspekti materijalnog statusa obitelji odnosno pojedinaca se u objašnjenjima psiholoških aspekata funkcioniranja i općenito povezanosti s mentalnim zdravljem prilično zanemaruju u istraživačkom kontekstu. No, ovo istraživanje

that mothers in single parent families expressed a higher level of depression. These results should be considered with caution due to a fairly large difference in the number of subsamples. The strength of the conclusions would be more significant if more single parent mothers were included in the study. However, we might conclude that there is a tendency that mothers in single parent families have more pronounced depressive symptoms, which was also found in the results of previous research (16,17). One study indicates that mothers in single parent families were more likely to experience at least one depressive episode in the 12 months preceding the study (16). As in our study, those mothers reported lower levels of social support and were less involved in communicating with family and friends (sources of informal support) than mothers from two-parent families.

Although earlier research points to an immediate (16,39,41) and indirect (39-41) relationship between parental stress and family structure, we found no differences in that respect in our research. Nevertheless, the parental stress variable has been shown to negatively predict psychological wellbeing in both groups of participants. No major deviations were found in the two groups regarding the predictors of psychological wellbeing in mothers in single and two-parent families. The reason for this may be related to the method of measurement used in this research to measure psychological wellbeing that includes variables related to individual mental health difficulties without taking into account all aspects of psychological wellbeing, which will be discussed in more detail later. Once again, it should be noted that with regard to the predictors used, a satisfactory percentage of variance of psychological wellbeing was explained, with 38.4% in single parent families and 40.7% in two-parent families. In this sense, the contribution of this research lies in the inclusion of a predictor set of variables related to the material aspect of the family, which made a significant contribution in explaining psychological wellbeing. Researchers often neglect various aspects of economic status of the family or the

pokazuje kako je ovaj aspekt važan za psihološku dobrobit roditelja odnosno majki, ne samo iz jednoroditeljskih već i iz dvoroditeljskih obitelji.

U ovom su istraživanju bila prisutna i određena metodološka ograničenja na koja se valja osvrnuti. Prvo se odnosi na prigodni uzorak kojim nisu obuhvaćeni reprezentativni omjeri jednoroditeljskih i dvoroditeljskih obitelji. Nadalje, kad je riječ o postupku istraživanja, majke su upitnike ispunjavale kod kuće pri čemu nisu mogle provjeriti značenje pojedinih pitanja te su upitnike vraćale u školu stručnom suradniku i to po djeci, što je moglo narušiti doživljaj anonimnosti i povjerljivosti. Ograničenje može biti relativno ekstenzivan anketni upitnik koji je sadržavao mnogo različitih ljestvica te je i to moglo dovesti do zamora i gubitka koncentracije kod sudionica. Povezano s upitnikom percipirane socijalne podrške činjenica je da se uglavnom odnosi na segment emocionalne podrške, dok ne sadrži, primjerice, aspekt instrumentalne podrške, koji bi bio važan u kontekstu jednoroditeljstva te bi trebalo razmotriti u budućim istraživanjima instrumente socijalne podrške koji sadrže i tu komponentu. Također, kao što je u uvodnom dijelu spomenuto, u ovom istraživanju smo se opredijelili za korištenje ljestvice koja polazi od koncepta psihološke dobrobiti kao prisutnosti ili odsutnosti psihičkih teškoća kao što su depresivnost, anksioznost ili razdražljivost. Činjenica je da je takav, prilično ograničen pristup razmatranju psihološke dobrobiti, zamijenjen znatno širim paradigmama kao što su ranije spomenuti hedonizam i eudemonizam i zapravo ljestvica pomoći koje smo mjerili psihološku dobrobit više se odnosi na psihičke teškoće.

U konačnici, važno je osvrnuti se i na mogućnosti dalnjih istraživanja u proučavanju teme psihološke dobrobiti u kontekstu jednoroditeljstva. Naime, s obzirom da smo u ovom istraživanju psihološku dobrobit obuhvatili prilično segmentirano s obzirom na mjerni konstrukt koji je bio ograničen na aspekte depresivnosti, anksioznosti i razdražljivosti (57) u dalnjim bi

individual when psychological aspects of functioning and general relationships with mental health need to be explained. However, this research shows that this aspect plays an important role for the psychological wellbeing of parents, in this case mothers, in both single parent and two-parent families.

This study was limited by certain methodological constraints, which should be addressed as well. The first constraint concerns a convenience sample that did not cover the representative ratios of single parent and two-parent families. Furthermore, in the examination procedure the mothers filled out questionnaires at home and were, thus, unable to verify the meaning of certain questions. They sent the questionnaire to the professional associate working in the school through children, which could have impaired the experience of anonymity and confidentiality. Another constraint was related to the fact that the questionnaire was relatively extensive and comprised many different scales, which could have resulted in fatigue and loss of concentration in participants. The fact is that the questionnaire on perceived social support mainly refers to emotional support and it does not comprise, for example, the aspect of instrumental support, which is important in the context of single parenting. Future research should consider the instruments of social support also tackling this component. As mentioned in the introduction, in this research we opted to use a scale that starts from the concept of psychological wellbeing as the presence or absence of psychological distress such as depression, anxiety or irritability. The fact is that such a rather limited approach to considering psychological wellbeing has been replaced by some much broader paradigms such hedonism and eudemonism. The scale used to measure psychological wellbeing focused more on psychological distress.

Ultimately, it is also important to address the possibilities of further research in the field of psychological wellbeing in the context of single parenting. Given that this study tackled psychological wellbeing in a rather segmented way with regard to the measurement construct that

istraživanjima bilo vrijedno proširiti mjerenje psihološke dobrobiti kod roditelja iz jednoroditeljskih obitelji obuhvaćajući i druge aspekte koji uključuju dva ranije navedena ključna koncepta sagledavanja psihološke dobrobiti kao što su hedonizam i eudemonizam. Naime, neki autori su integrirali ova dva koncepta psihološke dobrobiti što znači da su obuhvatili i konstrukt sreće kao bitne odrednice psihološke dobrobiti (hedonizam), kao i konstrukt aktualizacije (eudemonizam). Kao što smo već nekoliko puta naglasili, ljestvica psihološke dobrobiti korištena u ovom istraživanju uglavnom je temeljena na psihološkim teškoćama (engl. *psychological distress*), što je poseban konstrukt u nekim istraživanjima koji se dovodi u vezu s konstruktom psihološke dobrobiti koja se pak razmatra u kontekstu koncepta sreće i aktualizacije. Primjenom sveobuhvatnijeg i danas učestalijeg načina ispitivanja psihološke dobrobiti u kontekstu sreće i aktualizacije doprinijelo bi se boljem razumijevanju psihološke dobrobiti u jednoroditeljskim obiteljima. Ranije spomenuto istraživanje u kojem se istraživao odnos između psihološke dobrobiti i psihičkih teškoća pokazalo je negativnu povezanost između navedenih varijabli (52). U istom se istraživanju pokazalo se da je niska razina psihološke dobrobiti i veća prisutnost psihičkih teškoća (koje se primarno odnose na depresivnost i anksioznost) značajno više prisutna kod samaca, osoba koje su razvedene, relativno niskog obrazovnog statusa, radno nesposobnih osoba, osoba nižeg materijalnog statusa, podstanara i umirovljenika. Iz navedenih sociodemografskih obilježja vidljivo je da se radi o osobama koje su i inače u većem riziku od siromaštva te iako u tom istraživanju nije korištena varijabla jednoroditeljstva, vidljivo je da su razvedene osobe (a razvod je najčešći uzrok jednoroditeljstva), kao i osobe koje čeće žive u podstanarstvu (što se značajno više pokazalo kod majki iz jednoroditeljskih obitelji) podložnije psihičkim teškoćama odnosno imaju nižu razinu psihološke dobrobiti. S obzirom na spol, u istom istraživanju se pokazalo da nema razlika u psihološkoj dobro-

was limited to aspects of depression, anxiety and irritability (57), in further research it would be worth expanding the measurement of psychological wellbeing in parents from single parent families to also include other aspects that are key for the analysis of psychological wellbeing, such as hedonism and eudemonism. Some authors have integrated those two concepts of psychological wellbeing, meaning that they have also included constructs such as happiness (hedonism) and self-actualization (eudemonism) as essential determinants of psychological wellbeing. As we have already pointed out, the psychological wellbeing scale used in this study was mainly based on psychological distress. In some studies, it is a distinctive construct linked to the construct of psychological wellbeing, which is, in turn, examined in the context of happiness and self-actualization. Applying a more comprehensive and nowadays more frequent method of examining psychological wellbeing in the context of happiness and self-actualization would contribute to a better understanding of psychological wellbeing in single parent families. The previously mentioned study investigating the relationship between psychological wellbeing and psychological distress found a negative association between those variables (52). The same study has shown that a low level of psychological wellbeing and a greater presence of psychological distress (primarily depression and anxiety) were significantly more present in single or divorced persons, persons with a relatively low education, incapacitated for work, persons of lower socioeconomic status, tenants and retired persons. These sociodemographic characteristics indicate that these persons are usually at higher risk of poverty and although the single parenting variable was not used in this study, it is evident that divorced persons (divorce being the most common cause of single parenthood) and persons who were not homeowners (significantly more evident in the mothers in single parent families) were more susceptible to psychological distress or had a lower level of psychological wellbeing. In view of gender, the same study has found that there were no differences in psychological

biti između muškaraca i žena, ali žene iskazuju veću razinu kad su u pitanju psihičke teškoće. U tom kontekstu bilo bi zanimljivo istražiti psihološku dobrobit i prisutnost psihičkih teškoća u jednoroditeljskim obiteljima s obzirom na spol roditelja. S obzirom na općenito nedovoljnu istraženost psihološke dobrobiti kod roditelja u jednoroditeljskim obiteljima bilo bi vrijedno uključiti i kvalitativna istraživanja kako bi se mogli odrediti eventualni čimbenici odnosno varijable kojih nije bilo u dosadašnjim istraživanjima. U tom smislu, temeljem analize kvalitativnog istraživanja, osim nalaza i doprinosa svojstvenih kvalitativnom istraživanju, došlo bi se do dodatnih izvora za konstruiranje čestica odnosno upitnika za buduća istraživanja.

wellbeing between men and women. However, women indicated a higher level of psychological distress. In this context, it would be interesting to investigate the psychological wellbeing and the presence of psychological distress in single parent families with regard to gender of parents. Given the fact that psychological wellbeing of parents in single parent families has not been sufficiently investigated, it would be worthwhile to also include qualitative research in order to be able to determine possible factors or variables that were not examined in previous studies. Based on the analysis of qualitative research, in addition to findings and contributions of qualitative research, additional sources for the construction of items or questionnaires for future research would be obtained.

ZAKLJUČAK

Istraživanje je pokazalo da se majke iz jednoroditeljskih obitelji suočavaju s više rizika u odnosu na majke iz dvoroditeljskih obitelji. Ustanovljeno je da su slabijeg materijalnog statusa, percipiraju nižu socijalnu podršku te imaju nešto izraženije simptome depresivnosti kad je riječ o psihološkoj dobrobiti. Prediktori psihološke dobrobiti slični su kod majki iz jednoroditeljskih i dvoroditeljskih obitelji pri čemu se pokazalo da kod obje skupine materijalni status, percepcija učinka finansijskih poteškoća na odnose u obitelji i roditeljski stres značajno doprinose objašnjenju psihološke dobrobiti roditelja, dok se socijalna podrška pokazala prediktivnom kod majki iz dvoroditeljskih obitelji.

CONCLUSION

The study found that mothers in single parent families were faced with more risks compared to mothers in two-parent families as they had a less affluent economic status, perceived lower levels of social support and somewhat more pronounced symptoms of depression. Predictors of psychological wellbeing were similar in the mothers in single parent and two-parent families. In both groups, economic status, perception of the effect of financial difficulties on family relationships and parental stress significantly contributed to the explanation of the psychological wellbeing of parents whereas social support proved to be a predictive factor for mothers in two-parent families.

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Europski okvir za kompetencije u psihijatriji radi osiguranja kvalitetne edukacije za specijalista psihijatra i skrbi za osobe s poremećajem mentalnog zdravlja

/ European Framework for Competencies in Psychiatry for Ensuring the Quality of Training for Psychiatrists and Care for People with Mental Health Disorders

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Tema rada je prikaz kompetencija za zanimanje psihijatar prema Europskom okviru za kompetencije u psihijatriji (*European Framework for Competences in Psychiatry*, EFCP) Europske unije medicinskih specijalnosti (*European Union of Medical Specialists*, UEMS) - Odjela za psihijatriju. Rad opisuje sedam uloga liječnika-psihijatra s pridruženim kompetencijama, koje osiguravaju kvalitetu psihijatrijske skrbi, a mora ih stići svaki psihijatar da bi kvalitetno radio svoj posao: psihijatrijski stručnjak / klinički donositelj odluka, komunikator, suradnik, vođa, zagovornik zdravlja, učenik / znanstvenik i profesionalac. Svrha rada je povećati svijest o važnosti stjecanja specifičnih kompetencija za psihijatra, a osobito o potrebi procjene postignutih kompetencija u svim ulogama psihijatra, usporediti popis kompetencija u aktualnom programu specijalizacije iz psihijatrije u Hrvatskoj s EFCP popisom, te utvrditi postoji li potreba za revizijom hrvatskog programa specijalizacija iz psihijatrije. *Metodologija:* usporedba popisa kompetencija preporučenih u EFPC s popisom kompetencija iz hrvatskog programa specijalizacije iz psihijatrije.

Glavni rezultati: usporedba EFPC-a s hrvatskim popisom kompetencija pokazuje razliku u pristupu klasifikaciji kompetencija: u EFPC-u se kompetencije opisuju u obliku sedam specifičnih uloga psihijatra, a u hrvatskom programu kompetencije su vezane za područja psihijatrije. Utvrđena je i razlika u metodama mjerjenja, odnosno evaluacije o postignutim kompetencijama između hrvatskog i europskog programa evaluacije kompetencija za psihijatra. *Zaključak:* Usporedba EFPC-a s popisom kompetencija u hrvatskom programu specijalizacije iz psihijatrije upućuje na potrebu poboljšanja hrvatskog programa posebno u području procjene postignutih kompetencija za specijalista psihijatrije. Preporuke iz EFCP mogu biti korisne u analizi i reviziji svih europskih kurikulumi specijalizacije iz psihijatrije s ciljem harmonizacije izobrazbe za specijalista psihijatra u Europskoj uniji.

/ The topic of this paper is a presentation of competencies for the profession of psychiatrist in the revised document of the European Framework for Competences in Psychiatry (EFCP) of the European Union of Medical Specialists (UEMS) - Section of Psychiatry. It describes the seven roles of physician-psychiatrist with the associated competencies that each

psychiatrist needs to acquire to do his or her job according to high quality standards. It includes the following roles: a psychiatric expert/clinical decision maker, communicator, collaborator, team leader, scholar, advocate, and a professional. The purpose of this paper is to increase awareness of the importance of acquiring competencies, especially the need to assess the achieved competencies in all of the seven roles of psychiatrists, to compare the list of competencies in the current programme of specialization in psychiatry in Croatia with the EFCP list, and to determine whether there is a need to revise the Croatian programme of specialization in psychiatry. We have compared the list of competencies recommended in the EFPC with the list of competencies listed in the Croatian specialization programme in psychiatry. The main results established a difference in the approach to the classification of competencies. The EFPC describes the competencies using the model of seven roles of psychiatrists, whereas the Croatian list of competencies relates competencies to the fields of psychiatry. A difference from the recommended methods to measure the achievement of competencies has also been found. The comparison of the EFCP with the list of competencies in the Croatian specialization programme in psychiatry indicates the need to improve the Croatian programme, especially in terms of assessing the achieved competencies. One can use the EFCP in the analysis and audit of all EU specialization programmes in psychiatry, which can help in the harmonization of specialty training for psychiatrists at the EU level.

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UVOD

Pružanje kvalitetne skrbi za osobe s poteškoćama mentalnog zdravlja temeljene na dokazima u središtu je svega što psihijatar radi (1). Definicija područja rada psihijatara u europskom kontekstu i briga za njihovu kvalitetnu izobrazbu nosi sa sobom potrebu harmonizacije obrazovanja psihijatara u skladu s najnovijim dostignućima struke na području cijele Europske unije. Evropska unija medicinskih specijalnosti (*Union Europe'enne des Médecins Spécialistes – UEMS*), tj. njezin Odjel za psihijatriju, dali su niz preporuka za učinkovitu provedbu programa osposobljavanja u psihijatriji koji su uključivali preporuke o strukturi programa osposobljavanja, standardima osposobljavanja temeljenima na kompeten-

INTRODUCTION

Providing appropriate and evidence-based care for patients is at the heart of everything a psychiatrist does (1). The definition of the role of psychiatrists carries in itself the need for corresponding alignment of the education and relevant specialised training systems. The European Union of Medical Specialists (*Union Européenne des Médecins Spécialistes – UEMS*) and its Section of Psychiatry have established a number of recommendations for the effective implementation of training programmes in psychiatry, including the recommendations on the structure of training, competency-based training standards, standards for training institutions, trainers and

cijama, standardima za ustanove koje provode izobrazbu, mentorima i supervizorima, mehanizmima za osiguranje i procjenu kvalitete rada, kao i preporuke za kontinuiranu medicinsku edukaciju. Ključni dokumenti koji pomažu državama u uspostavi kurikuluma specijalističkog ospozobljavanja za psihijatre uključuju: Zahtjeve za ospozobljavanje za specijalnost psihijatrije (2, 3), Profil psihijatra (4) i Europski okvir za kompetencije u psihijatriji (EFCP) (5). Više od jedno stavne, jednokratne evaluacije, kompetencija je dosljedna i kontinuirana demonstracija u stvarnom okruženju rada, stoga se prema EFCP-u sustav procjene mora smatrati sastavnim dijelom svakog kurikuluma koji se razvija iz EFCP-a. Međutim, unatoč preporukama UEMS-a i naporima za postizanje usklađenosti, ospozobljavanja za specijalista psihijatra na razini EU, stanje je vrlo raznoliko (6). Neusklađenost izobrazbe, osobito u području neophodnih kompetencija za kvalitetu usluga koje pruža psihijatar, može utjecati na kvalitetu skrbi za osobe s mentalnim poteškoćama, biti prepreka oporavku, te povećati negativnu javnu percepciju psihijatrije. Stoga je potrebno uložiti napore kako bi se uklonile prepreke provedbi preporuka EFCP-a te potaknula njihova provedba u edukaciji i praksi psihijatrije. Razmatrajući prepreke kao što su kulturne razlike među zemljama, način na koji je skrb o mentalnom zdravlju organizirana, zanemarivanje uloge psihoterapije, kulture i obiteljskog konteksta (7), vjerujemo da bi problem mogao biti i u tradicionalnom fokusu psihijatrije na simptome bolesti, a manje na oporavku u kontekstu osobnog oporavka i socijalne uključenosti, kao i u poteškoćama u provedbi sveobuhvatnog psihoh-bio-socijalnog pristupa na uravnoteženi način u skladu s potrebama osoba s poteškoćama mentalnog zdravlja. Stoga pozdravljamo reviziju EFCP-a u kojoj se naglašava važnost oporavka, uravnoteženog psihoh-bio-socijalnog pristupa i intervencija te poštovanja ljudskih prava. Također vjerujemo da je jedna od prepreka provedbi EFCP-a nepoznavanje ovog dokumenta unutar psihijatrijske struke, stoga želimo povećati nje-

supervisors and quality assurance mechanisms along with continuing professional development. Some of the key documents that can help the member states in establishing the training curriculum for specialty training for psychiatrists include: Training Requirements for the Specialty of Psychiatry (2, 3), the profile of a Psychiatrist (4) and the European Framework for Competencies in Psychiatry (EFCP) (5). However, despite the UEMS recommendations and the efforts to introduce harmonisation, the training in psychiatry in Europe continues to be very diverse (6), which can affect the quality of care for people with mental health difficulties, be an obstacle to recovery and increase negative public perception of psychiatry. Therefore, efforts should be made to remove barriers to the implementation of the EFCP recommendations, so to stimulate their implementation in training and practice of psychiatry. Respecting all other barriers, such as the cultural differences between the countries with regards to how mental health care is considered and funded, neglected role of psychotherapy, culture and family context (7), we believe that the problem may lie with the traditional focus of psychiatry on the symptoms of the illness and less on the recovery, in context of personal recovery and social inclusion, as well as in the difficulties related to implementing a balanced and comprehensive bio-psychosocial approach in accordance with the needs of people with mental health problems. We therefore welcome the recent revision of the EFCP, which emphasises the importance of recovery, balanced bio-psychosocial approach, interventions, and respect for human rights. We also believe that one of the barriers to the implementation of the EFCP results from the ignorance of this document. Thus, we want to help in its dissemination in order to stimulate its implementation in practice. The UEMS strongly supports training and education in

govu vidljivost i dostupnost kako bismo potaknuli njegovu provedbu u praksi. UEMS snažno podupire ospozobljavanje i obrazovanje u psihiatriji na temelju integriranog bio-psiho-socijalnog razumijevanja mentalnog poremećaja koji se temelji na ljudskim pravima i pristupu oporavku (8) što je također u skladu s EFCP dokumentom.

Cilj je rada informirati o kompetencijama neophodnim za stjecanje diplome specijalista psihiatra, tj. koja znanja, vještine i ponašanje mora pouzdano pokazati specijalizantu psihijatrije da bi stekao kompetencije neophodne za kvalitetno i sigurno obavljanje poslova psihijatra, posebno u odnosu na ciljeve oporavka i poštivanja ljudskih prava. Također želimo povećati vidljivost ovog dokumenta psihijatrima i drugim liječnicima te usporediti kompetencije potrebne u hrvatskom programu o specijalizaciji iz psihijatrije s preporučenim kompetencijama EFCP-a, kako bismo procijenili potrebu revizije hrvatskog programa specijalizacije.

EUROPSKI OKVIR ZA KOMPETENCIJE U PSIHIJATRIJI I VAŽNOST ZA OPORAVAK I POŠTIVANJE LJUDSKIH PRAVA

Ishodi učenja u Europskom okviru za kompetencije u psihijatriji raspoređeni su u skladu sa sedam uloga liječnika ili meta kompetencija, izvedenih iz okvira kompetencija liječnika CanMEDS 2005 (9,10) na način kako je prilagođeno u UEMS profilu psihijatra (4). Sedam uloga su: psihijatrijski stručnjak / klinički donositelj odluka, komunikator, suradnik, vođa, zagovornik zdravlja, učenik / znanstvenik i profesionalac.

Ovdje prikazujemo kratak opis svakog područja kompetencija iz EFCP dokumenta kako bismo naglasili njihovu važnost u kontekstu oporavka i poštivanja ljudskih prava. Detaljan opis kompetencija nalazi se u izvornom dokumentu dostupnom na web stranici UEMS-a (5).

psychiatry based on an integrated bio-psycho-social understanding of mental disorder and disability underpinned by human rights, and recovery approach (8), also in line with the EFCP.

The aim of this paper is to inform what competencies, defined as the application and demonstration of appropriate knowledge, skills, behaviours, and judgment, are needed to obtain the diploma of a medical doctor specialized in psychiatry while focusing on the objectives such as recovery and respect for human rights. We also want to increase its visibility to psychiatrists and other doctors as well as to compare the competencies required by the Croatian curriculum on training in psychiatry with the recommended European competencies in order to assess the need for it revision.

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THE EFCP AND ITS RELEVANCE FOR RECOVERY AND RESPECT OF HUMAN RIGHTS

In the European Framework for Competencies in Psychiatry, the learning outcomes are organised in line with the seven roles of a physician, or metacompetencies, derived from the CANMEDS 2005 physician competency framework as amended in 2015 (9,10) and it drew on the revised version of The Profile of a Psychiatrist from 2018 (4). The seven physician roles are: psychiatric expert/ clinical decision-maker, communicator, collaborator, leader, health advocate, scholar, and professional.

Here we present a short description of each field of competencies and meta-competencies listed in the EFCP in order to emphasise its importance in the context of recovery and respect for human rights. A detailed description of the competencies can be found in the original EFCP document (5).

1. Psihijatrijski stručnjak / klinički donositelj odluka

Uloga medicinskog stručnjaka ključna je za funkciju specijalista psihiyatра i oslanja se na kompetencije uključene u uloge komunikatora, suradnika, zagovornika zdravlja, menadžera / vođe, učenika / znanstvenika i profesionalca. Bitne kompetencije ove uloge psihiyatра uključuju: izradu sveobuhvatne psihiatrijske anamneze uključujući razvojnu povijest, utjecaj negativnih životnih događaja u sadašnjosti i prošlosti i prepoznavanje medicinskih stanja koja doprinose mentalnom poremećaju; dijagnostičku formulaciju; procjenu rizika i upravljanje s rizicima; procjenu i dokumentiranje mentalnog statusa; procjenu sposobnosti pacijenta za doношење odluka; procjenu funkcionalnog statusa; sveobuhvatno psihohiobio-socijalno razumijevanje mentalnog poremećaja s izradom psihohiobio-socijalne formulacije uključujući utjecaj kulture i psihosocijalnih odrednica mentalnog zdravlja, razumijevanje čimbenika koji povećavaju rizik za mentalni poremećaj, kao i zaštitnih čimbenika, kao što su osobna otpornost na stres i socijalna uključenost. U području provođenja terapijskih postupaka psihiyatatar mora imati kompetencije za provođenje terapijskih postupaka kombinacijom bioloških, psiholoških i psihosocijalnih intervencija utemeljenih na dokazima.

Važne kompetencije u okviru oporavka i poštivanja ljudskih prava odnose se na prava na optimalno liječenje što uključuje: uspostavljanje, održavanje i oporavak terapijskog saveza, sposobnost psihiyatra da integrira modalitete liječenja za optimizaciju liječenja, promicanje ciljeva skrbi usmjerenih na oporavak i izradu optimalnog individualnog plana liječenja usmjerenog na pacijenta koji se temelji na sveobuhvatnoj psihohiobio-socijalnoj formulaciji relevantnih etioloških čimbenika. Potrebno je ustavoviti koje su biološke, psihoterapijske i psihosocijalne intervencije potrebne i dostupne osobi s mentalnim poremećajem. Važna je kontinuirana evalu-

1. Psychiatric Expert / Clinical Decision-Maker

The Psychiatric expert / clinical decision-maker role of the medical expert is central to the function of specialist psychiatrists and draws on the competencies included in the roles of communicator, collaborator, health advocate, leader, scholar, and professional. The essential competences of this psychiatric role include: obtaining a comprehensive psychiatric history, including developmental history, understanding the impact of adverse life events and recognizing medical conditions contributing to a mental disorder, diagnostic formulation, risk assessment and its management, carrying out and documenting a mental state examination, assessing the patient's capacity for decision making and functional status, comprehensive bio-psycho-social understanding of mental disorders, including the impact of culture and psychosocial determinants of mental health, understanding of the factors increasing the risk of mental disorder as well as the protective factors such as personal resilience and social inclusion, and carrying out therapeutic procedures with the use of a combination of evidence based biological, psychological, and psychosocial interventions.

Important competencies relevant for recovery and respect of human rights are related to rights to optimal treatment, such as establishing, maintaining and repairing a therapeutic alliance, ability of the psychiatrist to integrate various treatment modalities in order to optimize treatment, promoting recovery-focused goals of care and optimal individual treatment plan based on a comprehensive bio-psycho-social formulation of relevant aetiological factors, determining which available biological, psychotherapeutic and social interventions are appropriate to the patient's needs, as well as reviewing, revising and documenting changes to a treatment plan

acija i dokumentiranje plana liječenja; sustavna procjena ishoda liječenja, te kompetencije kada treba prekinuti tijek liječenja i osigurati odgovarajuće praćenje. U kontekstu poštivanja ljudskih prava važne su kompetencije za informirani pristanak, procjena i poznavanje zakonske regulative za dobrovoljne hospitalizacije i hospitalizacije bez pristanka, kao i rukovođenje etičkim načelima liječničke struke.

2. Komunikator

Uloga komunikatora uključuje sljedeće kompetencije: uspostavljanje, održavanje i dovršavanje terapijskih odnosa s pacijentima, kao i kompetencije za uspostavljanja terapijskog saveza kod donošenja odluka o liječenju kako bi se izradio individualni plan liječenja koji odražava pacijentove potrebe, vrijednosti i sklonosti; vještine potrebne za učinkovitu komunikaciju, kao što su aktivno slušanje, komuniciranje na otvoren i tolerantan način pokazujući empatiju i poštovanje, vodeći računa o profesionalnim granicama, kao i o pitanju prijenosa i protu-prijenosu, učinkovito rješavati izazovna komunikacijska pitanja kao što su dobivanje informiranog pristanka, iznošenje loših vijesti, rješavanje emocionalnih reakcija i drugih čimbenika koji mogu dovesti do nesporazuma ili sukoba. Psihijatar komunikator i kompetentni stručnjak će također pokazati sposobnost primjene tehnika deescalacije kako bi se sprječilo nasilno i agresivno ponašanje; omogućiti komunikaciju usmjerenu na pacijenta istražujući pacijentove simptome, pacijentovu perspektivu, uključujući strahove, ideje o bolesti, reakcije na bolest, pacijentovo iskustvo bolesti i sve okolnosti koje su dovele do poteškoća s mentalnim zdravljem. Psihijatar također mora biti u stanju konstruktivno komunicirati s obitelji, organizacijama pacijenata / korisnika usluga, kreatorima politika i medijima, kao i pravnim i socijalnim tijelima. Iz perspektive oporavka i poštivanja ljudskih prava psihijatar prepoznaće i poštuje pravo pacijenta da bude optimalno informiran

over time. Other important competencies include treatment based on informed consent, use of voluntary and involuntary admission and appropriate treatment measures in compliance with the legal standards and ethical principles.

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2. Communicator

The role of communicator includes establishing, maintaining and concluding appropriate therapeutic relationships with patients as well as demonstrating the ability to establish therapeutic alliance based on shared decision-making in order to develop a treatment plan that reflects the patient's needs, values, and preferences, demonstrating all the competencies needed for effective communication, such as active listening skills, open and non-judgmental communication showing empathy and respect, taking care of professional boundaries as well as transference and countertransference issues, handling certain challenging communication issues effectively, obtaining informed consent, delivering bad news, addressing emotional reactions and other factors that may lead to a misunderstanding or conflict, also demonstrating the ability to use de-escalation techniques to help prevent violent and aggressive behaviours, enabling patient centred communication by examining the patient's symptoms and perspective, including fears, ideas about the illness, feelings about the impact of the illness, the patient's experience of illness and all the circumstances that have led to mental health difficulties. The psychiatrist must also be able to communicate constructively with the family, patient / consumer organizations, policy makers, the media, and legal and social authorities. In addition to that, the psychiatrist needs to be able to recognise and respect the patient's right from the perspective of recovery and respect of human rights, has to be optimally informed about the illness and treatment options in order to give or refuse consent to

o svojoj bolesti i mogućnostima liječenja, kako bi mogao dati pristanak ili odbiti liječenje te aktivno sudjelovati u izradi plana liječenja.

3. Suradnik

Naziv uključuje kompetencije relevantne za suradnički rad s pacijentom, njegovom obitelji, rad u multidisciplinarnom timu, s drugim lijećnicima i drugim stručnjacima za mentalno zdravlje, organizacijama pacijenata, kao i drugima u nezdravstvenim uslugama relevantnim za liječenje pacijenata i promicanje psihiatrije. Kompetencije psihiatra suradnika odnose se na vještine: učinkovito pregovaranje, rješavanje međuljudskih sukoba; jasno definiranje vlastite uloge; poštovanje raznolikosti uloga drugih suradnika, odgovornosti i kompetencija drugih stručnjaka; sposobnost suradnje s lokalnim društvenim i kulturnim mrežama, dobrovoljnim organizacijama i skupinama za samopomoć; savjetovanje drugih stručnjaka u području medicine i izvan nje; učinkovito sudjelovati u prijelazu skrbi za pacijente između usluga. Iz perspektive oporavka i ljudskih prava suradnik također pokazuje kompetencije za promicanje oporavka i antistigma stavova, kao i rad s vršnjačkim pomagačima (engl. *peer-work*) poštujući njihove specifične kompetencije temeljene na vlastitom iskustvu s poteškoćama mentalnog zdravlja.

4. Voditelj / menađer

Od psihiatra se očekuje da funkcioniра као pružatelj zdravstvenih usluga, član tima, suradnik i lider u zdravstvenom sustavu, stoga mora imati i kompetencije u liderstvu, u planiranju i pružanju usluga, imati odgovornost za rad i kontinuirani razvoj zdravstvenog sustava, također u izvršavanju različitih aspekata svoje prakse te svakodnevno donositi odluke koje uključuju resurse, suradnike, zadatke, politike u okruženju individualne skrbi za pacijente, radnoj organizaciji i u širem kontekstu zdrav-

treatment and actively involved in the development of a treatment plan.

3. Collaborator

The role of collaborator includes competencies relevant for collaborative work with the patient, his or her family, multidisciplinary teams composed of other doctors, and other mental health professionals, patients' organizations and other stakeholders relevant for the patients' treatment and promotion of psychiatry. The psychiatrist has to be able to demonstrate various skills, such as effective negotiation, interpersonal conflict resolution, clear understanding of his or her role, respect for the diversity of roles, responsibilities and competencies of other professionals, ability to work with local social and cultural networks, voluntary organisations and self-help groups and effectively consult other medical specialists, mental health professionals and community agencies. The psychiatrist also has to obtain, interpret and evaluate consultations from other professionals as well as effectively participate in the transitioning of patient care between various services. From the perspective of recovery and human rights based care, the psychiatrist also has to show competencies to promote recovery and anti-stigma interventions as well as work with peers while respecting their specific competencies resulting from the experience with mental illnesses.

4. Leader

It is expected from the psychiatrist to function as an individual health care provider, team member, and manager or participant in the relevant health care system. The psychiatrist must be able to provide leadership in planning and delivering services that are accessible and appropriate for patients, undertake responsibility for the operation and on-going evolution of the health care system, handle various aspects of psychiatric practice, and take systematic deci-

stvenog sustava. Vještine vođenja uključuju i upravljanje timom i njihovom dinamikom te preuzimanje ambasadorske uloge kada se dešavaju promjene u politikama i pitanjima resursa za relevantna područja mentalnog zdravlja i zdravlja općenito. Iz perspektive oporavka i ljudskih prava liderска uloga psihijatra omogućava korištenje više aspekata skrbi u bolničkom i izvanbolničkom okruženju koji pomažu u oporavku, zastupanju prava pacijenata i borbi protiv stigme i diskriminacije.

5. Zagovornik zdravlja

Psihijatar treba prihvati zagovaranje (engl. *advocacy*) kao bitnu komponentu promicanja mentalnog zdravlja kako na razini pacijenta pojedinca tako i šire zajednice. Uloga zagovaranja uključuje promicanje javne rasprave o mentalnom zdravlju i mentalnim poremećajima iz preventivnog okvira i okvira oporavka, posebno kako bi se pomoglo u promjeni percepcije društva o osobama s poremećajima mentalnog zdravlja i značenju mentalnog zdravlja na razini populacije. Psihijatri se trebaju zalagati za prava svojih pacijenata da se jednakom liječe, da imaju ista prava na zdravstvenu zaštitu i budu uključeni u zajednicu na ravnopravnoj osnovi s drugim građanima s pravom na podršku kad god je to potrebno. Uloga zagovaratelja također uključuje identificiranje odrednica mentalnog zdravlja koje utječu na pacijenta i zajednicu kao i čimbenika koje utječi na tjelesno zdravlje osoba s mentalnim poremećajima, te intervenciju u skladu sa saznanjima. Iz perspektive kompetencija za oporavak i ljudska prava uloga zagovornika uključuje: poštovanje i promicanje ljudskih prava osoba s mentalnim poremećajima, suradnju s udrugama korisnika i njegovatelja te zagovaračkim skupinama; osnaživanje osoba s mentalnim poremećajima i njihovih njegovatelja i poticanje autonomije i korištenja metoda samopomoći; prepoznavanje i otklanjanje predrasuda, stigme i diskriminacije povezane s mentalnim poremećajima.

sions on resources, co-workers, tasks, policies and personal life in the settings of individual patient care, practice organizations and in the broader context of the healthcare system. Leadership skills also include managing teams and team dynamics and taking on advocacy roles while being aware of potential changes of policies and resource issues. From the perspective of recovery and respect of human rights the role of leader implies multiple aspects of care that help recovery through a range of approaches in inpatient, outpatient and community settings.

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5. Health Advocate

Psychiatrists should see advocacy as an essential and fundamental component of mental health promotion that occurs at the level of the individual patient, and the broader community. The role of health advocate involves promoting public discussion on mental health and mental disorders from the perspective of prevention and recovery, especially to help change the society's perceptions of persons with mental health disorders. Psychiatrists advocate the right of their patients to be treated equally, receiving health care and be included in the community on the equal basis with other citizens, by providing support when necessary. This role also includes identifying the determinants of mental health that affect the patient and the community, awareness of the factors that affect the physical health and well-being of persons with mental disorders and ability to intervene appropriately. The competencies relating to the perspective of recovery and respect of human rights include respecting and promoting human rights of persons with mental disorders and collaboration with consumer and professional associations and advocacy groups, empowering persons with mental disorders and their careers, recognising and addressing prejudice, stigma and discrimination associated with mental disorders and their treatment as well as applying strategies to enhance self-management and autonomy.

6. Učenik / Znanstvenik

Psihijatar kao učenik i znanstvenik je osoba posvećena cjeloživotnom učenju, kontinuirano radi na poboljšavanju znanja i vještina te ih koristi za postizanje izvrsnosti u praksi. Od psihijatra se očekuje da prepozna psihijatricu kao znanost koja se razvija, mijenja i sve više obogaćuje informacijama temeljenima na dokazima. Aktivna uloga učenika / znanstvenika osigurava da psihijatar u kliničkoj praksi donosi odluke koje su temeljene na stručnim i znanstvenim dokazima uzimajući u obzir sustav vrijednosti pacijenta i njegove preferencije. Psihijatar kao učenik / znanstvenik može prepoznati načela za održavanje kompetencije; prepoznati načela, metodologiju i etiku istraživanja kao i formulirati istraživačko pitanje i sustavno tražiti stručne i znanstvene dokaze, te na odgovarajući način širiti i upotrebljavati nalaze istraživanja. Učenik / znanstvenik također ulaže vrijeme, energiju i osobno znanje u pomoć rastu i razvoju kolega, liječnika u obuci i studenata medicine što može uključivati superviziju i mentorstvo.

7. Profesionalac

Od psihijatra se očekuje da surađuje s pacijentima kao i sa svim relevantnim dionicima kako bi se postigli najbolji ishodi liječenja za pacijenta. To se postiže poštivanjem etičkih okvira, primjenom visokih standarda struke, iskazivanjem poštovanja svima s kojima surađuje, pokazivanjem predanosti stalnom profesionalnom razvoju i osvješćivanjem svojih ograničenja. Psihijatar kao profesionalac primjenjuje najviše standarde kompetencija u kliničkoj praksi i profesionalnog ponašanja opisanih u svih sedam uloga te nikada neće zloupotrijebiti razliku moći koja postoji između njega i pacijenta te će se pridržavati profesionalnih, etičkih i zakonskih ograničenja na svim razinama na kojima djeluje. Psihijatar profesionalac vodi kvalitetnu dokumentaciju terapijskih

6. Scholar

In the role of scholar, the psychiatrist commits to lifelong learning, continuing improvement of skills and using knowledge to achieve excellence in practice. It is expected that the psychiatrist should recognize psychiatry as a science that develops, changes and expands on evidence-based information. As a scholar, the psychiatrist arrives at clinical decisions that are evidence-based at the same time taking into account the patient's values and preferences. In that way, he or she is able to recognise the principles for maintaining competence, methodology and research ethics, formulate a research question and conduct a systematic search for evidence, select and apply appropriate methods to address the question, analyse, interpret and report the results, and appropriately disseminate and utilise the findings of a study. The scholar also invests time, energy, and knowledge in assisting the growth and development of colleagues, students and doctors in residency and speciality training, possibly also involving supervision and mentoring.

7. Professional

The psychiatrist is expected to work together with patients and other relevant stakeholders in order to achieve best outcomes for the patient. This is done by reference to ethical frameworks, high standards, integrity and respect for everyone as well as by demonstrating commitment to continuing professional development and being aware of one's limitations. As a professional, the psychiatrist is able to maintain the highest standards of clinical competence and professional behaviour described in the seven roles. The psychiatrist is expected to never misuse power and to comply with professional, ethical and legal commitments at all levels. He or she also needs to maintain high quality records of clinical encounters and plans, manage conflicts of interest, maintain transparent relationships with commercial or

skih susreta s pacijentom i planova liječenja; upravlja sukobima interesa; održava transparentne odnose s komercijalnim organizacijama (uključujući farmaceutsku industriju) poštujući etička načela suradnje; poznaje načela i graniče povjerljivosti odnosa liječnik - pacijent, na prikidan način rješava neprofesionalno ponašanje drugih zdravstvenih djelatnika; ocjenjuje vlastito profesionalno ponašanje te priznaje i ispravlja medicinske pogreške ako do njih dođe. Psihijatar kao profesionalac može prepoznati i artikulirati vlastiti sustav vrijednosti i svoja načela vrijednosti shvaćajući kako se njegove vrijednosti mogu razlikovati od drugih pojedinaca i skupina; prepoznaje vlastite emocije i predrasude i razumije kako to može utjecati na njegovu prosudbu i ponašanje. Profesionalac također učinkovito koristi vrijeme i resurse da uravnoteži skrb za pacijente, potrebu za učenjem, vanjske aktivnosti i potrebe iz osobnog života; prepoznaje granice vlastitih ograničenja i zna potražiti savjet i podršku. Profesionalna uloga psihijatra posebno je važna iz perspektive oporavka i ljudskih prava u području primjene etičkih načela i poštivanja nacionalnih i međunarodnih zakona kao i u suočavanju s diskriminacijom, predrasudama i stigmom.

PROVJERA POSTIGNUTIH KOMPETENCIJA PSIHIJATRA U EDUKACIJI

Važan dio EFCP-a je provjera postignutih kompetencija. Kompetencija je sposobnost obavljanja određenog zadatka potrebnog za radnu situaciju (14). Kompetencija nije samo proizvod završetka potrebnih tečajeva niti se mjeri samo uspješnim polaganjem različitih testova i specijalističkog ispita. Kompetencija se postiže kada se znanje, vještine, odgovarajuće ponašanje i prosudbe točno i dosljedno primjenjuju u praksi, što je značajno viši standard od jednostavne, jednokratne evaluacije znanja. Kompetencija je, dakle, dosljedna i kontinuirana

ganisations (including pharmaceutical industry) based on ethical principles, recognise the principles and limits of patient confidentiality, appropriately address unprofessional conduct of other health care professionals, review their own professional conduct and acknowledge and remediate medical errors, if they occur. The psychiatrist also has to be able to recognise and articulate their own values and principles, understand how these may differ from those of other individuals and groups, identify their own emotions and prejudices and understand how these can affect their judgment and behaviour. In addition to that, the psychiatrist needs to utilize time and resources effectively to balance patient care, learning needs, outside activities and personal life, recognise the extent of one's own limitations and seek advice and support. The professional role of the psychiatrist is especially relevant from the perspective of recovery and respect of human rights, particularly so in terms of applying ethical principles and respecting national and international laws while dealing with discrimination, prejudice and stigma.

VERIFICATION OF PSYCHIATRIC COMPETENCIES IN EDUCATION

An important part of the EFCP is the verification of the achieved competencies. Competency is the ability to perform a certain task required for a work situation (5). Competency is not merely the product of completing required courses, nor is it measured simply by successfully passing a test. Rather, competency is confirmed when knowledge and skills are accurately applied in clinical situation, and appropriate behaviours and judgments are consistently displayed in practice. More than just a simple, one-time evaluation, competency is the consistent demonstration and on-going development of these components in a real-world work setting (5). Therefore, according to the EFCP, an assessment system must be considered as an integral part of any curriculum

demonstracija u stvarnom radnom okruženju (5). Zbog značenja provjere postignutih kompetencija sustav procjene mora biti sastavni dio svakog kurikuluma koji se razvija iz EFCP-a. To se odnosi jednako na edukaciju za specijalizaciju iz psihijatrije i na kontinuiranu medicinsku edukaciju. Postizanje kompetencija treba ocjenjivati u tri dimenzije: znanje ("ono što liječnik zna"), kompetencija ("što liječnik može učiniti") i uspješnost ("ono što liječnik radi"). Postoje tri načela koja bi se trebala koristiti u izgradnji sustava ocjenjivanja:

1. Sustavi ocjenjivanja trebaju biti transparentni kako bi učenici i nastavnici znali što se ocjenjuje i kako će se ocjenjivati.
2. Treba procijeniti svaku kompetenciju, a ne samo one koje je lako procijeniti.
3. Svaka kompetencija mora se procijeniti na više načina u više navrata.

Predložene metode koje se mogu upotrijebiti za procjenu stjecanja svake kompetencije navedene u EFCP-u mogu se pronaći u punom tekstu EFCP-a (5).

USPOREDBA EFCP-a S POPISOM KOMPETENCIJA U HRVATSKOM PROGRAMU OSPOSOBLJAVANJA ZA SPECIJALISTA PSIHIJATRA

Svrha edukacije za stjecanje naziva specijaliste psihijatre stjecanje je kompetencija za kvalitetno pružanje skrbi osobama s dijagnozom mentalnog poremećaja. Da bi se postigli ti ciljevi potrebno je propisati kompetencije kao obavezne standarde koji se moraju postići tijekom obuke za specijalista psihijatra, a njihovo postignuće je potrebno redovito provjeravati pouzdanim metodama procjene. Pravilnici o specijalističkom usavršavanju doktora medicine (11-14) propisuju standarde znanja i vještina za specijalista psihijatra u Republici Hrvatskoj. Program specijalizacije razlikuje opće i specifične kompetencije. Opće kompetencije odnose se

that is to be developed from the competency framework. This applies as much to professional training as to continuing professional development. Compliance with the competence criteria should be assessed through three dimensions: knowledge ('what the doctor knows'), competency ('what the doctor can do') and performance ('what the doctor does'). There are three principles recommended in the EFCP that should guide the construction of assessment systems:

1. Assessment systems should be transparent in a way that learners and teachers know what is being assessed and how it will be assessed;
2. Each competency should be assessed, not just those that are easy to assess;
3. Each competency must be assessed in more than one way on more than one occasion.

Suggested methods that may be used to assess the acquisition of each meta-competency can be found in full text of the EFCP (5).

COMPARISON OF EFCP WITH THE LIST OF COMPETENCIES IN THE CROATIAN PROGRAMME FOR TRAINING IN PSYCHIATRY

The purpose of training in psychiatry is enabling the trainee to gain the knowledge and acquire the competencies necessary to become a well-equipped psychiatrist and to provide a good quality of care according to people's needs. In order to achieve these goals, it is necessary to develop a list of competencies that must be achieved during psychiatric training as well as to regularly check achievements with the use of the appropriate assessment methods. Croatia has accepted the UEMS recommendation for all training programmes in all specializations in medicine. The standards for all specializations in medicine that are obligatory for all doctors in specialist training were published in official gov-

na etičko postupanje, komunikacijske vještine, poznavanje zakonodavnog okvira relevantnog za psihijatriju, upravljanje medicinskom dokumentacijom, pridavanje pozornosti kontinuiranom medicinskom obrazovanju, razumijevanje važnosti znanstvenog rada i sudjelovanja u znanstvenim istraživanjima, primjenu načela utemeljenih na dokazima, sudjelovanje u multidisciplinarnom timu i vođenje tima, aktivnu suradnju s drugima u zdravstvenom i izvanzdravstvenom sustavu te promicanje mentalnog zdravlja na razini pojedinca i stanovništva. Specifične kompetencije definiraju se za područja psihijatrije koja su obvezna u obrazovanju za specijalista psihijatra. Ta područja su klinička psihijatrija, bolesti ovisnosti, psihoterapija, psihijatrija u zajednici, socijalna psihijatrija i forenzička psihijatrija. Ostala područja su konzultativna suradnička i psihosomska medicina, psihogerijatrija i javno zdravstvo, upravljanje zdravstvenim sustavom u mentalnom zdravlju, dječja i adolescentna psihijatrija te neurologija i interna medicina.

Hrvatski program specijalizacije u usporedbi s UEMS-ovom listom kompetencija navodi slične kompetencije, međutim, kompetencije nisu sistematizirane prema sedam definiranih uloga psihijatara: klinički stručnjak, komunikator, suradnik, voda / menadžer, učenik / znanstvenik, zastupnik i profesionalac, nego su povezane s obaveznim područjima izobrazbe za specijalista psihijatra.

Slaba točka hrvatskog programa je i nedefinirana metodologija provjere kompetencija kao ni učestalosti provjere i specifičnosti provjere raznovrsnih kompetencija. Ovo je ključna razlika u odnosu na EFPC koji izričito traži višekratne i različite načine provjere kompetencija kontinuirano tijekom programa specijalizacije. U hrvatskom je programu specijalizacije iz psihijatrije potrebno napraviti poboljšanja u smislu preuzimanja ili adaptiranja EFPC metodologije procjene radi osiguranja postizanja i poboljšanja kompetencija u edukaciji psihijatra.

ernment journals (11, 12, 13, 14). The training programme for specialization in psychiatry includes the obligation for achievement of general and specific competencies. General competencies relate to ethical standards, communication skills, knowledge of the legislative framework relevant to psychiatry, management of medical records, continuing medical education, understanding the importance of scientific work and participation in scientific research, applying evidence-based principles, participating in and leading a multidisciplinary team, active collaboration with other professionals in the health and out-of-health systems and promoting mental health at the level of the individual and the overall population. Specific competencies are defined in the mandatory areas of psychiatric training. These areas include clinical psychiatry, addiction diseases, psychotherapy, community and social psychiatry, forensic psychiatry, consultative collaborative and psychosomatic medicine, psycho geriatrics, public health management of the mental health system, child and adolescent psychiatry, and neurology and internal medicine.

The Croatian specialization programme, compared to the UEMS list of competencies, lists similar competencies, however, the competencies are not systematized according to the seven defined roles of psychiatrists (clinical expert, communicator, collaborator, leader, scholar, health advocate, and professional), but are connected with the field of psychiatry mandatory for the psychiatric training.

The weak point of the Croatian programme is that it does not suggest different methods used in multiple times to assess the acquisition of each competency and meta-competency of doctors in psychiatric training. Therefore, this field requires significant improvement order to ensure that the competencies required to perform psychiatric tasks are achieved.

In support of the need to revise the existing specialization programme are the results of the research on satisfaction with the specializa-

U prilog potrebi revizije postojećeg programa specijalizacije idu i rezultati istraživanja o zadovoljstvu programom specijalizacije u Hrvatskoj u kojem specijalizanti (15-17) i mentori (18) iskazuju nezadovoljstvo programom, kao i preporuke za harmonizaciju edukacije u EU (19). S obzirom da je Republika Hrvatska uskladila medicinske specijalizacije s preporukama UEMS-a čiji je cilj harmonizacija edukacije na području psihijatrije (20), trebalo bi razmotriti klasificiranje kompetencija prema modelu sedam uloga liječnika prema preporuci EFPS-a, što podržava i Europska psihijatrijska udruga (*European Psychiatric Association, EPA*) (1).

Prošlo je mnogo godina od uvođenja važećeg hrvatskog programa specijalizacije iz psihijatrije na temelju preporuka UEMS-a. U međuvremenu, UEMS je izdao profil psihijatra i revidirao nekoliko dokumenata u kojima su preporučeni standardi izobrazbe specijalista psihijatra, stoga bi trebalo razmisliti o upućivanju zahtjeva za revizijom programa specijalizacije Nacionalnoj komisiji za specijalističko osposobljavanje liječnika, koja je odgovorna za primjenu europskih standarda okvira za specijalističko osposobljavanje.

tion programme in Croatia in which residents (15, 16, 17) and mentors (18) expressed their dissatisfaction with the programme as well as recommendations for the harmonization of the training in the EU (19). Given that the Republic of Croatia has aligned medical specializations with the UEMS recommendations that aim to harmonise education in the field of psychiatry (20), consideration should be given to the classification of competencies according to the model of seven roles of physicians as recommended by the EFCP and supported by the European Psychiatric Association (EPA) (1). Many years have passed since the introduction of the current Croatian specialization programme in psychiatry based on the UEMS recommendations. In the meantime, the UEMS issued the psychiatrist profile and revised several documents recommending the training standards for the specialist psychiatrist in the light of which consideration should be given to referring a request for a review of the specialization programme to the National Commission for the Specialist Training of Physicians, as the competent body responsible for applying the European standards of the specialist-training framework.

CONCLUSION

The list of competencies that the psychiatrist has to achieve to perform tasks professionally, safely and in the interest of improving mental health of persons with mental health problems makes an essential part of the specialty training of medical doctors in the field of psychiatry. The European Framework of Competencies in Psychiatry provides a good framework for analysing any existing list of competencies for specialist psychiatrists in all EU member states and can, therefore, be used for the analysis, audit and revision of all EU specialization programmes in psychiatry. The comparison of the EFCP with the list of competencies in the Croatian specialization programme in psychiatry indicates the

ZAKLJUČAK

Popis kompetencija koje psihijatar mora postići kako bi profesionalno i sigurno obavljao svoj posao u interesu poboljšanja mentalnog zdravlja osoba s problemima mentalnog zdravlja bitan je dio specijalističkog usavršavanja liječnika iz područja psihijatrije. Europski okvir kompetencija u psihijatriji dobar je okvir za analizu svih postojećih popisa kompetencija koje treba postići za specijalista psihijatra u bilo kojoj zemlji EU-a, stoga se može koristiti za analizu, procjenu i reviziju svih programa specijalizacije u EU. Usporedba EFCP s popisom kompetencija u hrvatskom programu specijalizacije iz psihijatrije upućuje na potrebu poboljšanja



hrvatskog programa, posebno u području procjene postignutih kompetencija. Usklađivanje kompetencija za psihijatra na razini EU može doprinijeti usklađivanju edukacije za psihijatra na razini EU, kao i za uspjeh na europskom ispitu iz psihiatrije.

need to improve the Croatian programme, especially in assessing the achieved competencies. The harmonization of psychiatric competences can contribute to the harmonization of training at the EU level, as well as to the success on the European exam in psychiatry.

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I Pismo Uredniku / Letter to the Editor

Poštovani Uredniče,

Nedavno smo, u Klinici za psihijatriju Vrapče, prigodnim stručnim seminarom i programom, obilježili Dan prava osoba s duševnim smetnjama. Obilježavanje 6. lipnja postalo je standard u Republici Hrvatskoj koji predstavlja značajan iskorak u zaštiti vulnerabilne populacije i potrebitih. O značenju ovog dana potanko je pisao prof. Vlado Jukić u članku pod naslovom "Dan prava osoba s duševnim smetnjama u Republici Hrvatskoj / *The Day of Right of Persons with Psychic Disorders in the Republic of Croatia*" u Socijalnoj psihijatri-

Dear Editor,

The University Psychiatric Hospital Vrapče recently marked the Day of Rights of Persons with Psychic Disorders with a special professional seminar and programme. Marking of June 6 became a standard in the Republic of Croatia, which represents a significant step forward in the protection of vulnerable population groups and the deprived. In the article titled "The Day of Right of Persons with Psychic Disorders in the Republic of Croatia" published in Social Psychiatry (2017;45(4):285-309), Prof Vlado Jukić wrote in detail about the importance of



SLIKA 1. S lijeva na desno: Ljubomir Hotujac, Martina Rojnić Kuzman, Neven Henigsberg, Igor Filipčić, Veljko Đorđević, Marijana Braš, Vlado Jukić, Vesna Medved, Miro Jakovljević, Rudolf Gregurek, Marina Šagud, Zorana Kušević, Alma Mihaljević-Peleš, Ninoslav Mimica, Dražen Begić, Dubravka Kalinić, Zrnka Kovačić Petrović

FIGURE 1. From left to right: Ljubomir Hotujac, Martina Rojnić Kuzman, Neven Henigsberg, Igor Filipčić, Veljko Đorđević, Marijana Braš, Vlado Jukić, Vesna Medved, Miro Jakovljević, Rudolf Gregurek, Marina Šagud, Zorana Kušević, Alma Mihaljević-Peleš, Ninoslav Mimica, Dražen Begić, Dubravka Kalinić, Zrnka Kovačić Petrović

ji 2017;45(4):285-309. Ovdje nema potrebe ponavljati ono što je pregledno i detaljno napisano u tom osvrtu, već bih samo sa svim čitateljima želio podijeliti jednu, koliko je meni poznato, do sada neobjavljenu fotografiju. Na ovoj fotografiji (photo: Studio Hrg) ovjekovječeni su članovi Katedre za psihiatriju i psihološku medicinu Medicinskog fakulteta Sveučilišta u Zagrebu, ispred Klinike za psihiatriju Vrapče, koji su nazočili Simpoziju 6. lipnja 2011. godine pod naslovom "6. lipnja - Dan prava duševnih bolesnika" na kojem je usvojen Prijedlog Hrvatskom saboru da 6. lipnja proglaši danom prava osoba s duševnim smetnjama.

Ninoslav Mimica

this day. There is no need to repeat what has been clearly and comprehensively compiled in his review; instead, I would like to share with our readers a photo that has not been, at least to my knowledge, published so far. The photo (photo: Studio Hrg) shows the members of the Department of Psychiatry and Psychological Medicine of the School of Medicine of the University of Zagreb who attended the Symposium on June 6, 2011, titled "June 6 - Day of the Rights of Mental Patients" standing in front of the University Psychiatric Hospital Vrapče. On the occasion, the Proposal to the Croatian Parliament was adopted to declare June 6 the Day of Rights of Persons with Psychic Disorders.

Ninoslav Mimica

Upute autorima

Instructions to authors

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