PREDICTORS OF DEPRESSION, ANXIETY AND STRESS DURING THE FIRST WAVE OF THE COVID-19 PANDEMIC: THE RESULTS OF AN ONLINE SURVEY IN SERBIA

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Abstract

Background: The outbreak of the COVID-19 pandemic has affected the mental health of population worldwide.

Aim: Assessment of risk factors for symptoms of anxiety, depression, and stress during the first wave of the COVID-19 pandemic.

Methods: An online survey including 161 participants was conducted in a population of both healthy participants and people who tested positive to COVID-19. The survey collected socio-demographic data, knowledge about the pandemic, psychological impact, and mental health status of the participants.

The psychological impact on mental health status was assessed using the Depression, Anxiety, and Stress Scale (DASS-21). Logistic regression was used to determine the risk factors that increased the likelihood of having symptoms of depression, anxiety and stress.

Results: A total of 63.8 % of participants showed symptoms of anxiety, with 31.6% showing moderate symptoms of anxiety. Symptoms of depression were found in 44.1% of the sample, with 23.7% showing moderate symptoms of depression, according to DASS-21 cut-off criteria. No mental health history, a positive test for COVID-19, physical health status, and time point of assessment were the most significant factors predicting symptoms of depression. In relation to symptoms of anxiety, we observed the importance of physical health, having offspring and testing positive for COVID-19, and being male. Factors that influenced higher degrees of stress were: testing positive for COVID-19, special nutrition, having offspring and being of low physical health.

Conclusion: Our study indicates that, during the COVID-19 pandemic in Serbia several factors could be important for the development of stress, depression, and anxiety and can be used as a basis for larger, population-based studies. Based on such future studies, evidence-based preventive mental health measures could be implemented in Serbia.

Keywords: mental health, COVID-19, DASS

CONFLICT OF INTEREST

All authors declare that they have no conflict of interests related to this research.

INTRODUCTION

On March 11th, 2020, WHO characterized COVID-19 as a pandemic (World Health Organization, 2020), and on March 13th, 2020 WHO proclaimed Europe as the center of the pandemic. On March 6th, 2020, the first case of the disease caused by COVID-19 was officially registered in Serbia, and on March 16th, 2020, a state of emergency was declared, which lasted until May 6, 2020[1].

Various measures were implemented with the aim of preventing the spread of the infection - work from home, closing down of schools and kindergartens, complete prohibition of movement during certain times of the day, reduction of social contacts and mandatory wearing of protective equipment indoors. Previous research has found that pandemics of infectious diseases contribute to a number of psychosocial changes in the population[2]. The uncertainty of COVID-19 disease, in addition to numerous restrictive social and economic measures, as well as incomplete and unclear information in media, could lead to helplessness, intensified fear and could encourage development of numerous negative emotions. In addition, infected members of the population also experience stigma that in its own way contributes to the development of psychological problems or the deepening of existing ones[3,4].

Unfortunately, the effects of the COVID-19 on mental health have not yet been systematically studied. It is becoming evident that COVID-19 pandemic may have longstanding effects particularly in the domain of mental health[5].

Having the aforementioned in mind, the aim of our research was to evaluate the risk factors for anxiety, depression and stress during the first wave of the COVID-19 pandemic.

SUBJECTS AND METHODS

Sample

A survey was designed for the purposes of this study (see below). The survey was initially distributed by email or phone to friends or colleagues of study authors who tested positive to COVID-19. Participants who received and completed the survey were asked to share the questionnaire among acquaintances that were, or currently are, being treated for COVID-19, as well as to their friends and relatives (snowballing method). The survey was conducted between April 17th and May 17th, 2020.

Before accessing the survey, all the participants agreed to participate in the study by noting it on the online consent form. This study was approved by the Ethics Committee of Faculty of Medicine, University of Belgrade No 1332/V-12. There were no conflicts of interest present. All authors certify their responsibility for the manuscript.

Assessment tools

The survey was designed, for the purposes of this study, as a closed-type questionnaire, which assessed the following domains:

1. Socio-demographic data: gender, age, marital status, number of children, level of education, place of residence, height, weight, special eating habits, presence of other serious diseases, substance use disorders and previous psychiatric treatments.
2. COVID-19 related data: The participant had to affirm if he/she had been tested for the presence of COVID-19 and received a positive PCR report. Questions related to specific symptoms of COVID-19 infection (fever, chills, cough, headache, muscle aches, shortness of breath, dizziness, sore throat), as well as questions about the application of protective epidemiological measures, data on the most common sources of information, whether there are more people suffering from COVID-19 infection in the family or in the close environment. The date of the point of assessment was noted in the survey. The decision to include the variable – survey completed before/after May 6th was based on notions that severe restrictive measures could influence mental health of study participants. As mentioned in the introduction, restrictive measures in Serbia lasted until May 6th 2020.
3. Depression, Anxiety and Stress Scale (DASS – 21) self – questionnaire: This instrument was used to assess the symptoms of anxiety, depression and stress - related symptoms. Questions 3, 5, 10, 13, 16, 17 and 21 formed the depression subscale. The total depression subscale score was divided into normal (0–9), mild depression (10–12), moderate depression (13–20), severe depression (21–27), and extremely severe depression (28–42). Questions 2, 4, 7, 9, 15, 19, and 20 formed the anxiety subscale. The total anxiety subscale score was divided into normal (0–6), mild anxiety (7–9), moderate anxiety (10–14), severe anxiety (15–19), and extremely severe anxiety (20–42). Questions 1, 6, 8, 11, 12, 14, and 18 formed the stress subscale. The total stress subscale score was divided into normal (0–10), mild stress (11–18), moderate stress (19–26), severe stress (27–34), and extremely severe stress (35–42). The available answers were scored on a Likert-scale (ranging from 0 to 3). This instrument was previously validated on the Serbian population[6].

Statistical analysis

Depending on the type of variables and the normality of distribution, the data description is shown as n (%), mean ± SD or median (min-max). Ordinal logistic regression was used to model the

relationship of the ordinal dependent variable (degree of depression, anxiety and stress on DASS-21) with potential predictors. The model of multivariate ordinal logistic regression includes those predictors that had a p-value ≤0.1 in the models of univariate ordinal logistic regression. The level of statistical significance was 0.05.

Data analysis was performed in the statistical program SPSS 22.0[7].

RESULTS

Survey response

Initially, the survey was sent to a total of 563 addresses. Since 402 surveys were not fully completed, only 161 surveys were included in further analyses (28.6% response rate).

Study sample

Basic sociodemographic and clinical parameters are shown in Table 1. The largest percentage of subjects was physically healthy, and among those who had a somatic disease, the most common was cardiovascular disease with 10.6%. A total of 85.1% participants were previously not treated psychiatrically. Distribution of the sample by DASS-21 severity is given in Table 2.

COVID-19 related behavioral characteristics of the sample

The highest percentage of subjects, 42.9%, stated that they spend 6-12 hours outside the house. Eighty-two percent of subjects limited their time to researching and informing themselves about the virus to 2 hours a day. Eight-point seven percent of subjects stated that they were not informed at all about the current situation regarding the virus. At the moment of inquiry, protective mask was used by 91.9% of the subjects as a preventive measure, with 88.2% using physical distancing and 76.4% using disinfectants as means of prevention.

Factors influencing levels of depression on DASS-21

In the model of multivariate ordinal logistic regression, statistically significant predictors of the degree of depression on DASS-21 are the point of assessment (i.e. completion of the survey after or before May 6th; OR = 2.91; p = 0.011), physical health (OR = 0.23; p <0.001), no mental health illness history (OR = 0.37; p = 0.037) and testing positive to COVID-19 (OR = 5.69; p <0.001).

The rest of the results pertaining to levels of depression can be seen in Table 3.

Factors influencing levels of anxiety on DASS-21

In the multivariate ordinal logistic regression model, statistically significant predictors of anxiety degree on DASS21 are the female gender (OR=0.49, p=0.024), smoking (OR=2, p=0.029), having an offspring (OR = 0.19; p = 0.001) and testing positive to COVID-19 (OR = 3.35; p = 0.002), while being physically healthy was a protective factor (OR = 0.22; p <0.001).

The rest of the results pertaining to levels of anxiety are displayed in Table 4.

Factors influencing levels of stress on DASS-21

In the model of multivariate ordinal logistic regression, statistically significant predictors of the degree of stress on DASS-21 are special nutrition (OR = 3.79; p = 0.027) and testing positive to COVID-19 (OR = 1.94; p = 0.036), while protective factors were having children (OR = 0.13; p = 0.001) and being physically healthy (OR = 0.04; p < 0.001).

The rest of the results pertaining to the levels of stress are displayed in Table 5.

DISCUSSION

This study was conducted during the first wave of the COVID-19 epidemic and evaluated the levels of depression, anxiety and stress. The present study demonstrates that, during the first wave of the COVID-19 epidemic in Serbia, several factors could influence the chances that symptoms of anxiety, depression and stress emerge. Concerning the symptoms of depression, our study indicates that previous mental health history, testing positive for COVID-19 and the point of assessment are the most significant factors. In relation to the symptoms of anxiety, we observed the importance of physical health, having children and testing positive for COVID-19, while being female was a detrimental factor. As for the symptoms of stress, factors that influenced higher degrees of stress were testing positive for COVID-19, special nutrition, having no children and being of weak physical health.

Our sample had 14.5%, 52%, and 28.3% participants with moderate to extreme scores on depression, anxiety, and stress, respectively. Compared to the study of Verma et al.[8], our sample had higher scores on anxiety and stress, but lower scores on depression, which might be on account of cultural differences. During the first epidemic wave, several countermeasures were undertaken, such as reduction of social contacts, maintaining social distances, quarantine measures and prohibition of leaving the household in certain time intervals, ranging from 8 hours up to 72 hours. All of the measures, together with the risk of infection or the effects of the infection itself, impacted the population's mental

health negatively. As previously mentioned, point of assessment (before/after May 6th) was introduced based on the fact that restrictive measures lasted until May 6th. Interestingly, our study found that point of assessment influenced only levels of depression, not levels of anxiety or stress. This is a finding that merits further exploration in future studies (i.e. correlating levels of depression with specific measures of social isolation during COVID-19 pandemic).

If we consider the effect of the pandemic as a global stressor on the mental dysfunction of population through the model of the impact of stress on mental health[9], we can assume that the high levels of stress, anxiety and depression can occur as a result of exhaustion of personal regulatory mechanisms, and also due to the lack of support from society which has been going through numerous socio-economic-political troubles for decades[10,11]. Subsequently, based on the personal vulnerability and lack of adequate support, it can be assumed that this global stressor leads to the development of more pronounced anxiety and depressive symptoms faster than it was observed in the Chinese population at the time of the same pandemic[12]. The impact of the economic crisis is considered to be a potential contributing factor to the manifestation of fear and panic behavior, but it is assumed that deepening of the economic crisis will further contribute to the progression and development of mental disorders, and it is necessary to implement appropriate prevention measures[13].

Previous research on the impact of a viral pandemic on the development of mental illness found that variables such as occupation, educational level, and gender were important factors in the development of anxiety and depression[12]. It has been shown that females are generally more susceptible to the development of anxiety and depression[14], which also manifested during this pandemic where women were more affected by symptoms of anxiety[12]. Our study results are in line with two recent studies[8,15], as our findings show that females were more susceptible to increased chances of having anxiety. Following a natural disaster (floods in Serbia from 2016), women were found to be more likely to re-experience trauma than men, while there were no differences in the levels of depression, anxiety and stress measured by the DASS-21 questionnaire between genders[16]. Due to the COVID-19 pandemic, women in Serbia were more likely to show symptoms of anxiety, depression and stress on the DASS-21 questionnaire, but without a significant prediction of the severity of the gender-related disorder in the multivariate model.

The rural population, which generally has lower education levels and more difficult access to health care and assistance, is potentially more vulnerable to the development of mental health prob-

lems[5,7]. The urban environment was not a significant predictor for development of mental disorders in our population, but rural population was not fully covered by our questionnaire due to specifics of the means of data collection. Some researchers noted that the residents of overcrowded urban areas were at higher risk of fear and increased health concerns[5].

As in most previous research, the risk of developing mental health issues throughout viral epidemics is significantly lower in people who had no prior history of mental illness[18,19]. In the model of multivariate regression, it was found that absence of mental disorders during individual life history of the subjects reduces the likelihood of each higher degree of depression on DASS-21 by as much as 63%, and the likelihood of developing anxiety symptoms by 35%. On the other hand, previous psychiatric illness was not a significant predictor of higher stress levels on DASS-21.

Presence of somatic illness in our study increased the chance of any higher degree of depression and anxiety by about 25%. The absence of physical illness reduced the chance of stress by as much as 96%, with control of all other factors in the model. The examined sample of our population based on the reported BMI falls within the range of normal nutrition, which is not a significant contributing factor for the development of psychological distress in response to a pandemic. Obesity, smoking and existence of chronic metabolic and cardiac diseases were singled out as poor predictors, which was reported to the public daily through the media, and it was expected that the mentioned categories of the population were under big pressure and thus greater stress in anticipation of a worse outcome.

Television news programs were the main source of information during the first wave of the epidemic in Serbia, but in our sample, subjects generally limited the time they use to research information about the virus to approximately two hours a day. The importance of media content during epidemic crises is considered extremely important. Insufficient information, together with social isolation, contributes to stress and psychiatric comorbidity[20]. On the other hand, information overload [21] can cause fear and panic and consequently can lead to increased health worry, preoccupation with bodily symptoms and misinterpretation of bodily sensations. Besides its impact on mental health functioning, the consequences of increased use of media reflect on physical health, too. In similar situations, people tend to avoid frequent visits to medical facilities even in situations where this might be advised. Furthermore, if the information received are unreliable, there is an impact on the health care system as a whole, due to an overall decrease in trust[22].

Limitations

Limitations of the present study include: low survey response rate and targeted/convenient sampling. Even though convenient sampling strategies, such as ours, do not representatively reflect the population, we believe that by assessing symptoms during the uncertain times of pandemic (not in retrospect) yielded important insights, and could be used as a reference point for future studies on this topic. Presence of a high educational profile of all participants was also a consequence of our sampling method (as initial recruitment of participants was done by researchers, i.e. surveys were distributed initially to friends and colleagues).

The part of the population that is able to fill in the questionnaire is mostly part of the computer literate population, i.e. younger and educated population, with milder symptoms of the disease, which does not give us a clear picture of the psychological impact on vulnerable strata of society, as well as the psychological consequences for the part of the population that suffered from the most severe form of infection.

CONCLUSION

Our study indicates that, during the COVID-19 pandemic in Serbia, factors that could be important for the development of stress, depression and anxiety are: testing positive for COVID-19, previous history of mental health symptoms, female sex, smoking cigarettes, having no children, reduced physical health, and replying to survey during the time of restrictive epidemiological measures (including social distancing). The results of this study could be used as a basis for larger, population-based studies which could examine each of these factors in greater detail and analyze their importance for the general population. Based on such, future studies, evidence-based preventive mental health measures could be implemented in Serbia.

Table 1 Basic sociodemographic and clinical parameters

Variables	**Study participants** N=161 (100%)
Age, years; mean (SD)	42.2 (10.2)
Gender, N (%)	
Female	105 (65.2)
Marriage status, N (%)	
Married	87 (54.0)
Single	53 (32.9)
Divorced	16 (9.9)
Widowed	5 (3.1)
With children, N (%)	91 (56.5)
Education, N (%)	
High school	21 (13.0)
College	7 (4.3)
University	93 (57.8)
PhD	40 (24.8)
Employment status, N (%)	
Student	2 (1.2)
Employed	146 (90.7)
Unemployed	8 (5.0)
Retired	5 (3.1)
Urbanicity, N (%)	
City	152 (94.4)
BMI, mean (SD)	24.6 (3.9)
COVID-19 testing, N (%)	
Positive	38 (23.6)

Table 2 Results of the DASS-21 questionnaire, by subscales of depression, anxiety and stress

Severity	**DASS21 Stress** n (%)	**DASS21 Anxiety** n (%)	**DASS21 Depression** n (%)
Normal	130 (85.5%)	55 (36.2%)	85 (55.9%)
Mild	10 (6.6%)	18 (11.8%)	24 (15.8%)
Moderate	6 (3.9%)	48 (31.6%)	36 (23.7%)
Severe	5 (3.3%)	14 (9.2%)	6 (3.9%)
Extremely Severe	1 (0.7%)	17 (11.2)	1 (0.7%)

Table 3 Ordinal logistic regression with **DASS-21 Depression** as a dependent variable

Variables	Univariate ordinal logistic regression		Multivariate ordinal logistic regression	
	OR (95%CI)	p-value	OR (95%CI)	p-value
Gender (male vs. female)	0.55 (0.28-1.08)	0.084	0.72 (0.33-1.54)	0.394
Age	1.03 (1.00-1.06)	0.075	1.00 (0.96-1.04)	0.873
Marital status				
single	0.95 (0.48-1.86)	0.870	1.58 (0.68-3.66)	0.284
divorced	0.57 (0.18-1.79)	0.333	0.42 (0.11-1.53)	0.187
widowed	5.50 (1.00-30.10)	0.050	4.17 (0.68-25.66)	0.124
married	reference category			
Offspring (yes)	0.62 (0.33-1.14)	0.126		
Education (high vs. low)	0.92 (0.65-1.31)	0.650		
Contact with COVID-19 through profession (yes)	0.64 (0.23-1.74)	0.381		
Employment status				
student	1.64 (0.05-55.33)	0.781		
employed	2.19 (0.24-19.61)	0.484		
unemployed	1.50 (0.11-19.89)	0.759		
retired	reference category			
Smoking (yes)	1.67 (0.87-3.21)	0.121		
Special nutrition (yes)	2.45 (1.19-5.01)	0.015	1.78 (0.79-3.99)	0.163
Time spent outside	1.24 (0.91-1.7)	0.179		
Time spent reading the news	1.59 (0.83-3.06)	0.163		
Physically healthy (yes)	0.22 (0.11-0.45)	**<0.001**	0.23 (0.10-0.51)	**<0.001**
BMI	1.03 (0.95-1.11)	0.473		
No mental health illness history (yes)	0.23 (0.1-0.56)	**0.001**	0.37 (0.14-0.94)	**0.037**
Positive COVID-19 test (yes)	2.94 (1.43-6.05)	**0.003**	5.69 (2.39-13.53)	**<0.001**
Someone from close family infected (yes)	0.84 (0.26-2.68)	0.772		
Time of questionnaire response (after vs. before May 6th)	2.30 (1.14-4.63)	**0.020**	2.91 (1.28-6.62)	**0.011**

Table 4 Ordinal logistic regression with **DASS-21 Anxiety** as a dependent variable

Variables	Univariate ordinal logistic regression		Multivariate ordinal logistic regression	
	OR (95%CI)	p-value	OR (95%CI)	p-value
Gender (male vs. female)	0.49 (0.26-0.91)	**0.024**	0.52 (0.26-1.02)	0.056
Age	1.01 (0.99-1.04)	0.345		
Marital status				
single	1.05 (0.55-1.98)	0.888	0.34 (0.11-1.02)	0.054
divorced	1.07 (0.4-2.9)	0.892	0.55 (0.18-1.70)	0.302
widowed	4.36 (0.85-22.46)	0.079	1.79 (0.29-10.95)	0.527
married	reference category			
Offspring (yes)	0.60 (0.33-1.07)	0.083	0.19 (0.07-0.53)	**0.001**
Education (high vs. low)	1.00 (0.72-1.39)	0.989		
Contact with COVID-19 through profession (yes)	0.97 (0.39-2.37)	0.939		
Employment status				
student	1.92 (0.09-42.39)	0.679		
employed	1.73 (0.27-11.04)	0.560		
unemployed	1.21 (0.13-11.22)	0.866		
retired	reference category			
Smoking (yes)	2.00 (1.07-3.73)	**0.029**	1.54 (0.73-3.23)	0.257
Special nutrition (yes)	1.78 (0.89-3.54)	0.103		
Time spent outside	1.3 (0.97-1.74)	0.084	1.17 (0.85-1.60)	0.341
Time spent reading the news	1.21 (0.64-2.27)	0.555		
Physically healthy (yes)	0.2 (0.1-0.4)	**<0.001**	0.22 (0.1-0.45)	**<0.001**
BMI	0.98 (0.91-1.05)	0.534		
No mental health illness history (yes)	0.28 (0.12-0.66)	**0.003**	0.65 (0.25-1.66)	0.368
Positive COVID-19 test (yes)	2.05 (1.02-4.09)	0.043	3.35 (1.57-7.16)	**0.002**
Someone from close family infected (yes)	1.55 (0.54-4.46)	0.421		
Time of questionnaire response (after vs. before May 6th)	1.68 (0.90-3.14)	0.105		

Table 5 Ordinal logistic regression with **DASS-21 Stress** as a dependent variable

Variables	Univariate ordinal logistic regression		Multivariate ordinal logistic regression	
	OR (95%CI)	p-value	OR (95%CI)	p-value
Gender (male vs. female)	0.54 (0.19-1.55)	0.253		
Age	1.02 (0.97-1.06)	0.503		
Marital status				
single	0.92 (0.34-2.49)	0.873		
divorced	-	-		
widowed	4.37 (0.72-26.31)	0.108		
married	reference category			
Offspring (yes)	0.40 (0.16-1.02)	0.056	0.13 (0.04-0.46)	**0.001**
Education (high vs. low)	0.69 (0.43-1.12)	0.133		
Contact with COVID-19 through profession (yes)	0.81 (0.18-3.71)	0.783		
Employment status				
student	-	-		
employed	0.57 (0.05-6.29)	0.648		
unemployed	1.20 (0.07-20.35)	0.898		
retired	reference category			
Smoking (yes)	1.64 (0.65-4.13)	0.295		
Special nutrition (yes)	2.53 (0.98-6.55)	0.056	3.79 (1.17-12.28)	**0.027**
Time spent outside	1.14 (0.72-1.8)	0.587		
Time spent reading the news	1.79 (0.8-4)	0.157		
Physically healthy (yes)	0.07 (0.02-0.2)	**<0.001**	0.04 (0.01-0.14)	**<0.001**
BMI	1.03 (0.92-1.15)	0.572		
No mental health illness history (yes)	0.53 (0.17-1.64)	0.268		
Positive COVID-19 test (yes)	1.82 (0.68-4.86)	0.233	1.94 (1.1-14.75)	**0.036**
Someone from close family infected (yes)	1.07 (0.21-5.5)	0.934		
Time of questionnaire response (after vs. before May 6th)	3.36 (0.95-11.86)	0.059	4.19 (0.89-19.59)	0.069

PREDIKTORI DEPRESIJE, ANKSIOZNOSTI I STRESA TOKOM PRVOG TALASA PANDEMIJE COVID-19: REZULTATI ONLAJN ANKETE U SRBIJI

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Sažetak

Uvod: Izbijanje pandemije COVID-19 uticalo je na mentalno zdravlje stanovništva širom sveta.

Cilj: Procena faktora rizika za simptome anksioznosti, depresije i stresa tokom prvog talasa pandemije COVID-19.

Metod: Sprovedena je onlajn anketa koja je uključivala 161 učesnika iz opšte populacije, kako zdravih učesnika, tako i ljudi koji su bili pozitivni na COVID-19. Istraživanjem su prikupljeni sociodemografski podaci učesnika, zatim njihova saznanja o pandemiji, kao i psihološki uticaj i stanje mentalnog zdravlja učesnika. Psihološki uticaj na status mentalnog zdravlja je procenjen korišćenjem skale depresije, anksioznosti i stresa (DASS-21). Logistička regresija je korišćena da bi se utvrdili faktori

rizika koji su povećali verovatnoću pojave simptoma depresije, anksioznosti i stresa.

Rezultati: Ukupno 63,8% učesnika je pokazalo simptome anksioznosti, dok je 31,6% pokazalo umerene simptome anksioznosti. Simptomi depresije pronađeni su kod 44,1% ispitanika iz uzorka, a 23,7% ispitanika pokazuje umerene simptome depresije, prema DASS-21 kriterijumima. Nemanje istorije psihijatrijskog lečenja, pozitivan test na COVID-19, fizički zdravstveni status i vreme procene bili su najznačajniji prediktivni faktori simptoma depresije. U odnosu na simptome anksioznosti, uočili smo važnost fizičkog zdravlja, posedovanja potomstva i pozitivno testiranje na COVID-19, i da je muškarac. Faktori koji su uticali na veći stepen stresa su: pozitivan test na COVID-19, posebna ishrana, posedovanje potomstva i slabo fizičko zdravlje .

Zaključak: Naša studija ukazuje da bi tokom pandemije COVID-19 u Srbiji nekoliko faktora moglo biti značno za razvoj stresa, depresije i anksioznosti i da se može koristiti kao osnova za veće, populacione studije. Na osnovu ovih budućih studija, preventivne mere mentalnog zdravlja zasnovane na dokazima mogle bi da se primene u Srbiji.

Ključne reči: mentalno zdravlje, COVID-19, DASS

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