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# THE RELATIONSHIP BETWEEN SOCIAL NETWORK USE AND PSYCHOLOGICAL ADJUSTMENT IN STUDENTS DURING THE COVID-19 PANDEMIC

## ABSTRACT

The aim of this study was to examine the students' habits of using social networking sites (SNS) during the COVID-19 pandemic, as well as the relationship of SNS use (usage frequency and characteristics of problematic use) with students' psychological adjustment (distress, loneliness, and happiness). Participants were 352 Croatian students (234 female, 118 male), with the mean age of 22 years ( $M = 22.2$ ;  $SD = 2.44$ ). The data was collected in May 2020 via online questionnaire containing the Generalized Problematic Internet Use Scale 2, the Depression, Anxiety and Stress Scale (DASS-21), the short-form of the UCLA-Loneliness Scale, and the Subjective Happiness Scale. The results showed that students actively used four social networks; 44% of students spent 2-4 hours a day on SNS during the pandemic, while 19.3% spent more than five hours. For more than a half of students this was more than before the pandemic. Levels of all characteristics of problematic SNS use (preference for online interaction, mood regulation, cognitive preoccupation, compulsive use, and negative outcomes) were low in surveyed students, while levels of all psychological adjustment indicators were normal. The results of hierarchical regression analyses showed that the SNS usage frequency positively predicted distress and loneliness, and negatively predicted happiness. However, after entering the characteristics of problematic SNS use in the second step of regression, usage frequency lost its significance as a predictor of adjustment. Mood regulation, preference for online interaction and negative outcomes positively predicted distress; preference for online interaction positively predicted loneliness, and mood regulation, compulsive use and preference for online interaction negatively predicted happiness. The obtained results were interpreted in relation to the research conducted before the pandemic, but also considering the specifics brought about by the COVID-19 pandemic.

**Keywords:** problematic social networks use, distress, loneliness, happiness

<sup>1</sup> The results presented in this paper are a part of the graduate thesis of the first author, mentored by the second and third author.

## 1. INTRODUCTION

Social networking sites (SNS) are Internet services and applications which enable users to create their own private or public profiles and then the list of users with whom they interact and share the content with or watch and use their content within the same system (Boyd & Ellison, 2008). Research has shown that more than a half of SNS users have two or more profiles on different platforms (Correa et al., 2010). Considering the age of users, adolescents and young adults use SNS more than any other age groups (Vannucci et al., 2017). Facebook, WhatsApp, Instagram, Youtube, Twitter and Snapchat stand out as the most famous and most frequently used SNS in the USA (Knight-McCord et al., 2016). Research in the USA found that students spend around 2-3 hours a day on SNS (Raacke & Bonds-Raacke, 2008). Young individuals use SNS for a variety of reasons, including identity development, meeting new people, having fun, and maintaining established social relationships (Vannucci et al., 2017).

Although SNS use can have positive effects on individuals, providing them with opportunities for self-discovery and social support (Vitak & Ellison, 2013) or reducing loneliness (Pittman & Reich, 2016), most research has focused on negative consequences of problematic social media use (Andreassen & Pallesen, 2014; Błachnio et al., 2015; Hunt & Eisenberg, 2010). Internet use in general becomes problematic when there is an excessive and inadequately controlled desire to use the Internet and inappropriate obsession along with disturbed mood and irritability in case the Internet is not available (Yau et al., 2012). Similarly, problematic SNS use has been conceptualized and investigated as a sub-type of it. Driven by strong motivation and effort, problematic SNS use negatively affects engagement in other social activities such as college/business tasks, interpersonal relationships and/or psychological health and well-being (Andreassen & Pallesen, 2014). Problematic social media use has been shown to increase levels of anxiety and stress (Hampton, 2011). Young people who spend more than two hours a day on

SNS are more likely to rate their mental health as poor than those who are less active on social media (Lewis & Sampasa-Kanyinga, 2015). Although SNS provide the opportunity to connect with friends and acquaintances, research has shown a positive association between Facebook use and loneliness (Song et al., 2014). However, this relationship is reciprocal - lonely individuals are more attracted to online communication through SNS than those who prefer face-to-face communication, but frequent use of SNS can also lead to increased levels of loneliness if individuals try to meet important social needs by using SNS (Clark et al., 2017). Conversely, some research has shown that with increased active use of Facebook, happiness levels also increase (Valkenburg et al., 2006), while other research (e.g., Brooks, 2015) showed that increased use of SNS is negatively related to happiness among students, and that problematic social media use predicts less happiness among students.

In the beginning of 2020, humanity faced the unknown coronavirus, the cause of COVID-19 illness, which later escalated into a pandemic. The COVID-19 pandemic has had a huge impact on the lives of individuals and whole populations, causing increased health concerns, uncertainty, changes in daily lives such as work from home, online schooling, social distancing, and isolation, which negatively affected people's mental health and well-being. Research shows increases in depression, anxiety, and stress among general population as well as among students, in many countries including Croatia (Arslan et al., 2022; Jokić Begić et al., 2020; Wang et al., 2021). There has also been an increase in SNS use during the pandemic, largely because of social distancing measures (Roy et al., 2020). Twitter reported that there were 12 million more users in the first three months of 2020 than in the last three months of 2019, and Facebook also reported about large increases in user activity (Kouzy et al., 2020). SNS were shown to be the most frequently used sources of information on COVID-19 (34%), followed by the World Health Organization (WHO) (19.9%), TV (17.6%), websites (except SNS) (13%), Ministry of Health (10.1%) and friends (5.4%) (Al-

zoubi et al., 2020). However, there has been a lot of misinformation about COVID-19 circulating on the Internet, and especially SNS (Kouzy et al., 2020). This great amount of (mis)information on social media increased the mental health crisis during the outbreak of COVID-19 (Dong & Bouey, 2020; Kouzy et al., 2020). Studies conducted during coronavirus pandemic showed that excessive exposure to SNS might lead to anxiety, heightened stress, or even long-term psychological distress (Garfin et al., 2020). However, during the pandemic social networks have also become a place where people go for entertainment, socialization and maintaining contacts in times of physical distancing, which points to potential advantages of more frequent SNS use in these circumstances.

Because people relied on social media more than ever before, it is important to know more about the consequences of (problematic) SNS use during coronavirus pandemic. Therefore, this study aimed to examine Croatian students' SNS usage habits during pandemic, as well as the relationship of SNS use (usage frequency and characteristics of problematic use) with indicators of psychological adjustment. Psychological adjustment was conceptualized as a multidimensional construct including both negative (depression, anxiety, stress, loneliness) and positive indicators (happiness). It has been shown that time spent on social networks is associated with depression, anxiety, stress, and loneliness, but the question is whether this association remains the same during the COVID-19 pandemic. Based on the findings presented above, it is assumed that frequency of SNS usage as well as characteristics of problematic SNS use will be positively related to students' distress and loneliness and negatively related to their happiness.

## 2. METHOD

### 2.1. Participants and procedure

Participants in this study were 352 students (234 female, 118 male), with the mean age of 22 years (age range 18 - 45;  $M = 22.2$ ;  $SD = 2.44$ ). The study was conducted online, in May 2020

(during the Croatian Institute of Public Health's appeal/recommendation to "Stay at home" during the COVID-19 pandemic). The invitation to participate in the study, together with the link to the questionnaire, was sent to students from various universities in Croatia using social networks and student mailing lists. The majority of students (77%) reported living with their parents during the "Stay at home" recommendation, while less than 10% reported living with a roommate (9.4%), alone (8%) or with a partner (4.8%).

### 2.2. Instruments

The online questionnaire included sociodemographic questions (gender, age, with whom they were currently living), and questions regarding social networks use (which social networks they actively used, how much time they spent on social networks daily (during the "Stay at home" recommendation) and whether the time they spent on social networks was shorter, equal to or longer than before the isolation period).

The questionnaire further included the following scales:

*The Generalized Problematic Internet Use Scale 2* (GPIUS2; Caplan, 2010; Brčić, 2018), modified for this study to deal specifically with problematic social networking site use, by substituting the word "Internet" or "online" with the word "social networks" where appropriate. The scale consists of 15 items divided in 5 subscales with 3 items each – *preference for online social interaction* (e.g., "I prefer online social interaction over face-to-face communication"), *mood regulation* (e.g., "I have used social networks to make myself feel better when I was down"), *cognitive preoccupation* (e.g., "I would feel lost if I was unable to go on social networks"), *compulsive SNS use* (e.g., "I have difficulty controlling the amount of time I spend on social networks") and *negative outcomes* (e.g., "My social networks use has made it difficult for me to manage my life"). The participant's task is to estimate his/her agreement with each item on a 5-point Likert scale (from 1 = *definitely disagree* to 5 = *definitely agree*). A total score is calculated for

each subscale by averaging the responses to their corresponding items, with a higher score indicating higher levels of problematic SNS use. In this study, Cronbach's alpha ranged from .70 for the cognitive preoccupation to .84 for the preference for online social interaction.

*The Depression, Anxiety and Stress Scales* (DASS-21; Lovibond & Lovibond, 1995; Reić Ercegovac & Penezić, 2012) consist of 21 items divided in 3 subscales with 7 items each - *depression* (e.g., "I couldn't seem to experience any positive feeling at all."), *anxiety* (e.g. "I was aware of dryness of my mouth."), and *stress* (e.g. "I found it hard to wind down."). The participant's task is to estimate negative emotional symptoms he or she has experienced over the previous week, on a 4-point Likert scale (from 0 = *did not apply to me at all* to 3 = *applied to me very much, or most of the time*). A total score can be calculated for each subscale or the total scale as an average of responses indicating one's psychological distress. In this study Cronbach's alpha for all subscales was greater than .85, and for the total scale score  $\alpha = .94$ .

*The Short-form of the UCLA-Loneliness Scale* (Allen & Oshagan, 1995; Lacković-Grgin, 2002) consists of 7 items measuring respondent's experience of him-/herself (e.g. "My interests and ideas are not shared by those around me"). The participant's task is to estimate his/her agreement with each item on a 5-point Likert scale (from 1 = *it doesn't apply to me at all* to 5 = *it applies to me completely*). A total score is calculated by summing the responses on all items (ranging from 7 to 35), with a higher score indicating greater loneliness. In this study, Cronbach's alpha for the scale was .81.

*The Subjective Happiness Scale* (Lyubomirsky & Lepper, 1999; Tadić, 2011) represents a global, subjective assessment of whether one is a happy or an unhappy person. It consists of 4 items and the participant's task is to estimate on a 7-point Likert scale how happy he or she considers him-/herself to be, generally and compared to others, or how the given brief descriptions of happy and

unhappy people relate to him/her (e.g., "Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?"). A total score is calculated by averaging the responses on all items, and a higher score indicates greater happiness. In this study, Cronbach's alpha for the scale was .85.

### 3. RESULTS

Regarding students' SNS usage habits during pandemic, the results showed that 46% of the students reported actively using four SNS, 21.4% reported using two, 18.9% three, while only 1.1% of the students was actively using only one SNS. Whatsapp was used most often, followed by Facebook and YouTube which were equally popular among students, and then Instagram, while other SNS were much less used (Table 1).

**Table 1.** Actively used social networks among participants ( $N=352$ )

Social network	f	%
WhatsApp	322	91.5
Facebook	313	88.9
YouTube	313	88.9
Instagram	277	78.7
Pinterest	39	11.1
Snapchat	31	8.8
TikTok	25	7.1
Discord	22	6.3
Twitter	19	5.4
Reddit	5	1.4
9gag	5	1.4
Viber	1	0.3
Tumblr	1	0.3

Almost all students (96.6%) reported spending more than one hour daily on social networks during coronavirus pandemic. About equal number of students spent 2-3 hours a day (21.6%) and 3-4 hours a day (22.4%) on social networks, while 19.3% of students reported spending more than five hours a day on social networks during pandemic. Compared to the pre-isolation period, 56% of students reported spending more time on social networks, 37.5% reported spending equal amount of time on social networks, while only 6.5% of students reported spending less time on social networks during pandemic (and “stay at home” recommendation) than before the isolation period.

Regarding the characteristics of problematic SNS use, average results on all subscales were below the theoretical average (Table 2) indicating low preference for online social interactions, low motivation to use SNS for mood regulation, low cognitive preoccupation with SNS use, low compulsive use and low nega-

tive outcomes due to SNS use in surveyed students.

Descriptive statistics of measured psychological adjustment indicators show that average depression, anxiety, and stress, as well as distress results, were shifted towards lower values (Table 2), which is expected given that the study was conducted with a non-clinical student sample. Authors of the DASS-21 scale (Lovibond & Lovibond, 1995) suggest that the summed scores on the subscales can be transformed by multiplying by two so that they could be compared with the norm values of the longer DASS-42 scale. Given the suggested severity rating cut-off points (Lovibond & Lovibond, 1995), students in this study on average had a mild level of depression, normal to mild level of anxiety, and normal level of stress. Average results on loneliness were also below the theoretical average of the scale, while average results on happiness were little above the theoretical average.

**Table 2.** Descriptive statistics of all study variables

	min	max	M	SD	$\alpha$
Preference for online social interaction	1	5	1.63	0.80	.84
Mood regulation	1	5	2.65	1.00	.78
Cognitive preoccupation	1	4.67	1.79	0.80	.70
Compulsive internet use	1	5	2.21	1.03	.82
Negative outcomes	1	5	1.72	0.85	.78
Distress	0	2.95	0.76	0.65	.94
Depression	0	3	0.78	0.74	.89
Anxiety	0	3	0.53	0.64	.85
Stress	0	3	0.96	0.78	.89
Loneliness	7	35	16.08	6.09	.81
Happiness	1	7	4.82	1.28	.85

The results showed statistically significant low to moderate positive correlations between frequency of SNS use and all characteristics of problematic SNS use with depression, anxiety, and stress, as well as distress and loneliness,

and significant low negative correlations with happiness (Table 3). Given the high positive intercorrelations between depression, anxiety and stress, the total scale score (i.e., distress) was used in the subsequent analyses.

**Table 3.** Correlations between study variables (N=352)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Frequency of SNS use	-										
2. Preference for online interaction	.16**	-									
3. Mood regulation	.38**	.35**	-								
4. Cognitive preoccupation	.37**	.29**	.67**	-							
5. Compulsive internet use	.40**	.20**	.49**	.66**	-						
6. Negative outcomes	.25**	.14**	.38**	.49**	.69**	-					
7. Distress	.23**	.25**	.41**	.28**	.32**	.30**	-				
8. Depression	.23**	.23**	.35**	.24**	.34**	.31**	.89**	-			
9. Anxiety	.19**	.26**	.37**	.25**	.24**	.22**	.88**	.63**	-		
10. Stress	.19**	.18**	.39**	.26**	.28**	.27**	.93**	.74**	.76**	-	
11. Loneliness	.17**	.43**	.30**	.28**	.24**	.22**	.50**	.41**	.41**	.50**	-
12. Happiness	-.15**	-.33**	-.34**	-.26**	-.28**	-.17**	-.55**	-.54*	-.45**	-.55**	-.54**

Note. \*\* $p < .01$ ; \* $p < .05$

To examine the contribution of SNS use (usage frequency and characteristics of problematic use) to students' psychological adjustment indicators (distress, loneliness, and happiness), hierarchical regression analyses were conducted. Because the pandemic has raised awareness of potential advantages of frequent social networks use (given it represents a way to stay connected with family and friends in times of

reduced face-to-face interaction), frequency of SNS use was included in the first step of the regression to examine its individual contribution to psychological adjustment indicators. The characteristics of problematic SNS use (preference for online social interaction, mood regulation, cognitive preoccupation, compulsive SNS use, negative outcomes) were entered in the second step (Table 4).

**Table 4.** The results of hierarchical regression analyses in predicting distress, loneliness, and happiness

	Distress		Loneliness		Happiness	
	Step 1 $\beta$	Step 2 $\beta$	Step 1 $\beta$	Step 2 $\beta$	Step 1 $\beta$	Step 2 $\beta$
Frequency of SNS use	.23**	.06	.17**	.03	-.15**	.03
Preference for online social interaction		.12*		.36**		-.24**
Mood regulation		.34**		.09		-.24**
Cognitive preoccupation		.15*		.06		.08
Compulsive SNS use		.12		.00		-.22**
Negative outcomes		.13*		.10		.06
R	.23	.47	.17	.47	.15	.43
R <sup>2</sup>	.05	.22	.03	.22	.02	.19
F(df)	19.11** (1, 350)	16.09** (6, 345)	9.46** (1, 350)	16.55** (6, 345)	7.47** (1, 350)	13.12** (6, 345)
$\Delta R^2$		.17		.20		.17
$\Delta F(df)$		14.73** (5, 345)		17.45** (5, 345)		13.98** (5, 345)

Note. \*\* $p < .01$ ; \* $p < .05$

In predicting distress, frequency of SNS use was a significant positive predictor in the first step of the regression, explaining 5% of distress variance. However, it ceased to be a significant predictor in the second step of the regression when characteristics of problematic SNS use were introduced, which explained additional 17% of distress. The most important predictor of distress was mood regulation, followed by cognitive preoccupation, negative outcomes, and preference for online social interaction. The final model explained a total of 22% of the distress variance. Students who use social networks to regulate their mood, who have obsessive thoughts involving the SNS use, more negative outcomes due to SNS use, and who prefer online social interactions experienced more distress during coronavirus pandemic.

For loneliness, frequency of SNS use was a significant positive predictor in the first step, explaining 3% of loneliness variance, but it lost its significance in the second step, where preference for online social interaction was the only

significant predictor, explaining additional 20% of loneliness. The final model explained a total of 22% of the loneliness variance. Students who prefer online social interactions expressed more loneliness during coronavirus pandemic.

Finally, for happiness, frequency of SNS use was a significant negative predictor in the first step explaining 2% of the happiness variance, but it ceased to be a significant predictor in the second step. In the final model the most important predictors were preference for online social interaction, mood regulation, and compulsive SNS use. The final model explained a total of 19% of the happiness variance. Students who prefer online social interactions, who use social networks to regulate their mood, and who are more prone to compulsive SNS use experienced less happiness during coronavirus pandemic.

#### 4. DISCUSSION

The aim of this study was to examine the students' habits of SNS use during COVID-19 pan-

demic as well as a relationship of SNS use (usage frequency and characteristics of problematic use) with students' psychological adjustment (depression, anxiety, stress, loneliness, and happiness).

The results showed that during a pandemic most students (44%) spent 2-4 hours a day on SNS, while almost 20% of students spent more than five hours on SNS. More than a half of the students stated they spent more time on SNS during pandemic than before the isolation period, which was expected given that, because of social distancing measures, most social activities were cancelled or switched online. For example, SNS usage frequency increased for 40% for Whatsapp, and 37% for Facebook, according to the "COVID-19 barometer" (Kantar, 2020). Watson's (2020) study showed that the coronavirus outbreak led to increase in different media consumption in many states worldwide, e.g., increase in SNS use (21%), reading books and listening audiobooks (14%), news consumption (36%), etc. This increase could also be considered as a (avoidant) coping mechanism in long-term stressful situation.

Regarding the characteristics of problematic SNS use (preference for online interaction, mood regulation, cognitive preoccupation, compulsive SNS use and negative outcomes), the results showed low levels of all problematic SNS use cognitions and behaviours in surveyed students. However, among them, mood regulation, or a motivation to use social networks to alleviate distressing feelings, was pronounced the most in students during coronavirus pandemic. During crisis events, when the amount of uncertainty is high, a person is motivated to search for information to reduce this situational uncertainty and consequently the high stress which occurs during these events (Ryan, 2018).

Levels of distress (depression, anxiety, stress), and loneliness were found to be generally low (normal to mild), while happiness level was normal (average) among the surveyed students (the average score of college students on the Subjective Happiness Scale has been found to be from 4.5 to 5; Lyubomirsky & Lepper, 1999).

Preliminary results of a study on mental health during COVID-19 pandemic conducted in Croatia showed that nation as a whole, and students as well, showed higher levels of impaired mental health, e.g. 30% of students had mild and moderate depression, and 23% had severe depression, 20-25% of students showed mild and moderate anxiety and stress, and 17-20% expressed severe anxiety and stress, while 10% of students had severely impaired mental health (Jokić Begić et al, 2020). Duration of quarantine, fear of infection, boredom, frustration, lack of information and financial loss heightened the risk of negative psychological outcomes (Brooks et al., 2020). Previous studies showed that students are at risk for loneliness, and they reported of higher loneliness during coronavirus pandemic than other not-at-risk groups (Bu et al., 2020). Studies examining consequences of coronavirus occurrence on mental health found an increased prevalence of moderate to serious symptoms of depression and anxiety in general population (Wang et al., 2020), and in youth - 83% of students reported that pandemic impaired their mental health, mostly because of the college lock-down, losing previous routines and limited social connectivity (YoungMinds, 2020, as cited in Grubic et al., 2020). Results of the present study are therefore not in line with these findings. What needs to be taken into consideration is that this study was conducted in May 2020, when the Croatian Institute of Public Health's measures that were on since the middle of March 2020 started to give away. Studies with students in the USA showed that depression and anxiety were highest at the beginning of the pandemic (Huckins et al., 2020).

Regarding the relationship of SNS usage frequency and psychological adjustment indicators, the results showed that students who spend more time on SNS during pandemic have higher levels of distress (and depression, anxiety, and stress), as well as loneliness, and lower levels of happiness, which is in line with previous studies. Rosen et al. (2013) showed that people who spent more time on social networks and posted content on their profiles more often had more depressive symptoms. Gupta et al.

(2018) on their Indian student sample showed reciprocal relationship of SNS overuse and depression – depressive individuals tend to overuse internet to alleviate a bad mood and as an escape from feelings of guilt and hopelessness. Previous studies also showed relationship of increased SNS use and anxiety and stress (Younes et al., 2016), as well as loneliness (Green et al., 2005). Social networks, especially Facebook and Instagram, allow for many activities considered social, although not interactive, such as passive browsing through content others have posted. Such activities do not contribute to interpersonal connectivity, which results in a lack of social support and feelings of connectedness with others (Green et al., 2005). Research examining the relationship between SNS use frequency and happiness generally show negative associations. However, some research also show that individuals who report increased SNS use also show higher levels of happiness, depending on the motives for their SNS use (Rae & Lonborg, 2015).

The present study showed that students who use social networks to regulate their own mood, who have a higher presence of negative outcomes related to the use of social networks, and students who prefer online interactions have a higher level of distress. Previous research has mainly focused on examining the relationship between the general problematic use of SNS (and not the individual characteristics/dimensions of problematic use) and individual indicators of mental health. This research has shown that problematic SNS use was associated with higher levels of depression and anxiety (Zendle & Bowden-Jones, 2019), and higher levels of stress (Elhai et al., 2017). Excessive exposure to social networks has been shown to trigger negative comparisons with others such as the belief that others are happier and have a better life which contributes to the development of anxiety symptoms (Chou & Edge, 2012). In addition, research conducted by Chen and Lee (2013) showed that excessive use of social networks overloads individuals in online communication, and this daily exposure to large amounts of information from various

social networks contributes to an increase in perceived stress.

The results of the present study also showed that students who prefer online interaction were more likely to experience loneliness during coronavirus pandemic. It is possible that participants' excessive use of SNS was encouraged by social distancing measures present during a pandemic, and such online social interactions may have further contributed to feelings of loneliness given that interactions through social networks cannot fulfil the need for close contacts as interactions face-to-face can (Park, 2013).

Finally, the results of the present study showed that students who use social networks to regulate their mood, who use social networks compulsively, and who prefer online social interactions were more likely to have lower levels of happiness during coronavirus pandemic. However, as we do not have information on this in the past, before pandemic, it is likely that these relationships between characteristics of problematic SNS use and indicators of psychological adjustment were like that even before. Previous research has shown that adolescents who engage in problematic use of social media reported lower life satisfaction (Booker et al., 2015) and lower levels of happiness (Twenge, 2019), while a study with Turkish students showed negative association between social network addiction and happiness (Baltacı, 2019). The negative contribution of the SNS use for mood regulation to happiness could be a result of passive browsing through the content other people post on SNS. Since people tend to represent themselves more positively on SNS (Denti et al., 2012), individuals who use SNS to alleviate distressing feelings end up witnessing "happy" moments in the lives of others, thus evaluating their lives as less happy, which reflects on the levels of their subjective happiness (Phu & Gow, 2018).

Although the present study confirmed that some previously established associations between frequency and problematic SNS use with indicators of psychological health and well-being remain the same during the COVID-19 pan-

demic, there are some limitations of this study that should be kept in mind while interpreting the results. Students were recruited through few popular social network student groups in two Croatian cities, so the results generalizability is limited by the convenience of the sample.

In future studies it would be useful to examine possible moderating or mediating effects in observed variables relationships, such as social support and self-efficacy, or motives for the SNS use. Also, it would be interesting to examine the contribution of (problematic) SNS use to various aspects of students' lives during the pandemic, such as academic achievement.

Regarding the implications of the obtained results, it would be useful to create (online) programs for prevention of problematic social media use that would help youth in developing strategies for adequate SNS use as well as strategies for coping with stressful situations, especially in times of isolation. Young people, including students, should be informed about the risks they face, both in the use of SNS and in maintaining their mental health. By understanding that SNS pose a certain risk to mental health, they can learn to independently monitor their own use of SNS and thus focus on other activities that could help them cope with challenging situations.

## 5. CONCLUSION

The results of the present study showed that most of the students (46%) actively used four

social networks. Most of them (44%) spent 2-4 hours a day on SNS during the pandemic, while 19.3% spent more than five hours on SNS. For more than a half of students (56%) this was more than before the pandemic. Levels of all characteristics of problematic SNS use (preference for online interaction, mood regulation, cognitive preoccupation, compulsive use, and negative outcomes) were low in surveyed students, while levels of all psychological adjustment indicators were normal. The SNS usage frequency, as expected, was significantly correlated with all indicators of students' psychological adjustment during the pandemic; it positively predicted distress and loneliness, and negatively predicted happiness. However, when the characteristics of problematic SNS use were entered in the analyses, SNS usage frequency was not a significant predictor of adjustment. The results showed that mood regulation, preference for online interaction and negative outcomes positively predicted distress; preference for online interaction positively predicted loneliness, and mood regulation, compulsive use and preference for online interaction negatively predicted students' happiness. Obtained results are similar to those of previous (pre-pandemic) studies, indicating that (problematic) use of SNS in pandemic is associated with adjustment problems and should be addressed in prevention and intervention strategies aimed at young people's psychological health and well-being.

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## ODNOS KORIŠTENJA DRUŠTVENIH MREŽA I PSIHOLOŠKE PRILAGODBE STUDENATA U VRIJEME PANDEMIJE COVID-19

### SAŽETAK

Cilj ovog istraživanja bio je ispitati navike korištenja društvenih mreža kod studenata u vrijeme pandemije bolesti COVID-19 te odnos korištenja društvenih mreža (učestalosti i problematičnog korištenja) i psihološke prilagodbe studenata (narušenog mentalnog zdravlja, usamljenosti i sreće). U istraživanju je sudjelovalo 352 studenta/ice (234 djevojke, 118 mladića), prosječne dobi 22 godine ( $M = 22,2$ ;  $SD = 2,44$ ). Podaci su prikupljeni u svibnju 2020. godine online upitnikom koji je sadržavao Skalu generaliziranog problematičnog korištenja interneta 2, Skalu depresivnosti, anksioznosti i stresa (DASS-21), Kratku formu UCLA skale usamljenosti te Skalu subjektivne sreće. Rezultati su pokazali da su studenti/ce aktivno koristili četiri društvene mreže; 44% studenata/ica provodilo je 2-4 sata dnevno na društvenim mrežama tijekom pandemije, dok je 19,3% njih provodilo na društvenim mrežama više od pet sati. Za više od polovice studenata/ica to je više nego prije pandemije. Razina svih karakteristika problematičnog korištenja društvenih mreža (preferencija online interakcije, regulacija raspoloženja, kognitivna preokupacija, kompulzivno korištenje i negativni ishodi) bila je niska, dok su razine svih pokazatelja psihološke prilagodbe bile normalne. Rezultati hijerarhijske regresijske analize pokazali su da je učestalost korištenja društvenih mreža pozitivno predviđala narušeno mentalno zdravlje i usamljenost, a negativno sreću. Međutim, nakon uvođenja karakteristika problematičnog korištenja u drugom koraku analize, učestalost korištenja društvenih mreža više nije bila značajan prediktor prilagodbe. Regulacija raspoloženja, preferencija online interakcije i negativni ishodi pozitivno su predviđali narušeno mentalno zdravlje, preferencija online interakcije pozitivno je predviđala usamljenost, a regulacija raspoloženja, kompulzivno korištenje i preferencija online interakcije negativno su predviđali sreću. Dobiveni rezultati interpretirani su u odnosu na nalaze drugih istraživanja provedenih prije pandemije, ali i uzimajući u obzir specifičnosti koje je donijela pandemija bolesti COVID-19.

**Ključne riječi:** problematično korištenje društvenih mreža, narušeno mentalno zdravlje, usamljenost, sreća