Journal of the Institute for Educational Research
Volume 56 • Number 2 • December 2024 • 343–363
UDC 159.944.4.072(497.11)
616.98:578.834(497.11)

ISSN 0579-6431
ISSN 1820-9270 (Online)
https://doi.org/10.2298/ZIPI2402343M
Original research paper

DEVELOPMENT OF ACADEMIC BURNOUT DURING COVID-19 PANDEMIC – THE ROLE OF PERCEIVED SOCIAL SUPPORT

Borka Malčić ➢ ORCID: 0000-0002-1862-962X
University of Novi Sad – Faculty of Philosophy, Novi Sad, Serbia

Stanislava Marić Jurišin ➢ ORCID: 0000-0002-4184-3309
University of Novi Sad – Faculty of Philosophy, Novi Sad, Serbia

Simona Bekić* ➢ ORCID: 0000-0002-0974-8846
University of Novi Sad – Faculty of Philosophy, Novi Sad, Serbia

Olivera Gajić ➢ ORCID: 0000-0002-6886-584X
University of Novi Sad – Faculty of Philosophy, Novi Sad, Serbia

A B S T R A C T

University life plays a crucial role in providing social support to its academic community, whilst also serving as a protective factor for developing mental health issues. However, the advent of the Coronavirus in 2019 left substantial changes in the education system. In this article, the authors' main goal was to examine the correlation of perceived social support and academic burnout levels during the COVID-19 pandemic. The research was conducted online, using the MBI-SS and the Scale for Assessing the Degree of Social Support. Based on survey data of 528 students from 11 different faculties from the University of Novi Sad, the findings demonstrate students' levels of academic burnout and perceived social support, as well as their relationship with demographic characteristics such as gender, level of study, academic achievement, and model of study payment. The findings revealed a negative correlation between perceived social support and academic burnout. The authors underscore the importance of academic burnout prevention during crisis periods like the pandemic, as well as university support in providing adequate burnout rehabilitation programs.

Key words:
burnout, social support, students, higher education, COVID-19.

* E-mail: simona.bekic@ff.uns.ac.rs

INTRODUCTION

In 2020, universities were forced to switch from face-to-face teaching to an online learning environment, completely changing the established routines of professors and students. In Serbia, the academic community was taken aback when it was left without the social dimension of teaching, which forms the basis of academic life and learning (Mijatović et al., 2021). Students were exposed to new challenges every day. It was necessary to adapt to the online learning environment, digital forms of communication with professors, significantly less contact with colleagues and friends, possible change of residence, and loss of part-time student jobs (Krnjaić et al., 2023; Mijatović et al., 2021).

Studies conducted in France, Poland, China, Switzerland, and Spain have reported an increase in psychological distress in students, especially anxiety, depression, and stress during the COVID-19 pandemic (Bao, 2020; Cao et al., 2020; Díaz-Jiménez et al., 2020; Elmer et al., 2020; Husky et al., 2020). Alongside these mental health issues, the levels of academic burnout started to rise as well (Andrade et al., 2023; Hao et al., 2021; Wang et al., 2021). One of the critical tasks during this time was keeping up with the student workload in new conditions of social isolation (Andrade et al., 2023). Social support has previously shown that it has a significant effect on the development of academic burnout (Dyrbye et al., 2010; Velando'Soriano et al., 2020; Wu et al., 2021; Zhang et al., 2021). Therefore, the main purpose of this study was to examine the relationship between students' burnout levels and perceived social support.

Academic Burnout in Rising?

Academic burnout is defined as a combination of feelings of emotional and physical exhaustion due to one's studies, followed by cynicism, i.e. reduced interest in college duties, and reduced efficiency in fulfilling academic duties (Yang, 2004). Some of the symptoms of academic burnout are: physical exhaustion, mental exhaustion, indifference, and lack of motivation to deal with college assignments, mental distance from obligations related to studies, callousness, a drop in self-confidence, and a feeling of personal inadequacy, lack of enthusiasm in work, and reduced quality of work engagement (Schaufeli & Buunk, 2003; Schaufeli et al., 2009; Čarapina & Ševo, 2017). There are various possible consequences of student burnout, while the following are most often recorded: delinquent behaviors, reduced motivation, dissatisfaction with studies, higher frequency of absenteeism from classes, development of addictive diseases, accelerated heart rate, and dropping out of studies (Alarcon et al., 2011; Čarapina & Ševo, 2017; Yang, 2004). In comparison with other groups experiencing burnout (e.g., teachers and medical workers), research shows that students are

listed with between medium and higher levels of burnout syndrome (Yang, 2004). Burnout syndrome in students is often associated with a large number of academic tasks, where the person does not have enough resources to complete them (Merhi et al., 2018). There are conflicting results about gender being a factor in experiencing student burnout. Some authors say there are no gender differences, whereas others indicate that women are affected by it more (Fiorilli et al., 2022; Madigan & Curran, 2021; Rahmatpour et al., 2019; Zhang et al., 2021).

Studies conducted during the COVID-19 pandemic indicate that burnout is lower among students with higher academic engagement and psychological capital (Wang et al., 2021), students whose quality of sleep is satisfactory, who approved of the way their university dealt with the conditions of the pandemic and who were given high levels of support from university staff (Andrade et al., 2023). On the other hand, factors like immoderate consumption of alcoholic drinks, antidepressants, thoughts of university desertion (Andrade et al., 2023), and socio-economic disadvantages (Anders et al., 2023; Cao et al., 2020) were correlated to poor mental health, whereas unsatisfactory skills for organizing study at home, poor physical health, and low perceived social support (Sveinsdóttir et al., 2021) were predictors of academic burnout.

Social Support as a Potential Buffer for Academic Burnout Development

Social support is defined as the presence of support from people we can rely on, who love us, who care about and value us (Čarapina & Ševo, 2017; Yang, 2004). Some authors (Demaray et al., 2005) emphasize that the person's impression of having meaningful social connections is more important than the objective presence of these social resources. Groups that provide social support include family members, friends, neighbors, colleagues at work, peers at school, and partners (Demaray et al., 2005). The types of social support also differ, e.g. emotional, informational, or instrumental support (Demaray et al., 2005).

Studies show that social support plays an important role in preventing student burnout (Dyrbye et al., 2010; Elmer et al., 2020; Karimi et al., 2014; Ye et al., 2021). Not only that, but receiving faculty member support (Dyrbye et al., 2010; Russell et al., 1987) and experiencing a positive learning climate also help in rehabilitation when the student had formerly burned out (Dyrbye et al., 2010). Research conducted during the COVID-19 pandemic (Elmer et al., 2020) indicates that students who live alone, have insufficient social contact with close friends and family members, and are not well integrated into student social networks have a higher risk of developing mental health issues. Results from Serbia concur with this data, as one study shows that 34% of students said that "lack of social contact" was a negative aspect of distance education during COVID-19 (Stojković & Jelić, 2021: 247).

Therefore, the main focus of this study was answering the following research questions:

1) What are students' burnout and perceived social support levels during the COVID-19 pandemic?
2) How do the levels of perceived social support and academic burnout differ regarding respondents' characteristics (gender, overall grade during studies, level of studies (bachelor, master's, or doctoral studies), and model of study payment (self-financed or budget-financed) during the COVID-19 pandemic?
3) Are students' perceived social support and student burnout levels correlated in the time of the COVID-19 pandemic?

MATERIALS AND METHODS

Study Context, Sample and Procedure

Serbia is a full member of the Bologna Process and offers two types of studies: academic and applied studies with three levels: bachelor, master, and doctoral studies (European Commission, 2023). Higher education is either private or public in Serbia (European Commission, 2023). When it comes to public higher education, there are two models of payment: budget-financed and self-financed students (European Commission, 2023). This study was set in September 2020 in the context of higher education in Serbia during the COVID-19 pandemic. On the brink of the COVID-19 state of emergency, universities were forced to move to an online learning environment for two academic years. During the COVID-19 pandemic, students were exposed to new circumstances such as social isolation, change of place of residence, and loss of part-time student jobs (Mijatović et al., 2021).

Participants were students from the University of Novi Sad, from all levels (bachelor, master, Ph.D.) and types of study (academic or applied). The sample consisted of 528 students, mainly female (74.6%) and budget financed (80.3%). The age of the respondents ranged from 18 to 34, whereas the average age was 21.6. Detailed sample description can be found in Table 1. The participants of the study completed the questionnaire anonymously and voluntarily online, via Google Forms (approximately 10 minutes). The data collection lasted for a week during the COVID-19 pandemic.

Table 1. Sample of the study

Variable	Category	N	%
Gender	Male	133	25.2%
	Female	394	74.6%
	Don't want to answer	1	0.2%
Study level	Bachelor studies	473	89.6%
	Master studies	48	9.1%
	Doctoral studies	7	1.3%
Model of study payment	Budget financed	424	80.3%
	Self-financed	104	19.7%
Academic achievement	First year students (not graded yet)	60	11.4%
	6.0-7.0	5	0.9%
	7.01-8.0	118	22.3%
	8.01-9.0	182	34.5%
	9.01-10.0	163	30.9%
Faculty	Faculty of Technology	18	3.4%
	Faculty of Natural Sciences and Mathematics	37	7.0%
	Academy of Arts	9	1.7%
	Faculty of Technical Sciences	151	28.6%
	Faculty of Philosophy	196	37.1%
	Faculty of Economics	15	2.8%

	Medical Faculty	66	12.5%
	Faculty of Agriculture	15	2.8%
	Faculty of Law	11	2.1%
	Other higher education institutions of the University of Novi Sad	10	2%

Note: N stands for number of respondents.

Measures

Assessment of Academic Burnout Levels

To measure students' levels of experienced burnout during the COVID-19 pandemic, the Croatian validation of the Maslach Burnout Inventory Student Survey (Kolundžić, 2013) was administered. The scale includes 16 items which measure its three dimensions:

1) Emotional exhaustion ("I feel emotionally drained from my studies")
2) Cynicism ("I became less impressed with my studies")
3) Academic efficacy („In my opinion, I am a good student")

The items were rated on a 7-point scale, indicating the degree to which the statements reflected students' relation to their academic life during the COVID-19 pandemic (from 1=strongly disagree to 7=strongly agree). The items' average scores produce overall subscale scores and the responses can be classified into low, medium, or high levels. In the present study, the MBI-SS survey as a whole showed adequate internal consistency reliability (α=.88)

Assessment of Students' Perception of Social Support

To measure the students' perceived social support, the Scale for assessing the degree of Social support (Jakovljević, 2004) was administered. It consisted of 8 items rated on a 4-point scale (from 1=never to 4=always). The items referred to the degree to which the respondents' family, friends, and partners provided social support („To what extent do people close to you listen when you need someone to talk to?"). The sum of the responses to all statements produces overall scores, so a higher score indicates a higher level of perceived social support. The lowest possible score is 8, and the highest is 32. In our sample, the internal consistency reliability is adequate (α=.86).

Data Analysis

Three sets of analyses were computed using the SPSS 25.0 program. Firstly, the t-test was conducted to identify gender differences in experienced academic burnout and perceived social support. The same procedure was used to recognize any possible differences between budget-financed and self-financed students. Secondly, a non-parametric alternative to ANOVA was conducted, the Kruskal-Wallis test, in order to examine differences between 3 study levels (bachelor, master, and doctoral) in academic burnout and perceived social support. The same test was utilized to contrast and compare students of differing academic achievements. Thirdly, Pearson's quotient of correlation was used to determine the relation between academic burnout levels and students' perceived social support.

RESULTS

Our descriptive statistics (Table 2) indicate that our sample is comprised of medium levels of emotional exhaustion, marginally medium levels of cynicism and high levels of academic efficacy according to the MBI manual (Maslach et al., 2016). Perceived social support is above average.

Table 2. Descriptive statistics of perceived social support and academic burnout dimensions

	Minimum	Maximum	Mean	Std. Deviation
Perceived social support	8.00	32.00	26.04	4.42
Emotional Exhaustion	5.00	35.00	21.39	7.24
Cynicism	3.00	21.00	9.74	5.56
Academic efficacy	12.00	42.00	30.93	5.67

Using the t-test of independent samples, it was established that there are no gender differences in burnout syndrome levels, t(508)=0.44, p=0.66. Using the same procedure, it was established that there is a significant difference between male students (M=24.86, SD=5.04) and female students (M=26.44, SD=4.12) in levels of perceived social support, t(522)=-3.59, p <.001. Details about the independent sample t-test results are presented in Table 3.

Table 3. Results of t-test of independent samples for academic burnout and perceived social support and gender differences

Gender							
Variable	Men		Women				
	M	SD	M	SD	df	t	p
Academic burnout	48.74	14.20	48.10	14.41	508	.44	.66
Perceived social support	24.86	5.04	26.44	4.12	522	-3.59	.00**

Notes: M stands for mean; SD stands for standard deviation; df stands for degrees of freedom; t stands for t-test; *p <.05; **p <.001.

Using the t-test of independent samples, it was established that there is a significant difference between budget-financed students (M=46.33, SD=14.07) and self-financed students (M=52.01, SD=14.82) in burnout syndrome levels, t(509)=-2.97, p<.001. Using the same procedure, it was found that there are no differences in the levels of perceived social support considering the model of study payment. This data is presented in detail in Table 4.

Table 4. Results of t-test of independent samples for academic burnout and perceived social support for model of study payment

Model of study payment							
Variable	Budget-financed		Self-financed				
	M	SD	M	SD	df	t	p
Academic burnout	46.33	14.07	52.01	14.82	509	-2.97	.00**
Perceived social support	26.21	4.32	25.35	4.75	523	1.78	.07

Notes: M stands for mean; SD stands for standard deviation; df stands for degrees of freedom; t stands for t-test; *p < .05; **p < .001.

In order to determine if there are disparities between students' study level and academic burnout during the COVID-19 pandemic, we initially intended to conduct an ANOVA analysis. Because of the unsatisfactory results of the Levin test, $F(2,509)=0.98$, $p=0.37$, implying that the variance is heterogeneous, we sought for other options. When the data does not follow a normal distribution, authors recommend using the Kruskal-Wallis test, a nonparametric alternative to ANOVA (Lix et al., 1996). This test indicated that the academic burnout during the COVID-19 pandemic differed, based on students' study level, $H(2)=16.10$, $p<0.001$. Based on the Dunn's post-hoc test, we can conclude that there is a significant difference between bachelor and master students, but no difference between bachelor and doctoral, or master and doctoral students (Table 5). We also intended to conduct an ANOVA analysis to determine if there are disparities between students' study level and perceived social support during the COVID-19 pandemic. Because of the unsatisfactory results of the Levin test, $F(2,523)=4.75$, $p=0.01$, implying that the variance is heterogeneous, we also conducted the Kruskal-Wallis test. However, no significant differences between groups were found, $H(2)=6.96$, $p=0.03$.

Table 5. Dunn's post hoc comparisons of study level and academic burnout

Comparison	z	p	p_{bonf}	p_{holm}
Bachelor and master students	4.012	< .001	< .001	< .001
Bachelor and doctoral students	0.232	0.817	1.000	0.817
Master and doctoral students	-1.287	0.198	0.595	0.397

Notes: z stands for z-value, p stands for statistical significance, Pbonf stands for Bonferroni correction of the p-value, Pholm stands for Holm-Bonferroni correction of the p-value.

In order to understand distinctions between students of differing academic achievement with regard to social support, we acted in the same manner. Levene's test indicated that the assumption of homogeneity of variances for perceived social support was met, $F(3, 451)=2.1$, $p=0.08$. The Shapiro-Wilk test, however, showed that the data for all four groups significantly deviates from a normal distribution, $p<0.05$. That is why we conducted the Kruskal-Wallis test. It indicated that we can reject the null hypothesis and conclude that there is a statistically significant difference of perceived social support between the groups based on their average grades, $H(3)=30.26$, $p<0.001$. Based on Dunn's post-hoc test, we can conclude that there is a significant difference only between groups of students with grades 9.01-10.0 and 8.01-9.0, but not between the other groups (Table 6).

Table 6. Dunn's post hoc comparisons of perceived social support and academic performance[1]

Comparison	z	p	p_{bonf}	p_{holm}
9.01-10 – 8.01-9.0	3.092	0.002	0.012	0.012
9.01-10 – 7.01-8.0	1.007	0.314	1.000	1.000
9.01-10 – 6.0-7.0	-0.367	0.714	1.000	1.000
8.01-9.0 – 7.01-8.0	-1.777	0.076	0.454	0.378
8.01-9.0 – 6.0-7.0	-1.103	0.270	1.000	1.000
7.01-8.0 – 6.0-7.0	-0.633	0.527	1.000	1.000

Notes: z stands for z-value, p stands for statistical significance, Pbonf stands for Bonferroni correction of the p-value, Pholm stands for Holm-Bonferroni correction of the p-value.

As with aforementioned cases, we intended to conduct ANOVA to measure differences in students' academic achievement and academic burnout. Levene's test indicated that the assumption of homogeneity of variances for academic burnout was met, $F(3,451)=0.17$, $p=0.92$. The Shapiro-Wilk test, however, showed that the data for one of four groups significantly deviates from a normal distribution, $p<0.05$. We decided to use the Kruskal-Wallis test which indicated that we can reject the null hypothesis and conclude that there is a statistically significant difference of academic burnout between the groups based on their average grades, $H(3)=30.26$, $p<0.001$. Based on the Dunn's post-hoc test, we can conclude that there is a significant difference between the group of students with grades 9.01-10.0 and all other groups, but there are no significant differences between students with the grade point averages of 8.01-9.0, 7.01-8.0, and 6.0-7.0 (Table 7).

[1] The students' success in exams is expressed with a grade from 5 (five) to 10 (ten). The lowest passing grade is 6 (six) (Zakon o Visokom obrazovanju, 2023). First-year students were excluded in this analysis, as they have not yet taken exams and do not have a grade point average.

Table 7. Dunn's post hoc comparisons of academic burnout and academic performance

Comparison	z	p	p_{bonf}	p_{holm}
9.01-10 – 8.01-9.0	-3.653	<.001	0.002	0.001
9.01-10 – 7.01-8.0	-5.135	<.001	<.001	<.001
9.01-10 – 6.0-7.0	-2.270	0.023	0.139	0.093
8.01-9.0 – 7.01-8.0	-1.939	0.053	0.315	0.158
8.01-9.0 – 6.0-7.0	-1.394	0.163	0.979	0.326
7.01-8.0 – 6.0-7.0	-0.873	0.383	1.000	0.383

Notes: z stands for z-value, p stands for statistical significance, Pbonf stands for Bonferroni correction of the p-value, Pholm stands for Holm-Bonferroni correction of the p-value.

As can be seen in Table 8, using Pearson's correlation coefficient, a negative correlation was found between burnout syndrome and perceived social support (r=-0.26, p<0.001). This means that the greater the social support a student perceives, the lower the level of burnout syndrome. The same tendency can be seen between the dimensions of academic burnout and the level of perceived social support. There is a positive correlation only between academic efficacy and perceived social support, whereas other dimensions have a negative correlation.

Table 8. Correlations of perceived social support, academic burnout, and its dimensions

Variables	1.	2.	3.	4.	5.
Perceived social support	1.00				
Academic burnout	-.26**	1.00			
Academic efficacy	.31**	-.72**	1.00		
Cynicism	-.19**	.81**	-.46**	1.00	
Emotional exhaustion	-.14**	.79**	-.27**	.48**	1.00

Notes: *p<.05; **p<.001.

DISCUSSION

Firstly, this research aimed to examine the levels of perceived social support in students as well as academic burnout levels during the COVID-19 pandemic (Research Question 1). Our study presents a sample of medium levels of academic burnout and slightly above average levels of perceived social support. Further analyses focused on answering how levels of perceived social support and academic burnout differ regarding respondents' characteristics (Research Question 2). It was confirmed that there are gender differences in students' perceived social support. Women's perception of social support is different than men's, which is in line with previous research on this topic (Dwyer & Cummings, 2001; Fiorilli et al., 2022; Jakovljević, 2004). However, as the Italian research on the adaptation of students to college indicates (Fiorilli et al., 2022) that gender does not seem to influence the relationship between perceived social support and burnout syndrome. In our research, there were also no gender differences in the level of developed academic burnout syndrome. Research by the pioneering researchers of burnout, Maslach and Jackson (1985), is in accordance with the findings of our research. Gender is not one of the main factors in burnout and the differences between men and women are very small or do not exist at all (Maslach & Jackson, 1985). Novel studies also confirm that gender is not correlated with academic burnout (Madigan & Curran, 2021; Rahmatpour et al., 2019; Zhang et al., 2021). However, the results are inconsistent, depending on the source. In some studies, the findings still point to a higher level of emotional exhaustion and spent energy in female students than in male students (Fiorilli et al., 2022). Therefore, a need for continuing the research on gender as a potential moderator between perceived social support and burnout syndrome is acknowledged.

Our research also found that there are significant differences in burnout levels between students of different modalities of study payment. Budget-financed students have lower levels of academic burnout in comparison with self-financed students. In contrast, no differences were found in perceived social support levels. One of the possible reasons for this is that self-financed students had more challenges given their unstable income. Research conducted in China during the COVID-19 pandemic lists the factors that contributed to the greater degree of anxiety of students, among which is instability of material goods (Cao et al., 2020). As well as this, a study from the United Kingdom showed that students from disadvantaged backgrounds had higher anxiety levels and lower levels of wellbeing during the pandemic and "were more likely to report that they would take any job that came along after university" (Anders et al., 2023). It is common knowledge that the pandemic caused numerous difficulties in the financial sphere due to numerous changes in the world of work that came with the Coronavirus. It

is possible that the self-financed students were forced to find a job due to material losses, which potentially created more stress for them. Due to having no acquired job qualification, students often resort to support from parents or engage in jobs that are paid (below) the average salary. Another factor that supports this assumption is the fact that students of budget status can apply for numerous student scholarships and loans (Ministarstvo prosvete, nauke i tehnološkog razvoja, n.d.), which enables greater financial stability.

In this research, we found that undergraduate students experience significantly higher levels of burnout compared to both master and doctoral students. There is no significant difference in burnout levels between master's and doctoral students, and no difference in perceived social support. There are several possible answers to the question of why undergraduate students were more burned out than their older counterparts. The first potential answer to this question can be seen in the research of a group of authors from Malaysia (Awang et al., 2014). They explain the transition from high school to college as a complicated process in which students create a completely new identity as students of higher education (Awang et al., 2014). Transition includes changes in culture, identity, role, status, routines, and relationships (Awang et al., 2014). The authors suggest that students, especially those from the first year, face the problem of adjustment in this period. The findings indicate that many students do not have the capacity or simply do not know how to face the stress that this transitional period brings (Awang et al., 2014). As well as that, they have problems adapting to the demands and challenges of university life (Awang et al., 2014). Another possibility is that during the first years of study, students had differing perceptions of what sort of support they would receive from the university staff members. According to one study, the strongest association with burnout among 1st and 2nd-year students was dissatisfaction with the learning environment and the perceived level of support provided by faculties (Dyrbye et al., 2009).

The results of this study also indicate that there are differences between perceived social support and groups of differing academic achievement. In our research, individuals with higher academic performance (Group 9.01-10.0) tend to have higher levels of perceived social support compared to those with lower academic performance (Group 8.01-9.0). As well as this, students with grades ranging from 9.01 to 10.0 have lower levels of academic burnout than those with lower academic achievement. This is in accordance with previous research (Atalayin et al., 2015; Yang, 2004), which claim that, on average, the greater the burnout syndrome, the inevitable the decline in academic performance (which is manifested here in the average grade).

There are several possible interpretations of this data. The first possibility is that students with a higher academic achievement are most likely in the group of budget-financed students, and possibly receive a scholarship. On the other hand,

students with lower average grades probably belong to the group of self-financing students, which creates more stress and worries about financing. Another possibility is that students with good average grades have a higher degree of self-efficacy and therefore lower levels of burnout syndrome. Self-efficacy consists of the individual's belief that with the help of their skills, they will be able to efficiently perform a task that they have set out to do (Bandura, 1978). If a person has high self-efficacy, they will be more motivated to do the task, and in contrast, if their self-efficacy is low, it is more likely that the person will avoid the task or even give up on it (Bandura, 1978). According to one study (Yang, 2004), high self-efficacy in students correlates with high grades, while low self-efficacy is positively related to burnout syndrome. Another possible interpretation of these data is that students who initially did not want to enroll in a faculty or department have lower grades. According to the author Yang (2004), burnout syndrome is more common in people who have a mismatch between the nature of the job and the nature of the person doing the job. One could imagine a situation in which a person who from the beginning was not interested in the Software Engineering study program, enrolls in it out of a desire for a well-paid job, but burns out during their studies, and therefore gets worse grades. However, our research was not dedicated to establishing causality, and hence cannot answer the question of which came first, the chicken or the egg, i.e. student burnout or lower grade average. This question would be worth exploring in further research.

The last Research Question (3) focused on determining if a correlation between students' perceived social support and academic burnout was present during the COVID-19 pandemic. Our study confirmed that the higher the level of perceived social support in a student, the lower the level of academic burnout levels. The findings of this research are in congruence with previous studies globally (Awang et al., 2014; Kim et al., 2018) and with former studies from the Balkan region (Čarapina & Ševo, 2017). What is different, however, is the fact that in our research, all dimensions of the burnout syndrome showed a significant statistical correlation with perceived social support. In contrast to the paper "Relationship between social support and student burnout" (Čarapina & Ševo, 2017) in which no significant correlation of social support with exhaustion and cynicism was found. This may be due to the fact that our research included a larger sample of students. It has been established that social support has a preventive effect on the development of stress so that an individual with greater social support becomes more resistant to stress (Kim et al., 2018). Namely, support from educational institutions and professors has a stronger correlation with academic burnout than support from parents or peers (Kim et al., 2018). A possible explanation for this is that social relations with family and friends are subject to conflicts, while relations in educational institutions are more stable and prone to change (Kim et al., 2018).

Authors therefore conclude that further research is needed on the topic of specific sources of social support as correlates of burnout syndrome.

CONCLUSIONS

The significance of this research is that it is one of the few investigations conducted on our sample during the COVID-19 pandemic. Given that this paper aimed to examine the levels of students' perceived social support and burnout syndrome during the COVID-19 pandemic and the correlation between these constructs, it can provide guidelines for further educational research in this field. However, the authors believe that the greatest significance of this research is of a practical nature. This research highlights the need to start a conversation about the general well-being of students during their studies, especially in uncertain times such as the COVID-19 pandemic. The importance of the results of this research is reflected in the understanding of burnout syndrome within other similar crisis situations. The results of this paper suggest that there is a need for programs to prevent burnout syndrome at colleges, where social support proves to be a very important protective factor. At the same time, people with lower levels of perceived social support, lower average grades, and self-financing status are in the foreground for preventive programs.

In addition to family, friendship, and partner relationships as basic support networks for students, various forms of institutional support are encouraged at the university (Raaper et al., 2022). There are specific suggestions that counselors and university staff can use to help students reduce their stress levels. Some of them are: teaching students that academic responsibilities can be more manageable if they are distributed throughout the semester, jointly analyzing which situations have been stressful for students in the past, helping students cultivate motivation and proactive behavior to achieve long-term goals (Dwyer & Cummings, 2001). Also, conducting workshops or speaking predicting and controlling some common sources of stress at the beginning of the semester (Dwyer & Cummings, 2001). In addition to the fact that counselors should be informed about how to treat students who are under stress, universities should also develop educational strategies to contribute to its prevention (Dwyer & Cummings, 2001). While doing so, it is crucial to take into account the possibility of developing teacher burnout, which could lead to higher employee turnover rates (Dreer, 2021; Liu et al., 2023) and increased burnout in students themselves (Madigan & Kim, 2021). There have also been suggestions about preparing teachers for VUCA (volatility, uncertainty, complexity, and ambiguity) situations (Darling-Hammond & Hyler, 2020; Hadar et al., 2020; Laukkonen et al., 2019) such as the COVID-19 pandemic. We live in a world of rapid change and "change, more often than not, translates to greater unpredictability in the form of

troubling state affairs" (Laukkonen et al. 2019, p. 4). One of these studies advocates for a shift in teacher training – where social-emotional competencies could be a more integral part of the curriculum (Hadar et al., 2020).

In addition to comprehensive support for students at the university level of education, there is a need for a special program for first-year students, who are in the transition period from high school to college (Awang et al., 2014). Their adaptation depends on both internal and external support that stimulates the inclusion of students in university life. A higher level of social support is associated with a better transition, and a wide social network of acquaintances and friends is important for a sense of belonging during the entire university experience (Awang et al., 2014).

Furthermore, there is a need to alleviate the symptoms of burnout syndrome in students who have experienced it. There are still no exact guidelines for intervention in the treatment of academic burnout, which is why several approaches should be taken into account (Robins et al., 2018; Schaufeli & Buunk, 2003). Two general methods of action found in the literature on burnout syndrome are individual interventions and workplace interventions, i.e. place of study (Schaufeli & Buunk, 2003). Through a meta-analysis of studies on burnout syndrome, the authors Schaufeli and Buunk (2003) concluded that almost every author admits that a combination of these two approaches would be the most effective. However, the vast majority of burnout syndrome interventions have been implemented at the individual level (Schaufeli & Buunk, 2003).

Since participation in the study was voluntary, the respondents were not equalized by gender, age, faculty, average grade during the course of study, model of study payment, and level of study. As a consequence of the data collection method, this sample is made up of 70% female respondents (394 out of 528), and 86% of bachelor students (456 out of 528). The moderating role of level of study in the relationship between perceived social support and burnout syndrome is an important research question that should be examined in future research. In addition to the aforementioned socio-demographic characteristics, the need to include questions about the material status of students is recognized. In previous research, the financial instability of students was a significant correlate of burnout syndrome (Cao et al., 2020), which is why it would be good to include this factor in future studies. The sample size, although reduced due to the pandemic, met the criteria of the selected research draft and appropriate consideration of the examined facts and effects of the research. The generalizations that were made should be observed within the framework of this specific research.

In general, this study found a negative correlation between perceived social support and academic burnout during the COVID-19 pandemic. In addition to this, this research indicates that students with lower levels of perceived social support, those with lower average grades, undergraduate students and of self-financing status

are at most risk of developing academic burnout. The authors suggest different models of student burnout prevention during critical periods such as the COVID-19 pandemic, as well as further research to tailor these prevention methods to the specific needs of the academic community.

REFERENCES

- Alarcon, G. M., Edwards, J. M., & Menke, L. E. (2011). Student burnout and engagement: A test of the conservation of resources theory. *The Journal of Psychology*, *145*(3), 211–227. DOI: 10.1080/00223980.2011.555432
- Anders, J., Macmillan, L., Sturgis, P., & Wyness, G. (2023). Inequalities in late adolescents' educational experiences and well-being during the Covid-19 pandemic. *Oxford Review of Education*, *49*(5), 620–642. DOI: 10.1080/03054985.2022.2124964
- Andrade, D., Ribeiro, I. J. S., & Máté, O. (2023). Academic burnout among master and doctoral students during the COVID-19 pandemic. *Scientific Reports*, *13*(1), 4745. DOI: 10.1038/s41598-023-31852-w
- Atalayin, C., Balkis, M., Tezel, H., Onal, B., & Kayrak, G. (2015). The prevalence and consequences of burnout on a group of preclinical dental students. *European Journal of Dentistry*, *09*(03), 356–363. DOI: 10.4103/1305-7456.163227
- Awang, M. M., Kutty, F. M., & Ahmad, A. R. (2014). Perceived social support and well-being: First-year student experience in university. *International Education Studies*, 7(13), 261–270. DOI: 10.5539/ies.v7n13p261
- Bandura, A. (1978). Reflections on self-efficacy. *Advances in Behaviour Research and Therapy*, *1*(4), 237–269. DOI: 10.1016/0146-6402(78)90012-7
- Bao, W. (2020). COVID–19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies*, *2*(2), 113–115. DOI: 10.1002/hbe2.191
- Cao, W., Fang, Z., Hou, G., Han, M., Xu, X., Dong, J., & Zheng, J. (2020). The psychological impact of the COVID-19 epidemic on college students in China. *Psychiatry Research*, *287*, 112934. DOI: 10.1016/j.psychres.2020.112934
- Čarapina, I., Ševo, J. (2017). Odnos socijalne podrške i sagorijevanja studenata [The relationship between social support and academic burnout]. *Školski vjesnik*, *66*(1), 9–25. https://hrcak.srce.hr/186825
- Darling-Hammond, L., & Hyler, M. E. (2020). Preparing educators for the time of COVID and beyond. *European Journal of Teacher Education*, *43*(4), 457–465. DOI: 10.1080/02619768.2020.1816961
- Demaray, M. K., Malecki, C. K., Davidson, L. M., Hodgson, K. K., & Rebus, P. J. (2005). The relationship between social support and student adjustment: A longitudinal analysis. *Psychology in the Schools*, *42*(7), 691–706. DOI: 10.1002/pits.20120
- Díaz-Jiménez, R. M., Caravaca-Sánchez, F., Martín-Cano, M. C., & De La Fuente-Robles, Y. M. (2020). Anxiety levels among social work students during the COVID-19 lockdown in Spain. *Social Work in Health Care*, *59*(9–10), 681–693. DOI: 10.1080/00981389.2020.1859044
- Dreer, B. (2021). Teachers' well-being and job satisfaction: The important role of positive emotions in the workplace. *Educational Studies*, 1–17. DOI: 10.1080/03055698.2021.1940872
- Dwyer, A. L., & Cummings, A. L. (2001). Stress, self-efficacy, social support, and coping strategies in university students. *Canadian Journal of Counselling, 35*(3), 208–220.
- Dyrbye, L. N., Power, D. V., Massie, F. S., Eacker, A., Harper, W., Thomas, M. R., Szydlo, D. W., Sloan, J. A., & Shanafelt, T. D. (2010). Factors associated with resilience to and recovery from burnout: A prospective, multi-institutional study of US medical students: Resilience in medical students. *Medical Education*, *44*(10), 1016–1026. DOI: 10.1111/j.1365-2923.2010.03754.x
- Dyrbye, L. N., Thomas, M. R., Harper, W., Massie, F. S., Power, D. V., Eacker, A., Szydlo, D. W., Novotny, P. J., Sloan, J. A., & Shanafelt, T. D. (2009). The learning environment and medical student burnout: A multicentre study. *Medical Education*, *43*(3), 274–282. DOI: 10.1111/j.1365-2923.2008.03282.x

- Elmer, T., Mepham, K., & Stadtfeld, C. (2020). Students under lockdown: Comparisons of students' social networks and mental health before and during the COVID-19 crisis in Switzerland. *PLOS ONE*, *15*(7), e0236337. DOI: 10.1371/journal.pone.0236337
- European Commission. (2023, November 27). *Serbia: Overview.* https://eurydice.eacea.ec.europa.eu/national-education-systems/serbia/overview
- Fiorilli, C., Barni, D., Russo, C., Marchetti, V., Angelini, G., & Romano, L. (2022). Students' burnout at university: The role of gender and worker status. *International Journal of Environmental Research and Public Health*, *19*(18), 11341. DOI: 10.3390/ijerph191811341
- Hadar, L. L., Ergas, O., Alpert, B., & Ariav, T. (2020). Rethinking teacher education in a VUCA world: Student teachers' social-emotional competencies during the COVID-19 crisis. *European Journal of Teacher Education*, *43*(4), 573–586. DOI: 10.1080/02619768.2020.1807513
- Hao, Z., Jin, L., Huang, J., Lyu, R., & Cui, Q. (2021). Academic burnout and problematic smartphone use during the COVID-19 pandemic: The effects of anxiety and resilience. *Frontiers in Psychiatry*, *12*, 725740. DOI: 10.3389/fpsyt.2021.725740
- Husky, M. M., Kovess-Masfety, V., & Swendsen, J. D. (2020). Stress and anxiety among university students in France during COVID-19 mandatory confinement. *Comprehensive Psychiatry*, *102*, 152191. DOI: 10.1016/j.comppsych.2020.152191
- Jakovljević, D. (2004). *Nezaposleni u Hrvatskoj: Povezanost socijalne podrške i psihičkog zdravlja* [*The unemployed in Croatia: The connection between social support and mental health*] [unpublished undergraduate thesis]. University of Zagreb – Faculty of Philosophy. https://www.researchgate.net/publication/277220267_Nezaposleni_u_hrvatskoj_povezanost_socijalne_podrske_i_psihickog_zdravlja
- Karimi, Y., Bashirpur, M., Khabbaz, M., & Hedayati, A. A. (2014). Comparison between perfectionism and social support dimensions and academic burnout in students. *Procedia - Social and Behavioral Sciences*, *159*, 57–63. DOI: 10.1016/j.sbspro.2014.12.328
- Kim, B., Jee, S., Lee, J., An, S., & Lee, S. M. (2018). Relationships between social support and student burnout: A meta-analytic approach. *Stress and Health*, *34*(1), 127–134. DOI: 10.1002/smi.2771
- Kolundžić, A. (2013). *Sindrom sagorijevanja kod zagrebačkih studenata – validacija i primjena upitnika Maslach Burnout Inventory – Student Survey (MBISS)* [*Burnout syndrome among students in Zagreb - validation and application of the Maslach Burnout Inventory - Student Survey (MBISS)*] [published master's thesis]. Repository of University of Zagreb, Centre for Croatian Studies. https://repozitorij.hrstud.unizg.hr/en/islandora/object/hrstud%3A856
- Krnjaić, Z., Grujić, K., & Vuletić, T. (2023). How students report about their education experiences during the first year of COVID-19 pandemic? *Andragoške studije*, *1*, 125–149. DOI: 10.5937/AndStud2301125K
- Laukkonen, R., Biddell, H., & Gallagher, R. (2018). Preparing humanity for change and artificial intelligence: Learning to learn as a safeguard against volatility, uncertainty, complexity and ambiguity. *Future of Education and Skills 2030: Curriculum Analysis 45*(ANN1). OECD. https://www.oecd.org/education/2030/Preparing-humanity-for-change-and-artificial-intelligence.pdf
- Liu, S., Keeley, J. W., & Sui, Y. (2023). Multi-level analysis of factors influencing teacher job satisfaction in China: Evidence from the TALIS 2018. *Educational Studies*, *49*(2), 239–259. DOI: 10.1080/03055698.2020.1837615
- Lix, L. M., Keselman, J. C., & Keselman, H. J. (1996). Consequences of assumption violations revisited: A quantitative review of alternatives to the one-way analysis of variance 'F' test. *Review of Educational Research*, *66*(4), 579. DOI: 10.2307/1170654
- Madigan, D. J., & Curran, T. (2021). Does burnout affect academic achievement? A meta-analysis of over 100,000 students. *Educational Psychology Review*, *33*(2), 387–405. DOI: 10.1007/s10648-020-09533-1

- Madigan, D. J., & Kim, L. E. (2021). Does teacher burnout affect students? A systematic review of its association with academic achievement and student-reported outcomes. *International Journal of Educational Research*, *105*, 101714. DOI: 10.1016/j.ijer.2020.101714
- Maslach, C., & Jackson, S. E. (1985). The role of sex and family variables in burnout. *Sex Roles*, *12*(7–8), 837–851. DOI: 10.1007/BF00287876
- Maslach, C., Jackson, S. E., & Leiter, M. P. (2016). *Maslach burnout inventory manual (Fourth Edition)*.
- Merhi, R., Sánchez-Elvira Paniagua, Á., & Palací Descals, F. J. (2018). The role of psychological strengths, coping strategies and well-being in the prediction of academic engagement and burnout in first-year university students. *Acción Psicológica*, *15*(2), 51–68. DOI: 10.5944/ap.15.2.21831
- Mijatović, L., Stržak, N., & Antić, S. (2021). Doživljaj akademskog stresa kod studenata specijalne edukacije i rehabilitacije tokom pandemije Kovid- [Experience of academic stress among special education and rehabilitation students during the Covid-19 pandemic]. In N. Buha, & M. Kovačević (Ur.), *Nacionalni naučni skup Specijalna edukacija i rehabilitacija u uslovima pandemije Covid-19: Zbornik radova.* (pp. 103–110). Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju.
- Ministarstvo prosvete, nauke i tehnološkog razvoja. (n.d). *Studentske stipendije i krediti* [*Student scholarships and loans*]. https://prosveta.gov.rs/skolski-i-studentski-zivot/stipendije/studentske-stipendije-i-krediti/
- Raaper, R., Brown, C., & Llewellyn, A. (2022). Student support as social network: Exploring non-traditional student experiences of academic and wellbeing support during the Covid-19 pandemic. *Educational Review*, *74*(3), 402–421. DOI: 10.1080/00131911.2021.1965960
- Rahmatpour, P., Chehrzad, M., Ghanbari, A., & Sadat-Ebrahimi, S. R. (2019). Academic burnout as an educational complication and promotion barrier among undergraduate students: A cross-sectional study. *Journal of Education and Health Promotion, 8.* DOI: 10.4103%2Fjehp.jehp_165_19
- Robins, T. G., Roberts, R. M., & Sarris, A. (2018). The role of student burnout in predicting future burnout: Exploring the transition from university to the workplace. *Higher Education Research & Development*, *37*(1), 115–130. DOI: 10.1080/07294360.2017.1344827
- Russell, D. W., Altmaier, E., & Van Velzen, D. (1987). Job-related stress, social support, and burnout among classroom teachers. *Journal of Applied Psychology, 72*(2), 269–274. DOI: 10.1037/0021-9010.72.2.269
- Schaufeli, W. B., & Buunk, B. P. (2003). Burnout: An overview of 25 years of research and theorizing. In M. J. Schabracq, J. A. M. Winnubst, & C. L. Cooper (Eds.), *The Handbook of work and Health Psychology* (pp. 383–425). John Wiley & Sons.
- Schaufeli, W. B., Leiter, M. P., & Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International*, *14*(3), 204–220. DOI: 10.1108/13620430910966406
- Stojković, I., & Jelić, M. (2021). Pupils' attitudes toward distance education during the COVID-19 pandemic. *Journal of the Institute for Educational Research*, *53*(2), 239–259. DOI: 10.2298/ZIPI2102239S
- Sveinsdóttir, H., Flygenring, B. G., Svavarsdóttir, M. H., Thorsteinsson, H. S., Kristófersson, G. K., Bernharðsdóttir, J., & Svavarsdóttir, E. K. (2021). Predictors of university nursing students burnout at the time of the COVID-19 pandemic: A cross-sectional study. *Nurse Education Today*, *106*, 105070. DOI: 10.1016/j.nedt.2021.105070
- Velando-Soriano, A., Ortega-Campos, E., Gómez-Urquiza, J. L., Ramírez-Baena, L., De La Fuente, E. I., & Cañadas-De La Fuente, G. A. (2020). Impact of social support in preventing burnout syndrome in nurses: A systematic review. *Japan Journal of Nursing Science*, *17*(1), e12269. DOI: 0.1111/jjns.12269

- Wang, J., Bu, L., Li, Y., Song, J., & Li, N. (2021). The mediating effect of academic engagement between psychological capital and academic burnout among nursing students during the COVID-19 pandemic: A cross-sectional study. *Nurse Education Today*, *102*, 104938. DOI: 10.1016/j.nedt.2021.104938
- Wu, F., Ren, Z., Wang, Q., He, M., Xiong, W., Ma, G., Fan, X., Guo, X., Liu, H., & Zhang, X. (2021). The relationship between job stress and job burnout: The mediating effects of perceived social support and job satisfaction. *Psychology, Health & Medicine*, *26*(2), 204–211. DOI: 10.1080/13548506.2020.1778750
- Yang, H.-J. (2004). Factors affecting student burnout and academic achievement in multiple enrollment programs in Taiwan's technical–vocational colleges. *International Journal of Educational Development*, *24*(3), 283–301. DOI: 10.1016/j.ijedudev.2003.12.001
- Ye, Y., Huang, X., & Liu, Y. (2021). Social support and academic burnout among university students: A moderated mediation model. *Psychology Research and Behavior Management*, *Volume 14*, 335–344. DOI: 10.2147/PRBM.S300797
- Zakon o visokom obrazovanju *[Higher Education Act*] (2003). *Službeni glasnik Republike Srbije*, br. 76/2003
- Zhang, J. Y., Shu, T., Xiang, M., & Feng, Z. C. (2021). Learning burnout: Evaluating the role of social support in medical students. *Frontiers in Psychology*, *12*, 625506. DOI: 10.3389/fpsyg.2021.625506

Received 11.06.2024; accepted for publishing 29.11.2024.