Original Research Article

Investigating Cyberloafing and Academic Burnout in University Students During The COVID-19 Pandemic

ABSTRACT

Aims: The present study was conducted with university students since it aims to explore the correlation between cyberloafing behavior in educational institutions during the COVID-19 pandemic and academic burnout.

Study design: Correlational survey model

Place and Duration of Study: Faculty of Education, Faculty of Economics and Administrative Sciences, between September 2021 and June 2022.

Methodology: The population of the study, which employed correlational survey model, was a group of students attending a state-run Turkish University in İzmir. The sampling consisted of the students accessed by using conventional sampling method. The data for the purposes of the study were collected from 406 university students (249 female and 157 male) by administrating Personal Information Form, Cyberloafing Scale and Maslach Burnout Inventory-Student Scale. SPSS 28.0 statistical package software was employed to do Pearson Correlation Analysis and Multiple Regression Analysis.

Results: The results of the analyses revealed a positive and significant but weak correlation between “shopping”, “real-time updating” and “gaming/gambling” dimensions of cyberloafing and “exhaustion” and “desensitization” dimensions of academic burnout. In addition, multiple regression analysis showed that dimensions of academic burnout along with “gender”, “age”, “year of study”, “academic GPA”, “attendance” and “duration of daily internet use” variables accounted 10.4% of total cyberloafing scale score. Finally, the study revealed that only “competence” dimension, “age”, “academic GPA” and “duration of daily internet use” variables significantly predict cyberloafing behavior.

Conclusion: It was found that as the academic burnout of university students increased, cyberloafing behaviors also increased. In this direction, psychological counseling programs can be developed to reduce the academic burnout of students. In addition, more studies can be conducted with students in different age groups to reveal the relationships between these variables.

Keywords: COVID-19; burnout; academic burnout; cyberloafing; university students

1. INTRODUCTION

The COVID-19 pandemic has brought about inevitable changes in people's daily lives including considerably slackened increases in income levels, unsold goods due to serious problems in supply chains, cancelled cultural activities and implementation of compulsory online education due to pandemic conditions [1]. This pandemic has affected the lives of university students as well as other age groups. The studies showed that university students struggled to cope with stress and anxiety due to the uncertainties imposed by the pandemic conditions regarding their career and future [2]. In addition, the studies reported that the students at that age group suffered from negative emotions such as insomnia, loss of appetite, aggression and depression [3]. There are some studies listing the significant challenges of unprecedented implementation of online education due to the pandemic conditions [4]. The research also emphasized that COVID-19 has negatively affected students' academic achievement [5]; positively correlated with loneliness and triggered problematic internet use behaviors [6]. Similarly, one study showed that COVID-19 pandemic conditions led to more cases of digital game addiction and smart phones have been used while carrying out such activities [7]. It has also been reported that students' screen addiction continued due to online education and the use of internet for other purposes rather than course-related content increased considerably [8]. The changes triggered by COVID-19 pandemic in many fields of life have also been observed in virtual environments, which led to considerable amount of negative consequences [9].

Despite the undeniable benefits of smart phones, which allow students to access knowledge easily and affordably, they might lead to slacking behaviors as well. The term called cyberloafing was defined in the literature for the first time by Lim [10] as "the use of technological resources in organizations by employees for personal benefits that do not comply with the goals of the organization". The studies in the related literature showed that technology is commonly used in education and effective use of knowledge and communication technologies in universities has positive effects on university students [11]. However, it is emphasized that there is an increase in texting during lessons and use of computer for non-work-related content if information technologies are not used in a controlled way [12], which clearly implies that the internet might lead to negative consequences in educational institutions just like in other organizations such as cyberloafing behavior, which is defined as non-course-related internet use. Kalaycı [13], who suggested for the first time that cyberloafing might be observed in educational institutions in Türkiye, defined the terms as "students' using internet for wasting their time on non-course-related activities". The most common cyberloafing activities in educational institutions are reported as social media use, playing online games, downloading music and video, texting, accessing news websites and sending personal e-mails [14].

Such behaviors make it more challenging for students to focus their attention, reduce their motivation to study, increase their anxiety level and weaken their interest in lessons, which might result in being obsessed with non-course-related activities [15, 16]. Therefore, cyberloafing is considered to be an obstacle while integrating information technologies and education [17]. In educational environments, cyberloafing correlates with various variables such as academic motivation [18], academic performance level [19], nomophobia [20], perceived stress [21], productivity [22], fear of missing-out [23], academic flow [24]. In addition, there are some studies aiming to determine the reasons of these behaviors in educational institutions [15, 25, 26]. According to the results of studies, these reasons can be grouped as personal reasons, the reasons related to working process and external

reasons [15]. When the topic is examined in terms of university students, it has been reported that tasks and responsibilities assigned as part of educational activities or some processes regarding assessment and evaluation of learning processes such as exams etc often cause some negative emotions including boredom, exhaustion and fatigue, which have positive effects on cyberloafing behaviors.

It is obvious that such consequences can be associated with burnout.

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The term burnout was first defined by Freudenberger [27] as the exhaustion in one's strength and energy in case of a failure he experiences when he faces a challenging situation forcing his limits of endurance. The term was initially associated with business life; however, although students are not, in fact, considered employees in psychological terms, academic tasks of academic life can be evaluated as "work" since they are regularly assigned [28]. Therefore, it is suggested that academic burnout can be defined as challenging demands of academic life and students' failure to meet these expectations due to exhausted psychological resources [29, 30]. Academic burnout has often dealt with under three dimensions in the literature; namely, emotional exhaustion, desensitization and low sense of personal accomplishment [31]. The studies report more problems especially in emotional exhaustion and desensitization dimensions; more problems in emotional exhaustion dimension in the first year of study and more intense problems in desensitization and low sense of personal accomplishment dimension in the following years [32]. The studies also showed that educational institutions impose certain responsibilities on students along with some expectations, which might cause students to develop a negative attitude towards educational process since they feel exhausted while trying to fulfill these responsibilities and expectations. Moreover, students reluctantly participate in school activities due to the feeling of incompetence and wasted efforts [28, 33].

The related research highlights that academic burnout has various effects on university students; especially, noticeable decrease in academic achievement and widespread apathy in school-related activities [34, 35]. Similarly, Şenel et al. [36] suggested that low academic achievement might be associated with increased cyberloafing behaviors. Thus, it can be concluded that cyberloafing might correlate with academic burnout. The related literature shows that students have experienced serious problems in learning since educational activities started to be provided in online platforms due to the pandemic conditions. The studies revealed that the most common problem faced by students during distance education process was the lack of concentration since they often failed to focus their attention on course content and presentation [37]. Another study emphasized that online education increased students' tendency to direct their attention to other activities rather than course-related ones since they continued to be dependent on technological tools, which inevitably led to higher cases of cyberloafing behaviors [38]. However, the correlation between cyberloafing and academic burnout has been dealt with in few studies so far.

The aim of the present study is to explore the correlation between these two variables and allow authorities to take necessary precautions by determining to what extent academic burnout of university students and some demographic variables predict cyberloafing activities. Thus, this study is expected to provide invaluable contributions to the literature since it was conducted during the pandemic, when the risk of cyberloafing behaviors is considerably high.

2. MATERIAL AND METHODS

This section presents information about the research model, the population and sampling, the data collection instruments and the data analysis.

2.1 Research Design and Sample

The study employed relational survey model since it dealt with the correlation between cyberloafing behaviors of university students and academic burnout. Relational survey method allows researchers to determine changes in many variables and explore the correlations between these variables by doing various statistical analyses [39]. The dependent variable of the present study is cyberloafing and the independent variables are academic burnout, gender, age, year of study, academic GPA, attendance and duration of daily internet use.

The population of this study consists of university students studying in different undergraduate departments of a state-run university in İzmir. Since it is quite challenging to reach all the individuals in the population, it is necessary to work with a smaller group that reflects the characteristics of the population [39]. The sampling of the study was determined by employing convenient sampling method, which was preferred due to its practicality in accessing the participants, affordability, duration [39]. As a result, the study was conducted with 406 participants (249 female and 157 male).

Table 1 Demographic Information about the Participants

Variables		n	%
Gender	Female	249	61.3
	Male	157	38.7
	18-19 years old	68	16.7
Age	20-21 years old	118	29.1
	22-23 years old	177	43.6
	24 years old and above	43	10.6
Year of study	1st year	93	22.9
	2nd year	57	14.0
	3rd year	60	14.8
	4th year	196	48.3
Academic GPA	0-2.00	17	4.2
	2.01-2.50	104	25.6
	2.51-3.00	164	40.4
	3.01-3.50	92	22.7
	3.51-4.00	29	7.1
Attendance	Never	54	13.3
	Rarely	188	46.3
	Sometimes	116	28.6
	Often	37	9.1
	Always	11	2.7
Duration of Daily Internet Use	0-1 hour	13	3.2
	1-3 hours	93	22.9
	3-6 hours	193	47.5
	6 hours and over	107	26.4

Table 1 shows that %61.3 (n=249) of the participants are female, %43.6 within 22-23 age range, %48.3 fourth year students, %40.4 has a GPA between 2.51 and 3.00, %46.3 rarely attend lessons on the campus and finally %47.5 use the internet between 3-6 hours a day.

2.2 Measures

The data obtained within the scope of this study was collected by administrating *Personal Information Form*, *Cyberloafing Scale* and *Maslach Burnout Inventory-Student Scale*.

2.2.1 Personal Information Form: This form was developed by the researchers in order to obtain demographic information about the students who participated in this study and it consists of 9 questions.

2.2.2 Cyberloafing Scale: Developed by Akbulut et al. [25], this 5-point Likert scale uses the rating 1 – Never … and 5 – Always. The factor analysis of this 30-item scale revealed 5 dimensions that account for %70 of total variance: namely, "sharing", "shopping", "real-time updating", "accessing online content" and "gaming/gambling". As for the reliability coefficients of each dimension, the analyses showed that the reliability coefficient of the first dimension (items 1-9) is .93. The second dimension (items 10-16) has a reliability coefficient of .87 and the third dimension (items17-21) .93, the fourth dimension (items 22-26) .94 and the fifth dimension (items 27-30) .80. The reliability coefficient for the overall scale was calculated as .95 [25]. In the present study, internal consistency coefficient for the overall scale was found to be .92.

2.2.3 Maslach Burnout Inventory-Student Scale (MBI-SS): Developed by Schaufeli et al. [40], MBI-SS was adapted to Turkish by Çapri et al. [41] by conducting validity and reliability studies. This 5-point Likert scale uses "1-Never" and "5-Always" rating pattern. The validity of the scale was examined by doing confirmatory factor analysis (CFA), which revealed that it has a 3-factor structure under 13 items. In addition, the results showed that the scale has high construct validity. The distribution of items according to the dimensions and reliability coefficients are as follows: reliability coefficient of "exhaustion" dimension (items 1, 4, 6, 9 and 11) is 0.76; "desensitization" dimension (items 2, 5, 7 and 10) 0.82; and "competence" dimension (items 3, 8, 12 and 13) 0.61. In addition, test-retest reliability coefficients for the scale were calculated as 0.76, 0.74 and 0.73 respectively [41]. The internal consistency coefficients were found to be 0.86, 0.85 and 0.66 for the present study.

2.3 Procedure and Data Analysis

The data collection instruments were sent to the participants via online platforms for data collection purposes. It took approximately 10-15 minutes for the participants to fill out the scales.

The data collected within the scope of the study were analyzed by using SPSS 28.0 statistics software. Prior to the analyses, the data was examined to determine whether they display a normal distribution or not, and the results showed that parametric test assumptions were successfully met. The correlation between cyberloafing behaviors and academic burnout was examined by employing Pearson Correlation Analysis technique. In addition, predictive power of academic burnout dimensions over cyberloafing total score was evaluated by doing multiple regression analysis.

3. RESULTS

This section provides information about descriptive statistics regarding the study-specific scales and the results of correlation analysis and multiple regression analysis.

Table 2 Descriptive Statistics for Scale Scores

	Variables	N	Min.	Max.	x̄	ss	Skewness	Kurtosis
Cyberloafing	Sharing	406	9	45	27.67	7.70	-0.32	-0.25
	Shopping	406	7	35	19.12	6.30	0.10	-0.49
	Real-time Updating	406	5	25	11.96	6.08	0.45	-1.05
	Accessing Online Content	406	5	25	17.81	5.59	-0.76	-0.05
	Gaming/Gambling	406	4	20	7.49	3.91	1.41	1.44
Academic Burnout	Exhaustion	406	5	25	14.62	5.21	0.28	-0.86
	Desensitization	406	4	20	11.22	4.38	0.29	-0.80
	Competence	406	6	20	12.71	3.10	0.21	-0.32

As shown in Table 2, skewness-kurtosis values of the scores obtained by the participants from the scales were examined in order to determine whether these scores meet normality assumptions or not. The skewness-kurtosis values of the scores are within ±2 range, which is accepted as the indication of normal distribution [42]. Therefore, parametric tests were used while doing the analyses.

Table 3 Pearson Correlation Analysis Results for the Dimensions of the Scales

		Academic Burnout		
		Exhaustion	**Desensitization**	**Competence**
Cyberloafing	**Sharing**	0.09	0.09	0.04
	Shopping	0.14**	0.17**	-0.01
	Real-time Updating	0.13**	0.16**	-0.05
	Accessing Online Content	0.09	0.09	0.01
	Gaming / Gambling	0.12*	0.18**	-0.04

*Note: *P < .05; **P < .01*

According to Table 3, there are not significant correlations between “sharing” dimension of cyberloafing scale and “exhaustion”, “desensitization” and “competence” dimensions of Maslach Burnout Inventory-Student Scale (*P* > .05). However, the results revealed a significant positive but low correlation between “shopping” dimension of Cyberloafing Scale and “exhaustion” and “desensitization” dimension of Maslach Burnout Inventory-Student Scale (*P* < .01). Similarly, there are significant positive but low correlations between “real-time updating” dimension of cyberloafing scale and “exhaustion” and “desensitization” dimensions of Maslach Burnout Inventory-Student Scale (*P* < .01). The results did not reveal any significant correlations between “accessing online content” dimension of cyberloafing and “exhaustion”, “desensitization” and “competence” dimension of Maslach Burnout Inventory-Student Scale (*P* > .05). Finally, the results show a significant positive but low correlation between “gaming/gambling” dimension of Cyberloafing Scale and “exhaustion” and “desensitization” dimensions of Maslach Burnout Inventory-Student Scale (*P* < .05; *P* <

.01). However, no significant differences were found between all dimensions of Cyberloafing Scale and "competence" dimension of Maslach Burnout Inventory-Student Scale (*P* > .05).

Table 4 Results regarding the Predictive Role of Maslach Burnout Inventory-Student Scale Dimensions and Some Demographic Variables on Cyberloafing Scale Total Score

Variable	B	sh	β	*t*	F	R	R^2
Constant	79.671	13.571		5.871*			
Exhaustion	.216	.328	.051	.659			
Desensitization	.490	.392	.098	1.249			
Competence	.835	.384	.118	2.173*			
Gender	3.030	2.219	.067	1.365			
Age	-1.267	.573	-.125	-2.213*	5.130*	.323	.104
Year of Study	.523	1.020	.029	.513			
Academic GPA	-3.647	1.210	-.161	-3.015*			
Attendance	1.538	1.244	.065	1.236			
Duration of Daily Internet Use	4.758	1.382	.171	3.443*			

*Note: *P < .05*

According to Table 4, there is a positive linear correlation between "gender", "age", "year of study", "academic GPA" and "duration of daily internet use" variables of Maslach Burnout Inventory-Student Scale in university students and total score of cyberloafing scale (R = .323; R^2 = .104). "Competence" dimension and "academic GPA" and "duration of daily internet use" have a statistically significant effect on cyberloafing (*P* < .05). In contrast, "exhaustion" and "desensitization" dimensions as well as "gender", "year of study" and "attendance" variables do not have significant predictive power over cyberloafing (*P* > .05). In addition, it can be said that %10.4 of total variance regarding the overall score of cyberloafing can be explained by the dimensions of Maslach Burnout Inventory-Student Scale and "gender", "age", "year of study", "academic GPA", "attendance" and "duration of daily internet use" variables.

4. DISCUSSION

This study mainly dealt with the correlations between cyberloafing and academic burnout during the COVID-19 pandemic. The results of the study revealed significant positive correlations between "shopping", "real-time updating" and "gaming/gambling" dimensions of cyberloafing and "exhaustion" and "desensitization" dimensions of academic burnout. In other words, as exhaustion and desensitization levels of students increase, they tend to display cyberloafing behavior more and more. In addition, it might be concluded that increases in cyberloafing activities specified in the dimensions of cyberloafing scale increase academic burnout as well. The literature review did not reveal any studies examining the direct correlation between cyberloafing behaviors and academic burnout; however, there are

some studies that might imply indirect correlations among these variables, which might support the findings of the present study. For instance, there are studies conducted during the COVID-19 pandemic and highlighting that cyberloafing affects academic performances of university students [43, 44].

The results of the related research reported a positive and significant correlation between academic burnout and internet addiction [45], Facebook addiction [46] and smart phone addiction [47]. Similarly, Yazgan and Yıldırım [17] emphasized that internet addictions of university students is a highly significant predictor of cyberloafing activities during the lessons. In addition, social media addiction [48] and smart phone addiction [49] were found to positively correlate with cyberloafing. Thus, it might be concluded that university students' experiences of burnout due to intense course activities correlate with problematic internet use. Finally, it can be said that problematic use of information technologies might lead to more intense tendency to display cyberloafing behaviors [17].

The results of the present study revealed a low correlation between academic burnout and cyberloafing. It might be claimed that compulsory online education during the COVID-19 pandemic was an obstacle in controlling students in an effective way. Similarly, it might be said that educational environment created by students without leaving their homes was more comfortable than classrooms and it was more difficult for teachers to control their students. Similarly, it might be concluded that students were more lenient in terms of course requirements when compared to face-to-face educational environments and they completed their education without showing great efforts. It is clear that these conditions played an important role in reducing academic burnout of students and the correlations between certain variables were lower than expected.

Another finding of the present study is that dimensions academic burnout and gender, "age", "year of study", "academic GPA", "attendance" and "duration of daily internet use" significantly predicts cyberloafing total score. A more detailed analysis showed that only "competence" dimension has a significant effect on cyberloafing. However, exhaustion and desensitization dimensions were not significant predictors of cyberloafing. In addition, "age", "academic GPA" and "duration of daily internet use" demographic dimensions are significant predictors of cyberloafing behaviors while the predictive effects of gender, year of study and attendance were not significant. No studies in the related literature examined the predictive role of academic burnout over cyberloafing behaviors; however, there were some studies focusing on predictive roles of demographic variables. To illustrate, Şenel et al. [36], in their study, found that males, smart phone owners, those with lower GPAs, those spending more time on the internet and those using a large number of social media applications tend to display cyberloafing behaviors more. The fact that males use the internet more than females affects their academic achievement and they tend to display cyberloafing behaviors more instead of spending their time on academic activities, which clearly implies that above mentioned variables increase cyberloafing behaviors. Moreover, it can be claimed that male students are more likely to develop cyberloafing behaviors since they are more interested in visiting sports pages and playing online games than female ones. Also, there are some studies reporting a negative correlation between age and cyberloafing [50, 51]. Finally, some studies in the literature found that duration of daily internet use affects cyberloafing [52, 53].

Although the literature review did not reveal any studies focusing on the predictive role of academic burnout over cyberloafing behaviors, the present study found that "competence" dimension significantly predicts cyberloafing behavior. The research suggest that one can experience conflicts with those around him when we consider this dimension, which is

characterized with feeling of incompetence and failure [54]. Similarly, since this dimension is also associated with one's struggles to cope with incompetence and feeling of guilty, individuals can develop depressive symptoms after a while [55]. There are some studies suggesting that students who suffer from depression face various problems; especially a considerable increase in feeling of loneliness [56]. Erdoğdu and Gündoğmuş [57] found a positive significant correlation between academic burnout and loneliness. Ümmet and Ekşi [58] suggested that real life loneliness is related to loneliness in cyber space. In addition, one study found a correlation between loneliness in virtual environment and cyberloafing behaviors [59]. Thus, it might be concluded that if students are exposed to intense academic tasks, competence dimension of academic burnout might increase feeling of loneliness. In summary, loneliness is related to loneliness in cyber environment, which allows individuals to stay away from people around them and spend more time on cyberspace and display more cyberloafing behaviors.

5. CONCLUSION, LIMITATIONS AND SUGGESTIONS

In conclusion, the present study showed that cyberloafing correlates with academic burnout and "competence" dimension of academic burnout along with "age", "academic GPA" and "duration of daily internet use" variable significantly predict cyberloafing behaviors. The present study has some limitations within the framework of the obtained results. The first limitation is the use of self-report scales, which implies that social desirability dimension might affect the replies provided by the participants. Secondly, the data for the present study were collected from 406 students attending different undergraduate programs of a state-run university. The further studies might collect data from students studying at different universities and different education levels (associate degree/graduate degree) so that more generalizable results can be obtained.

According to the literature review, it is clear that cyberloafing is a rarely studied topic although it has various effects on educational processes. Therefore, the present study is believed to contribute to the related literature since it reveals the correlations between cyberloafing behaviors displayed by university students and certain academic variables. Rapidly advancing technological developments are quite likely to lead to more cases of cyberloafing behaviors; therefore it is important to examine the topic within the framework of different disciplines. This study found a positive correlation between academic burnout and cyberloafing behaviors. Thus, it might be useful to develop psychological counseling programs so that cyberloafing behaviors of university students can be minimized.

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CONSENT

Informed consent was obtained from all individual participants included in the study.

ETHICAL APPROVAL

All authors hereby declare that all experiments have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki. The study was approved by Dokuz Eylül University Social and Human Sciences Research and Publication Ethics Committee.

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