



Perceived Social Support as a Predictor of Teacher Candidates' Smartphone Cyberloafing

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ABSTRACT

This study investigated whether teacher candidates' perceived social support (PSS) predicts smartphone use during lectures. To achieve the aim of the study, a relational survey model was used. The study sample composed of students studying at the College of Education in Elazığ Province, Turkey, during the 2019-2020 academic semester. The correlation analysis was conducted to determine the relationships among the variables, and hierarchical linear regression analysis was used to determine the predictive effects of demographic characteristics (gender and class) and PSS on smartphone cyberloafing. The results of the study revealed a significant, negative, and low relationship between PSS and smartphone cyberloafing. Social support from family negatively predicted smartphone cyberloafing during lectures, while social support from significant others positively predicted it. Finally, the family and significant other subscales significantly predicted interactive, browsing, and entertainment cyberloafing. In contrast, the friends subscale predicted only interactive cyberloafing. The belief that a sense of trust in family and needed family support in times of need could decrease smartphone cyberloafing and lead teacher candidates to focus more on teaching. Educational institutions should develop policies that involve families at every stage of education, and decisions should be made with the support of experts, institutions, or organizations on problematic issues.

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Keywords:

Perceived social support, smartphone cyberloafing, teacher candidates, lecture.

1. Introduction

As a result of the transition to university life, significant changes occur in the students' social environment. Some students move to different cities, while others live in the same town, but they change their social environment in both cases. In other words, they diversify their social support resources. Social support, which plays an important role in improving social integration, is defined as feedback towards a behavior, a thought, or a share. Social support is also defined as any support provided by the immediate social environment to those especially in difficulties and anxiety (Eker & Arkar, 1995).

Shumaker and Brownell (1984) define social support as a resource exchange between at least two people who provide and receive support and mainly aim to increase the well-being of the receiver of support. Thus, there are different interactions and relationships between individuals in the process of social support (Zimet et al., 1988). While social support is accepted as realized helping behaviors, the belief that these behaviors may arise in distress is expressed as PSS (Özdemir, 2013). Perception levels regarding this support are related to individuals' trusting their support resources (family, spouse, friends, etc.) and believing that they will receive the necessary support when needed (Sarason & Sarason, 1982). In addition to the support that the individual gets by interacting. Yıldırım (1997) states that the individual's family, family environment, friends, opposite-

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sex friends, teachers, colleagues, neighbors, ideological, religious, or ethnic groups, and the society in which the individual lives constitute the social support resources of the individual. Hupcey (1998) further narrows these resources and states that the individual's family, spouse, children, and close friends constitute their social support resources. Zimet et al. (1988) limit social support resources to the individual's family, friends, and significant other. With the developments occurring within the dynamics of life, differences in individuals' social support resources and their access to these resources also happen.

Cohen and Wills (1985) also cite social support resources as respect support, information support, social friendship, and instrumental support. Supporting respect is information that relates to the acceptance and sense of dignity of the individual. This source also refers to self-esteem and emphasizes that the individual is valued and accepted despite any difficulties or personal flaws. This support is also called emotional support, meaningful support, self-esteem support, and close support. Information support helps to understand, identify, and cope with problem situations. This type of support is also referred to as advice, assessment support, or cognitive guidance. Social friendship support is to spend time with other individuals in leisure and entertainment times. This dimension is also called messy support and belonging. Finally, instrumental support is the provision of necessary services, financial assistance, and resources. Moreover, it is also called aid, material, and concrete support.

The internet provides comfortable access to information and manipulates social relationships, and it is a tool that makes social support always accessible by making individuals feel less alone and feel more comfortable (Leung, 2007). In particular, the internet provides individuals access to social support resources when they need it, and it may be instrumental support for them. For example, an individual who receives less social support than colleagues and superiors makes more cyberloafing in the workplace than an individual with a higher social support level (Reinecke, 2009). This may mean that the individual uses the internet as instrumental support when they cannot reach the support source. Leung and Lee (2005) found a positive relationship between participation in leisure activities on the internet and social support. The internet is an indispensable tool for people to engage in various activities such as socializing, entertainment, and information seeking, and smartphones play an essential role in providing internet access. Smartphones are technological tools that provide convenience in communication and many subjects such as education, awareness of the environment, health, entertainment, fast access to information, and interaction with others via social networks. Therefore, smartphones are communication tools related to individuals' perceptions of social support (Mei et al., 2018). All age groups use smartphones, but research has revealed that young people mostly use them. Students do not give up smartphones in classroom environments, mainly because they provide practical access to information. However, they have become busy both physically and mentally due to using their smartphones during the lesson (Dirik, 2016).

As an extension of both internet access and the widespread use of smartphones, students started to exhibit new behaviors such as communicating with their friends, watching movies, listening to music through their smartphones during the lecture. Cyberloafing during the lectures is defined as the students' excessive and irrelevant use of the internet through the smartphone during the lectures. This is the in-class cyberloafing behavior that many students engage in, sometimes knowingly and sometimes unknowingly. The main cyberloafing behaviors during lecture are interactive cyberloafing, entertainment cyberloafing, and browsing-related cyberloafing (Blau et al., 2006). If smartphones are used for educational purposes during the lecture, they provide students the information they want. In this case, these behaviors performed interactively or as browsing-related cyberloafing may give the students instrumental and informational support. However, cyberloafing during the lecture can lead to adverse psychological and social effects on students' learning processes (Aljomaa et al., 2016). Because entertainment and interactive cyberloafing can provide students with social support due to their social interaction, it may cause their distraction during the lecture (Ott et al., 2018; Ragan et al., 2014).

In the literature, it was observed that such behaviors as digital game addiction (Barut, 2019), smartphone addiction (Gökçeşlan et al., 2016; Gökçeşlan et al., 2018), nomophobia (Büyükçolpan, 2019), social media addiction (Bilgin & Taş, 2018). In addition problematic internet use (Martinez et al., 2011; Oktan, 2015), internet addiction (Esen & Gündoğdu, 2010; Mete, 2017), problematic smartphone use (Fu et al., 2020), and displaying problematic behaviors (Hardie & Tee, 2007) have relations with PSS. PSS and problematic smartphone use also showed a negative correlation in empirical studies (Gökçeşlan et al., 2018). Yıldırım (1997) also

suggested a positive relationship between PSS from family, friends, teachers and academic achievement. However, smartphone addiction can negatively affect social relationships and academic performance (Seo et al., 2016). Teenagers may overuse their smartphones, and this may cause social, familial, and academic problems (Gökçearslan et al., 2016).

As a result of technological advances and the overuse of smartphones, one of the issues that researchers have been working on extensively in recent times is the technological (say, smartphone and internet) addictions (Gökçearslan et al., 2018) and the effect of technology on student's social relations (Kalungu & Thinguri, 2017). In the study by Mete (2017), it was observed that PSS significantly predicted the internet addiction of university students. Tanrikulu's (2019) study showed that the education faculty students' PSS levels significantly predicted the levels of social self-efficacy. Çivitci's (2015) study revealed that social support has a regulatory function in the relationship between self-esteem and constant anger. In Konan and Çelik's (2019) study, teacher candidates' social support perceptions significantly predicted their interaction anxiety in a negative way. In Zorlu-Yam and Tüzel-İşeri's study (2019), the levels of PSS by teacher candidates significantly predicted their social competence levels.

A limited number of studies examine the relationship between perceptions of social support and smartphone cyberloafing (Konan & Çelik, 2019) and perceptions of social support and cyberloafing (Goekçearslan et al., 2018). Cyberloafing is one of the events that negatively affect the efficiency and productivity of learning and teaching activities in educational environments (Saritepeci, 2019). A negative relationship was found between in-lecture cyberloafing and academic performance. Moreover, many studies reveal the harmful effects of smartphone use during lectures (Rosen et al., 2011; Sana et al., 2013). Cyberloafing behavior in the class reduces students' active participation in learning activities (Heflin et al., 2017), consumes cognitive resources that can be used for classroom learning (Sana et al., 2013), and negatively affects students' lecture learning and academic achievement (Wu et al., 2018). The idea that determining the relationship between teacher candidates' cyberloafing behaviors during the lecture and their social support status would help understand student behavior and achievement inspired us to begin this study. In addition, the most crucial measure to be taken to prevent cyberloafing during the lecture is to inform and raise awareness of students. The most influential people who can do awareness-raising activities are teachers. Therefore, in this study, it is thought that working with teacher candidates who will touch the lives of a large part of society and be an effective source of social support when they are appointed to the profession will contribute more to the field. In addition, the most crucial measure to be taken to prevent cyberloafing during the lectures is to raise awareness of students. The most influential people who can do awareness-raising activities are teachers. For this reason, in this study, it would be more appropriate to work with teacher candidates who would touch the lives of a large part of the society and be a valuable source of social support when they were appointed to the profession and contribute more to the field.

In this context, it can be said that PSS can affect the level of smartphone cyberloafing that teacher candidates would make during the lecture. It is also pointed out that social support harms young's negative behavior (Jackson & Warren, 2000). Therefore, teacher candidates' determination of the level of PSS and their perception of the source from which this support comes can guide our understanding of their behavior. Given the developments in today's mobile internet technology, it is expected that this study will provide clues on how to prevent this cyberloafing by revealing whether social support is among the reasons for using smartphones during lectures. In addition, it is thought that this study can give important ideas about whether smartphone cyberloafing, which is considered to have negative consequences for students, can be prevented with PSS.

Additionally, research results show that the teacher candidates' gender (Arıkan & Özgür, 2019; Askew, 2012; Çok & Kutlu, 2018; Tanrıverdi & Karaca, 2018) and the grade they study in (Tanrıverdi & Karaca, 2018; Yılmaz, 2017) cause differentiation in cyberloafing behaviors. It shows the importance of controlling these variables in determining the relationship between teacher candidates' PSS and cyberloafing. Therefore, in the present study, the teacher candidates' gender and grade were also included in the analysis as control variables.

This study aimed to determine whether teacher candidates' PSS levels predict smartphone cyberloafing during the lecture. For this purpose, answers were sought to the following questions:

- Is there any relationship among research variables (PSS, smartphone cyberloafing, teacher candidates' gender, and grade)?

- Do teacher candidates' demographic characteristics predict smartphone cyberloafing during the lecture?
- Do teacher candidates' PSS levels predict smartphone cyberloafing during the lecture?

2. Methodology

2.1. Research Model

The relational survey model was used in this study. The relational survey model is used to determine the direction and degree of the relationship between two or more variables (Creswell, 2012). The relational survey model can determine relationships with statistical methods such as correlation and hierarchical linear regression. Therefore, in this study, the relationships between teacher candidates' demographic characteristics, social support, and smartphone cyberloafing levels in the research method were examined with this model.

2.2. Research Sample

The study population consisted of 1898 students studying at the education faculty in Elazig, located in the eastern part of Turkey, in the 2019-2020 academic year. Four hundred ninety-two students at 99% confidence level and 5% error level should be reached from the population. This study collected data from 497 students (99% confidence and 4.96% acceptable error level) selected from this population by the simple random sampling method. In simple random sampling, the researcher selects participants for the sample so that any individual has an equal probability of being selected from the population (Creswell, 2012).

This study sample determination process formed a random coded student numbers table with 100 rows and 19 columns. To use this table, firstly, unique numbers for all students in the population were assigned. For example, there were 67 students in the first year of primary school teaching. These students were coded from CT1-1 to CT1-67. Then, starting anywhere in the table, you matched the numbers on the list with the numbers in the table. You started at the top left of the table and went down the column. So it continued down the column until we had selected the number of students needed for the sample. 317 (63.8%) of the teacher candidates are women and 180 (36.2%) are men.

2.3. Data Collection Tools

The data was collected by the researchers with a data collection form. The Multidimensional Scale of PSS and Smartphone Cyberloafing Scale in Class were in this data collection form.

The Multidimensional Scale of PSS: The scale developed by Zimet et al. (1988) has three subscales with 12 items, each addressing a different support source: family, friends, and significant other. In the present study, the internal consistency coefficients were calculated as .85 for the whole scale, .85 for the family support subscale, .89 for the friends support subscale, and .92 for the significant other subscale.

Smartphone Cyberloafing Scale in Class (SPCSC): The six-point Likert scale was developed by Blau et al. (2006). The scale consists of three subscales with 16 items: cyberloafing related to browsing, interactive cyberloafing, and cyberloafing for entertainment. In the present study, the internal consistency coefficient of the whole scale was .92, and it was .88 for browsing-related cyberloafing, .86 for interactive cyberloafing, and .64 for entertainment-related cyberloafing.

2.4. Ethical and Data Collection

The ethical permission of the study was obtained from Firat University Ethics Committee with the decision numbered 2020/11. Then, permission to apply the questionnaire was obtained from the dean of education faculty to apply the questionnaire forms. After receiving the necessary permissions, all participants were informed about the research purpose, and they voluntarily filled out the questionnaire. It took about 15 minutes to complete the questionnaire.

2.5. Data Analysis

SPSS 22 program was used in the analysis of the data. It was observed that the kurtosis and skewness coefficients of the subscales ranged between -1.25 and .98. Kurtosis and skewness coefficients in the range of ± 1.5 mean that the data meet the univariate normality condition (Tabachnick & Fidell, 2013). Then, by calculating the Mahalanobis distance, it was determined whether the multivariate normal distribution was

satisfied or not. The Mahalanobis distance values and the chi-square values were compared (Can, 2017), and the dataset was found to satisfy the multivariate normal distribution ($R^2 = 0.986$; $y = 0.9825x$). On the other hand, Cook's distance was calculated and it was found that all values were below .05 and close to zero. These values also showed that multivariate normality was obtained (Seçer, 2015). Therefore, Pearson correlation analysis was conducted to determine the relationships among teacher candidates' demographic characteristics, PSS, and smartphone cyberloafing during the lecture. In correlations between variables, the Pearson correlation coefficient (r) is considered to be high between .70 and 1.00, moderate between .50 and .70, and low if less than .50 (Büyüköztürk, 2012).

The hierarchical linear regression analysis was used to determine whether teacher candidates' demographic characteristics and PSS positively affect smartphone cyberloafing levels. The assumptions that normal distribution of data, no high-level correlation between independent variables, and no correlation between error terms were checked before regression analysis. Finally, suppose the tolerance value is greater than .10, and the VIF value is less than 10 in the regression analysis. In this case, there is no multicollinearity problem between the variables (see Table 2, Table 3, Table 4, and Table 5), and if the value of Durbin-Watson (dw) is around 2, it means that there is no autocorrelation (Can, 2017). In the hierarchical regression analysis, it was seen that the lowest tolerance value of the variables was .784, the highest VIF value was 1.275, and there was no multicollinearity problem.

3. Results

The relationship among teacher candidates' gender, grade, PSS levels, and smartphone cyberloafing during the lecture was examined to answer the study's first research question. Correlation analysis results are given in Table 1.

Table 1. *The Relationship between Research Variables*

Scale\Subscale\ Variable	X	1	2	3	4	5	6	7	8	9	10
(1) Family	5.65	-									
(2) Friends	5.14	.43**	-								
(3) Significant other	4.26	.14**	.22**	-							
(4) Percieved social support	5.02	.65**	.72**	.75**	-						
(5) Browsing-related	2.53	-.23**	-.11*	.10*	-.08	-					
(6) Interactive	2.20	-.21**	-.16**	.06	-.11*	.64**	-				
(7) Entertainment	2.00	-.24**	-.12*	.11*	-.08	.59**	.64**	-			
(8) Smartphone cyberloafing	2.31	-.25**	-.15**	.10*	-.10*	.90**	.89**	.78**	-		
(9) Gender		-.18**	-.03	.01	-.07	.03	.15**	.30**	.14**	-	
(10) Grade		-.03	.03	.12**	.07	.15**	.09	.10*	.13**	.02	-

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

As seen in Table 1, there was a negative and low relationship between PSS and smartphone cyberloafing ($r = -.10$; $p < .05$). According to the subscales, there was a negative and low relationship between PSS and interactive cyberloafing ($r = -.11$; $p < .05$), while no significant relationship was found between hovering and recreational cyberloafing ($p > .05$). There were negative and low relationships between family support and smartphone cyberloafing ($r = -.25$; $p < .01$), browsing-related cyberloafing ($r = -.23$; $p < .01$), interactive cyberloafing ($r = -.21$; $p < .01$), and entertainment cyberloafing ($r = -.24$; $p < .01$). There were negative and low relationships between friend support and smartphone cyberloafing ($r = -.15$; $p < .01$), browsing-related cyberloafing ($r = -.11$; $p < .01$), interactive cyberloafing ($r = -.16$; $p < .01$), and entertainment cyberloafing ($r = -.12$; $p < .01$). There were positive and low correlations between the significant other and the browsing-related cyberloafing ($r = .10$; $p < .05$) and the entertainment cyberloafing ($r = .11$; $p < .05$), while there was no meaningful relationship between smartphone cyberloafing and interactive cyberloafing ($p > .05$).

There were negative and low relationships between gender and family support ($r = -.18$; $p < .01$), positive and low relationship between gender and interactive cyberloafing ($r = .15$; $p < .01$), entertainment cyberloafing ($r = .30$; $p < .01$), and smartphone cyberloafing ($r = .14$; $p < .01$). But there was no significant relationship between

gender and friends support, significant other, PSS, and browsing-related cyberloafing ($p > .05$). Although there were positive and low relationship between grade and significant other ($r = .12; p < .01$), browsing-related cyberloafing ($r = .15; p < .01$), entertainment cyberloafing ($r = .10; p < .01$), and smartphone cyberloafing ($r = .13; p < .01$), there was no significant relationship between grade and family support, friend support, PSS, and interactive cyberloafing ($p > .05$).

According to the analyzes, it was revealed that men received less family support, more interactive, entertainment, and smartphone cyberloafing in general than women. In addition, it was observed that as the grade increased, more significant other supports emerged that were more related to browsing, entertainment cyberloafing, and smartphone cyberloafing in general. The hierarchical linear regression analysis was performed to determine whether demographic characteristics and the PSS predicted the teacher candidates' cyberloafing during the lecture. The analysis results are presented in Table 2.

Table 2. Hierarchical Linear Regression Analysis Results related to Predicting Browsing-Related Cyberloafing

	Variable	B	se	β	t	p	Tailed r	Partial r
Step 1	Constant	2.163	.171	-	12.680	.000	-	-
	Gender	.071	.105	.03	.681	.496	.031	.030
	Grade	.148	.045	.15	3.279	.001	.146	.146
Step 2	Constant	3.331	.307	-	10.837	.000	-	-
	Gender	-.027	.103	-.01	-.261	.794	-.012	-.011
	Grade	.128	.044	.13	2.904	.004	.130	.125
	Family	-.194	.043	-.22	-4.536	.000	-.201	-.196
	Friends	-.038	.038	-.05	-1.105	.310	-.046	-.044
	Significant other	.068	.025	.12	2.758	.006	.124	.119
	R	R^2	ΔR^2	F	df1	df2	p	d_w
Step 1	.15 ^a	.02	.02	5.646	2	494	.004	1.736
Step 2	.29 ^b	.09	.07	11.318	3	491	.000	

^a: Gender, Grade; ^b: Gender, Grade, Family, Friends, Significant other; Dependent variable: Browsing-related cyberloafing

When Table 2 is examined, both models tested with hierarchical regression in two steps were significant as a whole. In the first step, demographic variables (gender and grade) and in the second step, PSS subscales (family, friend, and significant other) were included in the analysis. In the first step, the demographic variables included in the model together significantly ($p < .05$) predicted the browsing-related cyberloafing. When the significance of the regression coefficients of each variable was examined, it was seen that grade ($\beta = .15; p < .01$) variable significantly predicted browsing-related cyberloafing, but the predictive effect of the gender variable was not significant ($\beta = .03; p > .05$). Gender and grade variables together significantly explained about 2% ($\Delta R^2 = .02; p < .01$) of browsing-related cyberloafing.

In the second step of the analysis, the model variables obtained by including subscales of PSS (family, friend, and significant other) significantly predicted the browsing-related cyberloafing. When the regression coefficients of each variable in the model are examined, the predictive effects of grade ($\beta = .13; p < .01$), family support ($\beta = -.22; p < .01$), and significant other support ($\beta = .12; p < .01$) variables on browsing-related cyberloafing were significant, but the predictive effects of gender ($\beta = .01; p > .05$) and friends support ($\beta = -.05; p > .05$) variables were not. PSS subscales added to the model at this step significantly explain approximately 7% of the model ($\Delta R^2 = .07; p < .01$). All the independent variables of the research predicted 9% of browsing-related cyberloafing ($R^2 = .09$). According to the t-test results, grade, family support, and significant other support subscales were meaningful predictors for browsing-related cyberloafing. Still, gender friends support subscales were not a significant predictor.

The hierarchical linear regression analysis results related to predicting the teacher candidates' interactive cyberloafing by PSS and demographic characteristics were presented in Table 3.

Table 3. Hierarchical Linear Regression Analysis Results related to Predicting Interactive Cyberloafing

Variable	B	se	β	t	p	Tailed r	Partial r	
Step 1	Constant	1.580	.169	-	9.345	.000	-	-
	Gender	.342	.104	.15	3.299	.001	.147	.146
	Grade	.083	.045	.08	1.859	.064	.083	.082
Step 2	Constant	2.643	.307	-	8.615	.000	-	-
	Gender	.272	.103	.12	2.632	.009	.118	.114
	Grade	.070	.044	.07	1.585	.114	.071	.069
	Family	-.128	.043	-.15	-3.012	.003	-.135	-.131
	Friends	-.089	.037	-.12	-2.368	.018	-.106	-.103
	Significant other	.056	.025	.10	2.252	.025	.101	.098
R	R ²	ΔR^2	F	df1	df2	p	d_w	
Step 1	.17 ^a	.03	.03	7.273	2	494	.001	1.829
Step 2	.28 ^b	.08	.05	8.767	3	491	.000	

^a: Gender, Grade; ^b: Gender, Grade, Family, Friends, Significant other; Dependent variable: Interactive cyberloafing

As seen in Table 3, gender and grade variables included in the model in the first step together significantly predicted the interactive cyberloafing model. However, when the significance of the regression coefficients of each variable was examined, gender ($\beta = .15$; $p < .01$) variable significantly predicted interactive cyberloafing, but the predictive effect of the grade variable was not significant ($\beta = .08$; $p > .05$). Gender and grade variables together explain approximately 3% ($\Delta R^2 = .03$; $p < .01$) of interactive cyberloafing.

Model variables obtained by including subscales of PSS in the analysis in the second step together significantly predicted interactive cyberloafing. However, when looking at the regression coefficients for each variable, gender ($\beta = .12$; $p < .01$), family support ($\beta = -.15$; $p < .01$), friends support ($\beta = -.12$; $p < .05$) and significant other support ($\beta = .10$; $p < .05$) variables significantly predicted interactive cyberloafing, but the predictive effect of grade variable was not significant ($\beta = .07$; $p > .05$). PSS subscales added to the model at this step significantly explain approximately 5% of the model ($\Delta R^2 = .05$; $p < .01$). All the independent variables of the research predicted 8% of browsing-related cyberloafing ($R^2 = .08$). When the t-test results were examined, the gender and all three subscales was a meaningful predictor for entertainment cyberloafing.

The hierarchical linear regression analysis results related to predicting the teacher candidates' entertainment cyberloafing by PSS and demographic characteristics were presented in Table 4.

Table 4. Hierarchical Linear Regression Analysis Results related to Predicting Entertainment Cyberloafing

Variable	B	se	β	t	p	Tailed r	Partial r	
Step 1	Constant	.952	.153	-	6.221	.000	-	-
	Gender	.647	.094	.29	6.886	.000	.296	.294
	Grade	.093	.040	.10	2.316	.021	.104	.099
Step 2	Constant	1.863	.277	-	6.731	.000	-	-
	Gender	.569	.093	.26	6.117	.000	.266	.255
	Grade	.075	.040	.08	1.898	.058	.085	.079
	Family	-.148	.038	-.18	-3.850	.000	-.171	-.160
	Friends	-.045	.034	-.06	-1.333	.183	-.060	-.055
	Significant other	.069	.022	.13	3.102	.002	.139	.129
R	R ²	ΔR^2	F	df1	df2	p	d_w	
Step 1	.31 ^a	.10	.10	26.663	2	494	.000	1.767
Step 2	.39 ^b	.15	.05	10.007	3	491	.000	

^a: Gender, Grade; ^b: Gender, Grade, Family, Friends, Significant other; Dependent variable: Entertainment cyberloafing

As seen in Table 4, gender and grade variables included in the first step model significantly predicted the interactive cyberloafing model. When the significance of the regression coefficients of each variable was

examined, gender ($\beta = .29; p < .01$) and grade ($\beta = .10; p < .05$) variables were significant in predicting entertainment cyberloafing. Gender and grade variables together significantly explain approximately 10% ($\Delta R^2 = .10; p < .01$) of entertainment cyberloafing.

Model variables obtained by including subscales of PSS (family, friends, and significant other) in the analysis in the second step together significantly predicted entertainment cyberloafing. However, when looking at the regression coefficients for each variable, gender variable ($\beta = .26; p < .01$), family support ($\beta = -.18; p < .01$), and significant other support ($\beta = .13; p < .01$) variables significantly predicted entertainment cyberloafing, but the predictive effect of grade ($\beta = .08; p > .05$) and friends support ($\beta = -.06; p > .05$) was not significant. PSS subscales added to the model at this step significantly explain approximately 5% of the model ($\Delta R^2 = .05; p < .01$). All the independent variables of the research predicted 15% of entertainment cyberloafing ($R^2 = .15$). When the t-test results were examined, gender, family support, and significant other support subscales were meaningful predictors for entertainment cyberloafing, but grade and friends support subscales were not.

The hierarchical linear regression analysis results related to predicting the teacher candidates' smartphone cyberloafing during the lecture by PSS and demographic characteristics were shown in Table 5.

Table 5. Hierarchical Linear Regression Analysis Results related to Predicting Smartphone Cyberloafing during the lecture

	Variable	B	se	β	t	p	Tailed r	Partial r
Step 1	Constant	1.719	.146	-	11.769	.000	-	-
	Gender	.281	.090	.14	3.134	.002	.140	.138
	Grade	.113	.039	.13	2.936	.003	.131	.130
Step 2	Constant	2.800	.262	-	10.697	.000	-	-
	Gender	.197	.088	.10	2.234	.026	.100	.095
	Grade	.096	.037	.11	2.563	.011	.115	.109
	Family	-.161	.036	-.21	-4.423	.000	-.196	-.189
	Friends	-.058	.032	-.09	-1.822	.069	-.082	-.078
	Significant other	.064	.021	.13	3.018	.003	.135	.129
	R	R ²	ΔR^2	F	df1	df2	p	<i>d_w</i>
Step 1	.19 ^a	.04	.04	9.374	2	493	.000	1.800
Step 2	.33 ^b	.11	.07	13.088	3	490	.000	

^a: Gender, Grade; ^b: Gender, Grade, Family, Friends, Significant other; Dependent variable: Smartphone cyberloafing

As seen in Table 5, first step variables (gender and grade) together predicted the smartphone cyberloafing significantly. According to the significance of the regression coefficients of each variable, gender ($\beta = .14; p < .01$) and grade ($\beta = .13; p < .01$) variables were significant in predicting smartphone cyberloafing. Gender and grade variables together significantly explain approximately 4% ($\Delta R^2 = .04; p < .01$) of smartphone cyberloafing.

Model variables obtained by including subscales of PSS in the second step analysis significantly predicted the smartphone cyberloafing. According to the regression coefficients of each variable, gender ($\beta = .10; p < .05$), grade ($\beta = .11; p < .05$), family support ($\beta = -.21; p < .01$), and significant other support ($\beta = .13; p < .01$) variables significantly predicted the smartphone cyberloafing, but friends support ($\beta = -.09; p > .05$) was not significantly predicted. PSS subscales added to the model at the second step significantly explain approximately 7% of the model ($\Delta R^2 = .07; p < .01$). All the independent variables of the research predicted 11% of smartphone cyberloafing ($R^2 = .11$). When the t-test results were examined, gender, grade, family support, and significant other support subscales were meaningful predictors for smartphone cyberloafing, but the friends support subscale was not.

4. Discussion, Conclusion, and Recommendations

Cyberloafing during the lecture negatively affects the academic success of the students. The teachers have to prevent this type of loaf, and teachers should support students about this wrong behavior by giving practical suggestions and exhibiting correct behaviors. For this reason, this study, which was conducted to determine

how much PSS explains university students' use of smartphones during the lectures, aimed to examine teacher candidates' perspectives.

According to this study's first finding, there was a negative and low relationship between the teacher candidates' PSS and smartphone cyberloafing during the lecture. This finding showed that as teacher candidates' PSS increased, their tendency to make cyberloafing during the class decreased. Studies have also shown that there is a negative relationship between PSS and cyberloafing (Goekçearsan et al., 2018), social media addiction (Bilgin & Taş, 2018), smartphone addiction (Konan & Çelik, 2019), Internet addiction (Esen & Guendoğdu, 2010; Oktan, 2015; Shaw & Gant, 2002; Tanrıverdi, 2012), and digital gambling addiction (Barut, 2019; Yavuz, 2018; Yıldırım, 2019). This finding of the current study is supported by the studies' results in the literature.

According to the results obtained from the study, it was revealed that male teacher candidates received less family support and more interactive, entertainment, and smartphone cyberloafing than females. It can be said that men receive less family support due to the Turkish family structure. Because in the Turkish family structure, the man himself is the source of support (Yapıcı, 2010). The reason why male teacher candidates cyberloaf with smartphones can also be explained by the fact that men are more likely to be addicted to the Internet. This is because according to the meta-analysis study by Su et al. (2020), there are gender differences in certain behaviors/disorders of internet use worldwide, specifically, males show more behaviors related to internet use disorder and social media addiction than females do. Senel et al. (2019) also stated in his study that one of the important predictors of cyberloafing is gender and that men show more cyberloafing behavior, and as a result, it is supported by many studies.

Dursun et al (2018) also emphasized that school grade should be considered as a determinant of cyberloafing status in educational studies dealing with cyberloafing behavior. In this study, it was found that as grade level increased, more significant other support emerged, more browsing-related, entertainment-related cyberloafing, and smartphone cyberloafing in general. It can be interpreted as that they tend to establish relationships with private individuals rather than family and friends. In this study, the reason why university students' smartphone cyberloafing levels tend to increase as college students' grades increase may be because teacher candidates prefer to use the internet to browse their lessons or have fun rather than use the internet to interact with others. In addition, it can be said that upper-grade students are more accustomed to university and classroom environments, and they are more self-confident than a lower grade. Senel et al. (2019) while internet use is an obstacle in front of the learning process with cyberloafing behavior; On the other hand, he stated that he could be a significant supporter. In the study conducted by Akgün (2020), it was revealed that as the grade level increased, the level of cyberloafing in the lessons increased.

According to another result, the PSS is negatively and slightly related to interactive cyberloafing, but not to cyberloafing related to surfing and to cyberloafing related to entertainment. In Gökçearsan et al. (2018) study, it was found that social support has a significant effect on cyberloafing. Kim (2017) revealed that those with high loneliness tend to rely more on smartphone-mediated communication. This finding of the current study coincides with the definition of social support perception as a perception arising from the communication of individuals with each other. Positive interaction is an essential factor in feeling social support. Interactive cyberloafing during lecture, however, is significantly but negatively related to PSS compared to other types of cyberloafing. Students' need to interact with others decreases as their PSS increases. This finding shows that the lecturers' interest or support to the teacher candidates is important for preventing smartphone cyberloafing during the lecture.

After adolescence, the effects of their friends increase in the lives of young people. Adolescents and teens prefer to share their problems with their friends rather than their families, but parents still impact their children. However, friends' influence starts to increase more than families' (Gunuc & Dogan, 2013; Muus, 1980; Rosen, 1965). This study supports these claims. The results showed a negative and low relationship between internet-related cyberloafing, interactive cyberloafing, and entertainment cyberloafing and support from family and friends. According to this finding, it can be said that as the social support that teacher candidates receive from their families or friends increases, their tendency to make smartphone cyberloafing decreases in class or vice versa. It can be said that students, whom their families and friends support, avoid displaying smartphone cyberloafing behaviors that will reduce their motivation and prevent them from understanding

the subjects. This situation can be interpreted as the family's support to teacher candidates can prevent their behavior unrelated to the lecture subject. Gunuc and Doğan (2013) found that adolescents spending time with their mothers have a higher level of PSS and a lower level of internet addiction. Researchers also stated that many activities adolescents carry out with their mothers increase their PSS levels. Dokmen (1994) specified that sharing problems in adolescence and communication within the family in this period is believed to positively influence adolescents' psychology. In the study of Pawlowska et al. (2018), it was observed that digital game addiction was higher among adolescents with communication disorders in the family. Besides, Kwon et al. (2011) also suggested that family relationships are more important in computer game addiction than friend relationships. Hupcey (2000) stated that individuals felt bad before talking to their families, felt happy, and encouraged after talking to their families or receiving support. In Esen and Guendoğdu's (2010) study, adolescents' Internet addiction decreased with increasing support from family and teachers. In the study by Yıldırım (2019), a negative relationship was found between the level of online gaming addiction and perceived social support from family, friends, and teachers. The results of the studies explain the findings of the current study.

It was found that there was a positive and low relationship between significant other support and both entertainment-related cyberloafing and browsing-related cyberloafing. However, there was no meaningful relationship between interactive cyberloafing. Results show that teacher candidates who feel supported by their partner are more likely to engage in cyberloafing while surfing and conversing. In Büyükçolpan's study (2019), there was a positive relationship between nomophobia and significant other support. When it comes down to the faculty member, it can be concluded that pre-service teachers tend to be more engaged in scanning data when they need to learn during class or when they feel that teachers provide the necessary support. When teacher candidates are distracted, bored of the lesson, or do not feel the faculty members' support, they mostly do entertainment cyberloafing during the lecture. However, if the significant other is flirt, the teacher candidate wants to communicate with the flirt and waits for her \his support, and she \he can push to talk with her \him during the lesson. Thus, it may cause more cyberloafing behaviors during the lectures. Whoever is evaluated as a significant other can also change the effect of PSS on cyberloafing.

According to another result, the subscales of the PSS together significantly predicted both cyberloafing and the three subscales of cyberloafing. In Mete's (2017) study, the PSS variable significantly predicted university students' internet addiction. In Konan and Çelik's (2018) study, the teacher candidates' social support perceptions predicted their smartphone addiction negatively meaningfully. Gökçearslan et al. (2018) stated that social support has a small but significant impact on cyberloafing. This finding shows that one of the variables explaining smartphone cyberloafing during the lectures is social support.

While the family and significant others subscales of the PSS significantly predicted interactive, browsing-related, and entertainment-related cyberloafing, the friends subscale significantly predicted only interactive cyberloafing. Besides, one of the results is that family and significant others are significant predictors of cyberloafing during the lecture, but friends do not have a significant predictive effect. According to the findings obtained, the most important effect for reducing the cyberloafing of teacher candidates is the support provided by their families. While the level of cyberloafing during the lecture decreases with the support of family and friends, it can increase with the support of significant others. Besides, interactive cyberloafing significantly reduces the perception of support from friends. This may be because the teacher candidates are in the same environment as most of their friends, and their friends provide the necessary support during the lecture.

Esen and Gündoğdu (2010) suggested that when students perceive their families' support as more important than others, they can protect themselves more easily from the damage caused by digitalization. Teacher candidates' belief that they will get support from their families when they need it may also lead to a significant decrease in undesirable behaviors such as smartphone surfing during lectures. Drouin and Landgraff (2012) stated that today, youngs continue their romantic relationships through messaging and can meet their needs of interest and love with the texts and pictures they send to each other. Büyükçolpan (2019) stated that dating relationships can affect university students' smartphone use and that smartphones are used to meet the daily communication needs of those distant from each other. This finding showed that teacher candidates use their smartphones to reach different supports for different purposes during the lecture.

As a result, PSS is also stated as satisfaction from the social relationship (Kaya et al., 2015). As understood from this definition, it can be said that PSS is one of the important factors shaping the individual's behaviour. Teacher candidates' perception of faculty members as a source of social support and establishing strong social relationships can positively affect smartphone cyberloafing during the classroom environment. Haşimoğlu and Aslandoğan (2018) found that students who engage in cyberloafing in their classes are supported by teachers, and that the self-esteem of students who do not feel the support of teachers and are exposed to violence could be damaged. According to Dirik (2016), virtual media addictions (such as smartphones and social media) of students whose self-confidence decreases increases, reflected during the lecture. Martinez et al. (2011) stated that with the decrease in teacher support, students' problematic behaviors increased, and in Altunbaş's (2002) study, the support perceived by teachers motivated and encouraged students. Gökçearsan et al. (2018) stated that poorly planned classes and problems related to campus life might also cause cyberloafing.

As a result of this study, family and friend support have negative relationships with cyberloafing during the lectures while significant other has a positive relationship. According to another result, social support, perceived by the family, significantly predicts the smartphone cyberloafing in the lecture and has a preventive effect. On the contrary, the individuals who perceive social support from significant others have an increased tendency to make cyberloafing in the classes. Perceived social support from friends also significantly predicts interactive cyberloafing. Parents' trust in teacher candidates and the feeling that they are helping them when they are stressed may lead them to focus more on lectures. Thus, individuals who limit their smartphone cyberloafing behavior can be expected to use their smartphones for educational purposes. This study showed that the social support that teacher candidates perceived from their families could reduce their cyberloafing during the lecture. The communication established in the family positively affects the psychology and development of the individual, and the social support from the families may reduce many destructive behaviors of the students, including cyberloafing during the lecture. That's why it's important to be aware of family support to prevent cyberloafing on smartphones in the class. In this respect, it is undeniable that the time spent with parents and family is vital in preventing smartphone cyberloafing, as with many addictions. In this context, families must engage in various activities with teacher candidates. With the transition to university, the influence of the family on the individual begins to be replaced by friends. However, the influence of families never completely disappears.

For this reason, families should guide their children to use smartphones even when they are away from them. In this case, prospective teachers will use their smartphones more healthily and accurately. They will be able to make practical suggestions about using many technological tools, including smartphones, to the students they will train in their professional lives.

Since those who continue their education in provinces far from their families are far from family control, it is possible that these teacher candidates will be adversely affected by some people and use smartphones in lectures. In this case, universities and national education directorates have various duties regarding teacher candidates' effective and correct use of smartphones. For this, universities and national education directorates should organize seminars or informative meetings on how important their social support is to students. Educational institutions should develop policies that involve families at every stage of education, and decisions should be taken by providing support from experts, institutions, or organizations on problematic issues. Also, various activities should be organized to provide teacher candidates with competencies related to practical use and prevention of misuse of technologies such as smartphones and the internet.

In the study, data were collected using scales and it was found that the level of cyberloafing during lecture decreased with the support of family and friends. At the same time, it increased with the support of a significant other. The significant other in the scale items could also be the fiancé, flirt, neighbor, doctor, or teacher of the teacher candidates. In this context, it is important for the interpretation of the study results to know which person the teachers are referring to in the concept of significant other. Therefore, in order to increase the validity of this study result, qualitative studies can be conducted in which the opinion of teacher candidates is obtained and mixed studies in which qualitative and quantitative data are collected together. The study was conducted only with students from a university of education at a particular university. In order to increase the generalizability of the study results, the opinions of students at other universities should be obtained.

5. References

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