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The relationship between social media addiction and family climate of the pharmacy faculty students in the shade of the COVID-19 pandemic

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Abstract

The aim of this study is to investigate the relationship between social media addiction and family climate in the shade of the COVID-19 pandemic. In addition, social media addiction was studied according to demographical features as the sub-goals of the study. The research group comprised 364 university students of the pharmacy faculty. Data were collected with the demographical information form, social media addiction scale and family climate scale. The results showed that there were negative correlations found between social media addiction and cognitive cohesion sub-dimension of family climate. But only cognitive cohesion predicted social media addiction significantly. Also, the findings indicated that the using ratios of social media accounts during the pandemic period were significantly increased. As a result of the study, the family relationships of the students were also examined within the scope of the pandemic period and their relationship with social media addiction was emphasised.

Keywords: Pandemic, COVID-19, family climate, social media addiction;

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1. Introduction

Pandemics that cause millions of people to die and affect the society negatively have been seen many times throughout history. Nowadays, the world is struggling with a pandemic called COVID-19, which started in China and spread around the whole world. However, we continue to live in restricted living spaces during this social isolation period. And as a part of new normal, our homes have become the new working and education areas (Oktay, 2020). It is an inevitable fact that people spend a lot of time with social media at home during the pandemic period. Social media is a limitless source of entertainment, information and connection. It is helpful for maintaining communication with friends and family to reduce isolation and boredom, which have been associated with anxiety and long-term distress (Brooks et al., 2020).

In the current COVID-19 pandemic, social media has the potential, if responsibly and appropriately used, to provide rapid and effective information. But, on the other hand, in many studies, it has been indicated that during the pandemic period, the time spent on social media than normal times has doubled. This situation poses a risk for social media addiction in the future.

The pandemic is ongoing and so the social and economic impacts seem to take a longer time. Social media can play positive role during the COVID-19 pandemic by promoting effective strategies for helping individuals in dealing with social and physical distancing (Hussain, 2020). Social media is also important in terms of providing safe communication between family members and friends by maintaining social distance. Nowadays, interpersonal relationship in a family is more important than ever. Although people continue their social relationships through the Internet and social media, it is obvious that it cannot be as healthy and high quality as social relationships established face to face (Akat & Karatas, 2020).

Studies focusing on the relationship between family and health have repeatedly confirmed that family structures and health are linked (Herke, Knöchelmann, & Richter, 2020). Regarding the statistics about the impact of the pandemic on family well-being, more than one-third of families have reported feeling either very or extremely anxious about family stress resulting from the COVID-19-related confinement (Statistics Canada, 2020). Pursuing communication is also important in terms of protecting human mental health, especially during the period of social isolation.

The family climate is based on family relationships, which also influence the mental and physical health of family members (Bookwala & Jacobs, 2004). It includes several factors such as the quality of relationships among family members and social interactions within the family, and intergenerational transmission of family values and skills (van Steijn, Oerlemans, van Aken, Buitelaar, & Rommelse, 2015). The family climate is fundamental to the family functioning and the quality of this function. It significantly affects the functionality of the family. A harmonious family climate shapes the family positively, both behaviourally and socially. In a harmonious family climate, family members are more concerned with each other and more sensitive to each other's needs. It has an important effect on shaping the attitudes and behaviours of individuals in positive or negative situations they encounter in life and in their social relationships (Kaplan, 2019). During the COVID-19 pandemic that has been going on for more than a year, the period of staying at home has also affected the family relationships.

During this period, the Internet had become an important tool for people to communicate with the outside world. In particular, the use of social media has increased significantly during this period. Thus, the main purpose of this study is to investigate the relationship between social media addiction and family climate in the shade of the COVID-19 pandemic. In addition, social media addiction was studied according to demographical features as the sub-goals of the study. Based on the main purpose, this study poses the following main hypothesis:

H1: There is a correlation between social media addiction and family climate during the COVID-19 pandemic.

In addition, this study also examined the following problem statements, depending on this main hypothesis:

- Do the factors of family climate predict social media addiction?
- Is there a difference between social media addiction levels of university students according to gender?
- Is there a difference between social media addiction levels of university students according to their study programme?
- Is there a difference between social media addiction levels of university students according to living with family or away from family?
- Is there a difference between social media addiction levels of university students according to marital status of the family?
- Is there a difference between social media addiction levels of university students according to sibling status?
- Is there a difference between social media addiction levels of university students according to their marital status?
- Is there a difference between social media addiction levels of university students according to their occupational status?
- Is there a difference between social media addiction levels of university students according to their parents living in or out of Istanbul?

2. Methodology

2.1. Sample

The research group consists of 364 students who were studying in the Faculty of Pharmacy, which included 300 females and 64 males in the age range of 18–24 years (mean = 20.80; SD = 1.360). The descriptive statistics about the participants are given at Table 1.

Table 1. Descriptive statistics of the participants

Demographic variables		*n*	%
Study programme	Domestic	302	83

	International	62	17
Education level	1	102	28
	2	108	29.7
	3	141	38.7
	4	13	3.6
Living with	Family	185	50.8
	Away from family	179	49.2
Living in	Istanbul	164	45.1
	Other city	200	54.9
Sibling status	Single / one sibling	131	36
	More than one sibling	233	64
Marital status of the parents	Married	321	88.2
	Divorced/widowed	43	11.8
Occupational status	Working	50	13.7
	Non-working	314	86.3
Marital status	Single	307	84.3
	Romantic relationship/married	57	15.7
Level of income	Low	52	14.3
	Medium	288	79.1
	High	24	6.6
Total		364	100

2.2. Data collection tools

The demographic information form (DIF), social media addiction scale (SMAS) and family climate scale (FCS) were used for collecting data from the participants.

2.2.1. Demographic information form (DIF)

The DIF was developed by the researchers and it was used in order to get information about gender, age, education level and other detailed information about the participants.

2.2.2. Social media addiction scale-Adult Form (SMAS-AF)

SMAS consists of 20 items that can be gathered under 2 subscales (virtual tolerance and virtual communication) in which self-evaluation of participants is intended. It is a 5-point Likert scale. The scale was developed by Sahin and Yagci (2017). The scale was evaluated by an overall score. The Cronbach alpha internal consistency coefficient of the whole scale is 0.94. For the subscales, the Cronbach alpha internal consistency coefficient for the virtual tolerance is 0.92 and virtual communication is 0.91. For this study, the Cronbach alpha internal consistency coefficient of the whole scale is 0.89. For the subscales, it is 0.82 for the virtual tolerance and 0.90 for the virtual communication.

2.2.3. Family climate scale (FCS)

The FCS was developed by Björnberg and Nicholson (2007) and it was translated into Turkish by Gonul, Isik-Bas, and Sahin-Acar (2018). It is a 5-point Likert scale consisting of 34 items and 3 subscales (relatedness in family, intergenerational authority and cognitive cohesion). The Cronbach alpha internal consistency coefficients of the subscales are as follows: Relatedness in family is 0.95, intergenerational authority is 0.87 and cognitive cohesion is 0.87. For this study, the Cronbach alpha internal consistency coefficient is 0.79, 0.80 and 0.82, respectively.

3. Analysis and findings

The analysis of data was carried out using SPSS version 23.0 packaged software. Pearson's correlation, independent samples *t*-test, one way analysis of variances (ANOVA) and simple linear regression were used in the analysis of data. For all these analyses, the results for $p < 0.05$ were deemed as statistically significant.

Table 2 shows the means and standard deviations of factors of social media addiction and family climate.

Table 2. Descriptive statistics of dependent and independent variables (n = 364)

	Minutes	Maximum	x	ss
Social media addiction				
Virtual tolerance	11	55	32.3	7.702
Virtual communication	9	45	23.15	6.188
Social media addiction total	21	100	55.45	12.548
Family climate	32	105	83.09	13.87

Relatedness in family				
Intergenerational authority	8	34	21.07	4.7
Cognitive cohesion	6	30	19.63	4.546

The correlation between social media addiction and its factors and factors of family climate was analysed using Pearson's correlation. There were significant negative correlations found between virtual tolerance and cognitive cohesion ($r = -0.171$, $p < 0.01$), social media addiction and cognitive cohesion ($r = -0.155$, $p < 0.01$) (Table 3).

Table 3. Pearson's correlation analysis between social media addiction and family climate

Variables	1	2	3	4	5	6
Social media addiction						
1. Virtual tolerance	1					
2. Virtual communication	0.628**	1				
3. Social media addiction total	0.923**	0.878**	1			
Family climate						
4. Relatedness in family	−0.077	−0.083	−0.088	1		
5. Intergenerational authority	0.082	0.046	0.073	−0.098	1	
6. Cognitive cohesion	−0.171**	−0.103	−0.155**	0.619**	−0.022	1

** $p < 0.01$; * $p < 0.05$.

According to the results of the simple linear regression analysis summarised in Table 4, only one factor of family climate, cognitive cohesion ($\beta = -0.16$, $p < 0.005$), predicted social media addiction significantly, but its predictive role is very low.

Table 4. The simple linear regression analysis of the predictive role of cognitive cohesion on social media addiction

Model	*B*	SE_B	*β*	*t*	*p*
Constant	63.862	2.887		22.117	0.000
Cognitive cohesion	−0.429	0.143	−0.16	−2.992	0.003

Dependent variable: Social media addiction. R^2 = 0.024, adjusted R^2 = 0.021 ($p < 0.005$).

There was no significant difference between social media addiction levels of university students according to gender ($t(362) = 1.27$; $p > 0.05$), study programme ($t(362) = 0.19$; $p > 0.05$), living with family or away from family ($t(362) = -1.57$; $p > 0.05$), marital status of the family ($t(362) = 1.04$; $p > 0.05$), sibling status ($t(362) = 1.11$; $p > 0.05$), marital status of the participants ($t(362) = -0.64$; $p > 0.05$) and occupational status ($t(362) = -0.54$; $p > 0.05$).

There was a significant difference only between social media addiction of university students whose parents were living in Istanbul and whose parents were living out of Istanbul ($t(362) = -1.99$; $p < 0.05$). The results showed that social media addiction of university students whose parents were living out of Istanbul ($\bar{x}$ = 56.63) was higher than university students whose parents were living in Istanbul ($\bar{x}$ = 54.01) (Table 5).

Table 5. Independent sample *t*-test analysis of social media addiction according to living in or out of Istanbul

	Parents living	*N*	$\bar{x}$	*ss*	$Sh_{\bar{x}}$	*t* test		
						t	*Sd*	*p*
Social media addiction	In Istanbul	164	54.01	12.77	.997	−1.991	362	.047
	Out of Istanbul	200	56.63	12.27	.868			

$p < 0.05$.

Finally, one-way ANOVA analysis was carried out in order to consider the variance analysis between age ($F_{(6,357)} = 0.97$, $p > 0.05$), level of education ($F_{(360,3)} = 0.010$, $p > 0.05$), level of income ($F_{(361,2)} = 0.95$, $p > 0.05$) and level of social media addiction, but statistically significant differences could not be found.

The participants of the study were asked about how they spend their time at home during the pandemic. The findings indicated that the top three activities at home were studying either course or homework (25.3%); watching television, movies and series (17.1%) and reading book (15.2%) (Table 6).

Table 6. Frequencies about spending time at home during the pandemic

How do you spend your time at home during the pandemic?	*n*	%
Studying course, homework	92	25.3
Watching television, movies and series	62	17.1
Reading book	55	15.2
Social media	39	10.7
Hobbies, music, art	24	6.6
Cooking	17	4.7
Sleeping and taking a rest	17	4.7
Housework	15	4.1
With family	14	3.8
Sport	11	3
Nothing	8	2.2
Learning foreign language	3	0.8
Worship	3	0.8
With friends	2	0.5
Garden works	2	0.5

The participants of the study were asked about frequently used social media accounts at normal times. The findings indicated that the top three social media accounts were Instagram (%61), WhatsApp (%50) and Twitter (%12.9) (Table 7).

Table 7. Frequencies about frequently used social media accounts at normal times

Frequently used social media accounts	*n*	%
Instagram	222	61
WhatsApp	50	13.7
Twitter	47	12.9
YouTube	24	6.6
None	15	4.1
Facebook	5	1.4
Snapchat	1	0.3

The participants of the study were asked about their sharing on social media at normal times. The findings indicated that the top three sharings were photographs (28%), story (9.1%) and re-tweets (6.6%). 27.2% of the users did not share anything (Table 8).

Table 8. Frequencies about sharings on social media at normal times

Sharings on social media at normal times	*n*	%
Photographs	102	28
Nothing	99	27.2
Story	33	9.1
Re-tweets	24	6.6
Selfie	24	6.6
Nature photographs	23	6.3
Current events, news	12	3.3
Ideas	9	2.5
Contents about lectures	7	1.9
Music, art	6	1.6
Places I visited	5	1.4
Religious contents	4	1.1
Things related to my hobbies	4	1.1
Posts about environmental awareness	3	0.8
Books, films	3	0.8
Political contents	2	0.5
Video	2	0.5

78.8% of the using ratios about social media accounts during the pandemic were increased and 21.2% were decreased (Table 9).

Table 9. Frequencies about using social media accounts during the pandemic

Using ratios about social media accounts during the pandemic	*n*	%
Increased	287	78.8
Decreased	77	21.2
Total	364	100

The participants of the study were asked about their sharings on social media during the pandemic. The findings indicated that top three sharings were personal photographs (14.8%), re-tweets (8.5%) and info about COVID-19 (8%). 45.3% of the users did not share anything during the pandemic (Table 10).

Table 10. Frequencies about sharings on social media during the pandemic

Sharings on social media during the pandemic	*n*	%
Nothing	165	45.3
Personal photographs	54	14.8
Re-tweets	31	8.5
Info about COVID-19	29	8
Personal ideas	14	3.8
Nature photographs	14	3.8
Story	12	3.3
Music	11	3
Handwork activities	7	1.9
Gastronomic contents	7	1.9
Video	7	1.9
Religious contents	6	1.6
Books	5	1.4
Humour	2	0.5

The participants of the study were asked about their family relationship during the pandemic. 42% of the sample group stated that nothing changed, 19.2% of the sample group stated that their relationship was affected positively and 14.3% stated that their relationship was affected negatively. 4.7% of the participants said that they got to know each other better, they became closer and their family bonds became stronger. 4.7% stated that the communication level with their family increased and they conversed more during this period. 4.4% of the sample group said that they got bored. 3% of the participants were away from their family during this period. 2.5% stated that arguments between family members increased, there were no private areas at home and there was uneasiness at home. 2.2% were affected both positively and negatively. 1.9% said that the tolerance between family members had decreased and there were bursts of rage. Only 1.1% stated that fights with siblings had increased (Table 11).

Table 11. Frequencies about family relationship during the pandemic

	n	%

Family relationship during the pandemic		
Nothing changed	153	42
Affected positively	70	19.2
Affected negatively	52	14.3
We got to know each other better, we became closer, family bonds became stronger	17	4.7
Communication with my family increased, we had more conversation	17	4.7
Get bored	16	4.4
I'm away from my family	11	3
Arguments between family members increased, there were no private areas at home, there was uneasiness at home	9	2.5
Affected both positively and negatively	8	2.2
Tolerance decreased, there were bursts of rage	7	1.9
Fights with my sibling has increased	4	1.1

4. Results and discussion

Current studies that have focused on the COVID-19 pandemic have indicated that intolerance of uncertainty about the course of the situation and psychological health are related to each other (Alizadeh Fard, & Alipour, 2020; Satici, Saricalli, Satici, & Griffiths, 2020). In the process of social isolation, people began to use the Internet for both obtaining information about the pandemic and continuing their business and social lives on social media. This caused people to spend a longer time on the Internet and thus also paves the way for an addiction process, especially in terms of social media, which is used extensively. In crises such as the COVID-19 pandemic, societies use technology much more actively to reduce stress and anxiety about the period. While technology enables people to work from home or to continue their education from home, it has been the main important tool of socialising during this process. But, on the other hand, while technology provides the entertainment

needed, unconscious individuals are at risk of developing problematic usage of the Internet (Goker & Turan, 2020). Also, in another study, there were positively high correlation between mental health problems and social media use during the COVID-19 outbreak (Gao et al., 2020). There are many studies examining the use of social media in terms of interpersonal relationship, but in this study, it was aimed to examine the pandemic process in terms of social media use and family relationships.

In this study, the participants were asked about their social media use in both normal time and during the pandemic period. The findings indicated that the top three social media accounts at normal times were Instagram, WhatsApp and Twitter. The findings indicated that the top three sharings at normal times were photographs, stories and re-tweets. According to the findings, it was found that the using ratios of social media accounts during the pandemic period were significantly increased. This finding is in line with other researches, indicating that the curfew restrictions and social isolations increased the consumption of digital entertainment, such as online games. Based on these studies, there was approximately 70% increase in online games and other online activities (Daniele & Niclas, 2020; Shanley, 2020).

The psychological effects of the pandemic period were also observed on the relationship of family members who spend a long time in the same house due to social isolation. As a result of the study, the students of the faculty of pharmacy were asked how they spent their time at home during the pandemic period. The findings indicated that the top three activities at home were, respectively, studying either course or homework, watching television, movies and series, and reading book. Also, when they were asked about their sharings on social media accounts during the pandemic, the findings indicated that the top three sharings were, respectively, personal photographs, re-tweets and information about COVID-19.

Also, the participants of the study were asked about their family relationship during the pandemic. 42% of the sample group stated that nothing changed, 19.2% of the sample group stated that their relationship was affected positively and 14.3% stated that their relationship was affected negatively. Other answers about their situations were spread out such as they got to know each other better, they became closer and their family bonds became stronger, communication level with their family increased and they conversed more during this period. On the other hand, some participants declared that they got bored of staying at home. The participants who did not have private personal areas at home expressed that the arguments between family members increased, there was uneasiness at home, the tolerance between family members were decreased and there were bursts of rage. This finding coincides with the findings of a study conducted on family problems during the pandemic period. According to this, compared to the pre-pandemic period, the problems that have increased the most among the problems experienced in the family are discussions about domestic responsibilities, arguments between family members and discussions about the home economy. On the other hand, the fact that family members spend more time together compared to pre-pandemic process, it has increased communication and joint activities among family members living together. In addition, there is a statistically significant difference with family problems, such as psychological, economic and physical violence, and variables such as gender, family type, degree of importance given to the family, family relationships and communication (Baris & Taylan, 2020).

First, as hypothesised, there are negative correlations found between social media addiction and cognitive cohesion sub-dimension of family climate. In addition to that, cognitive cohesion is

negatively related with the virtual tolerance sub-dimension of social media addiction. Only one factor of family climate cognitive cohesion predicted social media addiction significantly, but its predictive role is very low. Emotional cohesion as opposed to cognitive cohesion includes situations such as love, warmth and belonging to a family as the strongest source. On the other hand, cognitive cohesion is the overlap of values, perspectives and attitudes. When family members perceive their families as both emotionally and cognitively compatible, it would indicate an ideal situation for functioning of the family, but it is not always necessary. For an individual who sees the family as a functional system rather than a source of emotional support, low emotional cohesion and high cognitive cohesion may be more functional (Gonul et al., 2018). In another study, it was found that the players who had low perceived social support and who did not have positive family climate were highly more addicted to online games (Yilmaz, 2020). It was also supported by the results showed that social media addiction of university students whose parents were living out of Istanbul was higher than university students whose parents were living in Istanbul. In addition to that, there were no differences found between social media addiction level of university students according to other demographical features. This suggests that the feeling of loneliness caused by being away from social supports has an increasing effect on Internet addiction.

In conclusion, the results of this study demonstrated that especially the pandemic process caused an increase in Internet use. However, social media addiction has also increased. The findings of the study are important in terms of dealing with family relationships during the pandemic period. Therefore, there are limited researches about psychological effects of COVID-19 pandemic, and so the current findings of the research provide contributions to the literature by studying it effects in terms of both social media addiction and family relationships.

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