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

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Abstract

The COVID-19 pandemic has caused significant changes in everyone's lives. Especially with the social isolation process, people have moved their entire lives to their homes. In this case, the use of the internet in connection with the outside world has brought an important point. This situation poses a risk for social media addiction for the future. On this basis the aim of this study is to investigate the relationship between social media addiction and family climate in the shade of COVID-19 pandemic. Besides, the social media addiction was studied according to demographical features as the subgoals of the study. The research group was conducted by 364 university students of pharmacy faculty. Data was collected with 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 subdimension of family climate. And 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 increased significantly. 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 emphasized.

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 in many times throughout the history. Nowadays the world is struggling with a pandemic called COVID-19, that was started in China and reached the whole world. We continue to live in restricted living spaces during this social isolation period. And as a part of new normal, our homes became the new working and education areas (Oktay, 2020). It is an inevitable fact that people spend much more time with social media at home during the pandemic period. Social media is a limitless source of entertainment, information and connection. It is also helpful for maintaining communication with friends and family to reduce isolation and boredom which has been associated with anxiety and long-term distress (Brooks, Webster, Smith, Woodland, Wessely, Greenberg, 2020).

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

The pandemic is ongoing so that the social and economic impacts are 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 it is. Although people can continue their social relations through internet and social media, it is obvious that it can not be as healthy and high quality as social relations established by face to face (Akat, Karatas, 2020).

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

The family climate is based on the family relationships, which also influence the mental and physical health of family members (Bookwala, Jacobs, Age, 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 behaviorally 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 behaviors 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 became 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 COVID-19 pandemic. Besides, the social media addiction was studied according to demographic features as the subgoals of the study. Based on the main purpose, this study poses the main hypothesis stated below:

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

By the way 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 level of university students according to gender?

- Is there a difference between social media addiction level of university students according to their study

    programme?

- Is there a difference between social media addiction level of university students according to living with

    family or away from family?

- Is there a difference between social media addiction level of university students according to marital status of

    the family?

- Is there a difference between social media addiction level of university students according to sibling status?

- Is there a difference between social media addiction level of university students according to their marital

    status?

    Is there a difference between social media addiction level of university students according to their

    occupational status?

- Is there a difference between social media addiction level 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 studied at faculty of pharmacy, including 300 females and 64 males in the range of 18-24 ages (mean 20.80; sd 1.360). The descriptive statistics about the participants were given at Table 1.

Table 1. Descriptive statistics of participants

Demographical Info		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	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

Demographical Information Form, Social Media Addiction Scale and Family Climate Scale were used for collecting data from the participants.

2.2.1. Demographical Information Form (DIF)

Demographical Information Form was developed by researchers and it was used in order to get information about gender, age, education level and other detailed informations about the participants.

2.2.2. Social Media Addiction Scale (SMAS-AF)

Social Media Addiction Scale consists of 20 items that can be gathered under 2 subscales (virtual tolerance and virtual communication) in which self-evaluation of participants is intended, is a sample of 5-point Likert scale. The scale was developed by Sahin and Yagci (2017). The scale was evaluated by overall score. The Cronbach's Alpha internal consistency coefficient of the whole scale is .94. For the subscales the Cronbach's Alpha internal consistency coefficient for the virtual tolerance is .92 and virtual communication is .91. For this study the Cronbach's Alpha internal consistency coefficient of the whole scale is .89, for the subscales it is .82 for the virtual tolerance and .90 for the virtual communication.

2.2.3. Family Climate Scale (FCS)

Family Climate Scale 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, cognitive cohesion). The Cronbach's Alpha internal consistency coefficient of the subscale called relatedness in family is .95, intergenerational authority is .87 and cognitive cohesion is .87. For

this study the Cronbach's Alpha internal consistency coefficient is .79, .80 and .82 respectively.

3. Analysis and Findings

The analysis of data was performed on SPSS version 23.0 packaged software. Pearson Correlation, Independent Samples t-Test, One Way ANOVA and Simple Linear Regression were used in analysis of data. For all these analyses, the results for $p < .05$ 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)

	min	max	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				
Relatedness in family	32	105	83.09	13.87
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 analyzed with Pearson Correlation. There were significant negative correlations found between virtual tolerance and cognitive cohesion (r=-.171, p<.01), social media addiction and cognitive cohesion (r=-.155, p<.01), (see Table 3).

Table 3. Pearson 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	.628**	1				
3. Social media addiction total	.923**	.878**	1			
Family Climate						
4. Relatedness in family	-.077	-.083	-.088	1		
5. Intergenerational authority	.082	.046	.073	-.098	1	
6. Cognitive cohesion	-.171**	-.103	-.155**	.619**	-.022	1

** p<.01   * p<.05

According to the results of the simple linear regression analysis, summarized in Table 4, only one factor of family climate named cognitive cohesion (β=-.16, p<.005) predicted social media addiction significantly, but its predictive role is very low.

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

Model	B	SE_B	β	t	p
Constant	63.862	2.887		22.117	.000
Cognitive cohesion	-.429	.143	-.16	-2.992	.003

Dependent Variable: Social Media Addiction. R^2 = .024, adjusted R^2 = .021 (p< .005)

There was no significant difference between social media addiction level of university students according to gender (t(362)=1.27; p>.05), according to study programme (t(362)=.19; p>.05), according to living with family or away from family (t(362)=-1.57; p>.05), according to marital status of the family (t(362)=1.04; p>.05), according to sibling status (t(362)=1.11; p>.05), according to marital status of the participants (t(362)=-.64; p>.05), according to occupational status (t(362)=-.54; p>.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<.05). The results showed that social media addiction of university students whose parents were living out of Istanbul ($\overline{x}$ =56.63) was higher than university students whose parents were living in Istanbul ($\overline{x}$ =54.01) (see Table 5).

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

	Parents Living	N	$\overline{x}$	ss	$Sh_{\overline{x}}$	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 < .05

Finally one way ANOVA analysis were performed in order to consider the variance analysis in between age ($F_{(6,357)}$= .97, p>.05), level of education ($F_{(360,3)}$= .010, p>.05), level of income ($F_{(361,2)}$= .95, p>.05) and level of social media addiction, but statistically significant difference couldn't be found.

The participants of the study were asked about how they spend their time at home during the pandemi. The findings indicated that 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) (see Table 6).

Table 6. Frequences about spending time at home during the pandemi

How do you spend your time at home during the pandemi?	n	%
Studying cour.e, 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 top three social media accounts were instagram (%61), whatsapp (%50) and twitter (%12.9) (see Table 7).

Table 7. Frequences 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 sharings on social media at normal times. The findings indicated that top three sharings were photographs (%28), story (%9.1) and retweets (%6.6). %27.2 of the users didn't share anything (see Table 8).

Table 8. Frequences 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
Retweets	24	6.6
Selfy	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 pandemi were increased and %21.2 were decreased (see Table 9).

Table 9. Frequences about using social media accounts during the pandemi

Using ratios about social media accounts during the pandemi	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 pandemi. The findings indicated that top three sharings were personal photographs (%14.8), retweets (%8.5) and info about Covid-19 (%8). %45.3 of the users didn't share anything during the pandemi (see Table 10).

Table 10. Frequences about sharings on social media during the pandemi

Sharings on social media during the pandemi	n	%
Nothing	165	45.3
Personal photographs	54	14.8
Retweets	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 pandemi. %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 communication level with their family increased, they had more conversation during this period. %4.4 of the sample group said that they got bored. % 3 of the participants were away from their family in this period. %2.5 stated that arguments between family members increased, there were no private areas at home and there were uneasiness at home. %2.2 were affectedd

both positively and negatively. %1.9 said that the tolarence between family members were decreased and there were burst of rage. And just %1.1 stated that fights with his sibling have been increased (see Table 11).

Table 11. Frequences about family relationship during the pandemi

Family relationship during the pandemi	n	%
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 were uneasiness at home	9	2.5
Affected both positively and negatively	8	2.2
Tolerance decreased, there were burst of rage	7	1.9
Fights with my sibling has increased	4	1.1

4. Results and Discussion

Current studies focused on the COVID-19 pandemic 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 internet both for obtaining information about the pandemic and for continuing their business and social lives on social media. This causes people to spend a longer time on 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 educaiton from home it has been the main important tool of socializing during this process. But on the other hand while technology provides the entertainment needed, unconscious individuals are at risk of developing problematic usage of internet (Goker, Turan, 2020). And also in another study there were positively high correlation between mental health problems and social media use during the COVID -19 outbreak (Gao, Zheng, Jia, et. al.). 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 relations.

In this study, the participants were asked both about their social media use in normal time and their social media use during the pandemic period. The findings indicated that top three social media accounts at normal times were instagram, whatsapp and twitter. And the findings indicated that top three sharings at normal times were photographs, stories and retweets. According to the findings it was found that the using ratios of social media accounts during the pandemic period were increased significantly. 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 were approximately %70 increase in online games and other online activities (Shanley, 2020; Daniele, Niclas, 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 top three activities at home were respectively studying either course or homework, watching television, movies and series, and reading book. And also when they were asked about their sharings on social media accounts during the pandemic, the findings indicated that top three sharings were respectively personal photographs, retweets and informations about COVID -19.

Also the participants of the study were asked about their family relationship during the pandemi. % 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, they had more conversation during this period. On the other hand some participants declared that they got bored of staying at home. And the participants, who didn't have private personal areas at home, expressed that the arguments between family members increased, there were uneasiness at home, the tolarence between family members were decreased and there were burst of rage. This findings coincide 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 relations and communication (Baris, Taylan, 2020).

First, as hypothesized, there are negative correlations found between social media addiction and cognitive cohesion subdimension of family climate. And in addition to that cognitive cohesion is negatively related with virtual tolerance subdimension of social media addiction. Only one factor of family climate named cognitive cohesion predicts social media addiction significantly, but its predictive role is very low. Emotional cohesion as opposed to cognitive cohesion, includes situations such as love, warmth, 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, Isik-Bas, Sahin-Acar, 2018). In another study it was found that the players who had low perceived social support and who didn't 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 difference 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 relations during the pandemic period. Therefore there are limited researches about psychological effects of COVID -19 pandemic, so that the current findings of the research provide contributions to the literature by studying it effects both in terms of social media addiction and family relations.

References

Alizadeh Fard, S., Alipour, A. (2020). The Path Analysis Model in Prediction of Corona Phobia Based on Intolerance of Uncertainty and Health Anxiety. Journal of Research in Psychological Health, 14(1),16-17.

Baris, I., Taylan, H.H. (2020). Kuresel Salgin Surecinde Turkiye'de Aile Ici Sorunlar. Nosyon: Uluslararasi Toplum ve Kultur Calismalari Dergisi – Nosyon: International Journal of Society and Culture Studies, Gursoy Akca Ozel Sayisi, 5, 13-32.

Björnberg, A., Nicholson, N. (2007). The Family Climate Scales Development of a New Measure for Use in Family Business Research. Family Business Review, 20(3), 1-16.

Bookwala, J., Jacobs, J. (2004). Age, Marital Processes, and Depressed Affect. The Gerontologist, 44(3), 328–338.

Brooks, S.K., Webster, R.K., Smith, L.E., Woodland, L., Wessely, S., Greenburg, N., Rubin, G.J. (2020). The Psychological Impact of Quarantine

   and How To Reduce It: Rapid Review of The Evidence. The Lancet, 395, 912-20.

Daniele, L., Niclas, R. (2020). Fortnite Gamers Stuck at Home Strain Italy's Network [Internet]. Bloomberg. 2020 [cited 2020 J26]. Available

   from: https://www.bloomberg.com/news/articles/2020-03-12/housebound-italian-kids-strain-network-with-fortnite-marathon.

Gao, J., Zheng, P., Jia, Y., Chen, H., Mao, Y., Chen, S., Wang, Y., Fu, H., Dai, J. (2020). Mental Health Problems and Social Media Exposure During Covid-19 Outbreak. PLoS ONE, 15(4), 1-10.

Goker, M.E., Turan, S. (2020). COVID-19 Pandemisi Surecinde Problemli Teknoloji Kullanimi. ESTUDAM Halk Sagligi Dergisi, 5(COVID-19 Ozel Sayisi), 108-114.

Gonul, B., Isik-Bas, H., Sahin-Acar, B. (2018). Aile Iklimi Olcegi'nin Turkceye Uyarlanması ve Psikometrik Acidan Incelenmesi. Turk Psikolojik Danisma ve Rehberlik Dergisi, 8(50), 165-200.

Herke, M., Knöchelmann, A., Richter, M. (2020). Health and Well-Being of Adolescents in Different Family Structures in Germany and The Importance of Family Climate. Internatioanl Journal of Environmental Research and Public Health, 17(18), 6470. doi: 10.3390/ijerph17186470. PMID: 32899489; PMCID: PMC7559242.

Hussain, W. (2020). Role of social media in COVID-19 Pandemic. International Journal of Frontier Sciences:, 4(2), 59-60.

Kaplan, M. (2019). Üniversite öğrencilerinin algıladıkları aile iklimi, kuşaklararası ilişkiler ve aile uyumunun değerlendirilmesi. Çukurova Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalı Uzmanlık Tezi.

Ozden-Yıldırım, M. S. (2022). The relationship of social media addiction and family climate of students of pharmacy faculty in the shade of COVID-19 pandemic. *Global Journal of Guidance and Counseling in Schools: Current Perspectives*, *12*(1), 138-149. https://doi.org/10.18844/gjgc.v12i1.7053

Sahin, C., Yagci, M. (2017). Sosyal Medya Bagimliligi Olcegi – Yetiskin Formu: Gecerlilik ve Guvenirlik Calismasi. Ahi Evran Üniversitesi Kırşehir Eğitim Fakültesi Dergisi, 18(1), 523-538. Retrieved from https://dergipark.org.tr/en/pub/kefad/issue/59268/851452

Satici, B., Saricali, M., Satici, S. A., Griffiths, M. D. (2020). Intolerance of uncertainty and mental wellbeing: serial mediation by rumination and fear of COVID-19. International Journal of Mental Health and Addiction, 15, 1-12. https://dx.doi.org/10.1007/s11469-020-00305-0

Shanley, P. (2020). Gaming Usage Up 75 Percent Amid Coronavirus Outbreak, Verizon Reports [Internet]. Hollywood Reporter. 2020 [cited 2020 Jun 26]. Available from:https://www.hollywoodreporter.com/news/gaming-usage-up-75-percent-coronavirus-outbreak-verizon-reports-1285140.

Statistics Canada. (2020). Canadian Perspectives Survey Series 1: Impacts of COVID-19. Retrieved April 18, 2020, from https://www150.statcan.gc.ca/n1/en/daily-quotidien/200408/dq200408c-eng.pdf?st_QdNFbXIA

Oktay, F. (2020). Pandemi Doneminde Sosyal Medya Kullanimi. ECLSS International Online Conference Economics & Social Sciences Proceedings Book, September 8-9, 2020, Kyrenia, TRNC, 82-88.

Van Steijn, D.J., Oerlemans, A.M., van Aken, M.A.G., Buitelaar, J. K., Rommelse, N.N.J. (2015). The Influence of Parental and Offspring Autism Spectrum Disorder (ASD) and Attention-Deficit/Hyperactivity Disorder (ADHD) Symptoms on Family Climate. Journal of Child and Family Studies, 24(7), 2021-2030. https://doi.org/10.1007/s10826-014-0002-9

Yilmaz, B. (2020). E-spor oyuncularinin algiladiklari sosyal destek, aile iklimi ve yetiskin baglanma stillerinin oyun bagimliligi uzerine etkisi. Hacettepe Universitesi Sosyal Bilimler Enstitüsü Yuksek Lisans Tezi, Ankara.