RESEARCH ARTICLE
Child Development

A Research on Nomophobia: High School Students Example

Nomofobi Üzerine Bir Araştırma: Lise Öğrencileri Örneği

ÖZET

Gelişen iletişim teknolojileri cep telefonlarının da gelişmesine ve birçok fonksiyonu yerine getirmesine olanak sağlamıştır. Yaygın ve sık olarak kullanılan cep telefonları, insanlarda bazı davranış ve duygu bozukluklarına yol açabilmektedir. Nomofobi de bu bozukluklardan biridir ve insanların cep telefonlarından uzak kalma korkusu olarak adlandırılmaktadır. Bu çalışma lise öğrencilerinin Nomofobi düzeyleri üzerinde çeşitli değişkenlerin (yaş, cinsiyet vb.) anlamlı bir farklılık yaratıp yaratmadığını incelemek amaçlanmıştır. Araştırmanın örneklemini 2021-2022 eğitim-öğretim yılında Antalya İli Muratpaşa İlçesinde öğrenimine devam eden araştırmaya katılmaya gönüllü olan 511 (K=300, E=211) lise öğrencisi oluşturmaktadır. Çalışmada, Yıldırım ve Correira (2015) tarafından geliştirilen, Yıldırım ve arkadaşları (2015) tarafından Türkçe'ye geçerlilik ve güvenirlilik çalışması yapılan ölçek kullanılmıştır. Elde edilen veriler SPSS 22.0 paket programı kullanılarak bilgisayar ortamına aktarılmış ve verilerin analizinde bu programdan yararlanılmıştır. Veriler normallik testine tabi tutularak, her bir boyutun basıklık ve çarpıklık değerleri incelenmiştir ve yapılan test sonucu verilerin normal dağılım gösterdiği tespit edilmiştir.

Anahtar Kelimeler: Nomofobi, Lise Öğrencileri, Araştırma

ABSTRACT

Developing communication technologies have led mobile phones to develop and perform many functions. Commonly and frequently used mobile phones can cause some behavioral and emotional disorders in humans. Nomophobia is one of these disorders, which is called fear of people due to being away from their mobile phones. This study aims to investigate whether nomophobia levels can create significant differences in high school students with respect to some variables (gender, age etc.). The sample of the Research consisted of 511 high school students (G=300, B=211) who attended a high school in Muratpaşa District of Antalya province in 2021-2022 academic year and volunteered to participate in the research. In the study, a scale, developed by Yıldırım and Correira (2015), and whose Turkish validity and reliability that Yıldırım et al. (2015) made was used. The obtained data were transferred to computer environment by using SPSS 22.0 package program and this program was used in the analysis of data. The kurtosis and skewness of each dimension was investigated by exposing the data to normality test; and it was determined that the data obtained at the end of the test exhibited normal distribution.

Keywords: Nomophobia, High School, Research

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INTRODUCTION

Today, technology has an indispensable place in the life of children (Aygün and Pekşen Akça, 2022:159; Aydoğdu, 2018:3, Aydoğdu 2021:35). Technological devices such as television, smartphones, digital cameras, tablets also surround the children. Moreover, the children can learn to use technological devices very easily as a benefit of digital age (Pekşen Akça, 2022:159; Arslan and Pekşen Akça, 2021:199). Due to the fact that information and communication networks develop and change rapidly and that the telephones used for communication have many functions (banking processes, shopping, following news, access to social media), the popularity of these communication devices is increasing every other day. Especially since 2020, the pandemics period has added a different acceleration to the popularity of these devices; and the interaction with smart phones has increased depending on factors such as staying at home for a long time, the process of distance learning, being away from social relations etc. This has resulted in the emergence of many concepts such as technology addiction, social media addiction, internet addiction, cyberbullying and nomophobia. In fact, nomophobia, a popular concept of recent times, is defined as illogical fear and anxiety that an individual feels when s/he cannot reach mobile devices (King et al., 2013; Yıldırım and Correia, 2015:135); therefore, it is thought that especially the young people are extremely under the threat of this situation. It is known that the young people use internet and technology much more than the grownups; accordingly, in this study, it is stated that 20% of social media users in our country is

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composed of adolescences between the ages of 13-17 (Güneş, Akbıyık, Aypak and Görpelioğlu, 2018:187). It is seen that the internet used effectively since early ages is not always beneficial; nevertheless, especially when the young users get access to inappropriate contents on the internet, their development is negatively affected by this (Abraham, Mathias and Williams, 2014:426). Yen et al. (2009:868), in their study in which they conducted on high school students, a conclusion close to this was obtained. They found out that the students who extremely used telephone have weak social relations and low academic performance. In a study carried out by Lin, Chang, Lee, Tseng, Kuo and Chen (2014:4) on high school students, they found that in situations when smartphones are not appropriately and correctly used, the academic success of the students accelerated in negative direction. In addition, they determined that there was poor quality sleep in these students since they spent time on the phone before sleep. In another study carried out with adolescents, it was established that the devices and tools taking place in digital forms and applications 25% negatively affect the adolescents' social addiction levels (Savcı and Aysan, 2017). In the light of all these findings, the adolescent period, which is a period when adolescents start to decide who they are during their personality development, directs the adolescents to the smartphones. In addition, since these devices contain contents appropriate for all ages and development levels, they may lead to addiction. For this reason, in this study, it was aimed to investigate whether demographic variables of high school students create any significant differences on nomophobia levels.

In the research, the answers to the following questions were sought within the framework of this purpose:

✓ Is there a significant difference in statically between nomophobia score averages depending on the gender of students studying in general high schools?

✓ Is there a significant difference in statically between nomophobia score averages depending on the age of students studying in general high schools?

MATERIAL AND METHOD

In this part, the information about the model of the research, study group, collection of data and their analyses, and reporting the results emerged has been given place.

Research Model

This study was conducted with the aim to investigate whether demographic variables of high school students (age, gender, number of siblings etc.) create any significant differences on nomophobia levels. In line with this aim, "Relational Scanning Model" was used. Gathering data for determining the certain features of the present status of a group is defined as Relational Scanning Model (Karasar, 2022:109). In Relational Scanning studies, the relations between the data of more than one variables are studied (Karasar, 2022:127). In this study, the dependent variable is the nomophobia levels of high school students, while the independent variables are the genders, class levels, the number of siblings and the age of first smart phone acquisition of the individuals, who participated in the study.

Study Group

In 2021-2022 education and training year, 14866 students attend high schools according to data of National Education Administration of Muratpaşa district. The population of the study consists of general high school students attending their schools in Muratpaşa district of Antalya Province in 2021-2022 academic year.

In determining the sampling, convenience-sampling method was used. Convenience-sampling method is a sampling, which is applied to the individuals who live in the proxy vicinity, and who are easy to reach and available, and are willing to participate in the study (Erkuş, 2013; Karasar, 2022:147). While sampling size was determined, values of "Sampling sizes for 0,05", determined by Yazıcıoğlu and Erdoğan, were taken as references. The sampling of the study consists of 511 high school students, 300 girls and 211 boys, attending the general high schools in Muratpaşa district of Antalya Province and voluntarily participating in the study. The demographic information of high school students participating in the study is given in Table 1.

Table 1: Demographic information about high school students

Variable	Category	f	%
Gender	Girl	300	58.70
	Boy	211	41.30
Grade Levels	9	77	15.10
	10	167	32.70
	11	78	15.20
	12	189	37.00
Number of siblings	The only child	69	13.50
	2	273	53.40
	3	131	25.60
	4 and over	38	7.40
Age of first smartphone acquisition	7-12	192	37.60
	12-15	272	53.20
	15 and over	47	9.20

Data Collection Tools

Personal Information Form and Turkish Nomophobia Scale were applied to high school students in accordance with the aim of research tools. The Personal Information Form, prepared by the researchers, contained a total of 5 questions consisting of general information including the gender, grade level, number of siblings, and age of first smartphone acquisition of high school students. Özdemir and Bektaş developed the Turkish Nomophobia Scale in 2020. The scale consists of 20 items and is answered in a 7-point Likert type. In the scale, there are 4 items in the sub-dimension of not being able to access information, 5 items in the sub-dimension of relinquishing the comfort, 6 items in the sub-dimension of not being able to communicate, and 5 items in the sub-dimension of losing the online connection, all of which are the sub-dimensions of Nomophobia. According to the scores obtained from the scale, the Nomophobia level of 20 and below is interpreted as no Nomophobia, between 21-60 as mild, between 60-100 as moderate, between 100-140 as extreme. The validity and reliability study of the scale was carried out with 818 volunteers and the Cronbach Alpha value was obtained as 0.93.

Data Collection and Ethical Aspect

First, Ethics Committee Permission (NEU/SB/2021/991) was obtained by applying to the Near East University Ethics Committee for the research. Additionally, necessary permissions for the research were obtained by applying to the Strategy Development Department of T.R. Ministry of National Education (E-49614598-605-32147924). At the start of the research, students were receiving distance education due to the pandemic. As the pandemic process continued, the scales and personal information form, participant information, parent consent and participant consent forms were prepared online with Google Form. The permissions of the Ministry of National Education were obtained for online application. In order to carry out the research, the school principals, who were determined by the convenience sampling method, were interviewed, after which the scales were delivered to the students and parents online, and the data were collected.

Analysis and Interpretation of Data

Primarily, the values of kurtosis and skewness regarding the data obtained as a result of the research were examined and it was determined whether they had a normal distribution or not. As a result of the kurtosis and skewness examinations, it was seen that the data obtained had a normal distribution. The kurtosis and skewness values of the data obtained in the study are presented in Table 2. When the descriptive statistics of the nomophobia total scores in Table 2 are considered, the mean score is 74.46; on the other hand, when the kurtosis and skewness values are considered, the nomophobia total scores show a normal distribution. When the descriptive statistics of the scores of the sub-dimension of not having access to information are considered, it is seen that the mean score is 16.06. When the kurtosis and skewness values are considered, it can be said that these values are between -1 and +1, that is, the group's inability to access information scores show a normal distribution. When the descriptive statistics of the scores of relinquishing the comfort sub-dimension are considered, it is seen that the mean score is 19.13. Considering the descriptive statistics of the scores of the to communicate sub-dimension, it is seen that the mean score is 25.20. When the descriptive statistics of the scores of the sub-dimension of losing the online connection are considered, it is seen that the mean score is 14.08. When the kurtosis and skewness values are considered, it can be said that these values are between -1 and +1, that is, the scores of the sub-dimensions show a normal distribution.

Table 2: Descriptive statistics of Nomophobia scale scores

Variable	$\overline{X}$	S. Deviation	Min.	Max.	Multiplier	Kurtosis
Nomophobia Total	74.46	14.06	21.00	14.00	0.23	0.00
Inability to access information	16.06	5.12	4.00	28.00	0.02	-0.52
Relinquishing the comfort	19.13	3.87	5.00	35.00	0.15	-0.35
Inability to communicate	25.20	6.46	6.00	42.00	-0.13	-0.50
Losing online connection	14.08	3.39	5.00	35.00	0.89	0.48

In this study, it was aimed to examine whether there is a significant difference between the nomophobia levels of high school students and the variables of gender, grade level, number of siblings and age of first smartphone acquisition. For these purposes, it was examined whether there was a statistically significant difference between the scores obtained from the scales and the above-mentioned variables. In data with normal distribution, t-test was used in cases where the number of categories of the independent variable was two and in unrelated samples, while ANOVA analysis was used in cases where the number of categories was more than two. The frequencies of classification of high school students participating in our study according to their nomophobia levels are given in Table 3.

Table 3: Frequency classifications of participants in the study according to nomophobia levels

Nomophobia Level	f	%
Mild	131	25.60
Moderate	305	59.70
Extreme	75	14.70

When Table 3 is examined, it can be said that 131 (25.60%) of the participants have mild, 305 (59.70%) moderate and 75 (14.70%) extreme nomophobia levels according to their total nomophobia scores.

RESULTS

In this study, it was aimed to evaluate whether the scores of the total Nomophobia Scale and its sub-dimensions differ according to the variable of the students studying in general high schools in Muratpaşa district of Antalya. The results of the distribution of the Nomophobia Scale and its sub-dimensions according to the gender variable of high school students are given in Table 4.

Table 4: Examining the scores of the total nomophobia scale and sub-dimensions of the students according to gender variable

T Test	Group	N	Mean	sd	t	p
Nomophobia	Girl	300	77.87	509	3.87	0.00*
	Boy	211	69.62			
Inability to reach information	Girl	300	16.29	509	0.14	0.29
	Boy	211	15.71			
Relinquishing the comfort	Girl	300	20.16	509	4.14	0.00*
	Boy	211	17.65			
Inability to establish communication	Girl	300	26.80	509	4.67	0.00*
	Boy	211	22.91			
Losing online connection	Girl	300	14.60	509	1.91	0.06
	Boy	211	13.34			

When the t-test results applied for the scores obtained from the total nomophobia scale and its sub-dimensions are analyzed in Table 4, the scores of total nomophobia, relinquishing the comfort and inability to communicate show statistically significant differences in favor of women according to the gender variable (p≤0.05). In other words, girl students' total nomophobia, relinquishing the comfort and inability to communicate scores are higher than boy students. However, when another t-test result in Table 4 is examined, the scores of not being able to access information and losing online connection do not differ statistically according to the gender of the participants (p>0.05), and the scores of students' inability to access information are similar. In the study, it was observed that the total nomophobia of female students was higher than males in the sub-dimensions of relinquishing the comfort and inability to communicate. As a matter of fact, Yıldırım (2019:46), in his study with adolescents, determined that there is a relationship between variables such as gender, duration of smartphone use, purpose of smartphone use and nomophobia. There are other studies in the literature showing that girls have higher nomophobia levels than boys (Büyükçolpan, et al. 2015:54; Yıldırım, Sumuer, Adnan, & Yıldırım, 2016:1328).

In the study, the scores of the participants not being able to access information and losing the online connection do not differ statistically significantly according to the gender of the participants (p>0.05). In the literature, it is seen

that there are studies with different results regarding the relationship between nomophobia and gender. This may be due to the fact that the studies were conducted in different cultures and age ranges. Different variables such as socio-economic conditions, personality traits, age group, family attitudes, and gender roles according to cultures may be effective in the research results. For example, in a study conducted with secondary and high school students, it was found that individuals with avoidant coping and negative coping methods might have higher nomophobia levels (Ataş, 2021:67). In the literature, it is seen that there are studies with similar and different results regarding the relationship between gender and the level of nomophobia. In future studies, it is thought that the study can be reinvestigated with different sample groups and variables related to the reasons for this difference.

In the study, the ANOVA results of the students' scores for the total Nomophobia scale and its sub-dimensions according to the class variable are given in Table 5.

Table 5: Examination of students' scores of the total nomophobia scale and its sub-dimensions according to grade level variable

ANOVA	Source of Variance	Sum of squares	sd	mean of squares	F	p	Difference
Nomophobia	Intergroup	5045.19	3	1681.73	2.94	0.03*	12>11 12>9
	In groups	290263.89	507	572.51			
	Total	295309.08	510				
Inability to access information	Intergroup	536.00	3	178.67	4.88	0.00*	10>9 12>9
	In groups	18551.35	507	36.59			
	Total	19087.35	510				
Relinquishing the comfort	Intergroup	452.49	3	150.83	3.24	0.02*	12>11 12>9
	In groups	23592.99	507	46.53			
	Total	24045.48	510				
Inability to communicate	Intergroup	257.10	3	85.70	0.96	0.41	---
	In groups	45419.33	507	89.58			
	Total	45676.43	510				
Losing online connection	Intergroup	200.60	3	66.87	1.23	0.30	---
	In groups	27635.95	507	54.51			
	Total	27836.55	510	1681.73			

When the results of the ANOVA analysis applied to the scores obtained from the total nomophobia scale and its sub-dimensions in Table 5 are examined, the scores of total nomophobia, inability to access information, and relinquishing the comfort show statistically significant differences according to the class variable (p≤0.05). As a result of the post hoc test applied to determine the source of the difference, it was determined that the 12th grade students' total nomophobia and comfort relinquishing scores were higher than the 9th and 11th grades, and the 10th and 12th grades' inability to access information scores were higher than the 9th grades. In line with these findings, it can be said that students with higher grades have higher scores for total nomophobia, inability to access information, and relinquishing the comfort. However, when the results in the table are examined, the scores of the students not being able to communicate and losing the online connection do not show a statistically significant difference according to the class variable (p>0.05). In other words, the scores of the participants' inability to communicate and losing their online connection are similar at all grade levels.

In the study, it was determined that the 12th grade students' nomophobia total and comfort relinquishing scores were higher than the 9th and 11th grades; on the other hand, the 10th and 12th grades' inability to access information scores were higher than the 9th grades. In line with these findings, it can be said that students with higher grades have higher nomophobia total, inability to access information and relinquishing the comfort scores. In our study, the scores of the participants not being able to communicate and losing the online connection do not show a statistically significant difference according to the class variable. The finding that differs in our research findings compared to the literature was that the lowest level of nomophobia was seen in 12th grades students. It is thought that this may be due to the fact that students may have reduced their use of smartphones because they focused on the university exam (Ergin, 2020). Similarly, Yıldırım (2019:46) determined in his study that nomophobia levels in high school students do not differ according to grade levels. Different variables such as school type and awareness of conscious use of technology may have been effective in different results between the level of nomophobia and the class variable in the studies. For this reason, it may be useful to investigate the students of different sample groups and variables.

Table 6. Examination of students according to the variable of the number of siblings belonging to the total nomophobia scale and its sub-dimensions

ANOVA	Source of Variance	Total of squares	sd	Mean of squares	F	p	Difference
Nomophobia	Intergroup	1775.23	3.00	591.74	1.02	0.38	---
	In groups	293533.85	507.00	578.96			
	Total	295309.08	510.00				
Inability to access information	Intergroup	69.86	3.00	23.29	0.62	0.60	---
	In groups	19017.49	507.00	37.51			
	Total	19087.35	510.00				
Relinquishing the Comfort	Intergroup	74.70	3.00	24.90	0.53	0.66	---
	In groups	23970.78	507.00	47.28			
	Total	24045.48	510.00				
Inability to communicate	Intergroup	1014.64	3.00	338.21	3.84	0.01*	1>3,4
	In groups	44661.80	507.00	88.09			2>3,4
	Total	45676.43	510.00				
Losing online internet	Intergroup	144.15	3.00	48.05	0.88	0.45	---
	In groups	27692.40	507.00	54.62			
	Total	27836.55	510.00	591.74			

When Table 6 is examined, the scores of not being able to communicate show a statistically significant difference according to the number of siblings (p≤0.05). As a result of the post hoc test applied to determine the source of the difference, students with 1 or 2 siblings have higher inability to communicate than students with 3 or 4 siblings. In line with this finding, it can be said that students with fewer siblings have higher inability to communicate than students with more siblings. Moreover, it can be said that the number of siblings in total nomophobia, inability to access information, relinquishing the comfort and loss of online connection scores did not differ significantly (p>0.05), in other words, the number of siblings did not show similarity for the sub-dimensions. In addition, students with 1 or 2 siblings were found to have higher inability to communicate than students with 3 or 4 siblings. It can be said that students with fewer siblings have higher inability to communicate than those with more siblings. Similar to our research findings, Yıldırım (2019), in his study with high school students, shows that the nomophobia levels of adolescents with different siblings do not differ.

Table 7: Examination the age of first smartphone acquisition variable of students according to the total nomophobia scale and sub-dimensions

ANOVA	Source of Variance	Total of squares	sd	Mean of squares	F	p	Difference
Nomophobia	Intergroup	632.15	2.00	316.08	0.54	0.58	---
	In groups	294676.93	508.00	580.07			
	Total	295309.08	510.00				
Inability to access information	Intergroup	44.45	2.00	22.23	0.59	0.55	---
	In groups	19042.90	508.00	37.49			
	Total	19087.35	510.00				
Relinquishing the Comfort	Intergroup	37.59	2.00	18.80	0.40	0.67	---
	In groups	24007.89	508.00	4.,26			
	Total	24045.48	510.00				
Inability to communicate	Intergroup	136.51	2.00	68.25	0.76	0.47	---
	In groups	45539.92	508.00	89.65			
	Total	45676.43	510.00				
Losing online internet	Intergroup	138.17	2.00	69.08	1.27	0.28	---
	In groups	27698.38	508.00	54.52			
	Total	27836.55	510.00				

When Table 7 is examined, it is seen that the scores obtained from the total nomophobia scale and its sub-dimensions do not differ statistically significantly according to the age of first smartphone acquisition (p>0.05). In line with these findings, it can be said that the scores obtained from the total nomophobia scale and its sub-dimensions are similar regardless of the age of obtaining a phone. Regardless of the age of first phone acquisition of the high school students participating in the research, the scores obtained from all of the participants' nomophobia scale and its sub-dimensions are similar. This can be interpreted, as there is no significant relationship between the age of starting to use a smartphone and the level of nomophobia. In the literature, no similar study on this subject could be found. Therefore, it is thought that our study will contribute to the field. The research was carried out in Muratpaşa district of Antalya province. Other studies to be carried out in the field can be carried out with different sample groups such as city, district, town, place of residence, school type, age group.

CONCLUSION AND SUGGESTIONS

Girls' total nomophobia, relinquishing the comfort and inability to communicate scores are higher than those of boys. The scores of not being able to access information and losing online connection do not differ statistically significantly according to the gender of the participants.

It was determined that students with high-grade level had higher nomophobia total, inability to access information and relinquishing the comfort scores. The scores of not being able to communicate and losing online connection, which are sub-dimensions of the nomophobia scale, do not show a statistically significant difference according to the class variable.

Students with fewer siblings have higher inability to communicate than students with more siblings have. The scores of total nomophobia, inability to access information, relinquishing the comfort, and loss of online connection do not show a statistically significant difference according to the number of siblings' variable. There is no significant relationship between the age of starting to use a smartphone and the level of nomophobia.

In the results of the research, it was determined that more than half of high school students have moderate and high levels of nomophobia. In order to reduce the risk of nomophobia in young people, psycho-educational studies can be conducted for families, students and teachers.

Students with fewer siblings have higher inability to communicate than those with more siblings have. However, the scores of total nomophobia, inability to access information, relinquishing the comfort and loss of online connection do not show a statistically significant difference according to the number of siblings' variable. It is thought that it would be beneficial to organize family trainings on positive communication within the family, to spend effective time, to gain leisure activities and to make arrangements that provide students with a rich social environment.

The research data were obtained from the students studying in the general high schools of Muratpaşa District of Antalya Province. The research can be repeated in other formal and non-formal education groups such as vocational high school, project school, and open high school. Variables such as the level of nomophobia, school types, and attendance to formal or non-formal education can be investigated.

Women's total nomophobia, relinquishing the comfort and inability to communicate scores are higher than men. Future researches can be conducted with different variables regarding the reasons for this difference according to gender.

Students at high-grade level have higher nomophobia total, inability to access information and relinquishing the comfort scores. The scores of not being able to communicate and losing online connection, which are sub-dimensions of the nomophobia scale, do not show a statistically significant difference according to the class variable. In the literature, there are different findings regarding the relationship between grade level and nomophobia. Different variables such as school type, place of residence, awareness of conscious use of technology may have been effective in the different results in the literature regarding the change of nomophobia level according to class level. Therefore, it may be useful to investigate the study with different sample groups and variables.

Students with fewer siblings have higher inability to communicate than those with more siblings have. However, the scores of total nomophobia, inability to access information, relinquishing the comfort and loss of online connection do not show a statistically significant difference according to the number of siblings' variable. The reasons for the high scores of inability to communicate among young people with a low number of siblings can be investigated in the future.

REFERENCES

Abraham, N., Mathias, J., Williams, S.(2014). A Study to assess the knowledge and effect of nomophobia among students of selected degree colleges in Mysore. Asian Journal of Nursing Education and Research, 4(4), 421-428.

Arslan R., & Pekşen Akça R.(2021). Akıllı işaretler sistemi. Temel, V.(Ed.). INSAC Academic Developments on Social and Education Sciences içinde (198-209). Ankara: Duvar Kitapevi.

Ataş, M. (2021). Ergenlerin mobil telefonsuz kalma korkusu (nomofobi), stresle başa çıkabilme ve algılanan sosyal destek düzeyleri arasındaki ilişkinin incelenmesi (Yüksek Lisans Tezi). Necmettin Erbakan Üniversitesi Eğitim Bilimleri Enstitüsü, Konya.

Aygün A., & Pekşen Akça, R.(2022). Dijital çağda nomofobi kavramı. Dalkılıç, M. (Ed.), Contemporary trends in education sciences kitabı içinde (s.157-166). Ankara: Duvar Kitapevi.

Aydoğdu, F. (2021). 4-6 yaş çocukların dijital oyun bağımlılıklarında kardeş etkisi: nomofobi, akıllı telefon kullanma, dijital oyun oynama. Çocuk ve Gelişim Dergisi,4(7),34-49.

Aydoğdu, F.(2018). Dijital oyun oynayan çocukların dijital oyun bağımlılıklarının çeşitli değişkenler açısından incelenmesi. Ulak Bilge Sosyal Bilimler Dergisi, 6(31), 1-18.

Büyükçolpan, H. (2019). Üniversite öğrencilerinde nomofobi, bağlanma biçimleri, Depresyon ve algılanan sosyal destek (Yüksek lisans tezi). Hacettepe Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.

Ergin, Z. (2020). Lise öğrencilerinin nomofobi düzeylerini etkileyen faktörler (Yüksek lisans tezi). Hacettepe Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.

Erkuş, A. (2013). Davranış bilimleri için bilimsel araştırma süreci. Mersin: Seçkin Yayıncılık.

Güneş, N. A., Akbıyık, D. İ., Aypak, C.& Görpelioğlu, S. (2018). Lise Öğrencilerinin sosyal medya bağımlılığı ve uyku kalitesi. Türk Aile Hekimi Dergisi., 22(4), 185- 192

Karasar, N. (2022). Bilimsel araştırma yöntemleri: Kavramlar ilkeler teknikler. Ankara: Nobel Yayıncılık.

King, A. L. S., Valença, A. M., Silva, A. C. O., Baczynski, T., Carvalho, M. R. & Nardi, A. E. (2013). Nomophobia: Dependency on virtual environments or social phobia? Computers in Human Behavior., 29(1), 140-144. https://doi.org/10.1016/j.chb.2012.07.025

Lin Y-H, Chang L-R, Lee Y-H, Tseng H-W, Kuo TB. & Chen S-H (2014). Development and validation of the smartphone addiction ınventory (SPAI). PloS one., 9(6), 1-5. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0098312

Özdemir, B., Cakir, O. & Hussain, I. (2018). Prevalence of Nomophobia among university students: Acomparative study of Pakistani and Turkish undergraduate students. Eurasia Journal of Mathematics, Science and Technology Education, 14(4), 1519-1532. https://doi.org/10.29333/ejmste/84839

Özdemir, E.Z., & Bektaş, M. (2020). Psychometric properties of a Turkish version of the Nomophobia Scale for the Nine-Eighteen Age Group. Journal of Pediatric Research., 7(4), 316-322. https://doi.org/10.4274/jpr.galenos.2020.63425

Pekşen Akça, R. (2022). Çocuk ve Dijital Animasyon. Arslan R, Pekşen Akça R & Sağlam M. (Ed.) Çocuk ve Animasyon. Ankara: Eğiten Yayıncılık.

Savcı, M. &Aysan, F. (2017). Technological addictions and social connectedness: Predictor effect of Internet addiction, social media addiction, digital game addiction and smartphone addiction on social connectedness. Düşünen Adam: The Journal of Psychiatry and Neurological Sciences, 30, 202-216. doi:10.5350/DAJPN2017300304

Yanık, D.,& Arslan, R (2021). Covıd-19 Pandemisin de Özel Gereksinimli Çocukların Yaşadığı Psiko-sosyal Sorunlar ve Çözüm Önerileri. 3rd International Symposıum on Global Pandemıcs and Multıdıcıplınary Covıd-19 Studıes.12-17 Ekim, Ankara.

Yazıcıoğlu, Y. &Erdoğan, S. (2004). SPSS uygulamalı bilimsel araştırma yöntemleri. Ankara: Detay Yayıncılık.

Yen, C., Tang, T., Yen, J., Lin, H., Huang, C.& Liu, S. (2009). Symptoms of problematic cellular phone use, functional impairment and its association with depression adolescents in southern Taiwan. Journal of Adolescence, 32, 863-873.

Yıldırım, C. & Correia, A. P. (2015). Exploring the dimensions of nomophobia: Development and validation of a self-reported questionnaire. Computers in Human Behavior., 49, 130-137. https://doi.org/10.1016/j.chb.2015.02.059

Yıldırım, C., Sumuer, E., Adnan, M.& Yıldırım, S. (2016). A growing fear: Prevalence of nomophobia among Turkish college students. Information Development, 32(5), 1322–1331. https://doi.org/10.1177/0266666915599025

Yıldırım E. (2019). Ailesinin yanında yaşayan ve ailesinin yanında yaşamayan Üniversite öğrencilerinin psikolojik sağlamlıklarının yordayıcısı olarak algılanan sosyal destek ve mutluluk düzeylerinin karşılaştırılması (Yüksek Lisans Tezi). Haliç Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.

Yüksel, G., & Baytemir, K. (2010). İlköğretim öğrencilerinin internet kullanım amaçları ile algıladıkları sosyal destek düzeylerinin incelenmesi. Türk Eğitim Bilimleri Dergisi, 8(1), 1-20.