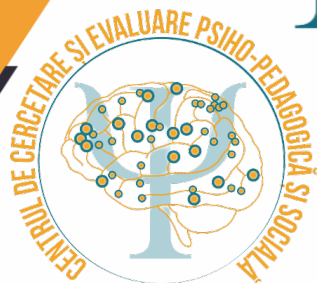




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Examination Of High School Students' Levels Of Internet Addiction And Nomophobia In Terms Of Different Parameters

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Abstract. The research is a survey model and was conducted to examine the internet addiction and nomophobia levels of high school students in terms of different parameters. The universe of the research consists of four different high schools, namely "Flat high school, Sports high school, Imam preacher high school and College" located in the city center and central districts of Isparta. The sample group consists of a total of 411 students, 248 women and 162 men, selected according to the easily accessible technique, studying in these high schools. The data in the study were obtained with the Internet Addiction Scale developed by Young (1998), the Nomophobia Scale developed by Yıldırım and Correia (2015), adapted to Turkish by Yıldırım et al. (2015), and updated by Erdem et al. (2017). A separate form was used for the demographic information of the participants. The scales were filled by the researcher after the participants were informed about the subject. For statistical operation percentage (%), frequency (f), dependent and independent variable comparisons to the obtained data; Mann-Whitney U and Kruskal Wallis tests, Pearson Correlation procedures were applied to determine the relationship between internet addiction and nomophobia. As a result of the data obtained within the scope of the research; Although there are statistically significant differences in the answers given by the participants to the levels of internet addiction and nomophobia, we can say that the average scores are medium and above in general, and that there is a positive and significant relationship between internet addiction and nomophobia.

Keywords: High School, Student, Internet, Addiction, Nomophobia



1.Introduction

From past to present, there have always been some new inventions and developments in the world. One of these developments and an indispensable application of today, "internet technology" has been prepared for military use (Griffiths, 2000). Today's internet and computer technology have replaced the tools such as telephone and telegraph used for communication and communication in the past, and it has provided convenience in transportation as a very fast and instantly accessible material in information exchange (Ganesh et al., 2017). With the development of the internet, which is used as a communication tool, and becoming widespread in the whole universe, it has become an indispensable tool because it provides faster access to all kinds of information and communication resources for all individuals. When the WeAreSocial research conducted in 2018 is examined, it has been reported that there are more than 7 hours of internet use and more than 2 and a half hours of social media use in Turkey (Taştan,2020; Altun and Ulusoy,2018). When the Tuik data is examined, the rate of households accessing the internet in our country in 2021 reaches 92%, and the rate of individuals using the internet reaches 82.6%. While individuals who use the Internet constitute 80.5% of individuals between the ages of 16-74, individuals who use the Internet almost every day have a total of 76.4%, while men make up 81.6% and women 71.4% when they are distributed according to gender (Tuik,2021). Habits resulting from these high usage rates lead to advanced addictions (Ertan,2019; Kimiloğlu et al., 2010). It is known that a healthy personality development is important for individuals to lead a regular, happy and meaningful life in the socialization process (Türkay, 2020).

Addiction is the inability to give up the habit level of the work done, and with this, it creates an involuntary control mechanism by breaking away from life and causing it to start enjoying it together with other substances that it makes and uses (Taştan,2020; Ertan,2019). This control begins to be reflected very easily in his behaviors and reactions. It makes it easier for him to relax if he uses the object or substance to which he is addicted by causing him to feel tense and restless. In the period we live in, the internet, where the latest versions of technology are used, where we can find a platform for every need, and the mobile phones that we always have with us to connect to it, have become one of the important issues that are thought about and researched in a short time (Ertan,2019).

The Internet is a network formation where individuals can meet each other, shop, facilitate bill payments, and do most of the transactions by sitting in front of them while waiting in line for hours (Akhter, 2013). Internet addiction occurs as a result of these conveniences being among our high usage habits due to making our lives easier and our ability to move comfortably, and therefore not being controlled (Ganesh et al, 2017). It is used by every segment of young, adult and old people with the conveniences that the internet adds to our lives. In addition to affecting all individuals with excessive use, it also affects the academic performance of students of all age groups positively and negatively (Akhter, 2013). Internet addiction causes not only an academic interaction but also physical, cognitive, social, psychological and many undefined problems in individuals. With the integration of the computer version and operating systems of the internet usage network into mobile phones, the fact that it is always with us and open to access, so the use of it is higher, besides internet addiction, the formation of nomophobia (fear of being without a mobile phone) has increased significantly (Kimiloğlu et al, 2010).

Nomophobia means the fear of being away from the mobile phone and the research on it has only just begun, although not much. Nomophobia first entered the literature during a



research conducted in England in 2008 (Yıldırım & Correia, 2015; Kimiloğlu et al., 2010). Nomophobia affects individuals physically, socially and psychologically and creates a state of tension and anxiety in individuals. Nomophobia is examined in subcategories of not being able to communicate, not being able to access information, losing connection and not feeling comfortable in individuals (Taştan, 2020). With the occurrence of internet addiction and nomophobia, decreases in physical activity levels and related health problems can be seen in individuals (Ulutaşdemir et al., 2017). The expression "social appearance anxiety", which was first used by Janet in 1903, is a sudden change in the negative emotions and thoughts that an individual feels in front of society (Türkay, 2021).

This research was carried out in order to evaluate the effects of "internet addiction and nomophobia", which negatively affect the health of individuals and, accordingly, societies in today's social life, on high school students, in terms of different parameters.

For this purpose, answers to the following sub-problems will be sought.

- What is the internet addiction and nomophobia level of high school students?
- Does the level of internet addiction and nomophobia differ according to gender?
- Does the level of internet addiction and nomophobia differ according to active sports?
- Does the level of internet addiction and nomophobia differ according to the type of school attended?
- Does the level of internet addiction and nomophobia differ according to the place of residence?
- What kind of a relationship is there between internet addiction and nomophobia?

2.Method

The research is a study in the survey scanning model. Scanning model; They are research models that try to describe a past and present situation as it is (Karasar, 2012).

2.1.Working group

The universe of the research consists of four different high schools, namely "Flat high school, Sports high school, Imam preacher high school and College" located in the city center and central districts of Isparta. The sample group consists of a total of 411 students, 248 females and 162 males, selected according to the easily accessible technique (Yıldırım & Şimşek, 2011) studying in these high schools.

2.3.Data Collection Tools

As data collection tools in the research; The Internet Addiction Scale developed by Young (1998) and the Nomophobia Scale developed by Yıldırım and Correia (2015), adapted to Turkish by Yıldırım et al. (2016) and updated to a 5-point Likert type by Erdem et al. (2017) were used. A separate form was used to collect the demographic information of the participants.

2.4.Internet Addiction Scale:

"Internet Addiction Scale" developed by Young (1998) was adapted into Turkish by Bayraktar (2001). The scale is a 6-point Likert type and consists of 20 items. The response options of the scale are "never", "rarely", "occasionally", "often", "very often" and "continually". Answer options are scored from 0 to 5. A score between 0 and 100 can be obtained from the scale. Those who score 80 and above from the total score of the scale are internet addicts; Those who score in the 50-79 range are those with limited symptoms; Those



who score below 50 are defined as asymptomatic. The Cronbach alpha value of the translated version of the scale is 0.91, the Spearman-Brown value. It was found to be 87.

2.5. Nomophobia Scale

The reliability value (Cronbach Alpha) of the “Nomophobia” scale developed by Yıldırım and Correia (2015) was calculated as 0.95. The reliability value (Cronbach Alpha) of the scale was calculated as 0.92 in its adaptation to Turkish by Yıldırım et al. (2016). The scale is likert type and the answer options are graded as “Strongly disagree (1), Disagree (2), Undecided (3), Agree (4) and Strongly agree (5)”.

2.6. Evaluation of Data

The obtained data were transferred to the appropriate statistical program to be evaluated. Statistically, firstly, percentage (%) and frequency (f) values were calculated. Normality test Kolmogorov Smirnov and Shapiro Wilk tests were performed to check the normality distribution of the obtained data. It was observed that the test results were significant and the data were not normally distributed. Consequently; for pairwise comparisons in dependent and independent variable comparisons; Mann-Whitney U test and Kruskal Wallis test were used for multiple comparisons. Pearson Correlation procedure was applied to determine the relationship between internet addiction and nomophobia.

Table 1. Demographic distribution of the participants

Variables		N. Distribution	%. Distribution
Gender	1. Woman	248	60,48
	2. Male	162	39,51
	Total	410	100.0
School type	1. Sports High School	120	29,26
	2. Private college	96	23,41
	3. Imam Hatip High School	72	17,56
	4. Normal highschool	122	29,75
	Total	410	100.0
Place of residence	1. Staying with family	258	62,92
	2. Staying with relatives	9	2,19
	3. dormitory	143	34,87
	Total	410	100.0
Active sports status	1. Yes	162	39,51
	2. No	248	60,48
	Total	410	100.0

In Table 1, the demographic characteristics of the participants are questioned. According to this query, the gender distribution of the participants was 60.48% female and 39.51% male, 29.75% of the schools they attended were regular high schools, 29.26% were sports high schools, and 23.41% were private schools. college and 17.56% of them attended imam hatip high school, 62.92% of them stayed with their families, 34.87% of them stayed in the dormitory, 2.19% of them stayed with relatives, 60.48% of them were active. It is seen that 39.51% of them do sports actively.



3.Results

Table 2. Descriptive statistical distribution of the mean scores of the participants' answers to the "Internet addiction and nomophobia" scale questions.

Variables	N	Minimum	Maximum	\bar{X}	Ss
1. Internet addiction	410	,00	4,85	1,9917	,93750
2. Nomophobia	410	1,00	4,80	2,7468	,78364

In Table 2, the "Internet addiction and Nomophobia" statuses of the participants were questioned. Internet addiction mean score ($\bar{X}=1.9917$) and nomophobia mean score ($\bar{X}=2.7468$) were found among these queries. According to these results, we can say that the average score of internet addiction of the participants is medium and above, and the average score of "nomophobia" is above the middle.

Table 3. Descriptive statistical distribution of the participants' responses to the sub-dimensions of the nomophobia scale.

Nomophobia sub-dimensions	N	Minimum	Maximum	\bar{X}	Ss
1. Inability to access information	410	1,00	5,00	2,7098	,92848
2. Inability to contact	410	1,00	5,00	2,9870	1,04839
3. Inability to feel comfortable	410	1,00	5,00	2,4395	,92533
4. Don't lose connection	410	1,00	5,00	2,7956	,83837

In Table 3, the answers given by the participants to the sub-dimensions of the nomophobia scale were questioned. According to this query, it is seen that the sub-dimensions of "not being able to communicate ($\bar{X}=2.9870$), loss of connection ($\bar{X}=2.7956$), not being able to access information ($\bar{X}=2.7098$), not feeling comfortable ($\bar{X}=2.4395$) have average scores. According to these scores, we can say that the nomophobia levels of the participants are above the middle.

Table 4. Comparative mann-whitney u test distribution of participants' internet addiction and nomophobia levels according to gender variable.

	Gender	N	\bar{X}	Total of rows	U	Z	P
Internet addiction	1.Woman	248	211,08	52348,50	18703,500	-1,181	0,238
	2.Man	162	196,95	31906,50			
	Total	410					
Nomophobia	1. Woman	248	193,09	47885,50	17009,500	-2,626	0,009*
	2. Man	162	224,50	36369,50			
	Total	410					

$P<0,05^*$

In Table 4, internet addiction and nomophobia levels of the participants are questioned according to the gender variable. There was no significant difference in the mean scores of the answers given for internet addiction according to the gender variable ($p=0.238,>0.05$). There is



a statistically significant difference in the average of the answers given for the nomophobia question statements ($p=0.009$, <0.05).

Table 5. Comparative mann-whitney u test distribution of internet addiction and nomophobia levels of the participants according to their active sports status.

	Active Sports	N	\bar{X}	Total of rows	U	Z	P
İnternet bağımlılığı	1.Yes	162	200,04	32407,00	19204,000	-,754	0,451
	2.No	248	209,06	51848,00			
	Total	410					
Nomophobia	1.Yes	162	186,24	30171,50	16968,500	-2,661	0,008*
	2.No	248	218,08	54083,50			
	Total	410					

$P<0,05^*$

In Table 5, internet addiction and nomophobia levels of the participants were questioned according to the variable of "active sports". There was no significant difference in the mean scores of the answers given for internet addiction according to the active sports variable ($p=0.451$, >0.05). There is a statistically significant difference in the average of the answers given for the nomophobia question statements ($p=0.008$, <0.05).

Table 6. The comparative kruskal-wallis test distribution of internet addiction and nomophobia levels of the participants according to the type of school they attend.

	School type	N	\bar{X}	df	χ^2	p
İnternet addiction	1.Sports high school	120	226,94	3	55,877	0,000
	2.Private college	96	168,25			
	3. Imam Hatip High School	72	138,88			
	4. Normal High School	122	253,04			
	Total	410				
Nomophobia	1. Sports high school	120	194,75	3	16,559	0,001
	2. Private college	96	174,10			
	3. Imam Hatip High School	72	243,38			
	4. Normal High School	122	218,43			
	Total	410				

$P<0,05^*$

In Table 6, internet addiction and nomophobia levels of the participants were questioned according to the "type of school" variable they studied. According to the school type variable in this query, there is a significant difference in the mean scores of answers to internet addiction ($p=0.000$, <0.05). There is also a statistically significant difference in the average of the answers given for the nomophobia question statements ($p=0.001$, <0.05).



Table 7. Comparative kruskal-wallis test distribution of internet addiction and nomophobia levels of the participants according to their place of residence

	Place of residence	N	\bar{X}	df	X^2	p
Internet addiction	1. With my family	258	184,99	2	21,022	0,000
	2. Near relatives	9	226,00			
	3. In the dormitory	143	241,22			
	Total	410				
Nomophobia	1. With my family	258	205,31	2	,613	,736
	2. Near relatives	9	175,89			
	3. In the dormitory	143	207,70			
	Total	410				

$P < 0,05^*$

In Table 7, internet addiction and nomophobia levels of the participants are questioned according to the “place of residence” variable they read. According to the “place of residence” variable in this query, there is a significant difference in the mean scores of answers to internet addiction ($p = 0.000, < 0.05$). There was no statistically significant difference in the mean response rates for the nomophobia question statements ($p = 0.736, > 0.05$).

Table 8. Pearson correlation distribution of the relationship between participants' responses to internet addiction and nomophobia scale.

Variables	Internet Addiction Scale	Nomophobia scale
Internet Addiction Scale	Pearson Correlation	1
	Sig. (2-tailed)	,508(**)
	N	410
Nomophobia scale	Pearson Correlation	,508(**)
	Sig. (2-tailed)	,000
	N	410

** Correlation is significant at the 0.01 level (2-tailed). $P < 0,05^*$

Table 8 questions the relationship between participants' internet addiction scale and nomophobia scale levels. According to this query, it is seen that there is a positive correlation at $p < 0.01$ level between the participants' internet addiction scale and nomophobia scale ($r = .508$).

Discussion

A total of 411 students participated in this study on a voluntary basis to examine the internet addiction and nomophobia levels of high school students in terms of different parameters. When we look at the personal characteristics of these participants, 60.3% of the gender distribution is male and 39.4% is female, 29.7% of the schools they attend are regular high schools, 29.2% are sports high schools, 23.4% attended a private college and 17.5% of them attended imam hatip high schools, 62.8% stayed with their families, 34.8% stayed in the dormitory, 2.2% stayed with relatives, 60.3% It is seen that they do not actively do sports, and 39.4% do sports actively (Table 1).



When we look at the answers given by the participants about the "internet addiction and nomophobia" situations, it is seen that the mean internet addiction score ($\bar{X}=1.9917$) and the nomophobia mean score ($\bar{X}=2.7468$). According to these results, we can say that the average score of internet addiction of the participants is moderate, and the mean score of "nomophobia" is above the middle (Table 2). The finding that children mostly play games on the Internet in a similar study by Pepe (2011) supports the finding of internet addiction of the research. When we examine the answers given by the participants to the sub-dimensions of the nomophobia scale in total, the average of the answers given to the sub-dimensions according to this query is "not being able to communicate" ($\bar{X}=2.9870$), loss of connection ($\bar{X}=2.7956$), inability to access information ($\bar{X}=2.7098$), inability to feel comfortable ($\bar{X}=2.4395$). According to these scores, we can say that the participants' fear of "not being able to communicate" and "losing the connection", which are sub-dimensions of nomophobia, is higher than the fear of "not being able to access information" and "feeling comfortable" (Table 3). According to these results, we can say that the level of internet addiction and nomophobia is high among young people. Bo & ark(2022), in their study, stated that increasing internet and smartphone addiction is a problem in China and the world, Randjelovic et al (2021), Griffiths (2000), Kwon et al(2013), Venkatesh & ark(2017), Carbonell et al (2012), in their similar studies, found that internet addiction among young people increased, many young people spent a lot of time using the internet and smart phones, some of them never turned off their smart phones, and the use of smart phone internet was at the level of addiction, Bajaj et al(2020), Bartwal et al. Bhola (2020), Setia& Tiwari (2021), Devi& Dutta(2022), the finding that the level of "nomophobia" is high in young and middle-aged people due to the internet and smart phone in their studies shows parallelism with the research finding.

When we look at the answers given for the internet addiction and nomophobia levels of the participants according to the gender variable, it is seen that the average scores of the answers for internet addiction are in women ($\bar{X}=211.08$) and in men ($\bar{X}=196.95$). These values are not statistically significant ($p=0.238, >0.05$). In other words, there is no difference in opinions about internet addiction between male and female participants. The mean response rates for the nomophobia questions were found to be females ($\bar{X}=193.09$) and males ($\bar{X}=224.50$). These values are statistically significant ($p=0.009, <0.05$). In other words, there is a difference of opinion in the answers given between the genders. According to these data, it is seen that the "nomophobia" levels of male participants are higher than that of females (Table 4). We can say that these results are generally due to the use of the internet in almost every stage of social life, the fact that our business or private life information and communications are provided via the internet, and the high level of nomophobia in men compared to women is due to the privacy of internet sharing. This research finding was determined by Güler & Veysikarani (2019), Burucuoğlu (2017), Erdem & ark (2017), Yıldırım & ark (2016), Lee (2014), Gezgin & ark (2017) in their similar studies that the level of nomophobia between genders differed between women and men. This is in contrast with the findings that it is higher than.

In the questioning of the internet addiction and nomophobia levels of the participants according to the "active sports" variable, the average scores of the answers to the internet addiction were found to be active sports ($\bar{X}=200.04$) and non-active sports ($\bar{X}=209.06$). These values do not show a statistically significant difference according to the active sports variable ($p=0.451, >0.05$). In other words, there is no significant difference of opinion in the levels of internet addiction in the answers given by the participants in the variable of active sports or not. The average of the answers given to the nomophobia question propositions was found to be active sports ($\bar{X}=186.24$) and non-active sports ($\bar{X}=218.08$). There is a statistically significant



difference in these values ($p=0.008$, <0.05). According to this result, we can say that the nomophobia levels of the participants who do not do active sports are higher than those who do active sports (Table 5). In the study, the finding that there is no significant difference in the levels of internet addiction between those who do active sports and those who do not, Hazar et al. (2017), Şar et al, (2018), Lepp et al. The finding that there is no significant relationship between the states of being present in the study coincides with the findings of the study. On the other hand, Şar et al (2018) and Onur (2019) found in their studies that those who do active sports have lower internet addiction than those who do not, Çubuk (2019), Yeic (2018), Burucuoğlu (2017), Ergin et al (2013). Ergün and Güzel (2019) in their similar research, the findings of the research finding that those who do active sports have higher internet addiction than those who do not. Gümüşgöl (2018) concluded that the participants who do not do active sports in the study have higher nomophobia levels than those who do active sports, which contrasts with the finding in his study that the nomophobia levels of those who do sports as a leisure time activity are higher than those who do not do sports.

In the question of the level of internet addiction and nomophobia according to the "type of school" variable of the participants, the average scores of the answers to the internet addiction according to the type of school variable, sports high school ($\bar{X} = 226.94$), private college ($\bar{X} = 168.25$), Imam hatip high school ($\bar{X} = 138.88$) and regular high school ($\bar{X} = 253.04$). It shows a significant difference in these values ($p=0.000$, <0.05). According to these data, we can say that the internet addiction of regular high school students and sports high school students is higher than other high schools. According to the school type variable, the average scores of the answers given to the nomophobia questions of the participants were found in sports high school ($\bar{X} = 194.75$), private college ($\bar{X} = 174.10$), Imam preacher high school ($\bar{X} = 243.38$) and regular high school ($\bar{X} = 218.43$), was found. These values are statistically significant ($p=0.001$, <0.05) (Table 6). In other words, there is a difference of opinion in the answers given by the participants to nomophobia according to the type of school they attend. According to these data, we may not see that the nomophobia levels of the Imam-Hatip high school and plain high school students are higher than the other high school students.

In the questioning of the "internet addiction" and "nomophobia" levels of the participants according to the variable of "place of residence" during the school period, the average scores of their answers to internet addiction were with my family ($\bar{X} = 184.99$), with a relative ($\bar{X} = 226.00$), at the dormitory ($\bar{X} = 241.22$) was found. These values are significant at the ($p=0.000$, <0.05) level. In other words, there is a difference of opinion in the answers given by the participants about internet addiction according to their place of residence during the school period. According to these data, we can say that students living in dormitories and living with relatives have a high level of internet addiction. The mean response rates for nomophobia were found to be with my family ($\bar{X} = 205.31$), with relatives ($\bar{X} = 175.89$), and in the dormitory ($\bar{X} = 207.70$). These values are not significant at the level of ($p=0.736$, >0.05) (Table 7). According to this result, we can say that there is no difference of opinion in the answers given by the participants to nomophobia according to their place of residence. The finding in the study that there is a difference in internet addiction according to the place of residence of the individuals, Balci and Gülnar (2009), Bağış, (2016), Canan (2010), Aslan (2010), Çam (2014) in their similar studies, the place of residence of the individuals and the internet addiction. This contrasts with the finding that there is no difference in addiction levels. On the other hand, in the study conducted by Durak-Batıgün and Kılıç (2011) the finding that those who connect to the internet from home and dormitory have higher levels of internet addiction than those who connect to the internet from other places is in parallel with the research finding. In the study,



the finding that there was no statistically significant difference in the nomophobia levels of the participants according to their place of residence contradicts the finding of a similar study by Kartal (2019) that those who live with their families are more nomophobic than those who live in the dormitory.

In the answers given by the participants to the internet addiction scale and the nomophobia scale, it is seen that there is a significant positive ($p=0.000$, <0.01) correlation between the internet addiction scale and the nomophobia scale ($r=.508$) (Table 8). This research finding showed that Aydemir (2016), Noyan et al (2015), Yıldız et al (2020) and Traş and Öztemel (2019) found a positive correlation between nomophobia and internet addiction and between facebook intensity, internet usage time and smartphone addiction in their similar studies. Findings that there is a relationship and that nomophobia is an important interpreter of internet addiction are in parallel with the findings of the research.

Conclusion.

As a result of the data obtained within the scope of the research; Although there are statistically significant differences in the answers given by the participants to the levels of internet addiction and nomophobia, we can say that the average scores are medium and above in general, and that there is a positive and significant relationship between internet addiction and nomophobia.

Suggestions.

- Information about internet addiction and nomophobia should be provided to every segment of the society through written and visual media, educational institutions, local administrations and non-governmental organizations, etc.
- Conscious use of the internet and digital devices should be explained to all age groups, especially children.
- The physical, social and psychological effects of long exposure to the Internet and digital devices should be explained to users and families.
- In order to prevent internet and digital device addiction, individuals should be directed to different free time activities they want outside of their compulsory work.
- This research should be done by expanding the universe and sample in terms of "cause-process-effect and precautions" with different dimensions.

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