

Examination Of Nomophobia, Internet Addiction And Loneliness Levels Of University Students: A Cross-Sectional Study

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Abstract

The aim of this study is to examine the nomophobia, internet addiction, and loneliness levels of university students. The study group of this cross-sectional study consisted of 966 university students who responded to the items digitally and manually. Personal information form, Young Internet Addiction Scale Short Form, UCLA Loneliness Scale, and Nomophobia Scale were used as data collection tools. SPSS version 24 was used for data analysis. It was found that students who used the internet for 5 hours or more had higher scores in nomophobia and loneliness. Additionally, male students had higher scores in nomophobia and internet addiction compared to female students. Sedentary students had higher scores in nomophobia and internet addiction compared to athletes. Based on the findings of this study, it can be said that sports have positive reflections on emotions and behaviors such as nomophobia, internet addiction, and loneliness. As the duration of internet use increases, emotions and behaviors such as addiction, anger, and loneliness negatively impact individuals' experiences.

Keywords; Sport, Loneliness, Internet, Nomophobia, Addiction, University Students

Introduction

University students have to struggle with various socio-cultural problems such as accommodation, nutrition, and orientation, as well as issues related to education and training. Both students and their families form an emotional bond with their mobile phones until they get used to a new environment. Today, technological development and innovations force almost every individual to use devices such as mobile phones, tablets, computers, and digital applications. Nomophobia is defined as the irrational fear and anxiety when a person is away from their mobile phone (Yıldırım & Correia, 2015). It is reported that the first users of smartphones were university students (Lee, 2014), and they are popularly used by university students (Yıldırım, 2014). Individuals establish closeness with their phones and feel distressed when they are separated from them (Konok et al., 2016). University students have high levels of anxiety and stress and may experience psychological problems while solving these issues (Bayram & Bilgel, 2008).

Technological developments and the widespread use of smartphones affect daily life and activities (Pavithra et al., 2015). The symptoms of nomophobia include behaviors such as spending too much time with the smartphone, checking it frequently, not switching it off, sleeping with it, communicating only with it, allocating too many resources to the smartphone, and avoiding places where using the phone is prohibited (Bragazzi & Del Puente, 2014). For an individual to be addicted to something, they should consume the relevant substance more than necessary, develop tolerance to it, and show withdrawal symptoms when they cannot get enough of it (Cüceloğlu, 2005).

The number of Internet users has increased due to its features such as enhancing communication quality with visual and audio elements, enabling economic and quick communication, providing access to up-to-date information sources, and facilitating information sharing (Kuzu, 2011). Banking, access to books and magazines, social networks, communication and transportation operations, education, health, security, and especially the ability to perform many different transactions connected to the e-government application make internet applications attractive and indispensable. Over time, the need for the application may be replaced by the concept of uncontrollable use and internet addiction due to the widespread use of the internet and disinformation related to its use. Individuals can neglect their responsibilities in their daily lives due to excessive Internet use, and they can become dependent on the Internet with the deterioration and weakening of social relations (Karaca, 2019). Internet addiction is characterized as uncontrolled and harmful use (Korkmaz & Şahin, 2011). Individuals who spend time on the internet can spend their days on digital platforms for hours, only leaving for their physiological needs, often without realizing how time passes. Individuals can turn the Internet into an escape point from problems, and if they cannot access the Internet, they may become anxious, sad, and depressed (Günüç, 2009).

Loneliness is defined as an ordinary emotion that everyone can experience at different stages of life, akin to a physical hunger that draws attention to social needs (Cacioppo & Patrick, 2008). Loneliness has two dimensions: emotional and social (Weiss, 1973). Emotional loneliness causes feelings of anxiety and isolation, while social loneliness is characterized by boredom, aimlessness, and feelings of contradiction. Loneliness can be explained by different groups, approaches, and classifications in the literature. Beck and Young (1978) considered the time spent alone and mentioned three types of loneliness: transient, situational, and chronic. Transient loneliness is defined as short-term loneliness that can be felt at any time of the day and disappears when communicating with someone else. Situational loneliness is a type of loneliness that can be caused by situations that happen to the individual (such as

moving to a new city or the loss of a relative), and chronic loneliness is reported to have a structure that makes it difficult for individuals to enter social interactions, paradoxically increasing the loneliness of individuals who need social and close relationships.

Sport is a concept consisting of a combination of competitive, social, inclusive, physical, psychological, and mental activities carried out within the framework of certain conditions and rules to satisfy subconscious desires such as power and victory (Yetim, 2005). The phenomenon of sport enables the emergence of many positive emotions and behaviors such as peace, love, friendship, tolerance, and sharing, and is a powerful concept that prepares the ground for the prevention of negative habits and behaviors. Sport is defined as a special life and a special morality that affects the whole existence of people (Erdemli, 1995). Sport, which contributes to the physical and mental well-being of people, is a physiological, cultural, socio-economic, and social activity that drags people along and makes its importance felt more every day with significant investments (Silik, 2014).

In the literature, it is possible to come across studies that indicate digital addictions cause many mental and physical health problems (Adnan & Gezgin, 2016; Blachnio et al., 2019; Chen & Nath, 2016; Hazar et al., 2017; Kuss & Griffiths, 2011; Rosenberg, 2014). Our study, which aims to examine the nomophobia, internet addiction, and loneliness levels of university students, is thought to shed light on a limited number of studies.

Method

Participants

This cross-sectional study was conducted at the Faculty of Sport Sciences at Gazi University, Duzce University and Selcuk University. To ensure a diverse representation within the sample group, participants were selected using a sampling method supplemented with snowball sampling. The student-athletes reached out through convenience sampling and were asked to share the link to the scale with their student-athlete friends. The inclusion criteria included in the study were as follows: being a university student, not currently taking psychiatric medication, and not participating in psychotherapy. A total of 966 university students, 397 female and 569 male, were reached.

Data Collection

The personal information form created by the researcher was used to obtain the sociodemographic information of the students. In this form, gender, university, daily internet usage, and active sports license were asked. Young Internet Addiction Scale Short Form (YIBÖ-KF) was used for Internet addiction, Nomophobia Scale (NMP-Q) for nomophobia levels, and UCLA (University of California, Los Angeles) Loneliness Scale was used to determine loneliness levels.

Young Internet Addiction Scale Short Form (YIBÖ-KF)

The Young Internet Addiction Test-Short Form (YIAT-SF) was originally developed by Young in 1998, later shortened by Pawlikowski et al. in 2013, and its Turkish version was validated and tested for reliability by Kutlu et al. in 2016. This scale comprises 12 items and uses a five-point Likert-type format (1 = Never, 5 = Very often). The internal consistency reliability of the scale was determined to be 0.85. The findings from the validity and reliability analyses confirm that the YIAT-SF is both valid and reliable. All items are scored positively, with higher scores indicating greater levels of internet addiction. In our study, the Cronbach's Alpha reliability coefficient was found to be 0.84.

UCLA (University of California, Los Angeles) Loneliness Scale

The UCLA Loneliness Scale, originally developed by Russel et al. (1980), was adapted into Turkish and tested for validity and reliability by Demir (1989). The scale’s discriminant validity was found to be significant, with similar scales showing validity coefficients ranging from $r = .50$ to $r = .82$. Reliability assessments revealed an internal consistency coefficient of $.96$ and a test-retest reliability coefficient of $.94$. The scale is composed of 20 items, evenly divided between 10 direct and 10 reverse-scored questions. In our study, the Cronbach’s Alpha coefficient was determined to be $.88$.

Nomophobia Scale (NMP-Q)

Nomophobia Scale was developed by Yıldırım and Correia (2015) to determine the nomophobia levels of individuals. The Turkish validity and reliability study was conducted by Yıldırım et al. (2016). The scale consists of 20 items and is 6-point Likert type. Scale scores between 120 and 90 were evaluated as highly nomophobic, between 89 and 60 as moderately nomophobic, between 59 and 21 as mildly nomophobic, and 20 as non-nomophobic. Cronbach's Alpha reliability coefficient was calculated as $.95$ in the original scale and $.92$ in the adapted scale. The Cronbach Alpha reliability coefficient in our study was found to be $.93$.

Study Ethics

This study was initiated after the ethics committee permission dated 11.05.2023 and numbered 105 was obtained from Selçuk University Faculty of Sport Sciences.

Analysing the Data

SPSS version 23 was used for analysing the data. First, the scales with invalid or missing responses were excluded from the analysis. Subsequently, the kurtosis and skewness values of all scale items were assessed to ensure the normal distribution of the data, with values falling within the range of ± 2.00 for all items, as recommended by George and Mallery. Since it was observed that the data were normally distributed, Independent Sample T test was used for pairwise comparisons and One Way Anova was used for multiple comparisons. $P < 0.05$ was considered as significance value.

Linguistic revisions were conducted in collaboration with an artificial intelligence (AI) language model. The manuscript underwent automated linguistic analysis and revisions using the AI tool to ensure linguistic appropriateness. This process involved examining various linguistic aspects, including grammar and syntax, with the assistance of ChatGPT 3.5. The revisions were integrated into the manuscript to enhance its clarity and coherence.

Results

This section provides tables displaying the percentage, frequency, standard deviation, and mean values derived from the analysis results.

Table 1. Changes in nomophobia, internet addiction and loneliness level depending on gender factor

Gender	n	%	NBAAI		GUC		NBAC		LC		Total NP	
			\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss
Female	397	41.10	20.57	3.68	25.87	3.90	31.06	4.33	25.98	4.00	103.48	10.07
Male	569	58.90	21.30	3.08	26.30	3.73	31.69	3.94	26.07	3.59	105.36	7.81
Total	966	100	21.00	3.35	26.13	3.80	31.43	4.11	26.03	3.76	104.59	8.85

	t		-3.215	-1.721	-2.334		-0.361		-3.126		
	p		.001*	.083	.018*		.713		.001*		
Gender	n	%	Internet Addiction				Loneliness				
			\bar{x}	Ss	t	p	\bar{x}	Ss	t	p	
Female	397	41.10	44.36	4.59				51.10	4.01		
Male	569	58.90	45.46	3.71				51.40	4.95		
Total	966	100	45.01	4.13				51.28	4.59		

* Significant difference between groups ($p < 0.05$), NBAAI: Not Being Able to Access Information, GUC: Giving Up Convenience, NBAC: Not Being Able to Communicate, LC: Losing Connectedness, NP: Nomophobia

It was determined that the value of men was higher than women in nomophobia dimensions depending on the gender factor, and the Not Being Able to Access Information (NBAAI), Not Being Able to Communicate (NBAC) and total nomophobia scores was statistically significant ($p < 0.05$). It was determined that the internet addiction value of males was statistically higher than the value of females, and there was no statistical change in loneliness values depending on gender (refer to Table 1).

Table 2. Changes in nomophobia, internet addiction and loneliness level depending on daily internet usage factor

Daily Internet Usage (H)	n	%	NBAAI		GUC		NBAC		LC		Total NP	
			\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss
1-2 H	418	43.27	20.61	3.42 ^a	26.21	3.79	31.49	4.04	26.10	3.80	104.41 ^b	8.66
3-4 H	393	40.68	21.08	3.28 ^b	25.76	3.76 ^a	31.24	4.06	25.96	3.63	104.04 ^b	8.62
5 and +	155	16.05	21.85	3.19 ^b	26.83	3.87 ^b	31.75	4.44	26.03	3.99	106.46 ^a	9.71
F			8.076		4.538		.966		.138		4.360	
p			.000*		.011*		.381		.871		.013*	

Daily Internet Usage	n	%	Internet Addiction				Loneliness			
			\bar{x}	Ss	f	p	\bar{x}	Ss	f	p
1-2 H	418	43.27	44.95	4.24			50.96	4.04 ^b		
3-4 H	393	40.68	44.91	4.01		.956	50.87	4.21 ^b		16.079
5 and +	155	16.05	45.43	4.14			53.16	6.20 ^a		.000*

* Significant difference between groups ($p < 0.05$) ^{a,b} = Source of difference. NBAAI: Not Being Able to Access Information, GUC: Giving Up Convenience, NBAC: Not Being Able to Communicate, LC: Losing Connectedness, NP: Nomophobia

While no statistical change was observed in the NBAC and Losing Connectedness (LC) on the daily internet usage, it was determined that the change in NBAAI, Giving Up Convenience (GUC) and total nomophobia values was statistically significant ($p < 0.05$). While no statistical change was observed between internet addiction values depending on daily internet use, it was determined that the value of students with internet habits of 5 hours or more in loneliness levels had a statistically higher mean value than students who used the internet for 1-2 and 3-4 hours ($p < 0.05$).

Table 3. Changes in nomophobia, internet addiction and loneliness level depending on sporting status factor

Sporting Status	n	%	NBAAI		GUC		NBAC		LC		Total NP		
			\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss	
Athletes	451	46.69	20.73	3.61	25.98	4.18	31.38	4.44	25.86	3.89	103.96	10.28	
Sedentary	515	53.31	21.23	3.10	26.25	3.44	31.47	3.81	26.18	3.63	105.14	7.35	
			t		-2.272		-1.114		-.345		-1.315		-2.034
			p		.022*		.260		.728		.187		.038*

Sporting Status	n	%	Internet Addiction				Loneliness			
			\bar{x}	Ss	t	p	\bar{x}	Ss	t	p
Athletes	451	46.69	44.60	4.42	-2.838	.004*	51.05	4.16	-1.415	.153
Sedentary	515	53.31	45.36	3.82			51.47	4.94		

*Significant difference between groups ($p < 0.05$), NBAAI: Not Being Able to Access Information, GUC: Giving Up Convenience, NBAC: Not Being Able to Communicate, LC: Losing Connectedness, NP: Nomophobia

After observing Table 3, it was determined that the values in the nomophobia dimensions of the students who do sports are lower than those who do not do sports, and the change in NBAAI and total nomophobia values is statistically significant ($p < 0.05$). While no statistical change was observed between the internet addiction values depending on the status of doing sports, it was determined that the loneliness value of the athlete students was statistically lower than the value of the non-sporting students ($p < 0.05$).

Table 4. Changes in nomophobia level between men and women due to sporting status

Sporting Status	n	%	NBAAI		GUC		NBAC		LC		Total NP		
			\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss	\bar{x}	Ss	
Female Athletes	183	46.10	20.10	4.13	25.59	4.35	30.84	4.84	25.38	4.19	101.90	12.44	
Female Sedentary	214	53.90	20.98	3.18	26.11	3.46	31.24	3.85	26.50	3.76	104.83	7.22	
			t		-2,344		-1,309		-.917		-2,778		-2,803
			p		.017*		.184		.351		.005*		.004*
Male Athletes	268	47.10	21.17	3.13	26.24	4.05	31.75	4.12	26.19	3.65	105.36	8.22	
Male Sedentary	301	52.90	21.41	3.04	26.36	3.43	31.64	3.78	25.96	3.53	105.36	7.44	
			t		-.928		-.357		.348		.775		-.006
			p		.353		.719		.727		.438		.995

* Significant difference between groups ($p < 0.05$). NBAAI: Not Being Able to Access Information, GUC: Giving Up Convenience, NBAC: Not Being Able to Communicate, LC: Losing Connectedness, NP: Nomophobia

As can be seen in Table 4, while no statistical change was observed in the nomophobia values of athlete and non-athlete male students, it was determined that the nomophobia values of non-athlete female students were higher than athlete females, and the change in the NBAAI, LC and total nomophobia was statistically significant ($p < 0.05$).

Table 5. Changes in internet addiction and loneliness level among men and women due to sporting status

Sporting Status	n	%	Internet Addiction				Loneliness			
			\bar{x}	Ss	t	p	\bar{x}	Ss	t	p
FemaleAthletes	183	46.10	43.90	5.15	-1.834	.062	51.46	3.95	1.672	.095
FemaleSedentary	214	53.90	44.76	4.01			50.79	4.05		
Male Athletes	268	47.10	45.09	3.78	-2.274	.023*	50.78	4.28	-2.863	.004*
Male Sedentary	301	52.90	45.79	3.62			51.96	5.43		

* Significant difference between groups ($p < 0.05$),

As can be seen in Table 5, while no statistical change was observed in the internet addiction and loneliness values of athlete and non-athlete female students, it was determined that the internet addiction and loneliness values of non-athlete male students were higher than athlete males and this change was statistically significant ($p < 0.05$).

Discussion and Conclusion

It was determined that the values of men in nomophobia dimensions were higher than the values of women, and the change in the dimensions of not being able to access information (NBAAI), not being able to communicate (NBAC), and total nomophobia values was statistically significant ($p < 0.05$; Table 1). When the relevant literature is examined, it is seen that although there are studies reporting that nomophobia does not differ depending on the gender variable (Erdem et al., 2016; Roberts et al., 2014), there are more studies reporting differences (Billieux et al., 2015; Çakır Özgöz, 2020; Çırak, 2021; Ercan & Tekin, 2019; Jena, 2015; Jood, 2017; Kıvrak, 2021; Kwon et al., 2013; Öz, 2018; Polat, 2017; Taştan, 2020; Yaman et al., 2019; Yildirim & Correia, 2015; Yoğurtçu, 2018) and these studies are in parallel with the findings of our study. In our study, the reason for the high nomophobia value of men being higher than the value of women can be seen as the tendency of men to use mobile devices more intensively. However, the statistical change in the dimensions of not being able to access information and losing communication and in the general nomophobia values is an indication of the critical role of mobile devices as communication tools and that they facilitate people's access to information.

It was also found that the internet addiction value of males was statistically higher than that of females ($p < 0.05$; Table 1). When the relevant literature is examined, it is seen that while there are studies showing that the internet addiction value of women is higher than the value of men (Bal, 2023; Cengiz, 2020; Hoşgör & Hoşgör, 2019; Şener, 2022), the studies in which the internet addiction values of men are higher (Adiele & Olatokun, 2014; Akdağ et al., 2014; Aslan & Yazıcı, 2016; Aycan & Üzüm, 2020; Can & Tozoğlu, 2019; Chou & Hsiao, 2000; Chou et al., 2005; Hotar et al., 2022; Johansson & Götestam, 2004; Mahmoud et al., 2022;

Morahan-Martin & Schumacher, 2000; Servidio, 2014; Taştan, 2020; Üzgü et al., 2023; Yoo et al., 2004) and these studies are in parallel with the findings of our study. Within the framework of gender-based femininity and masculinity values, it is known that male students mostly prefer technological products and sports equipment, while women mainly buy clothing, cosmetics, and household goods (Karahana & Adak, 2019). This may mean that men may increase their online interactions and thus the risk of internet addiction. In addition, the popularity of competitive and game-oriented online activities among men (Griffiths et al., 2012; Toker & Baturay, 2016) may also explain the high levels of internet addiction. In terms of sociocultural structure, there are some duties and responsibilities imposed on women by society and the area where women are placed in terms of the function of these responsibilities is the home and family (Elçi, 2011). The fact that women have lower levels of internet addiction can be explained by the fact that they have to fulfill these duties and responsibilities.

There was no statistical change in loneliness values depending on gender (Table 1). When the related literature is examined, it is seen that there are studies in which there is a significant difference between genders in loneliness values (Cramer & Neyedley, 1998; Yılmaz et al., 2018), while many studies in which no significant difference between genders is observed (Altın, 2019; Çeçen, 2008; Çubuk, 2022; Kozaklı, 2006; Oruç, 2013; Serdar et al., 2018; Tunç & Günay, 2020; Üzgü et al., 2023; Uzuner & Karagün, 2014; Yazıcılar Özçelik et al., 2015; Yöyen, 2017). The reason why the value of loneliness in our study did not differ between genders can be seen as the fact that today's technological development and changes have brought the gender-related roles and status between men and women closer to each other.

Those with an internet usage time of 5 hours or more had higher scores in nomophobia and internet addiction depending on the duration of use than those with a low phone usage time; this change in NBAAI, giving up convenience (GUC), and total nomophobia dimensions was statistically significant ($p < 0.05$; Table 2). When the relevant literature is examined, it is seen that studies showing that individuals with high internet usage time have high nomophobia and internet addiction scores (Akdağ et al., 2014; Al-Mamun et al., 2023; Aslan & Yazıcı, 2016; Balcı & Gülnar, 2009; Büyükçolpan, 2019; Can & Tozoğlu, 2019; Cengiz, 2020; Çiftçi, 2018; Gezgin et al., 2018; Helvacıoğlu, 2022; Karaca, 2017; Köyünü et al., 2022; Kutlu et al., 2016; Naser et al., 2023; Öztürk, 2022; Vagka et al., 2023; Yılmazsoy & Kahraman, 2017). In his research on university students, Çiftçi (2018) reported that students mostly access social media from their smartphones. These results are important in terms of overlapping with the findings of our research.

In the loneliness values, it was determined that the value of the students with 5 hours or more of internet usage time had a statistically higher mean value than the students with 1-2 and 3-4 hours of usage time ($p < 0.05$; Table 2). The literature shows that loneliness levels increase with the increase in smartphone and internet use (Andrea & Lovašová, 2020; Arpacı, 2020; Asghari, 2018; Aktaş & Yılmaz, 2017; Batıgün & Hasta, 2010; Çakır & Oğuz, 2017; Çelebi et al., 2020; Demir & Buğa, 2019; Gülaçtı, 2020; Hayırcı, 2019; Mert & Özdemir, 2018; Wang et al., 2011). These studies support our findings in this respect. Individuals with high nomophobia value have characteristics such as checking the smartphone frequently, feeling discomfort when away from the phone, getting stressed when they cannot find their phone, and sleeping with the smartphone (Bragazzi & Puente, 2014). It is thought that the fact that nomophobic individuals see their phones almost as an extension of themselves and prefer to be in places where there is constant internet access will negatively affect their loneliness levels.

It was determined that the nomophobia and internet addiction scores of non-sporting students were higher than those of sporting students, and the change in NBAAI, total nomophobia, and internet addiction scores was statistically significant ($p < 0.05$; Table 3). Aycan and Üzüm (2020) examined the internet addiction levels of high school students and found that the internet addiction levels of students who do not do sports are higher than those of students who do sports. Can and Tozoğlu (2019) examined the internet addiction levels of university students and found that the internet addiction scores of those who do not do sports are higher than those who do sports. In another study conducted by Kautiainen et al. (2005), it was reported that physical activity decreased smartphone use. Torlak et al. (2022) reported that there was a negative relationship between physical activity levels of university students and nomophobia scores, and that students with high physical activity levels may have low nomophobia levels. It is seen that the findings of these studies support the results of our study. It is thought that meeting more people and having the opportunity to share the same social environment, interpersonal communication, being included in a group, recognizing oneself and realizing one's limitations, experiencing and learning emotions such as winning and losing, and gaining skills such as self-expression and gaining self-confidence (Yıldız & Çetin, 2018) may positively affect the over-commitment to the internet and nomophobia levels, and the time allocated to sports may also shorten the time allocated to digital devices.

The loneliness scores of students who did not do sports were higher than those who did sports, but this change was not statistically significant (Table 3). Şara et al. (2018), in their study on university students, found that the loneliness levels of students who do not do sports are higher than those who do sports, but this change is not statistically significant. Toktaş and Demir (2021) examined the loneliness levels of university students and reported that there was no significant difference in the loneliness levels of students who did and did not exercise regularly. Yazıcılar Özçelik et al. (2015) reported that there was no significant difference between the loneliness levels of students who do sports and those who do not do sports. It is seen that the results of these studies support our findings. The fact that the difference in loneliness values was not statistically significant can be explained by the fact that factors such as age, social environment, and emotional states of the students who do not do sports can be effective on loneliness. In addition, frequent training of athletes may also affect their loneliness levels, as a matter of fact, in studies investigating the relationship between exercise frequency and loneliness level, it was concluded that exercise frequency positively affected loneliness values (Hopman-Rock & Westhoff, 2002; Page & Tucker, 1994).

The nomophobia scores of athlete women were higher than non-sporting women, and the change in NBAAI, losing connectedness (LC), and total nomophobia dimensions was statistically significant ($p < 0.05$; Table 4). Social media platforms are seen as a medium where individuals present their lives perfectly and this puts people under pressure. The desire to constantly receive positive feedback and likes on social platforms and the desire of athletes to show their ideal body image associated with sports on these platforms may increase the commitment to phones. In addition, the use of smartphones for training tracking and diet planning for athletes may increase the commitment of sportswomen to their phones. Taştan (2020), in his study on Internet Addiction and Nomophobia Levels of University Students who do and do not do sports, reported that there is a statistical change in internet addiction levels depending on the type of sport and the type of sport. Torlak et al. (2022) reported that the relationship between physical activity and nomophobia risk was higher in female students than in male students. In our study, no statistical difference was observed between the nomophobia scores of men who did and did not do sports (Table 4). Although it is thought that the time allocated to sportive activities will limit excessive phone use, it should not be

ignored that the intensity, duration, and frequency of these activities will affect this situation, and that the smartphone may be with and in use by the athlete during the activities.

No significant difference was observed in internet addiction and loneliness levels between female athletes and non-athletes (Table 5). Şara et al. (2018), in their study on university students, found that there was no difference between the loneliness and internet addiction levels of students who do and do not do sports. Toktaş and Demir (2021), in their study examining the loneliness levels of university students, reported that there was no significant difference in the loneliness levels of students who exercise regularly and those who do not exercise regularly. Yazıcılar Özçelik et al. (2015) examined the loneliness levels of university students and found that there was no significant difference between the loneliness levels of female students who do and do not do sports. It is seen that these studies support our findings. It is known that sport has positive effects on psychological health and provides psychological well-being to individuals. Therefore, doing sport has the potential to reduce individuals' loneliness levels and the risk of internet addiction. However, these effects may not be directly dependent on the factor of playing sport; that is, they may be insufficient to explain the difference between women who are athletes and women who are not athletes. In future studies, it may be recommended to conduct studies that examine the effect of sport on loneliness and internet addiction in more depth by using larger and more diverse sample groups.

The internet addiction and loneliness scores of male students who did not do sports were higher than male students who did sports and this difference was statistically significant ($p < 0.05$; Table 5). Can and Tozoğlu (2019) examined the internet addiction levels of university students in terms of sports and different variables and found that the internet addiction scores of students who do not do sports are higher than athletes. Yazıcılar Özçelik et al. (2015), in their study on university students, found that the loneliness scores of male students who do not do sports are higher than those who do sports. The findings of Can and Tozoğlu (2019) and Yazıcılar Özçelik et al. (2015) overlap with the findings of our study in this respect. It can be said that individuals who do sports can meet more people, find the opportunity to share the same social environment and thus increase their interpersonal communication skills (Yıldız & Çetin, 2018), which can reduce the loneliness levels of athletes and reduce the time they spend on the internet.

Lastly, it can be said that sport has a positive reflection on emotions and behaviors such as nomophobia, internet addiction, and loneliness, and as the duration of phone use increases, emotions and behaviors such as addiction, anger, and loneliness are reflected negatively on the experiences of individuals.

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