



Journal name	International e-Journal of Educational Studies
Abbreviation	IEJES
e-ISSN	2602-4241
Founded	2017
Article link	http://doi.org/10.31458/iejjes.1344541
Article type	Research Article
Received date	16.08.2023
Accepted date	05.10.2023
Publication date	21.10.2023
Volume	7
Issue	15
pp-pp	730-737
Section Editor	Prof.Dr. José Luis UBAGO-JIMÉNEZ
Chief-in-Editor	Prof.Dr. Tamer KUTLUCA
Abstracting & Indexing	Education Source Ultimate Database Coverage List EBSCO Education Full Text Database Coverage List H.W. Wilson Index Copernicus DRJI Harvard Library WorldCat SOBIAD
Article Name	Assessment of Mobile Phone Usage and Loneliness Levels of Faculty of Sports Sciences Students

Author Contribution Statement

¹ Süreyya Yonca SEZER 

Assoc.Prof.Dr.
Munzur University, Turkey

Conceptualization, literature review, methodology, implementation, data analysis, translation, and writing

² Kubilay ŞENBAKAR 

Assoc.Prof.Dr.
Firat University, Turkey

Conceptualization, literature review, methodology, implementation, data analysis, translation, and writing

Abstract

With the introduction of the mobile phone into our life, several social media and game applications were created, and individuals began to spend their time in the virtual world. The purpose of this study was to measure the loneliness levels of students at the Faculty of Sport Sciences using mobile phones. People have been more focused on their mobile phones as technology has advanced, and this has unavoidably led to a shift away from the environment and people. The research population consists of students from Firat University's Faculty of Sports Sciences. The sample consists of 146 students enrolled in the faculty of sports sciences in the academic year 2022-2023. The "Problematic mobile phone use scale" established by Kutlu and Pamuk and the "UCLA loneliness scale" developed by Russell (1996) were utilized as data collection techniques in the study. The SPSS package program was used to analyze the data. Female students of the Faculty of Sports Sciences had higher mobile phone usage values than male students, and their loneliness levels were lower than male students, according to our study, and when the values of the students participating in the study were examined, they used mobile phones between 0-4 hours. As a result, in our study, it was shown that students generally spend the majority of their time alone on the phone and playing games, while female students' PCPU (Problematic Mobile Phone Use Scale) scores are higher than men's, and women's values on the UCLA loneliness scale are low.

To cite this article:

Sezer, S.Y., & Şenbakar, K. (2023). Assessment of mobile phone usage and loneliness levels of faculty of sports sciences students. *International e-Journal of Educational Studies*, 7 (15), 730-737. <https://doi.org/10.31458/iejjes.1344541>

Copyright © IEJES

IEJES's Publication Ethics and Publication Malpractice Statement are based, in large part, on the guidelines and standards developed by the Committee on Publication Ethics (COPE). This article is available under Creative Commons CC-BY 4.0 license (<https://creativecommons.org/licenses/by/4.0/>)

Research Article**Assessment of Mobile Phone Usage and Loneliness Levels of Faculty of Sports Sciences Students***Süreyya Yonca SEZER¹  Kubilay ŞENBAKAR² **Abstract**

With the introduction of the mobile phone into our life, several social media and game applications were created, and individuals began to spend their time in the virtual world. The purpose of this study was to measure the loneliness levels of students at the Faculty of Sport Sciences using mobile phones. People have been more focused on their mobile phones as technology has advanced, and this has unavoidably led to a shift away from the environment and people. The research population consists of students from Firat University's Faculty of Sports Sciences. The sample consists of 146 students enrolled in the faculty of sports sciences in the academic year 2022-2023. The "Problematic mobile phone use scale" established by Kutlu and Pamuk and the "UCLA loneliness scale" developed by Russell (1996) were utilized as data collection techniques in the study. The SPSS package program was used to analyze the data. Female students of the Faculty of Sports Sciences had higher mobile phone usage values than male students, and their loneliness levels were lower than male students, according to our study, and when the values of the students participating in the study were examined, they used mobile phones between 0-4 hours. As a result, in our study, it was shown that students generally spend the majority of their time alone on the phone and playing games, while female students' PCPU (Problematic Mobile Phone Use Scale) scores are higher than men's, and women's values on the UCLA loneliness scale are low.

Keywords: Sports, student, cell phone, loneliness**1. INTRODUCTION**

It aims at people, plays an active role in reaching the results, and is time efficient. The effort to use it is called time management. With the development of technology, an even more important time management, which has become a situation, is a care that should be taken care of by people. Time while the importance of use does not only mean the time control, it does not affect the living conditions of the units of time control. It is one of the most important factors in promotion (Alay, 2000). People play games on their mobile phones in their free time and spend most of their time here. After the Covid 19 process, an increase in mobile gaming and internet addiction on mobile phones has been observed. In a study, they observed that the athletes made good use of their free time during the covid 19 process (Sezer & Çelikel, 2021). Technology is a notion that acts to improve human existence, acquires pace in response to demands and needs, and evolves. By providing a comfort zone, technology enables maximum efficiency with minimal effort. Smartphones have grown as indispensable devices, particularly with the increase in internet speed and mobile phone capability. your cell phones; It has been supplanted by computers and is widely used due to its compact size, easy portability, and nearly infinite network connectivity. The ability to use many functionalities

Received Date: 16/08/2023**Accepted Date:** 05/10/2023**Publication Date:** 21/10/2023

*To cite this article: Sezer, S.Y., & Şenbakar, K. (2023). Assessment of mobile phone usage and loneliness levels of faculty of sports sciences students. *International e-Journal of Educational Studies*, 7 (15), 730-737. <https://doi.org/10.31458/iej.1344541>

¹ Assoc.Prof.Dr., Munzur University, ybicer1@firat.edu.tr, Tunceli, Türkiye

² Assoc.Prof.Dr., Firat University, ksenbakar@gmail.com, Elazığ, Türkiye

Corresponding Author e-mail adress: ybicer1@firat.edu.tr

simultaneously, such as video calling, messaging, and recording, has boosted the desirability and usage rates of smart phones. It makes human existence easier with these features. Smartphones' habits, communication methods, cultural attitudes, and family interactions continue to differ (Işık, 2015; Samaha & Hawi, 2016). However, while it eliminates hurdles and speeds up life, it also causes behaviors that cannot be avoided in another realm. In the world and in our country, the prevalence of smartphone addiction or problematic smartphone use has reached alarming levels (Poushter, 2016). According to Tanju 2022, 77% of the Turkish population owns a smartphone. According to the results of the "Mobile User Survey" in Turkey, it was determined that the use of smartphones, which was known to be 86% in 2015, increased to 92% in 2017 (Goodall et al, 2017). For the usage rates increasing exponentially day by day; According to the 2020 data of the research conducted by the Turkish Statistical Institute (TUIK), it was determined that the rate of smartphone usage in Turkey is 95.3% in the 16-74 age group, with the strongest usage rate being 98% in the 18-24 age group (Tanju, 2022). Cisco Connected World Technology Report (2012) shared a study conducted on 1800 people between the ages of 18-30. In the study, it was determined that phone control was the first among the morning tasks, 97% in Turkey and 90% in the whole world. 60% of the participants from all over the world and 93% of the participants from Turkey obsessively check social networks, message boxes and e-mails via their mobile phones (Tanju 2022). University students are among the first to experience the use of smartphones. According to the increase in the frequency of use, studies to increase the awareness level of university students have a serious importance. The fact that students spend long periods of time with their phones causes deterioration in their course performance in their school life (Alakurt, & Yilmaz, 2021). Smartphones have been shown to have a negative impact on students' academic progress by interfering with their learning process (Boumosleh & Jaalouk, 2018). According to one study, smartphone addiction among university students was not associated to enjoying life, but was negatively related to academic accomplishment (Samaha & Hawi, 2016). Another study conducted with university students found that 68% of them felt disconnected when they were without a phone, 63% thought their phone was ringing even though it was not, and 66% felt lonely when their phone was not with them (Emanuel et al., 2015).

2. METHOD

2.1. Research Method

In this research, source documents were examined, and comparison type relational survey model, one of the quantitative research methods, was used (Karasar, 2012). Research data was collected using a scale from students who voluntarily participated in the research in the fall semester of the 2022-2023 academic year.

2.2. Working group

The research population consists of students from Frat University's Faculty of Sports Sciences. The sample consists of 146 students enrolled in the faculty of sports sciences in the academic year 2022-2023. A total of 146 students, 80 male students and 66 female students, participated in the research.

2.3. Data collection tool

The "Problematic mobile phone use scale" established by Kutlu and Pamuk and the "UCLA loneliness scale" developed by Russell (1996) were utilized as data collection techniques in the study. In the first portion of our study, we asked about gender, sports year, social media use, and whether or not you play mobile phone games. How frequently do you play video games? Demographic data in the form of questions is included.

In the second part of our study, "The Problematic Cell Phone Usage Scale" consists of 27 questions and 4 sub-dimensions (Deprivation, Negative results, control problem, avoidance of

interaction). The “UCLA Loneliness Scale” consists of 20 questions and consists of 2 sub-dimensions (Unity and Uniqueness).

2.4. Analysis of Data

It is analyzed by applying PCPU and UCLA loneliness scales to the Faculty of Sports Sciences. Data analysis was analyzed using SPSS 22.0 statistical package program. For the normality analysis of the data, skewness and kurtosis tests and Cronbach's alpha reliability analysis were performed and the frequency (f) and percentage (%) distributions have been checked. Parametric tests were applied to the data determined to be normally distributed. In examining the PCPU and UCLA loneliness scales of the Faculty of Sports Sciences according to their sub-dimensions, independent samples t-test, which is one of the parametric tests, and ANOVA test for differences between groups and multiple comparisons were determined and interpreted. Tukey and LSD Tests were applied to understand which groups were in favor of the significant difference revealed in the one-way analysis of variance. Comments are supported by tables. In the analyses, the significance level was accepted as $p < 0.05$.

3. FINDINGS

Table 1. Demographic information of the students of the faculty of sports sciences

		f	%
Gender	Male	80	54,8
	Female	66	45,2
Sports Year	0-3 years	45	30,8
	4-7 years	32	21,9
	8-11 years	39	26,7
	12 years and over	30	20,5
Social Media Usage	Yes	126	86,3
	No	20	13,7
Do you play games on your Mobile?	Yes	76	52,1
	No	70	47,9
How often do you play game?	0-4 hours	90	61,6
	5-9 hours	32	21,9
	10 hours and over	20	16,4

732

When Table 1 is assessed, the gender, year of sports, use of social media, status of playing games on the mobile phone and how often you play games of the students in the research group, respectively, 146 people participated and 54.8% of the participants were male, 66 of them 45.2% were female, 0-3 years 45 people, 4-7 years 32 people, 8-11 years 39 people, the number of people with 12 or more years of sports is 30, in the case of using social media no, 86% of them use the mobile phone, 86% yes, 86% of them use the mobile phone, 86% 1 of them yes, 47.9% of them I don't play, they determined that 90 people play 0-4 hours, 32 people 5-9 hours, 20 people 10 or more hours.

Table 2. Analysis of the problematic cell phone use (PCPU) sub-dimensions of the faculty of sport sciences students and the sub-dimensions of the UCLA loneliness scale by gender variable

	Gender	N	Mean	sd	t	p
Deprivation	Male	80	3,01	,96	-1,988	0,079
	Female	66	3,35	1,11		
Negative Results	Male	80	2,20	1,00	1,876	0,198
	Female	66	1,88	1,00		
Control problem	Male	80	2,71	,89	-1,384	0,049*
	Female	66	2,95	1,27		
Avoid from Interaction	Male	80	1,64	,71	,265	0,063
	Female	66	1,61	,90		
UCLA sub dimension Unity	Male	80	3,09	,89	-1,772	0,944
	Female	66	3,36	,90		
UCLA sub dimension singularity	Male	80	2,21	,72	1,293	0,094
	Female	66	2,06	,62		

$p < 0,05$

When Table 2 was monitored, it was specified that there was a statistically significant difference in the control problem sub-dimension of the problematic mobile phone use scale in the gender variable of the research group ($p < 0.05$). It was determined that there was no statistically significant difference in the sub-dimensions of deprivation, negative results, and avoidance of interaction with PCPU. No statistical significance was found in the sub-dimensions of the UCLA loneliness scale ($p > 0.05$). As a result of the analysis, it was determined that the values of women in the control problem sub-dimension were higher than that of men.

Table 3. Analysis of the PCPU sub-dimensions of the faculty of sport sciences students and the sub-dimensions of the UCLA loneliness scale according to the social media use variable

	Social Media Usage	N	Mean	Sd	t	p
Deprivation	Yes	126	3,25	1,00	2,484	0,014*
	No	20	2,63	1,14		
Negative Results	Yes	126	2,12	1,00	2,100	0,037*
	No	20	1,62	,97		
Control Problem	Yes	126	2,92	1,07	3,029	0,003*
	No	20	2,15	,92		
Avoidance of Interaction	Yes	126	1,66	,82	1,213	0,227
	No	20	1,43	,58		
UCLA sub dimension Unity	Yes	126	3,22	,85	,099	0,921
	No	20	3,20	1,20		
UCLA sub dimension Singularity	Yes	126	2,17	,66	1,169	0,244
	No	20	1,98	,77		

When Table 3 is reviewed, it is discovered that there is a statistically significant difference in the research group's social media usage variable in the sub-dimensions of PCPU deprivation, control problem, and bad results. There was shown to be no statistically significant difference in the sub-dimension of interaction avoidance in PCPU. There was no statistically significant difference in the UCLA loneliness scale's unity and uniqueness sub-dimensions ($p > 0,05$). It was discovered that those who use social media have higher averages in the sub-dimensions of deprivation, control problem, and negative results of PCPU than those who do not use social media.

Table 4. Sub-dimensions of PCPU of faculty of sport sciences students and sub-dimensions of UCLA loneliness scale. Do you have a gaming on cell phone? analysis by variable

	Do you play game on the cell phone?	N	Mean	sd	t	p
Deprivation	Yes	76	3,03	,98	1,175	0,111
	No	70	3,31	1,08		
Negative Results	Yes	76	2,18	1,02	,355	0,135
	No	70	1,92	1,00		
Control Problem	Yes	76	2,63	1,00	-1,605	0,032
	No	70	3,02	1,14		
Avoidance of Interaction	Yes	76	1,53	,80	1,502	0,149
	No	70	1,73	,78		
UCLA sub dimension Unity	Yes	76	3,30	,84	0,526	1,175
	No	70	3,12	,96		
UCLA sub dimension Singularity	Yes	76	2,16	,69	0,908	0,355
	No	70	2,12	,67		

When Table 4 was assessed, it was determined that there was no statistical significance in the PCPU sub-dimensions of the research group ($p < 0.05$). In the sub-dimensions of deprivation, control problem and avoidance of interaction, it was determined that the average of the students who do not play games on their mobile phones is higher than the students who play games on their mobile phones. It was determined that there was no statistical significance in the sub-dimensions of the UCLA loneliness scale ($p > 0,05$).

Table 5. ANOVA analysis of the sub-dimensions of PCPU of faculty of sports sciences students and the sub-dimensions of the UCLA loneliness scale of the sport year variance

	Sports Year	N	Mean	Std. Deviation	f	p	Difference
Deprivation	0-3	45	3,59	,92	3,920	0,010*	A-B,D
	4-7	32	2,97	1,17			
	8-11	39	3,02	1,03			
	12+	30	2,91	,91			
	Total	146	3,16	1,04			
Negative Results	0-3	45	2,20	1,13	1,688	0,172	
	4-7	32	1,72	,93			
	8-11	39	2,17	,87			
	12+	30	2,04	1,03			
	Total	146	2,05	1,01			
Control Problem	0-3	45	3,21	1,10	4,819	0,003	A-B
	4-7	32	2,30	1,01			
	8-11	39	2,87	,99			
	12+	30	2,73	1,05			
	Total	146	2,82	1,08			
Avoidance of Interaction	0-3	45	1,57	,86	2,357	0,074	
	4-7	32	1,44	,75			
	8-11	39	1,90	,79			
	12+	30	1,55	,68			
	Total	146	1,63	,80			
Unity	0-3	45	3,38	,78	1,217	0,306	
	4-7	32	3,12	,99			
	8-11	39	3,03	,81			
	12+	30	3,29	1,05			
	Total	146	3,21	,90			
Singularity	0-3	45	1,98	,54	2,240	0,086	
	4-7	32	2,29	,81			
	8-11	39	2,28	,63			
	12+	30	2,04	,73			
	Total	146	2,14	,68			

A) 0-3 B) 4-7 C) 8-11 D) 12+

When Table 5 is examined, it has been determined that there is a statistically significant difference in the PCPU deprivation and control problem sub-dimensions of the research group ($p < 0.05$). It was determined that there was a difference between the variables of 4-7 and 12 years and above in the deprivation sub-dimension and the variable of 0-3 years, and a difference between 0-3 years and 4-7 years in the control problem sub-dimension. It was determined that there was no statistically significant difference in the sub-dimensions of negative results and avoidance of interaction with PCPU. It was determined that there was no statistically significant difference in the unity and uniqueness sub-dimensions of the UCLA loneliness scale. In the deprivation sub-dimension, a significant difference was observed between the students who did sports for 0-3 years and the students who did sports for 8-11 years and 12 or more years. It was determined that there was a difference between the students who had been doing sports for 0-3 years and the students who had been doing sports for 4-7 years in the control problem sub-dimension.

Table 6. ANOVA analysis of the variable of “How often do you play games” sub-dimensions of PCPU of faculty of sport sciences students and sub-dimensions of UCLA loneliness scale

How often	Do You play Games	N	Mean	Std. Deviation	f	p
Deprivation	0-4	90	3,13	,99	,749	0,475
	5-9	32	3,35	1,10		
	10+	24	3,03	1,14		
	Total	146	3,16	1,04		
Negative Results	0-4	90	2,05	1,01	1,919	0,151
	5-9	32	2,29	1,10		
	10+	24	1,75	,81		
	Total	146	2,05	1,01		
Control Problem	0-4	90	2,71	1,01	2,156	0,119
	5-9	32	3,17	1,14		
	10+	24	2,75	1,19		
	Total	146	2,82	1,08		
Avoidance of Interaction	0-4	90	1,59	,77	,795	0,454
	5-9	32	1,78	,90		
	10+	24	1,55	,76		
	Total	146	1,63	,80		
Unity	0-4	90	3,30	,90	1,160	0,316
	5-9	32	3,04	,89		
	10+	24	3,11	,92		
	Total	146	3,21	,90		
Singularity	0-4	90	2,17	,70	0,425	0,654
	5-9	32	2,13	,59		
	10+	24	2,03	,69		
	Total	146	2,14	,68		

When the sub-dimensions of PCPU Deprivation, negative results, control problem, and interaction avoidance are analyzed in Table 6, there is no statistically significant difference. It was discovered that students who played games for 5-9 hours in the PCPU sub-dimensions had a higher average than students who played games for 0-4 and 10 hours or more. The UCLA loneliness scale was shown to be statistically insignificant in the unity and uniqueness sub-dimensions. In the sub-dimensions of unity and unity, students who played games for 0-4 hours performed better than students who played games for 5-9 and 1 hour or more ($p>0,05$).

4. DISCUSSION and CONCLUSION

The purpose of this study was to look at the mobile phone attachment and loneliness levels of students at the faculty of sports sciences. The study included 146 students, 80 of whom were male and 66 of whom were female. In our study, there was no statistically significant difference in the sub-dimensions of the cell phone use and loneliness scale when gender was considered. [Izgar \(2009\)](#) discovered no statistically significant difference in loneliness and gender characteristics among school principals in his study. [Bozgeyik's \(2019\)](#) study titled “Examination of the relationships between teachers’ early maladaptive schemas, interpersonal relationship styles, and loneliness” found no significant relationship between the gender variable and the level of loneliness. [Deursen et al. \(2015\)](#) examined the relationship between smartphone addiction and many variables in their study and concluded that female adolescents have a higher probability of showing negative symptoms of smartphone addiction. [Turhan and Canpolat \(2023\)](#) in their study found that men’s social media addiction was higher compared to women. There was found to be a substantial difference in terms of The UCLA loneliness scale sub-dimensions were found to have no statistically significant difference. In individuals who use social media, most of the smart phone users in their spare time look at their smart phones when they wake up in the morning and before going to sleep at night ([Lee et al., 2014](#)). It has been observed that being constantly connected to the internet and following the developments in social media platforms, the environment or the world reduces the feeling of emptiness and loneliness in individuals ([Townsend, 2000](#)). It has been determined that the values of people who use social

media are higher. When we evaluated the variable do you play games on your mobile phone, we found that there was no statistically significant difference in the sub-dimensions of the PCPU and UCLA loneliness scales, and students who played games on their mobile phone had high values. According to Erboy's (2010) study on his pupils, computer game addiction is higher in students who do not have a personal computer. Tel (2021), in his study, determined that the playing time of the research group was high. In the study conducted by Horzum (2011) on primary school students, it was concluded that there was no statistically significant difference between having a personal computer and game addiction. It was determined that the research group had a statistically significant difference in the PCPU deprivation and control problem sub-dimensions ($p < 0.05$). There was a difference in the deprivation sub-dimension between the variables 4-7 and 12 years and above, and a difference in the control problem sub-dimension between the variables 0-3 years and 4-7 years. There was no statistically significant difference in the sub-dimensions of unfavorable outcomes and avoidance of PCPU engagement. There was no statistically significant difference in the UCLA loneliness scale's unity and uniqueness sub-dimensions. In their study, Hazar et al. (2017) concluded that the digital gaming addiction of secondary school pupils who do not frequently participate in sports is much higher than that of those who do. They stated that the increase in the tendency to use technological game tools and therefore the avoidance of games that require physical activity may be the reason for this result. Tel and Erdoğan (2015) determined in their study that the participants use the internet and developing technology at a high rate. It was determined that there was no statistically significant difference in the sub-dimensions of PCPU Deprivation, negative results, control problem and interaction avoidance of the research group. It was discovered that students who played games for 5-9 hours in the PCPU sub-dimensions had a higher average than students who played games for 0-4 and 10 hours or more. The UCLA loneliness scale was shown to be statistically insignificant in the unity and uniqueness sub-dimensions. In the sub-dimensions of unity and unity, students who played games for 0-4 hours performed better than students who played games for 5-9 and 1 hour or more. According to the "WeAreSocial and Hootsuite 2020 Report", 92% of our country's population (77 million) is a smartphone user. Tanju (2022) estimates that smartphone usage time is approximately 4 hours.

As a result, in our study, it was determined that students generally spend most of the day on the phone and play games when they are alone, while the PCPU scores of female students are higher than that of men, and women's values are low in the UCLA loneliness scale.

Ethics Committee Decision

Ethical approval and written permission for this study were obtained from the Social and Human Sciences Scientific Research and Publication Ethics Committee of Fırat University with the decision dated 10/08/2023 and numbered 358565.

5. REFERENCES

- Akgül-Bozgeyik, B. (2019). *An investigation of the relationships between teachers' early maladaptive schemas, interpersonal relationship styles and loneliness*. Master Thesis. Gaziantep: Gaziantep University.
- Alakurt, T. & Yılmaz, B. (2021). Teachers' views on the use of mobile phones in schools. *Journal of Computer and Education Research*, 9 (18), 575-597. <https://doi.org/10.18009/jcer.901358>
- Boumosleh, J., & Jaalouk, D. (2017). Depression, anxiety, and smartphone addiction in university students-a cross sectional study. *Plos One*, 12(8), E0182239.
- Goodall, W., Fishman, T. D., Bornstein, J., & Bonthron, B. (2017). The rise of mobility-as-a-service. *Deloitte Review*, 20, 111-130.

- Emanuel, R., Bell, R., Cotton, C., Craig, J., Drummond, D., Gibson, S., ... & Williams, A. (2015). The truth about smartphone addiction. *College Student Journal*, 49(2), 291-299
- Erboy, E. (2010). *Factors affecting computer game addiction of primary school 4th and 5th grade students*. Master Thesis, Adnan Menderes University, Aydın.
- Hazar, Z., Demir, G. T., Namlı, S., & Türkeli, A. (2017). Examining the relationship between secondary school students' digital game addiction and physical activity levels. *Journal of Physical Education and Sport Sciences*, 11(3), 320-332.
- Horzum, M. B. (2011). Examining the computer game addiction levels of primary school students according to various variables. *Education and Science*, 36(159), 56-68.
- Işık, A.D. (2015). Features of mobile devices and its implications into education: A literature review. *Journal of Computer and Education Research*, 3 (6), 188-198.
- Izgar, H. (2009). An investigation of depression and loneliness among school principals. *Educational Sciences in Theory and Practice*, 247-258.
- Karasar, N. (2012). *Scientific research method*. Ankara: Nobel Publishing.
- Lee, Y.-K., Chang, C.-T., Lin, Y., & Cheng, Z.-H. (2014). The dark side of smart phone usage: Psychological traits, compulsive behavior and technostress. *Computers in Human Behavior*, 31, 373-383.
- Poushter, J. (2016). Smartphone ownership and internet usage continues to climb in emerging economies. *Pew Research Center*, 22, 1-44
- Samaha, M., & Hawi, N. S. (2016). Relationships among smartphone addiction, stress, academic performance, and satisfaction with life. *Computers in Human Behavior*, 57, 321-325.
- Sezer, S.Y. & Çelikel, B.E. (2021). Investigation of the leather time management of football players in Elazığ province during the covid 19 process, *Spor Eğitim Dergisi*, 5 (3), 135-142.
- Tansu, A. (2022). The effectiveness of cognitive behavioral based psychoeducation in university students with smartphone addiction (Order No. 30411073). Available from ProQuest Dissertations&Theses Global. (2812066013). Retrieved from <https://www.proquest.com/dissertations-theses/smart-phone-addicted-university/docview/2812066013/se-2>
- Tel, M. (2021). Investigation of athletes' habits of playing digital game in the pandemic process. *Pakistan Journal of Medical and Health Sciences*, 15(12), 3630-3638.
- Tel, M., & Erdogan, R. (2015). Investigation of doctors' participation in leisure activity. *International Journal of Science Culture and Sport*, 3(4), 383-395.
- Townsend, A. M. (2000). Life in the real time city: Mobile telephones and urban metabolism. *Journal of Urban Technology*, 7, 85-104.
- Turhan F. H. & Canpolat B., (2023). Examining the purposes of facebook use of some football club fans. *İnönü Üniversitesi, Beden Eğitimi ve Spor Bilimleri Dergisi*, 10(1), 1-12.
- Van Deursen, A. J. A. M., Bolle, C. L., Hegner, S. M., Hegner, S., & Kommers, P. A. M. (2015). Modelling habitual and addictive smart phone behavior: The role of smart phone usage types, emotional intelligence, social stress, self-regulation, age, and gender. *Computers in Human Behavior*, 45, 411-420.