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Evaluation of Nomophobia and Smartphone Addiction Levels among University Students in terms of Alcohol and Drug Abuse Risk

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ABSTRACT

Objectives: This study examines the relationship between nomophobia and smartphone addiction, which have not become increasingly prevalent, and other addictions, especially drug abuse.

Methods: This study included Hacettepe University students aged 18 years and above between June 2020 and August 2020. The questionnaire used in this study consisted of questions about socio-demographical characteristics in the first part and the Nomophobia Questionnaire (NMP-Q), Smartphone Addiction Scale (SAS), Alcohol Risk Screening Scale (ARSS) and Drug Use Risk Screening Scale (DRSS) in the second part.

Results: The study included 386 university students and 195 (50.5%) were men. The median of NMP-Q, SAS, ARSS, and DRSS were 78.0 (20.0-140.0), 35.0 (10.0-60.0), 6.0 (0.0-12.0), 0.0 (0.0-2.0), respectively. No significant difference in the nomophobia score was found between the alcohol and drug addiction risk scale scores (p=0.545 and p=0.186, respectively). Also, no significant difference in the smartphone addiction score was found between the alcohol and drug addiction risk scale scores (p=0.520 and p=0.945, respectively). There was a weak negative relationship between nomophobia scores and age (p=0.046).

Conclusion: Given the increased tendency to follow technological developments among university students, their incapability to stay away from smartphones and similar devices due to smartphone addiction is an indicator of the student's addiction. This may predispose them to other accompanying addictions such as alcoholism and drug abuse. However, many different factors may cause this. All health institutions should take necessary protective measures to minimize and eliminate such addictions.

Keywords: Smartphone, students, addiction medicine, alcohol drinking, drug addicts

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INTRODUCTION

Today, mobile technologies have now become a part of our lives. The use of smartphones makes our lives easier in every field, however, they have some undesirable effects such as addiction or restlessness. Nomophobia, recently considered as a phobia of the modern age, is defined as irrational fear and anxiety experienced by individuals when they cannot reach or communicate with their mobile devices. This anxiety adversely affects individuals' ability to concentrate and perform daily work in their lives. Nomophobia, defined as the fear of being detached from the mobile phone, increased in parallel with the widespread use of smartphones.[1,2] Nomophobic behaviors change the daily habits of individuals, and problems

due to nomophobia may affect their lives and academic achievements, especially students.[1,3]

Remarkably, studies investigating the widespread use of smartphones and their effects on the users mainly focused on the sales and marketing fields rather than the psychiatry and psychology fields. Repetitive behavioral disorders affecting functionality in daily life and interpersonal relationships should be evaluated in terms of the addiction concept.[4] In the new version of the Diagnostic and Statistical Manual of Mental Disorders (DSM), the diagnosis category "Substance abuse and dependence" which has been previously used in psychiatric diagnostic systems, was changed to the diagnosis category" substance use and dependence disorders". With this change in the DSM-5, the dependence concept, which has previously included only substance abuse-related disorders, now has included non-substance abuse-related behaviors.[5,6] Although only "gambling disorder" is currently present under the substance abuse-related disorder category in the DSM-5, internet gaming addiction may be evaluated as a separate diagnosis category with future clinical studies.[4-6]

Repetitive behaviors form the basis of behavioral addictions. Individuals continue pleasure-giving behaviors, which then become a habit. Therefore, one should be careful when evaluating any behavior that has become a habitual behavior as an addictive behavior.[4,7] As in other addiction types, excess engagement with a certain behavior causes the repetition of such behaviors to get away from the real word or experience a feel-good effect, the development of tolerance as such behaviors are repeated, difficulties in controlling these behaviors, and withdrawal symptoms, such as tension, irritability, and restlessness, if the behaviors are prevented from being repeated, causing functional impairment as the behaviors are continued with increasing intensity.[4,7,8] Among the different types of addiction, drug abuse usually starts in the adolescence period, where psychological, social, and cultural factors play an important role. Therefore, studies on early identification of individuals at a high risk of drug abuse are highly important.[7] In the alcohol addiction development process, several spiritual, physical, and social factors show variable interactions among individuals.[9]

Primary healthcare services are important in providing diagnosis, treatment, and treatment control for all types of addiction, as they always include the easiest and fastest accessible healthcare institutions for all age groups. This study contributes to the evaluation of the dimensions of smartphone addiction in young people and the status of associating it with other addiction types, especially when they are encountered in primary care. Investigating the relationship between the different types of addiction among university students is important for planning possible measures, and the psychological nature of these addictions may cause difficulties and restrictions in studies.[4,8] The aim of this study was to examines the relationship between nomophobia, smartphone addiction and other addictions.

METHOD

This study enrolled Hacettepe University students aged 18 years and above between June 2020 and August 2020. The university students who volunteered to participate in this study were provided with questionnaires containing questions about socio-demographical characteristics in the first part and the Nomophobia Questionnaire (NMP-Q), Smartphone Addiction Scale–Short Version (SAS-SV), Alcohol Use Risk Screening Scale and Drug Use Risk Screening Scale in the second part. Necessary permits were obtained to use all the related questionnaires.

NMP-Q: The 7-point Likert-type 20-items NMP-Q developed by Yıldırım and Correira was used to measure the smartphone addiction levels of the students included in this study.[10] Yıldırım and Correira have reported that four subscales existed for the nomophobia status among individuals. These subscales included being unable to be online=1 point, losing communication=2 point, lacking a device=3 point and failing to reach information=4 point. Above 20 points in the NMP-Q was defined as Nomophobia.[10-12] Therefore, it was concluded that the Turkish version of the NMP-Q developed by Yıldırım and Correira and adapted by Yıldırım et al. was valid and reliable.[10-12]

SAS-SV: The SAS-SV is a 6-point Likert-type scale consisting of 10 items developed by Kwon et al. to measure the risk of smartphone addiction in adolescents.[13] The reliability analysis of the Turkish version of this scale was performed by Noyan et al.[4] Each item of the scale is scored from 1 to 6 and total scale scores vary from 10 to 60. Higher scores mean a higher risk of addiction and the scale has no subscales. In a study involving Turkish subjects, the cut-off value was 29.5 for men and women, respectively.[14]

Risk Screening Questionnaire for Alcohol and Drug Use: Ogel et al. developed the Addiction Profile Index Risk Screening Questionnaire to evaluate alcohol and drug addictions separately, and each consists of six questions. Moreover, they evaluated the validity and reliability of the Turkish version of the questionnaires. In the alcohol addiction questionnaire, a total score of at least 3 should be considered "high risk" in terms of alcohol use. In the drug addiction questionnaire, a total score of at least 4 should be considered "high risk" in terms of drug abuse.[15]

The data were analyzed using IBM Corp.'s Statistical Pack-

age for the Social Sciences version 23. Frequency, percentage, median, minimum and maximum values were used as descriptive statistical methods. The conformity to a normal distribution was examined using the Kolmogorov and Smirnov, Shapiro–Wilk tests, and if the data did not show conformity to a normal distribution, nonparametric tests (Mann–Whitney U and Kruskal–Wallis tests) were used to compare the data. The relationship between the variables was examined using Spearman's correlation analysis. A p-value less than 0.05 was considered significant.

RESULTS

The study included 386 university students and the median age of the students was 22.0 (18.0-26.0) years. Socio-demographic characteristics of the students are shown in Table 1.

Table 1. Socio-demographic characteristics of the students

	n (%)
Gender	
Men	195 (50.5)
Women	191 (49.5)
University Department	
Faculty of Nursing	36 (9.3)
Faculty of Communication	36 (9.3)
Department of Physiotherapy and Rehabilitation	32 (8.3)
Faculty of Science	31 (8.0)
Faculty of Dentistry	30 (7.8)
Faculty of Literature	29 (7.5)
Faculty of Fine Arts	28 (7.3)
Faculty of Health Sciences	28 (7.3)
Faculty of Engineering	27 (7.0)
Faculty of Sport Sciences	25 (6.5)
Faculty of Pharmacy	21 (5.4)
Faculty of Economics and Administrative Sciences	18 (4.7)
Faculty of Education	17 (4.4)
Faculty of Medicine	15 (3.9)
Faculty of Law	13 (3.3)
Nomophobia score group	
None	13 (3.4)
Mild	122 (31.6)
Moderate	126 (32.6)
Severe	125 (32.4)
Alcohol addiction risk scale	
Risk	292 (75.6)
No risk	94 (24.4)
Drug addiction risk scale	
Risk	0 (0.0)
No risk	386 (100.0)

The median nomophobia score was 78.0 (20.0-140.0) and, there were 373 (96.6%) participants with nomophobia. Only 13 (4.4%) participants did not have nomophobia. All addiction risk scale scores of students are shown in Table 2.

There were no difference in nomophobia score according to gender and department of study (p=0.533 and p=0.699, respectively). Besides, there was no different in smartphone addiction score according to gender and the department of study (p=0.702 and p=0.767, respectively). Comparisons by nomophobia and smartphone addiction scores are summarized in Table 3.

While there was no significant relationship between the nomophobia score and alcohol and substance addiction risk scale scores, a weak negative correlation was found between nomophobia scores and age (p=0.545, p=0.186 and p=0.046, respectively). The relationship between age, nomophobia, smartphone addiction scores, alcohol and drug abuse risk score are summarized in Table 4.

DISCUSSION

Technological developments and thus changes in lifestyle bring along new types of addictions, which may increase the incidence of coexisting addictions. In the late adolescence period when technological developments are followed better and efficiently, the development of technology-related addictions is inevitable, especially in university students. The use of computers, smartphones, and similar new-generation technological communication devices, which make access to information easier, for other than their intended purposes, has caused the development of addictions.[16] Other types of addiction, such as alcoholism and drug abuse, have also started to be observed frequently along with technological device addiction.[17]

Being considered the phobia of the modern age, nomophobia comes from the English words "no," "mobile," and "phobia" and, in clinical psychology, is defined as the irrational fear experienced by a person when he/she cannot reach or communicate with his/her mobile device.[1,3,10]

It is thought-provoking that only 3.4% of the participants had no nomophobia, and 32.4% have severe nomophobia.

Table 2. All addiction risk scale scores of students

	Median (min-max)
Nomophobia score	78.0 (20.0-140.0)
Smartphone addiction scale score	35.0 (10.0-60.0)
Alcohol addiction risk scale score	6.0 (0.0-12.0)
Drug addiction risk scale score	0.0 (0.0-2.0)

Table 3. Comparisons by nomophobia and smartphone addiction scores

	Nomophobia score	p	Smartphone addiction score	p
Gender				
Men	78.0 (20.0–140.0)	0.533*	35.0 (10.0–60.0)	0.702*
Women	79.0 (20.0–140.0)		35.0 (10.0–60.0)	
University department				
Faculty of Dentistry	72.5 (20.0–139.0)	0.669†	32.5 (10.0–59.0)	0.767†
Faculty of Pharmacy	94.0 (20.0–139.0)		45.0 (10.0–59.0)	
Faculty of Literature	78.0 (20.0–140.0)		35.0 (10.0–54.0)	
Faculty of Education	90.0 (27.0–129.0)		46.0 (10.0–60.0)	
Faculty of Science	59.0 (26.0–135.0)		34.0 (10.0–58.0)	
Department of Physiotherapy and Rehabilitation	99.0 (26.0–136.0)		35.5 (11.0–60.0)	
Faculty of Fine Arts	68.5 (20.0–128.0)		30.0 (11.0–60.0)	
Faculty of Nursing	79.5 (20.0–136.0)		38.5 (13.0–60.0)	
Faculty of Law	59.0 (27.0–140.0)		38.0 (11.0–56.0)	
Faculty of Economics and Administrative Sciences	83.0 (20.0–138.0)		31.0 (11.0–60.0)	
Faculty of Communication	79.0 (22.0–134.0)		35.5 (12.0–60.0)	
Faculty of Engineering	90.0 (32.0–139.0)		32.0 (10.0–60.0)	
Faculty of Health Sciences	76.0 (26.0–134.0)		36.5 (14.0–59.0)	
Faculty of Sport Sciences	72.0 (23.0–127.0)		36.0 (12.0–60.0)	
Faculty of Medicine	69.0 (20.0–134.0)		28.0 (13.0–58.0)	

Variables are expressed as median (minimum-maximum).
*Mann Whitney U test; †Kruskal Wallis test.

A study by the post office involving a participant group of 2.163 persons in the UK has reported that 53% of mobile phone users showed nomophobic behaviors, and men were more prone to nomophobia than women.[18] In a study by Adnan and Gezgin to evaluate the prevalence of nomophobia among university students, no relationship was found between gender and nomophobia, which conforms to the results of this study that no relationship was also found between gender and nomophobia and smartphone addiction.[1]

Table 4. The relationship between age, nomophobia, smartphone addiction scores, alcohol and drug abuse risk score

	Age	Nomophobia score	Smartphone addiction score	Alcohol addiction risk score
Nomophobia score				
r	-0.102			
p	0.046			
Smartphone addiction scale score				
r	-0.062	-0.053		
p	0.222	0.296		
Alcohol addiction risk scale score				
r	0.011	-0.031	-0.033	
p	0.829	0.545	0.520	
Drug addiction risk scale score				
r	0.077	-0.067	0.003	0.061
p	0.129	0.186	0.945	0.228

Spearman's correlation.

The study by Özgür Güler and Veysikarani on nomophobia among university students has found no relationship between nomophobia and the studied department.[19] Similarly, this study found no relationship between nomophobia and the studied department. However, another remarkable point is that both nomophobia and smartphone addiction scores were low among medical students. This might be caused by their intense studying tempo.

The study by Kuyucu on the use of smartphones among university students has shown that the use of smartphones did not vary in terms of gender, age, and mobile phone use characteristics.[20] Similarly, this study found no relationship between age, gender, and the studied department and smartphone addiction among university students.

In a study involving university students in the Turkish Republic of Northern Cyprus, the lifetime prevalence of drinking alcohol was 70.8%.[21] In studies conducted in the USA and Europe, the rates of alcohol use and addiction were higher.[22] In this study, the risk of alcohol addiction was 75.6%, similar to the findings of a study in Cyprus, however, no relationship was found between nomophobia and smartphone addiction.[21]

The rate of illicit drug use for at least once was 3.1% in the population aged 15–64 years according to the 2019 report by the Turkish Monitoring Center for Drugs and Drug Addiction in Turkey.[23] In this study, based on the drug addiction scores, all students were at no risk. This might be due to the fact that the students might have avoided to correctly answer the questions due to the sensitive nature of drug abuse.

More reliable results about technology addiction were obtained using both the nomophobia and smartphone addiction scales. The levels of relationship with technology have been allowed to be compared more strongly with the inclusion of university students from different departments. This study has an important place since it has evaluated the relationship between different types of addiction that are most commonly seen and represent a major problem among young adults. Moreover, this study has a psychological basis and it will shed light on future studies on this subject.

This study has several limitations. First, the sample consisted of a small number of students. Second, the study was conducted in only one university. In this regard, prospective studies with larger samples may provide significant contributions.

CONCLUSION

In conclusion, no significant difference in the nomophobia and smartphone addiction scores were found between the alcohol and drug addiction risk scale scores. However, most participants in this study had nomophobia, which may negatively affect their daily lives and their relationships with other individuals. If smartphone addiction is not prevented, it may lead to serious psychological problems in individuals in societies in the following years.

Disclosures

Peer-review: Externally peer-reviewed.

Conflict of Interest: None declared.

Ethics Committee Approval: The Non-Interventional Clinical Researches Ethics Committee of Hacettepe University approved this study (Approval date: 23 June, 2020 and Approval number: 2020/12-44).

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