EJONS International Journal on Mathematic, Engineering and Natural Sciences | ISSN 2602 - 4136

Article Arrival Date: 14.02.2021 | Article Type: Research Article | Article Published Date: 20.03.2022

Doi Number: http://dx.doi.org/10.38063/ejons.561

INVESTIGATION OF NOMOPHOBIA LEVELS OF NURSING DEPARMENT STUDENTS

Güllü YAZKAN[1]

Nezihe UĞURLU[2]

Fatma BIRGILI[3]

[1]Uz.Hemşire(Doktorant), Muğla Sıtkı Koçman Üniversitesi,Hemşirelik Bölümü, Psikiyatri Hemşireliği, Muğla/Türkiye

Orcid:0000 0003 2860 1169

[2]Prof.Dr., Muğla Sıtkı Koçman Üniversitesi,Hemşirelik Bölümü, Psikiyatri Hemşireliği, Muğla/Türkiye

Orcid: 0000 0002 7103 4625

[3]Doç.Dr., Muğla Sıtkı Koçman Üniversitesi, Hemşirelik Bölümü, Hemşirelik Esasları, Muğla/Türkiye

Orcid: 0000-0003-0942-2122

ABSTRACT

Smartphones are among the most important non-drug addictions today. Nowadays, young people spend most of their time sharing content in the virtual world, living in line with their impulsive thoughts, following their friends, and updating their status. This causes young people to be isolated from the real life and have sleeping problems, brings about psychological problems and leads to academic failure. This study aims to determine the levels of nomophobia among nursing students studying at university and detect influencing factors. The individuals participating in the study were applied the 9-item introductory information form and the 20-item, 7-point Likert-type Nomophobia Scale (NMP-Q), which is used to determine the level of the fear of being without smartphone. The Nomophobia Scale was detected as X±SD 74.88±28.91. Moreover, when the introductory characteristics and the total nomophobia score were examined, the association between checking phone as soon as waking up, carrying a charger, spending time with phone before sleep, and daily frequency of phone use were detected to be statistically highly significant ($p<0.001$). Although no significant difference was detected between the total nomophobia score and the variable of sex, when the mean score was compared across sexes, it was seen that males got 73.28 while females got 75.97 and that females were more nomophobic than males.

Keywords: Nomophobia, nursing student, smartphone

Introduction

With technological advances in the present century, certain global transformations have taken place in people's lives in both micro and macro levels. It has become possible to do many things that we used to do with a variety of devices through a single device particularly after smartphones came into our lives (Kaplan Akıllı and Gezgin, 2016). Indeed, these devices has started to be regarded as compulsory tools to call family members and friends, send text messages, get in touch and keep in touch with them at any possible time and place, get online, play games and listen to music, briefly to have a good time (Sar and Işıklar, 2012). According to the Household Use of Information Technologies Survey carried out by TURKSTAT, 96.9% of households in Turkey have mobile phones or smartphones (TURKSTAT, 2016). As the adaptation of the young to novel technologies is more rapid than people of other ages (Aydoğdu Karaaslan, and Budak, 2012), it can be said that the use of mobile devices is more common among the young (Cheever, Rosen, Carrier and Chavez, 2014).

Smartphones enable socializing through online communication and social networks, which leads to their being an important tool for high school and university students (Hong et al., 2012). Moreover, the use of smartphones appears as one of the characteristic feature of today's youngsters (Yılmaz, Şar, and Civan, 2015). However, excessive and uncontrolled use of smartphones brings about a number of problems (Minaz and Çetinkaya Bozkurt, 2017). It can be seen that in recent years studies have been conducted about problems related to smartphone addiction (Kuyucu, 2017), problematic use of mobile phones (Doğan and İlçin-Tosun, 2016), and excessive smartphone use (Lee et al., 2014).

Smartphones are among the most important non-drug addictions today. Negative effects of smartphones include weakening face-to-face communication, a higher individualization of people, information pollution, practices that lead to addiction, and psychological problems they bring about. Although there is no precise definition of smartphone addiction, it may be defined as the problematic use of phones, constantly checking phones, and failure to complete duties or daily tasks. Nomophobia, the fear of being deprived of smartphones/smart devices, has recently started to be discussed (Yıldırım and Kişioğlu 2018). Nomophobia is defined as unintentional fear that individuals experience about not being able to have access to their mobile devices (smartphone, tablet, pocket computer, etc.) or to establish communication over mobile devices (online or offline) (Gezgin, Şumuer, Arslan, and Yıldırım, 2017).

Although it has started to be discussed in recent years, nomophobia is a significant factor that adversely affects the daily lives of individuals today (Adnan and Gezgin, 2016). Nomophobia has negative effects on academic success of individuals and their physical and psychological health (Prasad et al., 2017). Nomophobic individuals begin to worry when they forget to take their smartphones with them and they cannot be reached as their smartphones run out of battery power or they are outside coverage area (Adnan and Gezgin, 2016; Yıldırım et al., 2016). Furthermore, nomophobic individuals constantly need to check their smartphones even if they are with them (Adnan and Gezgin, 2016). Nowadays, especially youngsters spend most of their time sharing content in the virtual world, following the agenda and their friends, and updating their status. Cheever et al. (2014) found that anxiety levels increased in time among students whose mobile phones were taken from them. In Gezgin et al. (2017), carried out on university students, it was revealed that nomophobia scores of students were over the mean scale score and the participants worried about loss of communication and inability to access information.

This study also concluded that female students were more nomophobic than male students. In their study carried out on university students, Erdem et al. (2016) found that over half of the participants were nomophobic and female participants spent more time on smartphones than male ones. In Tavolacci et al. (2015), it was determined that one out of every three university students was nomophobic and female participants had a stronger nomophobia tendency than male participants. Yıldırım et al. (2016) reported that 42.6% of university students who took part in their study

displayed nomophobic behaviors and female participants displayed a stronger tendency to be nomophobic than male participants. Adnan and Gezgin (2016), on the other hand, concluded that the nomophobia levels of students were above the average; however, there were no significant differences in terms of demographic characteristics. The use of smartphones is observed more commonly among university youth in particular. It has become an ordinary thing to see young people who are immersed in their smartphones and ignorant of the developments around them (Yıldırım and Kişioğlu, 2018).

METHOD

This is a descriptive study. The study was planned to be implemented on students who took summer course lessons in Muğla Sıtkı Koçman University. No sampling was performed and students who volunteered to take part in the study formed the sample. The data obtained from the questionnaire form were assessed with the SPSS 22.0 (The Statistical Package for the Social Sciences) software.

Normality tests were performed on the study data. The Mann Whitney U Test was used for pairwise comparisons and the Kruskall Wallis Test for multiple comparisons in the analysis of the data that did not show a normal distribution.

Frequency and percentile were used for descriptive criteria of the analyses and standard deviation and minimum-maximum values were used as the criteria of prevalence. The association between nomophobia and subscales was investigated through the Pearson correlation coefficient. The values of $p<0.05$ and $p<0.01$ were chosen as the lowest statistical significance levels in the analyses.

Personal Data Form

The participants were given the questionnaire on demographic characteristics consisting of 9 items, 3 of which were items about introductory information and 6 items about phone use, which were obtained from similar studies. Demographic data form involved information about sex, age, grade, the duration of smartphone use, and the daily frequency of checking smartphone.

Nomophobia Scale (NMP-Q)

The Nomophobia Scale (NMP-Q), developed by Yildirim and Correira (2015) and adapted to Turkish by Yildirim, Sumuer, Adnan and Yildirim (2015), was used for the study. The Nomophobia Scale (NMP-Q) was a 7-item Likert scale consisting of 20 items. The reliability coefficient of the original scale calculated using the Cronbach's alpha was .95 and the reliability coefficient of the scale adapted to Turkish was .92. The scale has four subscales: Inability to Access Information (1,2,3,4), Losing Connectedness (5,6,7,8,9), Inability to Communicate (10,11,12,13,14,15), and Giving Up Convenience (16,17,18,19,20). In the original scale, the reliability coefficients of these subscales were given as .94, .87, .83, and .81, respectively. The reliability coefficients of the subscales for the adapted version of the scale, however, were reported to be .90, .74, .94, and .91, respectively.

RESULTS:

Table 1: Distribution of Introductory Characteristics

	N	%
Sex		
Female	99	54.7
Male	82	45.3
Age		
Under 20 years	5	2.8
20-25 years	164	90.6
Above 25 years	12	6.6
Grade		
2. grade	33	18.2
3. grade	51	50.3
4. grade	57	31.5
Duration of phone use		
Less than 1 year	2	1.1
1-2 years	5	2.8
3-4 years	41	22.7
More than 4 years	133	73.5
Daily frequency of phone use		
1-16 times	20	11.0
17-32 times	49	27.1
33-48 times	36	19.9
49 times and over	76	42.0
Carrying a charger		
Yes	96	53.0
No	85	47.0
Checking phone upon waking up		
Yes	148	81.8
No	33	18.2
Spending time with phone before sleep		
Yes	170	93.9
No	11	6.1
Turning off phone at night		
Yes	18	9.9
No	163	90.1

Findings regarding the introductory characteristics of university students who took part in the study are given in Table 1. Among the participants, 54.7% were females, 90.6% were in the age group of 20-25, 31.5% were in grade 4, 73.5% used their phones for over 4 years, 42.0% used their phones 49 times and over daily, 53.0% carried a charger with them, 81.8% checked their phones as soon as they woke up, 93.9% spent time with their phones before sleep, and 90.1% did not turn off phone at night.

Table 2: Score distribution between the Nomophobia Scale and introductory characteristics

	X	Std.	Min.	Max.	Significance level
Total nomophobia	74.88	28.91	20.00	140.00	
Sex					
Female	75.97	30.38	20.00	129.00	P>0.05
Male	73.28	27.20	20.00	140.00	
Age					
Under 20 years	76.20	28.19	43.00	114.00	
20-25 years	74.04	28.77	20.00	139.00	P>0.05
Above 25 years	85.83	31.25	37.00	140.00	
Grade					
2. grade	73.06	26.38	25.00	115.00	
3. grade	71.61	28.85	20.00	125.00	P>0.05
4. grade	81.15	29.86	26.00	140.00	
Duration of phone use					
Less than 1 year	97.90	36.76	37.00	140.00	
1-2 years	73.36	41.96	22.00	124.00	P>0.05
3-4 years	80.11	29.74	25.00	129.00	
More than 4 years	67.32	28.22	20.00	125.00	
Daily frequency of phone use					
1-16 times	97.90	26.26	37.00	140.00	
17-32 times	73.36	25.19	22.00	124.00	**P<0.05**
33-48 times	80.11	29.35	25.00	129.00	
49 times and over	67.32	28.45	20.00	125.00	
Carrying a charger					
Yes	67.59	28.67	20.00	129.00	
No	83.11	27.05	22.00	140.00	**P<0.05**
Checking phone as soon as waking up					
Yes	70.81	27.72	20.00	140.00	**P<0.05**
No	93.15	27.38	29.00	139.00	
Spending time with phone before sleep					

Yes	73.46	28.21	20.00	140.00	
No	96.81	32.06	37.00	139.00	**P<0.05**
Turning off phone at night					
Yes	82.44	27.89	26.00	125.00	P>0.05
No	74.04	28.98	20.00	140.00	

According to Table 2, the mean score of those who checked their phones 1-16 times a day was 97.90, the rate of those who responded "no" to the item about carrying a charger with them was 83.11, those who responded "yes" to the item about checking phone as soon as they woke up had a mean score of 93.15, and those who responded "yes" to the item about spending time with phone before sleep had a mean score of 96.81, and these values were found to be statistically significant (p<0.05).

Table 3: The association between the nomophobia scale and its subscales

	Total nomophobia	**Inability to access information**	**Losing connectedness**	**Inability to communicate**	**Giving up convenience**
Total nomophobia	1	.663*	.890*	.837*	.790*
Sig.		.000	.000	.000	.000
Inability to access information	.663*	1	.516*	.387*	.368*
Sig.	.000		.000	.000	.000
Losing connectedness	.890**	.516**	1	.678**	.634**
Sig.	.000	.000		.000	.000
Losing connectedness	.837**	.387**	.678**	1	.503**
Sig.	.000	.000	.000		.000
Giving up convenience	.790**	.368**	.634**	.503**	1
Sig.	.000	.000	.000	.000	

(* Pearson correlation coefficient, p<0.01)

Table 3 presents data of the association between the nomophobia scale and the subscales of the scale. According to the Pearson correlation analysis of the subscales, inability to access information was found to be .000, losing connectedness was .000, loss of communication was .000, and giving up convenience was .000, and a statistically significant relationship was detected between the subscales and the general scale (p<0.01)

DISCUSSION

This study investigated the nomophobia levels of undergraduate university students. According to the study results, it was concluded that the nomophobia levels of the students were above the average. This result, which was obtained from Adnan and Gezgin (2016), Erdem et al. (2016), Yıldırım et al. (2016), Gezgin et al. (2017), and Erdem, Türen, and Kalkın (2017), shows similarities to our study carried out on university students.

In the international literature, Kaur and Sharma (2015) found out in their study carried out in India that about 73% of the participants were nomophobic, which is parallel to the findings of the present study. A study carried out by Tavolacci et al. (2015) in France revealed that approximately 35% of university students displayed nomophobic behaviors. Remarkably high rates were obtained in 2 review studies conducted in England as well. For example, in the study conducted by the Postal Service in 2008 with 2163 participants, 53% of the participants displayed nomophobic behaviors. In the study by SecureEnvoy (2012), on the other hand, 77% of young people aged 18-24 years stated that even the idea of losing their mobile phones brought about anxiety and fear in them. In the study carried out by Newport (2015) on 15,747 participants, it was reported that 81% of the participants kept their mobile phones around as long as they were awake.

No statistically significant difference was detected between the nomophobia scale and the sex variable in the study. When the sex variable was investigated, statistically significant differences were detected between the mean scores of females and males obtained from the nomophobia scale. Males display a stronger nomophobia tendency than females. Tavolacci et al. (2015), Yıldırım et al. (2016), Gezgin et al. (2017), and Erdem, Türen and Kalkın (2017) found that females were more nomophobic than males. These results do not overlap with the results of our study. Dixit (2010) and Adnan and Gezgin (2016) did not find a significant difference between the nomophobia levels of females and males. It can be concluded that numerous socio-cultural and psychological factors are effective in the fact that males had a higher nomophobic tendencies than females in our study.

A statistically significant difference was found in the study between the variables of carrying a charger, checking phone as soon as waking up, spending time with phone before sleep, and daily frequency of phone use and the nomophobia scale ($p<0.05$). Walsh, White and Young (2010), Singh, Gupta and Garg (2013), Kalaskar (2015), and Newport (2015) revealed evidence that a strong correlation existed between daily frequency of checking smartphones and nomophobia. In Newport (2015), it was determined that approximately half of the smartphone users in the USA checked their phones many times in one hour (41% several times every hour, but 11% once every several minutes). While it was claimed that 20% of the users checked their phones every hour, it

was found that the remaining 28% checked their phones much less frequently.

Gezgin and Akıllı (2016) and Kumar (2014) defined this among stress factors experienced related to mobile phones, such as feeling guilty for not being able to respond to all incoming calls and messages, while Pavithra and Madhukumar (2015) reported that 23% of students had stress and concentration problems as they ran out of battery power or phone credits. Actually, Bragazzi and Del Puente (2014) described this situation as one of the different clinical characteristics of nomophobia. When the definition of nomophobia in clinical psychiatry is considered, a similar finding of the present study is an indication that individuals experience anxiety of running out of battery power.

As stated by Erdem et al. (2017), higher nomophobia levels of university students may bring about several problems in the working environment for students who will begin working in the near future. Low performance in employees will prevent the business from achieving its goals, and cognitive and attention problems in employees with a high level of nomophobia may lead to possible occupational accidents.

Today, changes in communication and information technology are rapidly taking place. Considering that changes in technology will increase in the future, it can be predicted that the development of smartphone technology will advance even more. These changes and developments may elevate dependence on mobile phones. Thus, smartphone manufacturers and application and content developers should take into consideration the effects of newly developed technologies on human life and produce products, services, and content in a way that will not negatively affect physical and psychological well-being, which will be beneficial for individuals, businesses, and the general society.

As a consequence, current studies have vividly presented the association between nomophobia and certain daily habits like checking their smartphones during the day, carrying a charger with them all the time, checking smartphones as soon as waking up, spending time with smartphones before sleep, and keeping smartphones on even when sleeping When the studies carried out on nomophobia, which is a current issue, are considered, it is necessary to execute studies with a larger sample size and in terms of different dimensions.

RESULT AND RECOMMENDATIONS

-It was determined that there was no statistically significant difference between the total score from the nomophobia scale and introductory characteristics of sex, age, and duration of phone use,

-There was a statistically significant difference between daily frequency of phone use, carrying a charger with them, checking smartphones as soon as waking up, and spending time with smartphones before sleep and the nomophobia scale,

-The nomophobia level among university students was moderately significant,

-The relationship between the nomophobia scale and its subscales was statistically highly significant ($p<0.01$).

Author's notes: This article, which was accepted in your journal, was previously presented only as a summary presentation at the 6th International 17th National Nursing Congress. It has not been presented as a full text anywhere else and has not been published as an article.

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