

International Journal of Research in Education and Science (IJRES)

<u>www.ijres.net</u>

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To cite this article:

Onal, N. (2019). Metaphoric perceptions of high school students about nomophobia. *International Journal of Research in Education and Science (IJRES)*, 5(2), 437-449.

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Volume 5, Issue 2, Summer 2019

ISSN: 2148-9955

Metaphoric Perceptions of High School Students about Nomophobia

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Article Info	Abstract
Article History	The present study was conducted to reveal high school students' feelings
Received: 31 October 2018	regarding their experiences of being deprived of their smartphones (nomophobia). The study group of the study was comprised of 158 students attending a high school in a city center in the central Anatolian region in
Accepted: 19 January 2019	Turkey. One of the qualitative research methods, namely the phenomenology research design, was employed. The data of the research were collected by means of a questionnaire, comprised of open ended questions, and a metaphor
<i>Keywords</i> High school students Smartphones Deprivation Nomophobia Fomo	form. The data obtained were analyzed using the content analysis technique by the researchers simultaneously. As a result of the analyses, it is possible to say that the participants (i) generally underwent a psychological breakdown, or felt furious, or sad in some of the nomophobia scenarios they experienced, (ii) frequently experienced intense negative feelings, such as anxiety, anger, and/or boredom, and (iii) sometimes refrain from expressing their feelings by saying "it doesn't affect me". The present study yielded striking and equally thought-provoking findings such that the smartphone has a central place in the lives of the participants, who consider being deprived of a telephone equivalent to the loss of their most beloved ones.

Introduction

It is known that the new generation mobile phones, also called smartphones, are devices that provide individuals with the features of not only communicating and texting but also accessing the Internet from any place at any time. With the various facilities they provide, mobile phones are used intensively by individuals at all ages, especially by youngsters (Augner & Hacker, 2012; Smetaniuk, 2014). In fact, this intensive use of the mobile phone can cause situations that lay the foundation for various disorders in individuals due to its excessive use; this can be named as mobile addiction. Thus, in the recent literature, it is clear that the number of studies related to these kinds of disorders, i.e. the phenomenon of "Nomophobia", has increased. Nomophobia has been derived from the English expression NO Mobile PHOBIA, and it refers to the involuntary fear individuals experience when they cannot reach mobile devices such as smartphones or when they cannot communicate or connect to the Web with their devices (Fadzil, Abdullah & Salleh, 2016; King, Valença & Nardi, 2010). If an individual is nomophobic, s/he starts to feel anxious when s/he forgets to take his/her smartphone with him/her, when the battery of the telephone runs out or when the mobile telephone has no signal, and most of the time this anxiety can cause a disruption in the individuals' daily routines (Dixit et al., 2010). Individuals who feel void when they do not have their smartphones think that this device has become an indispensable part of their life. In addition, individuals' behavior of checking their telephones without any reason or purpose can indicate nomophobia as well (Park, 2005). Owing to individuals' excessive use of their smartphones, it has become quite common for them to hear imaginary telephone ringing or vibrations. These imaginary ringing or vibrations are revealed to be related to users' state of anxiety and depression (Lin, Chen, Li & Lin, 2013). Besides, individuals who experience a deprivation of smartphones are likely to experience the problem of focusing on their daily chores as their anxiety level increases and they have sleep disorders owing to their frequent telephone checks throughout the night (Rosen et al., 2016). Choliz (2010) underlines the fact that nomophobia is one of the strongest non-drug addictions in the 21st century. Thus, nomophobia, which is accompanied with serious negativities, is becoming increasingly widespread each day. Nomophobia is quite widespread especially among youngsters (Bianchi & Phillips, 2005; Pavithra & Madhukumar, 2015). To illustrate, in a study conducted with university students, it was revealed that almost two thirds of the students were nomophobic (Tavolacci et al., 2015; Yıldırım et al., 2016; Adnan & Gezgin, 2016).

Only these data can even display how serious Nomophobia is or can become. Hence, especially in recent years, the phenomenon of nomophobia is an area which attention drawn to. However, being a new concept in literature, Nomophobia related studies are limited (Adnan & Gezgin, 2016; Altundağ & Bulut, 2017; Bragazzi et

al., 2016; Gezgin, Çakır & Yıldırım, 2018; Gezgin, Şahin & Yıldırım, 2017; Minaz & Çetinkaya Bozkurt, 2017; Sharma et al., 2015; Tavolacci et al, 2015). In these research studies generally, high school and university students' levels of nomophobia were identified and the variation in these levels by various variables were examined. However, in the related literature, there seems to be no qualitative studies evaluating the feelings of individuals when they experience a deprivation of their smartphones based on their first-hand reports or studies examining the cognitive perceptions of individuals who are or are not deprived of their smartphones. This is why the current study could be considered unique and significant. In fact, Gezgin, Çakır and Yıldırım (2018) claim that it is important to conduct qualitative studies related to nomophobia. Since nomophobia is more common among youngsters, the current study, which aims to collect in-depth data, is significant also because its participants are high school students. In addition, to prevent nomophobia from affecting individuals physically, socially and psychologically, nomophobia has been explained in detail and the need to reveal how individuals feel has been met. Thus, it can be maintained that there is a need for studies carrying out in-depth qualitative analyses of high school students' nomophobic conditions. Based on this, the scope of the current study is based on identifying the feelings of high school students when they are deprived of mobile phones and the meanings they attribute to their smartphones and to the condition of being deprived of their smartphones. Thus, the research question of the study is as follows: "How do high school students feel in situations where they experience a deprivation of smartphones?"

Method

Research Design

In the present study, the research design of phenomenology was employed. Phenomenology is a research design which describes the experiences of individuals in relation to a phenomenon. These descriptions enable the researcher to reach the essence of the experiences of individuals who have various experiences related to the phenomenon under investigation (van Manen, 1990; Moustakes, 1994). The essence that the present study attempted to reach, that is the focus of the study, was the students' feelings when they experienced a deprivation of the mobile phone. Since each student participating in the study possessed a smartphone, it is evident that they had experiences regarding the phenomenon under study.

Participants

The present study was conducted with the participation of 158 students who were selected by means of criterion sampling in a high school located in the province of Niğde in Turkey during the 2016-2017 academic year. The criteria employed in the selection of the sample group were as follows: possessing a smartphone with Internet connection, having been using a mobile phone with internet connection for at least one year, and participating in the study on a voluntarily. The demographic features of the 158 students participating in the study are presented in Table 1.

Table 1. Participants' demographic features					
The Participants' Demogra	phic Features	Participants of the Interview Form N=158 (100%)			
Gender	Female	92 (41.8)			
	Male	66 (58.2)			
	Grade 9	41 (25.9)			
Creada Lavial	Grade 10	41 (25.9)			
Grade Level	Grade 11	42 (26.6)			
	Grade 12	34 (21.5)			
Number of years of using	1-2 years	59 (37.3)			
•	3-4 years	70 (44.3)			
the smartphone	5 years or more	29 (18.4)			
	0-2 hours	26 (16.4)			
Number of hours of using	2-4 hours	55 (34.9)			
Number of hours of using the smartphone per day	4-6 hours	27 (17.1)			
	6-8 hours	19 (12.0)			
	more than 8 hours	31 (19.6)			

Data Collection Tools

The data of the study were collected by the researcher by means of a questionnaire comprised of open-ended questions. After the form was developed, it was examined by two experts, one in the field of education and the other in the discipline of psychology. In the first section of the form, the participants were asked questions aiming to describe the participants' gender, grade level, the number of years of using the smartphone and the number of hours of using the smartphone per day; the second section, on the other hand, included questions to reveal the feelings of the participants when they did not have their smartphones. In the continuation of the form, there was a metaphor form.

The participants were given information about the research study before the form was distributed and they were assured that the obtained data would be used solely for scientific purposes and that their identity would be kept confidential. No influential interference was made while the participants were completing the form. The questions in the second section of the form were as follows:

Please complete the following to express how you would feel in the given situations.

1. When your smartphone is turned off	
2. When the battery of your smartphone is running out	
3. When the Internet package of your smartphone runs out	
4. When you cannot access information from your smartphone	
Metaphor Form	
For me, the smartphone is like	
For me, being deprived of the smartphone is like	

Data Collection and Analysis

The form, which was constructed by the researchers, was administered to the participants in the high school where they worked at their own convenient time so that a logistic problems would not be experienced in the research. The administrations lasted 15 minutes. The collected data were analyzed by means of the content analysis method. The codings were done by two researchers independently; however, the researchers coded the words that could substitute each other or had very close meanings together by arriving at a consensus and identified the ones they could not arrive at an agreement. Thus, with the formula of Miles and Huberman (1994), the inter-rater reliability of the study was calculated. The inter-rater reliability in the present study was calculated to be 96%.

Based on their frequencies, the responses given by the participants as regards their feelings were reported as word clouds. What smartphones and being deprived of the smartphone meant to the participants are presented by means of the metaphors generated by the participants and the frequencies (f) of the participants expressing those metaphors. In addition, in order to ensure the reliability and transferability of the study, quotations from participants' views are presented to the readers. Furthermore, to ensure the validity of the research study, the data analysis process is explained in detail.

Findings

The present study, in which how the participants felt when they experienced a deprivation of the smartphone is focused on, addresses four situations. First, the participants were asked how they would feel if their smartphones were turned off. Their responses are presented as a word cloud in Figure 1 below:

According to Figure 1, if the participants' smartphones were turned off, they would mostly feel anxious, bitter, bored, angry, stressed and uneasy. On the other hand, there were participants who stated that they would not be affected if their mobile phone were turned off. When the responses of the participants are examined carefully, it can be claimed that when their smartphones are turned off, generally they feel uneasy and tense.



Figure 1. The participants' feelings when their smartphones are turned off

Another scenario that indicates individuals' experiencing Nomophobia is the situation where their telephone's battery runs out. Hence, the feelings that high school students experience when the battery of their smartphones runs out constitutes one of the research questions. The responses of the participants are presented as a word cloud in Figure 2 below:



Figure 2. The feelings of the participants when the battery of their smartphone runs out

According to Figure 2, it can be asserted that when the battery of the participants' smartphones runs out, they mostly feel angry, sad, anxious, like a disaster, uneasy, tense and bitter. On the other hand, it is striking that there were participants who stated that they would not be affected and would in fact feel peaceful if the battery of their smartphone ran out.

Furthermore, another question that the participants were asked in order to understand whether or not they were Nomophobic was how they would feel if the Internet package of their smartphone were to run out. The feelings



of the participants in conditions where they would not be able to have Internet connection are presented as a word cloud in Figure 3 below:

Figure 3. The feelings of the participants when they would not be able to have Internet connection

When the responses in Figure 3 were examined, it was found that if the participants' Internet package were to run out, they would mostly feel bored and sad with a significant number of the participants expressing that they would feel angry, unhappy, bitter, furious, horrified and stressed. However, again a significant number of the participants were found to have indicated that they would not be affected. Finally, based on one other scenario that indicates individuals' experiencing Nomophobia, the participants were asked how their would feel if they could not access any kind of information they were seeking. The findings regarding the participants' feelings are presented as a word cloud in Figure 4 below:



Figure 4. The feelings of the participants when they cannot access information from their smartphones

In addition to the participants who claimed that they would feel bored, sad, or angry, there were also participants who stated that they would not be affected most of the time.

The Smartphone Related Metaphors Developed by the Participants

The smartphone related metaphors developed by all the individuals participating in the research study are presented in Table 2 with their frequencies.

Metaphor	f	Metaphor	f	Metaphor	f
Life	27	A sibling	1	A part of a body	1
A friend	22	My ear	1	An important object	1
A necessity	9	Memory	1	An important person	1
A supplementary tool	9	Chocolate	1	Guide	1
A means of communication	9	My world	1	Cigarette	1
Water	8	Wallet	1	A virus	1
A source of information	8	Education	1	Social life	1
Everything to me	6	A lake in the desert	1	Lover	1
A part of me	4	Entertainment	1	Dessert	1
My family	3	House	1	49	156
A toy	3	Film machine	1		
An unimportant object	3	An unimportant thing	1		
A source of happiness	3	Medicine	1		
Bread	2	İzmir meat balls	1		
My heart	2	Television	1		
A book	2	Music	1		
A close friend	2	Loneliness	1		
Sleep	2	An aid tool	1		
Food	2	Cake	1		
My mother	1	Time spending device	1		

Table 2.7	The smartphone	related metaphors	developed by the	participants

When Table 2 is examined, it can be observed that the participants have developed 49 different smartphone related metaphors. 30 of the metaphors were developed by a single student, while the remaining metaphors were generated by 2 to 27 students. The most frequently mentioned metaphors were as follows: life (f=27), friend (f=22), a necessity (f=9), a supplementary tool (f=9) and a means of communication (f=9). The 49 metaphors developed by the participants were grouped into 10 categories based on their common aspects. When the categories of metaphors were being formed, not only the metaphors themselves, but the justifications given were also taken into consideration. The categories formed of the smartphone related metaphors generated by the participants are presented in Table 3 below:

Category	Metaphor	f
The smartphone being of vital importance	life (27), everything to me (6), my heart (2), my ear (1), part of a body (1), my world (1), a lake in a desert (1)	39
The smartphones as a beloved person	friend (22), my family (3), a close friend (2), mother (1), sibling (1), an important person (1), a lover (1)	31
The smartphone as a basic need	a necessity (9), water (8), bread (2), sleep (2), food (2), home (1)	24
The smartphone as a facilitator of life	a supplementary tool (9), memory (1), wallet (1), guide (1), medicine (1)	13
The smartphone as a means to access information	source of information (8), book (2), education (1)	11
The smartphone resembling things that are liked	toy (3), film machine (1), music (1), an important object (1), entertainment (1), television (1)	8
The smartphone as a means of socialization	a source of communication (6), social life (1)	7
The smartphone as a source of happiness	a source of happiness (3), chocolate (1), dessert (1), cake (1), Izmir meat ball (1)	7
The smartphone as an unimportant device	an unimportant object (3), an unnecessary object (1),	4
The smartphone with their negativities	a virus (1), loneliness (1), cigarette (1)	3

Table 3. The categories of the smartphone related metaphors generated by the participants

The category of *smart telephones being of vital importance* includes 7 different metaphors, the total frequency of which is 39. The frequency distribution of the metaphors with the highest frequencies is as follows: life (27), everything to me (6) and my heart (2). It can be clearly understood that this category consists of participants' opinions that indicate that smartphones are perceived as a very important component of their life. Sample sentences of some participants that best reflect this category are as follows:

* For me, the smartphone is like life because I most spend my time on my phone and that's why I need it all the time. (S71,F)

* For me, the smartphone is like everything to me because I carry it everywhere all the time; I feel like I can't live without it. (S78,F)

The category of *the smart telephone as a beloved person* represents the opinions of the participants where they regard the smartphone as the people they love so much so that they identify their smartphone with their families, mother, or siblings. Consisting of 7 different metaphors, this category includes metaphors with a total frequency of 31. The frequency distribution of the metaphors with the highest frequencies is as follows: friend (22), family (3) and close friend (2). Sample sentences of some participants that best reflect this category are as follows:

* For me, the smartphone is like my friend because it means everything to me. (S82,M)

* For me, the smartphone is like my family because they always call me and want to reach me. (S25,F)

The category of *the smartphone as a basic need* includes 6 different metaphors. Of the metaphors, which are mentioned 24 times in total, the ones with the highest frequencies are as follows: a necessity (9), water (8) and bread (2). This category was formed based on the participants' opinions which showed that the smartphone was perceived as a basic need. Sample sentences of some participants that best reflect this category are as follows:

* For me, the smartphone is like a necessity because I use it for communication and for my homework. (S48,F)

* For me, the smartphone is like water because just as I can't stay without water, so I can't stay without it [the smartphone]. (S75,M)

The category of *the smartphone as a facilitator of life* represents the views that the smartphone facilitates their daily lives. In this category, five metaphors are repeated 13 times. Sample sentences of some participants that best reflect this category are as follows:

* For me, the smartphone is like a supplementary tool because it enables me to access information whenever I need it. (S123,M)

* For me, the smartphone is like memory because I can find all kinds of information in it. (S58,F)

The category of the smartphone as a means to access information is comprised of high school students' views that they can access information by means of their smartphones. Three different metaphors are repeated 11 times. The distribution of the metaphors based on their frequencies are as follows: a source of information (8), a book (2), and education (1). Sample sentences of some participants that best reflect this category are stated below:

* For me, the smartphone is like a source of information because I can find everything I look for in it. (S7,F)

* For me, the smartphone is like a book because I read books from my telephone. (S95,F)

The category of *the smartphone like the things that are liked* is comprised of views of participants who resemble the smartphone to things they like. Sample sentences of some participants that best reflect this category, which is comprised of 6 metaphors which are repeated 8 times, are as follows:

* For me, the smartphone is like a toy because whenever I get bored, I get out of it with the help of my phone. (S137,M)

* For me, the smartphone is like music I feel incomplete if I don't listen to music from it. I feel incomplete. (S90,F)

The category of *the smartphone as a means of socialization* represents the views that the participants can communicate with other people via their smartphones. Sample sentences of some participants that best reflect this category, comprised of two metaphors – a means of communication (6) and social life (1) – are as follows:

* For me, the smartphone is like a means of communication because if I didn't have a telephone, I wouldn't be informed of anything... (S6,M)

* For me, the smartphone is like social life because everything is possible only with it [the smartphone]. (S150,M)

With the metaphors in the category of the smartphone as a source of happiness, the participants resembled their smartphones to the things that made them happy. The opinions of participants that best illustrate this category, in which 5 metaphors are mentioned 7 times, are as follows:

* For me, the smartphone is like a source of happiness because I get happier the more I use it; I become attached to it. (S140.M)

* For me, the smartphone is like chocolate because I feel happy when I both eat chocolate and spend time on my phone. (S62,F)

The category of the smartphone as an unimportant device indicates that the participants do not regard their smartphones as a very important device. Sample sentences of some participants that best reflect this category, which comprises two metaphors – an unimportant object (3) and an unnecessary object (1) – are as follows:

* For me, the smartphone is like an unimportant thing because life does not just consist of things that we *hear, but also of what we see. (S51,M)*

* For me, the smartphone is like an unnecessary thing because it is not essential. (S36,F)

Finally, the category of the smartphone with their negativities is comprised of views indicating the negative aspects of the smartphone. For example, in this category, a participant resembles the smartphone to a cigarette to indicate that the smartphone is also a hazardous addiction like smoking cigarettes, while another participant stated that smartphones were hazardous like viruses. Some sample sentences of the participants are as follows:

* For me, the smartphone is like a virus because I am dependent on it just as a patient is to a drug; it is always in my hand. (S116,M)

* For me, the smartphone is like loneliness because I stay alone in order to spend time on my phone. (S109,F)

The Metaphors Developed by the Participants in relation to Being Deprived of a Smartphone

The metaphors developed by the participants in relation to being deprived of a smartphone and their frequencies are presented in Table 4.

Metaphor	Ν	Metaphor	Ν	Metaphor	Ν
Death	34	The absence of a father	2	Feeling good	1
Loneliness	19	Having no friend	2	A nightmare	1
Emptiness	12	Falling on a deserted island	2	Going crazy	1
Deficiency	8	Sadness	1	Being excluded from social life	1
Being hungry	5	Being away from my family	1	Blindness	1
Not important	5	Having no purpose in life	1	Being left without an ear	1
A terrible situation	4	Being drowned	1	Unhappiness	1
Convenience	4	Boredom	1	Disturbance	1
Stress	4	Desperateness	1	Losing a part of my body	1
Being thirsty	4	Losing one's mind	1	49	155
Non-influential	4	Losing connectedness with the world	1		
Ignorance	3	A power cut	1		
Torture	3	Ancient period	1		
Being without water on an island	2	Insomnia	1		
Falling behind	2	Being left without a home	1		
Darkness	2	Having no news	1		
Being left without an arm	2	Not feeling anything	1		
Feeling bitter	2	Peace	1		
Happiness	2	Losing a part of myself	1		
A boring life	2	Nervousness	1		

When Table 4 is examined, it can be seen that high school students developed 49 metaphors in relation to their smartphones. Of the metaphors developed, 26 belong to a single student, while the remaining metaphors were produced by 2 to 34 students. The metaphors developed by the students with the highest frequencies are as follows: death (f=34), loneliness (f=19) and emptiness (f=12).

The metaphors developed by the participants were grouped into 9 categories based on their common features. The reasons underlying the metaphors developed by the participants to reflect the situation of being left without a smartphone are presented in Table 5.

Table 5. The categories of the metaphors developed by the participants to reflect the situation of being deprived
of a smartphone

Category	Metaphor	Frequency
Loss of life	death (34)	34
Negative feelings	a terrible situation (4), stress (4), a boring life (2), a bad feeling (2), a nightmare (1), going crazy (1), unhappiness (1), torture (3), nervousness (1), sadness (1), drowning (1), boredom (1), desperateness (1), losing one's mind (1), disturbance (1)	25
Loss of socialization	loneliness (19), having no friends (2), falling on a deserted island (2), loss of social life (1)	24
Loss of an object of interest	emptiness (12), deficiency (8), having no purpose in life (1), boredom (1)	22
Loss of things of vital importance	being hungry (6), being thirsty (6), being left without an arm (2), being left in the dark (2), being left without a home (1), loss of a part of the body (1), losing a part of myself (1), blindness (1), being left without an ear (1), insomnia (1)	22
Not attaching importance	not important (5), uninfluential (4), not feeling anything (1)	10
Positive feelings	convenience (4), happiness (2), peace (1), feeling good (1)	8
Inability to follow up on the agenda	ignorance (3), falling behind the news (2), being ill- informed (1), living as in the old ages (1)	7
Loss of a beloved person	the absence of a father (2), being away from one's family (1)	3

When Table 5 is examined, it can be observed that the metaphors the participants developed in related to being deprived of a smartphone is grouped under 10 categories. It can be deduced that the participants in the category of Loss of life identify being deprived of a smartphone with death. Some sample sentences of participants expressing these opinions that best reflect this category are stated below:

* For me, the smartphone is like loneliness because if I am left without a telephone, I will become detached from life. (S9,F)

* For me, the smartphone is like death because I can't live without it. (S17,M)

The category of negative feelings includes views of participants that they experience negative feelings such as anxiety, fear and unhappiness when they are deprived of a smartphone. In this category, which includes 15 metaphors, the total frequency of which is 25, the most frequently mentioned metaphors were a terrible condition (4), stress (4), a boring life (4) and feeling bad (2). Views illustrating this category are as follows:

* For me, the smartphone is like a terrible situation because I need it all the time. (S14,F)

* For me, the smartphone is like stress because I can't do anything without it. (S57,F)

The category of loss of socialization includes the metaphors of the participants who stated that they would feel lonely if they were deprived of a smartphone. In fact, according to some participants, being deprived of a smartphone is like falling on a deserted island. The views of participants best illustrating this category, comprised of four metaphors, are as follows:

* For me, the smartphone is like loneliness because not being able to communicate with anybody will make me upset. (S110,F)

* For me, the smartphone is like having no friend because I will get bored without it and this will make me upset. (S3,M)

The metaphors in the category of losing the object of interest are those metaphors based on the participants' views that if they were deprived of a smartphone, they would feel emptiness. In this category, comprised of 4 metaphors, the total frequency of which is 22, the most frequently mentioned metaphors were emptiness (12) and deficiency (8). Views of participants best illustrating this category are as follows:

* For me, the smartphone is like emptiness because if I don't have my telephone, I will merely fall into emptiness. (S64,F)

* For me, the smartphone is like deficiency because I feel I need it. (S38,F)

The category of losing something of vital importance, just like the category of losing life, includes metaphors based on highly assertive meanings attributed to their smartphones. According to the metaphors in this category, the participants identify being deprived of a smartphone with such important conditions as being hungry (5), being thirsty (4) and being left without an arm (2). Views of participants' best illustrating this category are as follows:

* For me, the smartphone is like being hungry because I cannot stand it at all. (S102,F) * For me, the smartphone is like being thirsty because I can't live without it. (S82,M)

Three metaphors in the category of not attaching importance were repeated 10 times. The participants generating the metaphors in this category stated that they would not attach importance to the condition where they were deprived of a smartphone. The metaphors generated by some participants holding these opinions are as follows:

* For me, the smartphone is like being unimportant because if I don't have it, I will be interested in other things. (S88,F)

* For me, the smartphone is like a neutral element because I am not addicted. (S94,F)

As opposed to the participants thinking that they would die if they did not have their smartphones, the category of negative feelings, represent the views of participants who stated that they would feel such positive views as convenience (4), happiness (2) and peace (1) in the same condition. The metaphors generated by some participants holding this view are as follows:

* For me, the smartphone is like convenience because when there is no telephone in the environment, I can communicate more effectively with people. (S138,M)

* For me, the smartphone is like happiness because it makes people both busy and lazy. (S107,F)

The category of not being able to follow up-to-date developments includes four metaphors. The total frequency of these metaphors is seven. The participants generating the metaphors in this category think that without a smartphone, they would not be able to access information (7), they would fall behind up-to-date developments (2), and they would not be able to access sources of news (2). The metaphors generated by some participants holding this view are as follows:

* For me, the smartphone is like ignorance because I get sad if I don't get information from my family and friends. (S43,F)

* For me, the smartphone is like falling behind because you fall behind the conditions of the era. (S35,F)

The category of losing a beloved person can be considered to be one of the interesting categories. Three participants who generated the two metaphors in this category stated that they would feel like they were left without a father (2) or were away from their family (1) if they were deprived of a smartphone. In other words, the smartphone in these participants' minds had the same value as their fathers and other family members. The metaphors produced by these participants are as follows:

* For me, the smartphone is like being without a father because people need a phone as much as they need a father. (S140,M)

* For me, the smartphone is like being away from one's family because I will not be able to communicate with my family. (S10,M)

Discussion and Conclusion

The first thing most telephone users do in the morning even before they wash their face and the last thing they do before falling asleep is to check their phones owing to the fact that the telephone is used as an alarm clock, and people are curious about what they missed throughout the night during their sleep. In fact, smartphones are always in the hands of the users during the day too. Smartphones, which can be used independent of time and place, provide numerous advantages, such as entertaining individuals, facilitating work, and enabling one to use

their time productively. However, in addition to these, the usage of the telephone can lead to different situations where work and personal life are intermingled, and this can sometimes lead to problematic situations in individuals' lives. Furthermore, the intensive use of the smartphone can lead to some physical, social and psychological problems in individuals. Considering the frequent usage of smartphones by youngsters, it can be said that the group under risk in terms of these problems is the young generation. Thus, in the present research study, the meanings students attribute to their smartphones and their feelings regarding the absence of the smartphone were investigated. Striking findings were arrived at as a result of the analysis of the participants' responses to the questions based on scenarios, such as running out of the battery and the Internet package, which were asked to reveal whether or not the participants were nomophobic. It was revealed in the study that when the participants' smartphones were shut down, they felt anxious, bored, angry, stressed and uneasy. In addition, when the battery of participants' telephone ran out, it can be stated that they felt angry, sad, worried, a disasterlike feeling, uneasiness and nervousness. As for the situation in which the Internet package of the participants' smartphones finished, it was found that they felt bored, sad, angry, unhappy, furious, afraid and stressed. In a study conducted in Turkey have been found to be addicted to the Internet, 15.3% of 221 university students (Tekin, Yetkin, Adıgüzel & Akman (2018). In a similar study, the rate of problematic internet use among 432 participants was 15.9% (Ancel, Acıkgöz & Yavaş Ayhan, 2015). On the other hand, in a different study, it was determined that the university students who participated in the research were not in the dependency category according to the internet addiction scale scores (Durmus, Günay, Yıldız, Timur, Balcı & Karaca, 2018).

Finally, some participants stated that if they could not access any information they sought by means of their smartphones, they would not be affected by this situation most of the time. On the other hand, there were some participants who stated that they would feel bored, sad or angry in such a situation. Accordingly, it can be stated that when the battery or Internet package of the participants run out, they feel worried, angry, sad or stressed. In parallel to this result, in a study conducted in India, it was found that 39.5% of the students were nomophobic and 27% were under the risk of becoming nomophobic (Pavithra & Madhukumar, 2015). In a study carried out in Turkey, it was found that 42.6% of young adults were nomophobic and that the participants were highly afraid of losing access to communication and information (Yıldırım, Sumuer, Adnan & Yıldırım, 2016). Interestingly, however, in the present study, the participants expressed that they would not be affected by not being able to access information only. This result indicates that individuals do not use their smartphones to access information or at least that they do not feel uneasy when they cannot access information. Similarly, Hosgör, Tandoğan and Hosgör (2017) reported that high school students regarded not being online as not being able to access social network sites, watch videos, text people, listen to music and play games. According to a study by the Deloitte Company, Facebook, WhatsApp, Facebook Messenger, Instagram and e-mail are frequently used applications on the smartphone and are used for at least one hour per day. In Turkey, it is accepted that 66% of smartphone users use their phones more than necessary (URL-1). When the findings obtained from the research are evaluated overall, it is understood that high school students, that is youngsters, use their smartphones excessively. This situation may derive from the fact that for the new generation youngsters, smartphones have become an identifying attribute and is perceived as an indicator of a certain condition Tindell, Bohlander, 2012). In some studies in the literature, it is reported that individuals use their phones excessively and in a problematic way (Martinotti, et al., 2011; Peters & Malesky, 2008; Philips, 2006) and, in fact, display behaviors of addiction to their smartphones Balta & Horzum, 2008; James & Drennan, 2005).

As a result of the analysis of the meanings that the participants of the present study attributed to their smartphones and the absence of a smartphone, it was found that they developed 50 different smartphone related metaphors. When these metaphors were examined based on their categories, it was understood that the smartphone related metaphors were intensified around the category of the smartphone being of vital importance so much so that high school students identified their smartphones with 'life'. Furthermore, the participants identified their smartphones with people they loved, such as their family and friends. The students generated 49 different metaphors for being deprived of a smartphone too. The highest number of metaphors were found to be in the category of loss of life. Accordingly, the high school students participating in the study regard their smartphones as important as their life, which is both an interesting and a frightening result. Similarly, in a study conducted in the U.S.A., 26% of mobile phone users were found to think that they would not be able to live without their smartphones (Chen & Katz, 2009). In the present study, there were also students who stated that the absence of a smartphone was like being left without a father. Another finding arrived at in the present study was that the second most frequently generated metaphors by the participants in relation to being left without a smartphone made up the category of negative feelings. So much so that according to high school students, being left without a smartphone is described as a terrible situation, a source of stress, a boring life, a nightmare, unhappiness, desperateness and boredom, which signify nomophobic feelings. This finding is supported by that reported in a study by Uzun, (2016). in which the meaning of smartphones for Z generation students were

examined. In the study, Uzun revealed that smartphones had an important place in youngsters' lives and that the participants regarded the mobile phone as a means to access information, and they mostly mentioned being addicted to their mobile phones. In the present study, there were also participants who attributed the meaning of "source of life" to their smartphone. As the number of studies on smartphone addiction is limited, the variables related to smartphone addiction have yet not been identified. Further studies could be conducted on various variables related to smartphone addiction, how smartphone addiction can affect personal life, the work performance of individuals working in different sectors, the school performance of student groups at different levels, and how the negative effects of potential problems can be overcome.

References

- Adnan, M., & Gezgin, D. M. (2016). Modern yüzyılın yeni olgusu nomofobi ve üniversite öğrencileri arasında yaygınlık düzeyi. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, 49*(1), 141-158.
- Altundağ, Y., & Bulut, S. (2017). Aday sınıf öğretmenlerinde problemli akıllı telefon kullanımının incelenmesi. Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi, 17(4), 1670-1682.
- Ançel, G., Açıkgöz, İ., & Yavaş Ayhan, A. (2015). Problemli internet kullanımı ile duygusal zekâ ve bazı sosyodemografik değişkenler arasındaki ilişki. *Anadolu Psikiyatri Dergisi, 16*, 255-263.
- Augner, C., & Hacker, G.W. (2012). Associations between problematic mobile phone use and psychological parameters in young adults. *International Journal of Public Health*, 57, 437-441.
- Balta, Ö., & Horzum, M. B. (2008). Web tabanlı öğretim ortamındaki öğrencilerin internet bağımlılığını etkileyen faktörler. Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, 41, 187-205.
- Bianchi, A., & Phillips, J. G. (2005). Psychological predictors of problem mobile phone use. *CyberPsychology* & *Behavior*, 8(1), 39–51.
- Bragazzi, N. L., Del Puente, G., Adavastro, G., Pompei, V., Siri, A., Rania, N., Correria, AP., & Yıldırım, C. (2016). Translation and validation of the nomophobia questionnaire (NMP-Q) in Italian language: Insights from factor analysis. *European Psychiatry*, 33, 390.
- Chen Y.F., & Katz J. (2009). Extending family to school life: College students use of the mobile phone. *Human-Computer Studies*, 67(2), 179-191.
- Choliz, M. M. (2010). *Mobile phone addiction in adolescence: Evaluation and prevention of mobile addiction in teenagers*. Saarbrücken: Lambert Academic Publishing.
- Dixit S., Shukla H., Bhagwat A., Bindal A., Goyal A., Zaidi A. K., & Shrivastava, A. (2010). A study to evaluate mobile phone dependence among students of a medical college and associated hospital of central India. *Indian J Community Med.*, 35(2), 339–341.
- Durmuş, H., Günay, O., Yıldız, S., Timur, A., Balcı, E., & Karaca, S. (2018). Üniversite öğrencilerinde internet bağımlılığı ve üniversite yaşamı boyunca değişimi. *Anadolu Psikiyatri Dergisi*, 19(4), 383-389.
- Fadzil, N.M., Abdullah, M.Y., & Salleh, M.A.M. (2016). The level of tolerance sanctioning children using gadgets by parents lead to nomophobia: Early age gadgets exposure. *International Journal of Arts & Sciences*, 9(2), 615–622.
- Gezgin, D.M., Çakır O., & Yıldırım, S. (2018). The relationship between levels of nomophobia prevalence and internet addiction among high school students: The factors influencing Nomophobia. *International Journal of Research in Education and Science (IJRES)*, 4(1), 215-225.
- Gezgin, D.M., Şahin, Y.L., & Yıldırım, S. (2017). Sosyal ağ kullanıcılarının nomofobi düzeylerinin çeşitli faktörler açısından incelenmesi. *Eğitim Teknolojisi Kuram ve Uygulama*, 7(1), 1-15.
- Hoşgör, H., Tandoğan, Ö., & Hoşgör Gündüz, D. (2017). Nomofobinin günlük akıllı telefon kullanım süresi ve okul başarısı üzerindeki etkisi: Sağlık personeli adayları örneği. Akademik Sosyal Araştırmalar Dergisi, 5(46), 573-595.
- James, D., & Drennan, J. (2005). *Exploring addictive consumption of mobile phone technology*. In Paper presented at the Australian and New Zealand marketing academy conference. Perth: Australia.
- King, A. L. S., Valença, A. M., & Nardi, A. E. (2010). Nomophobia: the mobile phone in panic disorder with agoraphobia: reducing phobias or worsening of dependence?. *Cognitive and Behavioral neurology*, 23(1), 52-54.
- Lin, Y. H., Chen, C. Y., Li, P., & Lin, S. H. (2013). A dimensional approach to the phantom vibration and ringing syndrome during medical internship. *Journal of Psychiatric Research*, 47(9), 1254-1258.
- Martinotti, G., Villella, C., Di Thiene, D., Di Nicola, M., Bria, P., Conte, G., et al. (2011). Problematic mobile phone use in adolescence: A cross-sectional study. *Journal of Public Health*, *19*, 545-551.
- Miles, M. B. & Huberman, A. M. (1994). Qualitative data analysis. London: Sage Publication.
- Minaz, A., & Çetinkaya Bozkurt, Ö. (2017). Üniversite öğrencilerinin akıllı telefon bağımlılık düzeylerinin ve kullanım amaçlarının farklı değişkenler açısından incelenmesi. *Mehmet Akif Ersoy Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 9(21), 268-286.

Moustakas, C. (1994). Phenomenological research methods. Thousand Oaks, CA: Sage.

Park, W. (2005). Mobile phone addiction. Mobile Communications, 31, 253-272.

- Pavithra, M. B., & Madhukumar, S. (2015). A study on nomophobia-mobile phone dependence, among students of a medical college in Bangalore. *National Journal of Community Medicine*, *6*, 340-344.
- Peters, C. S., & Malesky, L. A. (2008). Problematic usage among highly-engaged players of massively multiplayer online role playing games. *CyberPsychology & Behavior*, 11, 481-484.
- Phillips, J. G. (2006). *The psychology of Internet use and misuse*. In M. Anandarajan, T. Thompson, & C. Simmers (Eds.), The Internet and workplace transformation (pp. 41-62). Armonk, New York: Sharpe.
- Rosen, L., Carrier, L. M., Miller, A., Rokkum, J., & Ruiz, A. (2016). Sleeping with technology: cognitive, affective, and technology usage predictors of sleep problems among college students. *Sleep Health*, 2(1), 49-56.
- Sharma, N., Sharma, P., Sharma, N., & Wavare, R. R. (2015). Rising concern of nomophobia amongst Indian medical students. *International Journal of Research in Medical Sciences*, *3*, 705-707.
- Smetaniuk, P. (2014). A preliminary investigation into the prevalence and prediction of problematic cell phone use. *Journal of Behavioral Addictions*, *3*, 41-53.
- Tavolacci, M. P., Meyrignac, G., Richard, L., Dechelotte, P., & Ladner, J. (2015). Problematic use of mobile phone and nomophobia among French college students. *The European Journal of Public Health*, 25(3), 172-088.
- Tindell, D. R., & Bohlander, R. W. (2012). The use and abuse of cell phones and text messaging in the classroom: A survey of college students. *College Teaching*, 60, 1-9.
- URL-1: https://www2.deloitte.com/tr/tr/pages/about-deloitte/articles/deloitte-global-mobil-kullaici-arastirmasi-2017.html
- Uzun, Z. (2016). Z kuşağı öğrencilerinin akıllı cep telefonu (smartphone) kavramına ilişkin algılarının değerlendirilmesi: Bir metafor analizi çalışması. 1.International Distance Education Researches Conference, İstanbul, Türkiye.
- Tekin, A., Yetkin, A., Adıgüzel, S., & Akman, H. (2018). Evaluation of stroop and trail-making tests performance in university students with internet addiction. *Anadolu Psikiyatri Dergisi, 19*(6), 593-598.

van Manen, M. (1990). Researching lived experience. New York: State University of New York Press.

Yıldırım, C., Sumuer, E., Adnan, M., & Yıldırım, S. (2016). A growing fear prevalence of nomophobia among Turkish college students. *Information Development*, *32*(5), 1322-1331.

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