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Metaphorical Connotations of Preservice Teachers on the Concept of Nomophobia

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Abstract
The diversity of temporal needs in the world has increased the people's rate of communication and interaction. Many factors play a role in increasing the rate of communication and interaction. One of these factors is mobile devices. It can be said that various mobile devices have features that affect human life in many dimensions in today's world. Therefore, these devices have a very important place for individual and social sustainability. Mobile phones are the most important of the various mobile devices in the globalizing world. The excessive use of mobile phones has produced the concept of nomophobia, which is a new type of addiction in the world. In this study, based on this type of disorder, it was aimed to determine the metaphorical connotations of preservice teachers regarding the concept of nomophobia. In this study, which was carried out with a qualitative research method and a phenomenological design, the study group members were asked an open-ended question in the form of "Nomophobia is like ……….…… because …………… ." and by which, the metaphorical connotations of the preservice teachers were aimed to be determined. The analysis of their answers revealed that the preservice teachers had remarkable metaphorical connotations regarding the concept of nomophobia. The connotations compiled in the study were combined under certain themes by the researchers and presented in the findings section.

Keywords: Nomophobia, Preservice Teacher, Mobile Phone, Metaphorical Connotation

1. Introduction

Technology can be said to be the greatest revolution of the modern age. Technology plays an important role in meeting needs and facilitating human life. Consequently, a daily increase in the utilization of technology is observed. In addition to the benefits provided by the technological instruments used today, they also bear harmful aspects. The leading technological devices used are mobile devices and smart phones. Especially smart phones provide meaningful conveniences in people's lives. The conveniences provided by these multi-dimensional phones offer significant advantages to individuals in terms of saving time. Apart from their basic function, individuals benefit from smart phones through many functions such as shopping, using e-mail and

social media, banking transactions and virtual games. It can be stated that the multidimensional functionality of these devices and the fact that they can easily meet the needs bring about the excessive use of these devices. It is seen that addictions to these devices occur due to excessive use. When evaluated in the context of human health, it can be said that addictions cause many problems primarily in terms of social, cultural, physical, psychological and economic aspects. It can be stated that the current situation continues to escalate daily.

Nomophobia is a concept that has entered the literature as the fear of being without a smartphone or the fear of mobile phone deprivation. The addiction caused by this fear can be defined as one of the addictions brought by the age we live in. Therfore, the use of smartphones, in contrast to keypad phones, causes an increase in the level of nomophobia. It can be said that this fear brought by the age of technology will increase in the future and studies on nomophobia will increase in the same direction. Therefore, this study on nomophobia is important in terms of facilitating academics, educators and graduate students in their studies and helping taking preventive actions regarding nomophobia. Thus, it will be easier to progress in a healthy way regarding the studies to be conducted and the measures to be taken. It is also expected that the study will contribute to the literature on the theme of nomophobia.

1.1. Literature Survey

Nomophobia can be defined as a digital age phobia stemming from the fear of being without a smartphone (Galhardo, Loureiro, Massano-Cardosso & Cunha, 2022). At the point where human interaction with technology has reached, the concept of nomophobia has been chosen as the word of the year by the Cambridge Dictionary via a public vote in 2018 (Eren, Kılıç, Günal, Kırcalı, Öznacar &Topuzoğlu, 2020). It has been determined that nomophobia has four different dimensions which are not being able to communicate, losing connectedness, not being able to access information and giving up convenience (Yildirim & Correia, 2020).

Based on these dimensions, it can be said that with smart phones taking center stage of life, it carries various problems. Being constantly accessible causes problems in the context of work and family relations, although it is sometimes deemed as positive. In terms of social relations, individuals experience difficulties in socializing, and games and social media addiction cause anxiety when the individual cannot access the internet (Öz & Tortop, 2018).

With the increase in the use of smart phones, there has been an increase in the use of the internet. For example, in Turkey in 2021, the rate of internet access at home was 92% (Turkish Statistical Institute (TÜİK), 2021). This rate is quite high and is an indicator of the level of internet use at home. It can be said that the cheapness of the internet and ease of access to the internet bring about senseless use. Güler and Veysikarani (2019), further, stated that excessive and uncontrolled use of the internet leads to phone addiction. In cases where mobile phone deprivation is experienced due to addiction, the fear termed nomophobia arises.

The concept of Nomophobia, which is a type of fear, was introduced into the literature as a result of a research conducted in England in 2008. The concept has started to become widespread, especially with the development of smartphone technology. Expressed as "fear of being without a phone", nomophobia is derived from the abbreviation of the English words "no mobile phobia". In the case of nomophobia, individuals feel a fear of being deprived of telephone communication. It can be said that this discomfort caused by fear increased with the introduction of smartphones. The concept of nomophobia has been mentioned since the use of the first touch phone in Turkey in 2009. It is seen that the probability of nomophobia is higher due to the use of the phone, especially in the generation named "Generation Z", born after the 2000s (Bartwal & Nath, 2020; Saraç, 2021), and it has started to become a rapidly spreading problem, especially among university students (Apak & Yaman, 2019). In addition, it can be said that the use of smartphones in society has become one of the most important actions of life. Hence, it is seen that a society that does not worry about feeding but does not think of going anywhere without a smart phone and internet is being built. It has been determined that there is an increase in the addiction of not only young people, but also people from all age groups to smartphones. Waking up even in the early hours of the morning and looking directly at their phones, constantly checking the phone screen during the day, and feeling anxious when they cannot find their phones are considered the most important indicators of

nomophobia (Kalaskar, 2015). In short, it can be said that accessing internet getting easier causes nomophobia by increasing social media and smartphone addiction (Gezgin, Şumuer, Arslan & Yıldırım, 2017).

1.2. Research Aim and Research Questions

The aim of this study is to determine the metaphorical connotations of preservice teachers regarding the concept of "nomophobia". In accordance with the purpose of the study, answers to the following questions were sought;
- ✓ What are the metaphorical connotations of preservice teachers regarding the concept of nomophobia?
- ✓ Under which conceptual categories can the metaphorical connotations expressed by preservice teachers be classified according to their common characteristics?

2. Method

2.1. Study Design

This study aims to determine the metaphorical connotations of preservice teachers regarding the concept of nomophobia. Qualitative research method and phenomenological design were used in accordance with the nature of the study. Qualitative research method is a research method in which methods such as observation, interview and document analysis are used and perceived situations are processed in a realistic and holistic way in a natural environment. It is also a perspective that aims to research and understand social phenomena in their natural environment, based on theory building (Groenewald, 2004; Göçer, 2014; Koopman, 2017). Phenomenology, on the other hand, deals with phenomena that we are aware of but for which we do not have an in-depth and detailed perspective. Phenomenology emerges as a research design that is suitable for studies aiming to investigate phenomena whose meaning we do not fully understand (Koopman, 2017; Yıldırım & Şimşek, 2018).

2.2. Participants

The study group of the research consists of preservice teachers studying at İnönü University Faculty of Education. In today's world, where the use of smartphones has turned into an addiction, young preservice teachers' perspectives on the subject are worth examining. A total of 125 preservice teachers, 90 female and 35 male, participated in the study carried out in this direction. The participation of preservice teachers in the study was voluntary based.

Table 1: Demographic characteristics of the study group

Gender	Frequency	Percentage (%)
Male	35	28
Famale	90	72
Total	125	100

2.3. Instrument

In order to collect the data for the study, a metaphorical connotation questionnaire was created by the researchers. The metaphorical connotation questionnaire where questions are formed as "Nomophobia is like …………, because ………… ." was given its final form following experts' opinion. The questionnaire, which was completed after receiving experts' opinion, was distributed to preservice teachers after they were briefed on required information on the subject. The preservice teachers completed the distributed questionnaire in line with their own opinions.

2.4. Data Analysis

The "content analysis" technique was used in the evaluation of the study data. Content analysis is a technique that allows working indirectly to understand human behavior and nature. This technique is based on the

systematic collection of important words under the same categories with coding created with certain methods (Huberman & Matthew, 1994; Büyüköztürk, Kılıç Çakmak, Akgün, Karadeniz & Demirel, 2018).

3. Research Results

In this part of the study, the data obtained within the scope of the research and the metaphorical connotations of the preservice teachers regarding the concept of nomophobia are presented. In addition, in this section, 40 different mental images developed regarding the concept of nomophobia are given, supported by sample metaphorical connotations expressed by the participants. The 40 mental images obtained through the content analysis were compared in terms of the gender variable of the members in the study group. According to the findings obtained from the study, it was determined that female and male preservice teachers produced a total of 125 valid metaphorical connotations for the concept of nomophobia. Metaphorical connotations are presented in Table 2.

3.1. Metaphorical Connotations of Preservice Teachers Regarding the Concept of "Nomophobia"

When the metaphorical connotations of the preservice teachers regarding the concept of nomophobia are examined, it is seen that 35 male preservice teachers and 90 female preservice teachers produced 125 metaphorical connotations in total. It can be said that preservice teachers associate the metaphorical connotations they produce with regard to the concept of "nomophobia" with different perspectives and generally different concepts.

Table 2: Perceptions of the study group regarding the concept of nomophobia

Code of Metaphorical Connotation	Name of Metaphorical Connotation tation	Gender der	Frequency(*n*) quency (*n*)	Percentage(%)ercentage (%)
1	Enduring pain	1 f	1	0.8
2	Forest with no trees	1 f	1	0.8
3	Loosing one's mind	1 f	1	0.8
4	Alcohol addiction	1 f	1	0.8
5	Separation	5 f*- 1 m*	6	4.8
6	House with no balcony	1 f	1	0.8
7	Something insignificant	1 f	1	0.8
8	Lack of five senses	1 f	1	0.8
9	Emptiness/feeling of incompleteness	4 f	4	3.2
10	Loosing a valuable belonging	4 f - 3 m	7	5.6
11	Depression	3 f - 1 m	4	3.2
12	Resting	1 f	1	0.8
13	Captivity	1 f	1	0.8
14	Prison	1 f	1	0.8
15	Detachment from life	1 f	1	0.8
16	Pleasure	1 m	1	0.8
17	Nothing	1 m	1	0.8
18	Primitive age	1 f	1	0.8
19	Loosing one's dignity	1 m	1	0.8
20	Person and object addiction	1 f	1	0.8
21	Fear-Worry-Anxiety	9 f - 4 m	13	10.4
22	Blindness	1 f	1	0.8
23	Gambling addiction	1 f	1	0.8
24	Substance addiction	4 f - 2 m	6	4.8
25	Inability to breathe	7 f	7	5.6

26	Obesity	2 f	2	1.6
27	Lack of organs	4 f - 3 m	7	5.6
28	Death	4 f - 1 m	5	4.0
29	Poverty	2 f - 3 m	5	4.0
30	Platonic love	1 f	1	0.8
31	Shelter	1 f	1	0.8
32	Smoking addiction	3 m	3	2,4
33	Thirst	6 f - 3 m	9	7.2
34	Inability to taste	1 f	1	0.8
35	Technology addiction	1 f	1	0.8
36	Sleep	1 f	1	0.8
37	Loneliness	9 f - 4 m	13	10.4
38	Eating and drinking	5 f - 4 m	9	7.2
39	Loosing one's way	1 f	1	0.8
40	Falling from height	1 f	1	0.8
Total		**F: 90 M: 35**	**125**	**100**

*In the table, the following notations are used m: male and f: female. The letters m and f represent the number of preservice teachers representing each metaphorical connotation by gender. These notations have the same meaning for all tables given in the categorization.

Table 2 reveals that 40 different metaphorical connotations have been generated for the expression "Nomophobia is like…….…..…   because ……..……. " . When the resulting metaphorical connotations are examined, it is seen that the study group has different, original and negative perceptions regarding the concept of nomophobia. The frequency distributions of the connotations most emphasized by the members of the study group are given below. Considering this distribution, it was determined that nomophobia was perceived negatively by the members of the study group. In addition, connotations with the highest frequency; loneliness (n-13), fear-worry-anxiety (n-13), thirst (n-9), eating-drinking (n-9), loss of a valuable item (n-7), inability to breathe (n-7) and lack of organs (n-7). As a result of the analyzes made on the basis of the data obtained; The data are presented below as tabulated under 9 different categories.

3.2. Distribution of Metaphorical Connotations Regarding the Concept of "Nomophobia" by Common Features

3.2.1.The Concept of Nomophobia as Health Perception

When the metaphorical connotations of preservice teachers regarding the concept of nomophobia are evaluated from the perspective of "health perception", it is seen that 21 participants produced 8 different metaphorical connotations.

Table 3: Distribution of metaphorical connotations of the concept of nomophobia as a health perception

Code of Metaphorical Connotation	Nomophobia as Health Perception	Gender	Frequency (n)	Percentage (%)
3	Loosing one's mind	1 f	1	0.8
8	Lack of five senses	1 f	1	0.8
22	Blindness	1 f	1	0.8
25	Inability to breathe	7 f	7	5.6
26	Obesity	2 f	2	1.6
27	Lack of Organs	4 f - 3 m	7	5.6
34	Inability to taste	1 f	1	0.8
40	Falling from height	1 f	1	0.8
Total		**18 f - 3 m**	**21**	**16.8**

Metaphorical connotations of the category comprise inability to breathe (n-7), lack of organs (n-7), obesity (n-2), losing one's mind (n-1), lack of five senses (n-1), blindness (n-1), inability to taste (n-1) and falling from height (n-1). When the metaphorical connotations in the theme of "nomophobia as a health perception" are analyzed; of the 8 metaphorical connotations gathered, 7 metaphorical connotations (losing one's mind, lack of five senses, blindness, inability to breathe, obesity, inability to taste, falling from height) were only stated by female preservice teachers, and 1 metaphoric connotation (lack of organs) was expressed by both male and female participants. In this theme, it is seen that preservice teachers associate the concept of nomophobia with not being able to breathe and lack of organs. Thus, it can be said that nomophobia has a vital meaning such as not being able to breathe and is perceived as important as the lack of an organ in the body.

*"Nomophobia is like shortness of breath because when we lack something, our pulse rises, our heart rate quickens, and we experience shortness of breath." (**Female preservice teacher, 12**)*
*"Nomophobia is like the longing for a kidney of a patient waiting for a kidney transplant in the hospital, because our phones have become as important as a vital organ today." (**Male preservice teacher, 8**)*

3.2.2. The Concept of Nomophobia as Perception of Addiction

When the metaphorical connotations of preservice teachers regarding the concept of nomophobia are evaluated from the perspective of "addiction perception", it is seen that 13 participants generated 6 different metaphorical connotations.

Table 4: Distribution of metaphorical connotations of the concept of nomophobia as a perception of addiction

Code of Metaphorical Connotation	Nomophobia as Perception of Addiction	Gender	Frequency (n)	Percentage (%)
4	Alcohol addiction	1 f	1	0.8
20	Person or object addiction	1 f	1	0.8
23	Gambling addiction	1 f	1	0.8
24	Substance addiction	4 f - 2 m	6	4.8
32	Smoking addiction	3 m	3	2,4
35	Technology addiction	1 f	1	0.8
Total		**8 f - 5 m**	**13**	**10.4**

Metaphorical connotations of the category were substance addiction (f-6), smoking addiction (n-3), alcohol addiction (n-1), person and object addiction (n-1), gambling addiction (n-1) and technology addiction (n-1). When the metaphorical connotations in the theme of "nomophobia as a perception of addiction" are analyzed, of the 6 metaphorical connotations obtained, 4 metaphorical connotations (alcohol addiction, person and object addiction, gambling addiction, technology addiction) were only expressed by female preservice teachers, 1 metaphorical connotation (smoking addiction) was expressed only by 1 male preservice teacher, 1 metaphorical connotation (substance addiction) was expressed by both male and female preservice teachers. In this theme, it is seen that preservice teachers associate the concept of nomophobia with addiction. Thus, it can be stated that nomophobia is perceived as a form of addiction (alcohol, smoking, drugs, etc.) which harms human health and it harms the human body. The statements which stand out among the metaphorical connotations of the theme of "nomophobia as perception of addiction" are given below.

*"Nomophobia is like drug addiction, because technology addiction is now a life-threatening condition." (**Female preservice teacher, 20**)*
*"Nomophobia is like smoking because it is addictive. Quitting, forgetting and staying away from it makes one nervous." (**Male preservice teacher, 13**)*

3.2.3. The Concept of Nomophobia as Perception of Human Situations

When the metaphorical connotations of preservice teachers regarding the concept of nomophobia are evaluated from the perspective of "perception of human situations", it is seen that 15 participants generated 6 different metaphorical connotations.

Table 5: Distribution of metaphorical connotations of the concept of nomophobia as a perception of human situations

Code of Metaphorical Connotation	Nomophobia as Perception of Human Situations	Gender	Frequency (n)	Percentage (%)
5	Separation	5 f - 1 m	6	4.8
13	Captivity	1 f	1	0.8
15	Detachment from life	1 f	1	0.8
19	Loosing one's dignity	1 m	1	0.8
28	Death	4 f - 1 m	5	4.0
39	Loosing one's way	1 f	1	0.8
Total		**12 f - 3 m**	**15**	**12.0**

Metaphorical connotations of the category are separation (n-6), death (n-5), captivity (n-1), detachment from life (n-1), losing one's dignity (n-1) and losing one's way (n-1). When the metaphorical connotations in the theme of "nomophobia as a perception of human situations" are analyzed of the 6 metaphorical connotations obtained, 3 metaphorical connotations (captivity, detachment from life, losing one's way) were only expressed by female preservice teachers, 2 metaphorical connotations (separation, death) were expressed by both male and female preservice teachers, and 1 metaphorical connotation (losing one's dignity) was generated by 1 male preservice teacher. In this theme, it is seen that preservice teachers associate the concept of nomophobia with a number of human situations. Thus, the metaphorical connotations of nomophobia expressed as separation, captivity, detachment from life, losing one's dignity, death and losing one's way, reveal that preservice teachers have negative perceptions about nomophobia in comparison with human situations. The statements that are remarkable among the metaphorical connotations regarding the theme of "nomophobia as perception of human situations" are given below.

"Nomophobia is like losing your life, surrendering your soul, because I can never do without a phone." (**Female preservice teacher, 18**)
"Nomophobia is like the friend I love very much, because I get sad when I lose the friend I love too." (**Male preservice teacher, 17**)

3.2.4. The Concept of Nomophobia as Perception of Emotional States

When the metaphorical connotations of preservice teachers regarding the concept of nomophobia are evaluated from the perspective of "perception of emotional states", it is seen that 36 participants generated 6 different metaphorical connotations.

Table 6: Distribution of metaphorical connotations of the concept of nomophobia as the perception of emotional states

Code of Metaphorical Connotation	Nomophobia as Perception of Emotional States	Gender	Frequency (n)	Percentage (%)
1	Enduring pain	1 f	1	0.8
9	Feeling of Emptiness/ incompleteness	4 f	4	3.2
11	Depression	3 f - 1 m	4	3.2
21	Fear-worry-anxiety	9 f - 4 m	13	10.4
30	Platonic love	1 f	1	0.8

| 37 | Loneliness | 9 f - 4 m | 13 | 10.4 |
| **Total** | | **27 f - 9 m** | **36** | **28.8** |

Metaphorical connotations of the category are fear-worry-anxiety (f-13), loneliness (n-13), feeling of emptiness/incompleteness (f-4), depression (n-4), enduring pain (n-1), and platonic love (n-1). Analysis of the metaphorical connotations in the theme of "nomophobia as the perception of emotional states" reveal that of the 6 metaphorical connotations obtained, 3 metaphorical connotations (enduring pain, feeling of emptiness/incompleteness, platonic love) were generated only by female preservice teachers, and 3 metaphorical connotations (depression, fear-worry-anxiety, loneliness) were generated by both male and female preservice teachers. In this theme, it is seen that preservice teachers compare the concept of nomophobia with various emotional states. Thus, the nomophobia induces in preservice teachers various negative emotions such as enduring pain, feeling of emptiness/being incomplete, depression, fear-worry-anxiety, platonic love and loneliness. Remarkable expressions among metaphorical connotations related to the theme of "nomophobia as perception of emotional states" are given below.

"Nomophobia is like loneliness, because being without a phone makes you feel lonely." (**Male preservice teacher, 16**)
"Nomophobia is like a beautiful big kite slipping out of the hand of a small child in a strong wind, because that's exactly what the state of anxiety will feel like." (**Female preservice teacher, 25**)

3.2.5. The Concept of Nomophobia as Perception of Location

When the metaphorical connotations of preservice teachers regarding the concept of nomophobia are evaluated from the perspective of "perception of location", it is seen that 4 participants expressed 4 different metaphorical connotations.

Table 7: Distribution of metaphorical connotations of the concept of nomophobia as perception of location

Code of Metaphorical Connotation	Nomophobia as Perception of Location	Gender	Frequency (n)	Percentage (%)
2	Forest with no trees	1 f	1	0.8
6	House with no balcony	1 f	1	0.8
14	Prison	1 f	1	0.8
31	Shelter	1 f	1	0.8
Total		**4 f**	**4**	**3.2**

Metaphorical connotations of the category are forest with no trees (n-1), house with no balcony (n-1), prison (n-1) and shelter (n-1). When the metaphorical connotations in the theme of "nomophobia as perception of location" are analyzed; 4 of the 4 metaphorical connotations (forest with no trees, house with no balcony, prison, shelter) were generated by female preservice teachers. In this theme, it is seen that preservice teachers associate the concept of nomophobia with various places. Thus, it can be stated that nomophobia inspires a spatial perception in some preservice teachers. The outstanding expressions of the metaphorical connotations related to the theme of "nomophobia as a perception of space" are given below.

"Nomophobia is like a forest with no trees, because without trees there is no forest." (**Female preservice teacher, 69**)
"Nomophobia is like a prison because you want to get off the phone but you have nothing to do or entertainment so you stay there to pass the time." (**Female preservice teacher, 57**)

3.2.6. The Concept of Nomophobia as Perception of Physiological Needs

When the metaphorical connotations of preservice teachers regarding the concept of nomophobia are evaluated from the perspective of "perception of physiological needs", it is seen that 21 participants produced 5 different metaphorical connotations.

Table 8: Distribution of metaphorical connotations of the concept of nomophobia as perception of physiological needs

Code of Metaphorical Connotation	Nomophobia as Perception of Physiological Needs	Gender	Frequency (n)	Percentage (%)
12	Rest	1 f	1	0.8
16	Pleasure	1 m	1	0.8
33	Thirst	6 f - 3 m	9	7.2
36	Sleep	1 f	1	0.8
38	Eating-drinking	5 f - 4 m	9	7.2
Total		**13 f - 8 m**	**21**	**16.8**

Metaphorical connotations of the category are thirst (n-9), eating-drinking (n-9), rest (n-1), pleasure (n-1) and sleep (n-1). When the metaphorical connotations in the theme of "nomophobia as perception of physiological needs" are analyzed; Of the 5 metaphorical connotations obtained, 2 metaphorical associations (rest, sleep) were expressed by female preservice teachers, 1 metaphorical connotation (pleasure) by 1 male preservice teacher, and 2 metaphorical connotations (thirst, eating-drinking) by both male and female preservice teachers. In this theme, it is seen that preservice teachers compare the concept of nomophobia with several physiological needs. Thus, it can be stated that nomophobia is associated with physical needs such as rest, pleasure, thirst, sleep and eating and drinking. The statements that are remarkable among the metaphorical connotations regarding the theme of "nomophobia as perception of physiological needs" are given below.

"Nomophobia is like fasting without sahur*, because when I don't have my phone, I feel sluggish, devastated and so incomplete." (**Male preservice teacher, 9**)
*last meal before dawn when fasting starts, during ramadan
"Nomophobia is like being thirsty in the desert because I get all my work done with it." (**Female preservice teacher, 21**)

3.2.7. The Concept of Nomophobia as Perception of Economical Situations

When the metaphorical connotations of preservice teachers regarding the concept of nomophobia are evaluated from the perspective of "perception of economical situations", it is seen that 12 participants produced 2 different metaphorical connotations.

Table 9: Distribution of metaphorical connotations of the concept of nomophobia as a perception of economical situations

Code of Metaphorical Connotation	Nomophobia as Perception of Economical Situations	Gender	Frequency (n)	Percentage (%)
10	Loosing a valuable belonging	4 f - 3 m	7	5.6
29	Parasızlık	2 f - 3 m	5	4.0
Total		6 f - 6 m	12	9.6

Metaphorical connotations of the category are losing a valuable belonging (n-7) and lack of money (n-5). When the metaphorical connotations in the theme of "nomophobia as a perception of economical situations" are analyzed; The 2 metaphorical connotations obtained (losing a valuable belonging, lack of money) were produced

by female and male preservice teachers. In this theme, it is seen that preservice teachers associate the concept of nomophobia with some economical situations. Thus, it can be stated that nomophobia induces a negative economic perception in some preservice teachers. The statements that are remarkable among the metaphorical connotations regarding the theme of "nomophobia as a perception of economical situations" are given below.
"Nomophobia is like being without money, because it's like a part of our life, we get nervous when it's not with us." (Female preservice teacher, 15)
"Nomophobia is like a millionaire who has lost all his fortune, because all the young people today have are their phones." (Male preservice teacher, 11)

3.2.8. The Concept of Nomophobia as Perception of Insignificance

When the metaphorical connotations of preservice teachers regarding the concept of nomophobia are evaluated from the perspective of "perception of insignificance", it is seen that 2 participants produced 2 different metaphorical connotations.

Table 10: Distribution of metaphorical connotations of the concept of nomophobia as perception of insignificance

Code of Metaphorical Connotation	Nomophobia as Perception of Insignificance	Gender	Frequency (n)	Percentage (%)
7	Someting unimportant	1 f	1	0.8
17	Nothing	1 m	1	0.8
Total		1 f - 1 m	2	1.6

Metaphorical connotations of the category are something unimportant (n-1) and nothing (n-1). When the metaphorical connotations in the theme of "nomophobia as a perception of insignificance" are analyzed; It is seen that the 2 metaphorical associations obtained (something unimportant, nothing) were generated by 1 female and 1 male preservice teacher. In this theme, it is seen that preservice teachers associate the concept of nomophobia with unimportant things. Thus, it can be stated that nomophobia creates a perception that is not considered important in 2 preservice teachers. The statements that are remarkable among the metaphorical connotations regarding the theme of "nomophobia as perception of insignificance" are given below.

"Nomophobia is like pressing the light switch, because I don't have a social media account and I don't like to do things that I know won't really benefit me. (I mean it is something unimportant for me)." (Female preservice teacher, 19)
"Nomophobia is like nothing for me, because I am not very addicted." (Male preservice teacher, 21)

3.2.9. The Concept of Nomophobia as Perception of Backwardness

When the metaphorical connotations of preservice teachers regarding the concept of nomophobia are evaluated from the perspective of "perception of backwardness", it is seen that 1 participant produced 1 metaphoric connotation.

Table 11: Distribution of metaphorical connotations of the concept of nomophobia as a perception of backwardness

Code of Metaphorical Connotation	Nomophobia as Perception of Backwardness	Gender	Frequency (n)	Percentage (%)
18	Primitive age	1 f	1	0.8
Total		1 f	1	0.8

The metaphorical connotation of the category is expressed as the primitive age (n-1). When the metaphorical connotation in the theme of "nomophobia as a perception of backwardness" is analyzed; 1 metaphorical association (primitive age) obtained was generated by 1 female preservice teacher. In this theme, it is seen that the female preservice teacher associates the concept of nomophobia with primitive age. Thus, it can be stated that nomophobia creates a perception of time in this female preservice teacher showing their backwardness. The metaphorical connotation of the theme of "nomophobia as a perception of backwardness" is given below:
"Nomophobia is similar to the primitive age, because being away from technology today means not keeping up with the necessities of the age." (Female preservice teacher, 11)

3.2.10. Gender Comparison of Themes Obtained Regarding the Concept of Nomophobia

The metaphorical connotations of the preservice teachers for the concept of nomophobia were compared in terms of gender and presented under themes. Presenting the themes in a single table with a holistic perspective may be beneficial for researchers to evaluate the study. For this reason, the themes obtained are presented below in a single table.

Table 12: The table of the comparison of the themes obtained regarding the concept of "nomophobia" by gender

Name of the Theme	Female Preservice Teacher	Male Preservice Teacher	Total Frequency (n)	Total Percentage (%)
1. Nomophobia as Health Perception	18 f	3 m	21	16.8
2. Nomophobia as Perception of Addiction	8 f	5 m	13	10.4
3. Nomophobia as Perception of Human Situations	12 f	3 m	15	12.0
4.Nomophobia as Perception of Emotional States	27 f	9 m	36	28.8
5. Nomophobia as Perception of Location	4 f	-	4	3.2
6. Nomophobia as Perception of Physiological Needs	13 f	8 m	21	16.8
7.Nomophobia as Perception of Economical Situations	6 f	6 m	12	9.6
8. Nomophobia as Perception of Insignificance	1 f	1 m	2	1.6
9.Nomophobia as Perception of Backwardness	1 f	-	1	0.8
Total	90 f	35 m	125	100.0

In Table 12 the metaphorical connotations generated by preservice teachers grouped under the themes (nomophobia as health perception, nomophobia as addiction perception, nomophobia as perception of human situations, nomophobia as perception of emotional states, nomophobia as perception of location, nomophobia as perception of physiological needs, nomophobia as perception of economical situations, perception of insignificance and nomophobia as a perception of backwardness) were compared in terms of gender. Thus, it is seen how many male and how many female preservice teachers gave answers for each theme. Looking at the table, it can be said that preservice teachers have strikingly different perceptions of the concept of nomophobia according to the gender variable, and this difference brings about the diversity of metaphors. It can be stated that the resulting diversity stems from the difference in meaning that men and women attribute to smartphones.

4. Discussion, Conclusions and Implications

It can be said that the most important change in the 21st century has taken place in the field of science and technology. Considering that the advances in science are transferred to the development of technology, it is seen that there is a very rapid change. The rapid change in technology has its benefits as well as its harmful aspects. Rather than the beneficial aspects, it is necessary to focus on the prominent harmful aspects and to improve them. Today, the dependency on technological tools is increasing rapidly and people suffer from it to a certain extent. Hence, it is seen that the use of smartphones has increased immeasurably. The addiction that develops due to the excessive use of smartphones reveals the fear of not being able to disconnect from the phone or staying away from the phone. It can be stated that the fear of being away from the phone negatively affects the lives of university-age youth. Therefore, nomophobia, which is called the fear of being away from the mobile phone, stands out as a subject that needs to be studied. With this study, it was aimed to determine the

metaphorical connotations of preservice teachers about nomophobia and it was seen that the individuals in the study group had different perceptions. The fact that the metaphorical connotations produced regarding the concept of nomophobia are grouped under nine different themes proves this.

This study was carried out with the data obtained from the metaphorical connotations of the preservice teachers studying at different grades regarding the concept of nomophobia. When we look at the metaphorical connotations produced by the preservice teachers regarding the concept of nomophobia, which is described as the fear of being away from the mobile phone, it is seen that generally negative perspectives are dominant. Based on the metaphorical connotations obtained, it can be said that preservice teachers have nomophobic addiction. In addition, 13 preservice teachers' associated nomophobia with addiction to alcohol, smoking, substances, etc. Analogies to addictions can be accepted as an indication that nomophobia has reached dangerous levels among young preservice teachers. The research is important in terms of measures to be taken and studies to be carried out by drawing attention to the prevalence and dimensions of nomophobia.

Based on the findings obtained from this study, it can be said that preservice teachers have generally negative connotations on the concept of nomophobia and nomophobic behaviors are observed in preservice teachers. A number of studies yielded that the majority of university students have moderate or higher nomophobia levels (Adnan & Gezgin, 2016; Erdem, Kalkın, Türen & Deniz, 2016; Yılmaz, Köse & Doğru, 2018; Apak & Yaman, 2019; Atilgan, 2020; Gürol, Apay, Özdemir, Uslu & Güven 2020; Ramazanoğlu, 2020; İdil, Çakır & Akman, 2022; Masalimova, Khairullina, Lapidus, Orekhovskaya, Zheltukhina & Baranova, 2022; Özsavran & Kuzlu Ayyıldız, 2022; Üstündağ Öcal & Öztürk, 2022), nomophobia prevalence is higher in women (Erdem, Türen & Kalkın, 2017; Gezgin, Şahin & Yıldırım, 2017; Yılmaz, Köse & Doğru, 2018; Karakuyu & Ata, 2019; Pekin, Yırtıcı & Olgun, 2021; Avcı, 2022; Gökbulut, 2022; S. Karabatak, Ay & Karabatak, 2022) and according to a study conducted with only male university students, 28.6% of male university students are mildly, 57.3% are moderately and 14.1% are severely nomophobic (Özalp, Kurnaz, Güler, İnamlık, Berkmen, Ömer & Hayran, 2021). Hence, it can be said that the study has similar characteristics with the related studies in the literature.

Nomophobic behaviors are observed not only in the university-age Z generation, but also in the middle aged and mature X and Y generations. For example, adults also exhibit behaviors as spending too much time on a smartphone, checking it at regular intervals, sleeping with the telephone nearby, keeping the charger with them at all times, experiencing anxiety in situations such as losing the phone, not being able to locate the phone, being out of coverage, and running out of credit and battery (Bak, 2019). For example, it is seen that there is a significant relationship between the frequency of individuals checking their smartphones and their nomophobia levels (Büyükçolpan, 2019). It has been determined that nomophobic university students also have the behavior of delaying sleep (Yorulmaz, Kıraç & Sabırlı, 2018). It can be said that this has negative effects on the standart of living and achievement levels of young people. It is also thought that introducing restrictions/obstacles on the use of smartphones in higher education institutions will positively affect the individual's intrinsic motivation and success (Bayram, Zeybek Yılmaz, Sözen & Bayer, 2019). As inferred from the studies, it can be stated that nomophobia has become common not only among preservice teachers and university students, but also in the general population. The fact that the conceptual findings of the results obtained in the studies (dependence, fear of being away from and losing, not being able to do without it, etc.) are similar to those of this study can be considered as a remarkable situation in terms of expressing the importance of the study. As a result, it is seen that this study conducted on preservice teachers comprises important information about the current time frame. Based on the results obtained in the study the following recommendations are presented below;

- ✓ In order to reach a wider general picture of the results, similar studies involving more prospective teachers can be conducted in different universities.
- ✓ Comparisons can be made by conducting field-based studies regarding nomophobia in all departments of education faculties. For example, it can be investigated whether there is any difference between computer science teachers and social studies teachers in terms of nomophobia. Similarly, metaphorical connotations of students from different departments regarding the concept of nomophobia can be examined.
- ✓ Considering that nomophobia is escalating daily, suggestions have been developed such that awareness raising activities can be carried out through projects to be carried out by ministries, especially the Ministry of National Education and the Ministry of Health, in order to prevent this rise.

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