

Examining Nomophobia Among Participants of Leisure Activities

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While individuals engage in diverse leisure activities, the prevalence of nomophobia has been rising in parallel with rapid technological developments. Accordingly, the aim of the present study is to examine the relationship between activity type and nomophobia individuals participating in leisure activities. The research group consists of individuals who participate in sports, social, cultural, or artistic activities and were selected through a convenience sampling method ($N = 382$). Data was collected through Personal Information Form, Nomophobia Scale (Yildirim et al., 2016) and Leisure Activity Participation Scale (Şimşek & Çevik, 2020). The fit of the measurement instruments with the data was examined with Confirmatory Factor Analysis. Non-parametric tests were used in the analysis of data. The findings indicate that the participants' levels of nomophobia were moderate. Additionally, it was observed that participants predominantly preferred relaxing activities, while engaging less frequently in productive activities. No difference was found between leisure activity type and nomophobia based on marital status. However, gender, age, education, income, and leisure time duration showed significant differences or correlations. The study findings indicate that relaxing, developmental, and aesthetic activities trigger nomophobia. Although socializing activities were found to reduce nomophobia, this relationship was not statistically significant.

Keywords. Nomophobia, leisure activities, confirmatory factor analysis

In the modern era of rapid technological advancement, the internet and digital tools have become indispensable forces in every aspect of our lives. Smartphones are characterized as one of the platforms where the internet is used most frequently (Erdem et al., 2016). The transition of societies to the digital world with the use of smartphones has enabled communication, information, innovative ideas and unimaginable opportunities. However, despite the many

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positive aspects, several risks have also emerged among individuals (León-Mejía et al., 2021). As a concept, nomophobia is defined as the abbreviation of the English words NO MOBILE Phone PHOBIA (Dixit et al., 2010). It is defined as the fear experienced by individuals when they cannot access their smartphones or communicate via mobile devices (King et al., 2014; Yılmaz et al., 2018). Individuals who experience this fear show a number of symptoms. For example, individuals who are worried about losing their smartphones are concerned when they cannot find their phones nearby or in case of network loss. They become nervous if the battery or battery of the mobile device runs out. They try to avoid places and situations where smartphone use is prohibited (public transport, restaurants, theaters, airports). They constantly check whether they have received a message or a call. Individuals try to keep the smartphone on at all times and exhibit the behavior of going to bed with the phone at night (Bragazzi & Del Puente, 2014).

Nomophobia, the fear of being without a phone, is a key reason for the increase in phone usage. People tend to use their phones more frequently and dependently due to this anxiety, which often leads them to spend their leisure engaged in digital activities rather than traditional hobbies or social interactions (Yildirim & Correia, 2015; Vagka et al., 2023). Kumcağız et al. (2020) suggest that individuals should engage in various activities that will benefit them in order to reduce smartphone use in leisure. Because participation in leisure activities has many individual and social benefits (Brajša-Žganec et al., 2011; Kim & Cho, 2020; Shen et al., 2024).

Leisure activities are characterized as a situation where individuals establish friendships, develop their skills, improve their psychosocial well-being and find the meaning and purpose of life (Şimşek & Çevik, 2020; Yueh & Chang, 2024). Therefore, participation in leisure activities and their sustainability are important. Researchers have grouped leisure time activities in various ways by evaluating them from this perspective (Şimşek & Çevik, 2020). Şimşek and Çevik (2020) categorized leisure time activity types in various ways. Relaxing Activity: This type of activity allows individuals to rest regularly, relieve fatigue and store extra energy (Eskiler et al., 2019). It also plays an important role in the sustainability and relaxation of individuals' state of health (Tekin et al., 2020). Developmental Activity: Leisure time activities can provide individuals with many biopsychosocial benefits (Wei et al., 2015; Liu et al., 2023) as well as individual development by providing different experiences (Arslan, 2011). Socializing Activity: Leisure activities are

characterized as a necessary condition in meeting the social needs of individuals.

Because leisure activities are known as activities that allow individuals of all ages and different status to participate (Tekin et al., 2017). Many studies have also reported that leisure time activities have a socializing feature (Serçek et al., 2015; Yoshida et al., 2021). Activity with an attractive environment/esthetic activity in terms of the sustainability of leisure time activities, it is considered that the characteristics of the facilities attended are important. The spaces and places where activities are evaluated provide aesthetic satisfaction to the participants with features such as design, beauty and attractiveness (Şimşek & Çevik, 2020). Therefore, activities in aesthetically pleasing places may affect individuals' intention to participate again (Şimşek & Çevik, 2020). Productive activity is the creative and productive nature of leisure activities can provide individuals with new and rich experiences.

These experiences develop skills in terms of personal development and the lifelong continuation of certain professions (Şimşek & Çevik, 2020). Exciting or entertaining activity is the leisure evaluation refers to activities that individuals enjoy doing. It is stated that one of the most important characteristics is to derive pleasure and enjoyment from the activities (Gökmen & Şentürk, 2022). Leisure activities were categorized according to their types. The more experience individuals gain in leisure activities, the more leisure is considered essential for individual development. Leisure activities can improve the physical and mental health of individuals, alleviate the stress of life and provide an experience that is desired to be done again (Li et al., 2021).

In addition, leisure activities aimed at socialization can reduce nomophobia by strengthening individuals' face-to-face communication skills and increasing the time spent away from digital devices. While leisure activities have many benefits, it was the impact on people who fear being deprived of their smartphones that prompted the idea for this study. Which types of leisure activities affect the level of nomophobia in individuals? For this purpose, in the current research, the following questions are sought to be answered about individuals who participate in leisure time activities and use smartphones such as what is the level of nomophobia in individuals participating in leisure time activities? Which type of activity do individuals most frequently engage in during leisure time? Which type of leisure time activity is associated with nomophobia?

Method

The present study was designed in a survey-based correlational design in accordance with the survey model.

Sample

Participants were selected using a convenience sampling method. Using this method, data were collected from individuals who were easily accessible. This may lead to sampling bias, which could limit the generalizability of the findings. Based on the formula for determining sample size for an unknown population, a minimum of 384 participants was required to achieve a 95% confidence level with a 5% margin of error. Participants with incomplete or invalid questionnaire responses were excluded. At the same time, after eliminating the data that did not meet the following conditions for inclusion in the sample, the research was completed with 382 people.

Table 1: *Demographic Characteristics of Individuals (N = 382)*

Demographic Characteristics	<i>n</i>	%
Gender		
Male	204	53.4
Female	178	46.6
Marital Status		
Married	80	20.9
Single	302	79.1
Education Status		
High School and Below	115	30.1
Bachelor's Degree and Above	267	69.9
Income Status		
Income Less Expenses	89	23.3
Income Equals Expenses	189	49.5
Income Exceeds Expenses	104	27.2
Weekly Leisure Duration		
Between 1-5 Hours	35	9.2
Between 6-10 Hours	112	29.3
Between 11-15 Hours	69	18.1
16 Hours and Over	166	43.5

Table 1 provides information on the demographic characteristics of the participants. The average age of the participants was 25.95(±9.83) and 53.4% were male. 79.1% of the participants were

single, 69.9% had a bachelor's degree or higher, 49.5% had an income equal to their expenses, and 29.3% had 6-10 hours of leisure per week.

Participants met the following inclusion criteria, that is they were Turkish citizens aged between 18 and 65 years, literate, able to engage in at least one recreational activity during their leisure time, smartphone users, and willing to participate voluntarily. The inclusion criteria were set to ensure that the participants were suitable for the purpose and methods of the study. Turkish citizenship was required because the research was conducted within the Turkish cultural context. The age range of 18 to 65 included adults who could give informed and responsible answers. Literacy was necessary so that participants could understand and complete the questions properly. Being involved in at least one leisure activity was important since the study focused on leisure behavior. Participants were required to be smartphone users, as the research focused on nomophobia, which is directly related to smartphone use. Lastly, voluntary participation was essential to meet ethical research standards.

Measures

In the study, Personal Information Form, Nomophobia Scale and Leisure Activity Participation Scale were used to collect demographic information of the participants. Personal Information Form is a form created in line with the literature to collect information on the participants' gender, age, education level, marital status, income level and weekly leisure.

Nomophobia Scale

Nomophobia Scale ([Yildirim & Correia, 2015](#)) developed to determine the nomophobia level of individuals was adapted into Turkish ([Yildirim et al., 2016](#)). The scale, which is graded on a 7 - point Likert scale (1 = *Strongly disagree* to 7 = *Strongly agree*), consists of 20 statements. Nomophobia Scale consists of four sub-dimensions. The sub-dimensions are; not being able to access information, giving up convenience, not being to communicate, losing connectedness. The increase in scores is interpreted as an increase in the level of nomophobia. Individuals with a score of 20 and below were stated to have no nomophobia. Those scoring between 21-60 points indicate a low level of nomophobia; those scoring between 61-100 points indicate a moderate level of nomophobia, and those scoring between 101-140 points indicate a high level of nomophobia. While the Cronbach alpha coefficient calculated for the overall scale was

found to be .92, the sub-dimensions were found between .74-.94 (Yildirim et al., 2016). The data fit of the Nomophobia Scale for this study was tested with CFA. According to the CFA results, the model was confirmed ($\chi^2/df = 2.97$; RMSEA = .07; CFI = .94; GFI = .89; AGFI = .85). The findings showed that the factor loadings of the Nomophobia Scale sub-dimension of not being able to access information ranged between .72-.79; the factor loadings of the sub-dimension of giving up convenience ranged between .66-.73; the factor loadings of the sub-dimension of not being able to communicate ranged between .78-.91; and the factor loadings of the sub-dimension of losing connectedness ranged between .66-.90.

Leisure Activity Participation Scale

Leisure Activity Participation Scale was developed by Şimşek and Çevik (2020) to determine the basic constructs related to individuals' participation in leisure activities and to measure participation in leisure activities. The scale, which is graded on a 5-point Likert scale (1 = *Strongly disagree* to 5 = *Strongly agree*), consists of 34 statements and 8 sub-dimensions. The sub-dimensions are as follows respectively: Relaxing Activity, Developmental Activity, Socializing Activity, Activity with an Attractive Environment, Productive Activity, Aesthetic Activity, Entertaining Activity, Exciting Activity. It was stated that the results of the Cronbach Alpha values of the test on the reliability of the scale had a high level of reliability (Şimşek & Çevik, 2020). The suitability of the LAPS for this study was analyzed using CFA, and the results for the verified model ($\chi^2/df = 3.01$; RMSEA = .07; CFI = .92; GFI = .81; AGFI = .80) were found adequately with a good model fit. Findings showed that all sub-dimensions of the Leisure Activity Participation Scale vary between .73-.94. It was determined that CR values vary between .88-.95 and AVE values vary between .64-.82 in the current study.

Procedure

Permission was obtained from the authors of the scales primarily used in the study via e-mail. Later, the research was found ethically appropriate by the Istanbul University-Cerrahpaşa Social and Human Sciences Research Ethics Committee in its meeting dated 03.12.2024 and numbered 582. Informed consent was obtained from all participants for the data collected in December 2024. The study was

conducted in accordance with the ethical principles of the Declaration of Helsinki.

Results

Descriptive statistics were used in the study. Second-level CFA was conducted to test the fit of the data collected from the participants to the sample group. Factor loadings were expected to be at least .32 (Meydan & Şeşen, 2015; Schermelleh-Engel et al., 2003; Tabachnick & Fidell, 2013). The normality distribution of the data was analyzed by skewness and kurtosis values and the range of ± 1.5 was taken as a basis (Tabachnick & Fidell, 2013). Since the data were not within this range, non-parametric tests were applied in the analyzes. Accordingly, Mann Whitney U, Kruskal Wallis and Spearman Correlation tests were applied. The significance level was determined as 0.05 and 0.01.

Table 2: *Distribution of Scale Mean Scores (N = 382)*

Scale & Subscales	Min.	Max.	<i>M</i>	<i>SD</i>	Skew	Kurt.	<i>α</i>
Nomophobia Scale	20.00	140.00	72.83	27.29	0.22	-0.54	.90
Not being able to access information	4.00	28.00	16.08	6.44	0.03	-0.83	.86
Giving up convenience	5.00	35.00	18.37	7.73	0.20	-0.70	.82
Not being able to communicate	6.00	42.00	24.60	10.18	-0.07	-0.94	.94
Losing connectedness	5.00	35.00	13.76	7.80	0.93	0.21	.90
LAPS	1.00	5.00	3.92	0.71	-1.13	3.06	.98
Relaxing Activity	1.00	5.00	4.09	0.78	-1.11	2.41	.93
Developmental Activity	1.00	5.00	4.01	0.80	-1.09	2.50	.91
Socializing Activity	1.00	5.00	3.89	0.84	-1.08	2.26	.91
Activity with an Attractive Environment	1.00	5.00	3.88	0.80	-1.05	2.66	.90
Productive Activity	1.00	5.00	3.73	0.83	-0.91	1.85	.87
Aesthetic Activity	1.00	5.00	3.74	0.89	-0.96	1.61	.92
Entertaining Activity	1.00	5.00	4.04	0.86	-1.21	2.27	.95
Exciting Activity	1.00	5.00	3.90	0.84	-1.09	2.46	.88

Note. LAPS: Leisure Activity Participation Scale.

Table 2 presents the score distributions for the scales. Accordingly, the mean score obtained from the Nomophobia Scale was 72.84 and the highest score was obtained in the sub-dimensions of “not being able to communicate” 24.61 and the lowest score was obtained in the sub-dimensions of “losing connectedness” 13.77. The mean score obtained from the LAPS was 3.92 with the highest score in the sub-dimension “Relaxing Activity” 4.10 and the lowest score in the sub-dimension “Productive Activity” 3.74. The Cronbach Alpha internal consistency values obtained from the NS ranged between .82-.95, while the skewness/ kurtosis values ranged between -.94; .93. The internal consistency scores of the LAPS ranged between .87-.98 and the skewness/kurtosis scores were between -1.21 to 3.06 acquired in the current study.

The suitability of LAPS for this study was analyzed using CFA, and the model was validated ($\chi^2/df = 3.01$; RMSEA = 0.07; CFI = 0.92; GFI = 0.81; AGFI = 0.80). Findings further showed that analysis results between the NS and its sub-dimensions according to the independent variables of the individuals. According to the findings, a statistically significant difference was found between the gender of the individuals and total score ($Z = -3.93$; $p < .001$), not being able to access information ($Z = -4.48$; $p < .001$), giving up convenience ($Z = -3.71$; $p < .001$), not being able to communicate ($Z = -3.23$; $p < .001$) and losing connectedness ($Z = -2.48$; $p = .01$). The mean score of female is higher than that of male. It was found that there was no statistically significant difference between the total score ($Z = -1.36$ $p = .17$), not being able to access information ($Z = -1.33$; $p = .18$), giving up convenience ($Z = -1.77$, $p = .076$), not being able to communicate ($Z = -0.62$ $p = .53$) and losing connectedness ($Z = -0.86$; $p = .38$) according to marital status. There was a statistical difference between the total score ($Z = -3.21$; $p < .001$), not being able to access information ($Z = -3.78$; $p < .001$), giving up convenience ($Z = -3.40$; $p < .001$), not being able to communicate ($Z = -2.46$; $p = .01$) and losing connectedness ($Z = -2.28$; $p = .02$) according to educational status. The mean scores of individuals with a bachelor's degree and above were found to be higher. There was a statistical difference between total score ($X^2 = 8.50$; $p = .014$), not being able to access information ($X^2 = 11.97$; $p = .003$), giving up convenience ($X^2 = 7.34$; $p = .02$), and losing connectedness ($X^2 = 6.49$; $p = .03$) according to income status. It was observed that the mean scores of individuals whose income was less than their expenses were higher than the others. No difference was found between the sub-dimension of NS not being able to communicate ($X^2 = 4.27$, $p = .11$) according to income status. There was a statistical difference between the total score ($X^2 = 8.63$; $p =$

.035) and the sub-dimensions of not being able to access information ($X^2 = 13.08$; $p = .00$) according to the weekly leisure duration of the individuals. Individuals with weekly leisure time in the range of 11-15 hours have higher mean scores. There was no difference between the sub-dimensions of giving up convenience ($X^2 = 7.82$; $p = .05$), not being able to communicate ($X^2 = 5.30$; $p = .15$) and losing connectedness ($X^2 = 4.19$; $p = .24$).

The results of the analysis examining the differences between the types of activities in which individuals participate in leisure according to their independent variables are presented as follows. According to the gender of the individuals, the total score of LAPS ($Z = -3.235$; $p < .001$), relaxing activity ($Z = -4.49$; $p < .001$), developmental activity ($Z = -3.174$; $p = .002$), activity with attractive environment ($Z = -3.18$; $p < .001$), aesthetic activity ($Z = -2.15$; $p = .03$) entertaining activity ($Z = -2.80$; $p = .00$) and exciting activity ($Z = -3.029$; $p = .002$). Female were found to be more interested in activities than male.

According to the educational status of the individuals, LAPS total score ($Z = -4.49$; $p < .001$), relaxing activity ($Z = -6.39$; $p < .001$), developmental activity ($Z = -4.35$; $p < .001$), socializing activity ($Z = -3.59$; $p < .001$), activity with attractive environment ($Z = -4.41$; $p < .001$), productive activity ($Z = -3.08$; $p = .00$), aesthetic activity ($Z = -2.361$; $p = .018$), entertaining activity ($Z = -3.72$; $p < .001$), exciting activity ($Z = -4.46$; $p < .00$). The mean scores of individuals with a bachelor's degree and above were found to be higher.

A significant difference was found only between relaxing activities ($X^2 = 10.64$; $p = .01$) and developmental activities ($X^2 = 11.15$; $p = .01$) according to weekly leisure duration. Individuals with 16 hours or more of weekly leisure have higher mean scores than others. It was found that there was no statistically significant difference between the total score and sub-dimensions of LAPS according to marital status and income status variables ($p > .05$).

Results show the correlation between the age of the individuals participating in the study and the scale scores. According to the findings, positive and significant relationships were found at different levels between age and LAPS total score ($r = .17$; $p < .01$), relaxing activity ($r = .27$; $p < .01$), developmental activity ($r = .18$; $p < .01$), socializing activity ($r = .15$; $p < .01$), Activity with an attractive environment ($r = .15$; $p < .01$), productive activity ($r = .11$; $p < .05$) and exciting activity ($r = .15$; $p < .05$). The relationships between age and aesthetic activity, entertaining activity and nomophobia were not

found to be significant ($p > .05$). The significant correlation results between the scale total score and its sub-dimensions are as follows, a positive low level significant relationship was found between nomophobia and aesthetic activity ($r = .10$; $p < .05$). A low level positive correlation was found between not being able to access information and relaxing and aesthetic activities ($r = .10$; $p < .05$; $r = .10$; $p < .05$). A positive low-level significant relationship was found between giving up convenience and aesthetic activity ($r = .12$; $p < .05$). A positive significant correlation was found between the not being able to communicate and relaxing, developmental and entertaining activities ($r = .13$; $p < .01$; $r = .10$; $p < .05$; $r = .10$; $p < .05$).

Discussion

It was determined that nomophobia of individuals participating in leisure activities was at a moderate level. It was found that individuals had the highest fear of not being able to communicate. [Bayrakdaroğlu et al. \(2022\)](#) examined the nomophobia levels of athletes in different branches and found that the nomophobia of the participants was at a moderate level. [Kuzu \(2020\)](#) investigated the nomophobia levels of university students participating in recreational activities. The findings showed that students' nomophobia was at a moderate level. It can be said that the literature supports the current research findings. It was understood that the research group preferred relaxing activities the most and productive activities the least. In today's exhausting, complex and stressful life challenges, individuals need relaxing activities the most. This may be the reason why individuals prefer relaxing activities more.

There was a significant difference between nomophobia according to gender. Female have higher levels of nomophobia than male. In a study conducted by [Zeb et al. \(2022\)](#), female were found to have higher levels of nomophobia. There are studies that support the findings of the current research ([Güllüce et al., 2019](#); [Turan et al., 2018](#)). However, there are also studies in the literature that do not show a significant difference between nomophobia according to gender ([Apak & Yaman, 2019](#); [Pavithra & Madhukumar, 2015](#); [Prasad et al., 2017](#)). It becomes difficult to comment on the effect of gender on nomophobia. Phobias can be characterized as situations that can vary from person to person. Therefore, different results may have been obtained in the studies. A significant difference was found between activity types other than socializing and productive activities according to the gender of the individuals. Female are more likely to participate in activities than male. [Belošević and Ferić \(2022\)](#) found

that male participants were more likely to participate in structured leisure activities. In the study conducted by [King et al. \(2007\)](#), the participation of boys and girls in recreation and leisure activities was examined. It was determined that boys participated in physical activities, while girls participated in social and skill-oriented activities for individual development. In another study, it was observed that there was no statistically significant difference between participation in leisure activities according to gender ([Bozdal & Şahin, 2020](#)). [Coşkun \(2021\)](#) investigated the participation of Turkish society in activities. It was found that male preferred to go to sports clubs and movies in their leisure, while female were more interested in artistic activities and volunteer services. Considering both the current research findings and the literature, it can be said that male and female participate in recreational activities according to their purposes.

There was no significant difference between nomophobia according to marital status. When the literature was examined, it was seen that similar results were obtained to the current research findings ([Kocabaş & Sezer-Korucu, 2018](#); [Tokat et al., 2019](#); [Yıldız et al., 2020](#)). However, [Sarıtaş and Karagöz \(2020\)](#) aimed to examine nomophobia according to some independent variables. In the study, married individuals were reported to have higher levels of nomophobia. Therefore, it is recommended to conduct comprehensive research in order to comment on the effect of marital status on the fear of phone deprivation. The hypothesis on whether there is a difference between the types of leisure time activities in which individuals participate according to their marital status was also tested. The findings showed that there was no statistical difference between the cases. In a study conducted by [Gürsoy and Sevin \(2021\)](#), it was found that single individuals preferred sportive activities, hobbies and outdoor recreation, while married individuals tended towards home-based social activities. In another study, while the preference for participation in physical and touristic activities in leisure did not differ according to marital status, it was determined that it differed in terms of social and cultural activities ([Gökçe, 2019](#)). The literature did not support the findings of the current study. The difference in the results may be due to the non-homogeneous distribution of the marital status of the research group.

There was a significant difference between education level and nomophobia. Accordingly, it can be said that individuals with a bachelor's degree and above have higher nomophobia. There are studies in the literature that support the current research findings ([Darvishi et al., 2019](#); [Subaşı & Zengin, 2023](#)). However, contrary to the findings, there are also studies reporting that there is no difference

between nomophobia according to educational status ([Aksu & Doğan, 2021](#); [Gezgin et al., 2017](#)). [Gurbuz and Ozkan \(2020\)](#) conducted a comprehensive study on the prevalence and level of nomophobia among young people in Turkey and found that high school graduates were more nomophobic than university graduates. Addictions can be influenced by many factors, including psychological, environmental, biological, individual or family factors. Therefore, variables such as educational status can be considered as confounding factors. A statistically significant difference was found between all types of activities in which individuals participated according to their educational status. Accordingly, individuals with a bachelor's degree and above have a higher tendency to participate in activities. [Şişman et al. \(2019\)](#) investigated the effect of demographic characteristics of individuals on recreation activity preference and frequency. The findings indicate that educational status is the variable that affects the identification, preference and frequency of participation in tourism and recreational activities the most compared to other demographic characteristics ([Şişman et al., 2019](#)). It is thought that as the education level of individuals increases, their consciousness and awareness of leisure time and recreational activities also increase. In the present study, the high tendency of individuals with undergraduate and higher education to engage in leisure activities may have resulted from this situation.

A significant difference was found between Nomophobia Scale total score, not being able to access information, giving up convenience and losing connectedness sub-dimensions according to the income status of the individuals. No difference was found between the sub-dimension of not being able to communicate. It was determined that individuals whose income was less than their expenses experienced higher nomophobia. [Aydın and Aydın \(2023\)](#) found a negative correlation between income and nomophobia. [Zeb et al. \(2022\)](#) found a significant effect of socio-economic status on nomophobia. It was observed that individuals with low socio-economic status were more nomophobic. The literature supports the findings of the current research. However, there are also studies with different results. [Köyönü et al. \(2022\)](#) conducted a study on nomophobia levels of university students. A significant difference was found between losing connectedness according to family income status. The findings showed that those with higher family income levels were more nomophobic. The results in the studies may have resulted from the differences in the sample groups. To make a comment on the findings of the current research; the fact that individuals whose income is less than their expenses are more

nomophobic can be interpreted as that they are dependent on their smartphones due to the lack of sufficient income to evaluate their leisure. According to another finding of the study, income status did not create a statistically significant difference on leisure activity types. Income can be an important factor in participation in leisure or recreation activities (Akyol & Akkaşoğlu, 2020; Yazıcı & Alpulu, 2020). Before testing the data, it was predicted that income would also make a significant difference on the type of activities. However, according to the research findings, it is understood that there is no difference in the type of activities in terms of income. It is recommended to test the effect of the current variable on the types of leisure activities with different sample groups.

The effect of weekly leisure duration on the sub-dimensions of nomophobia and not being able to access information was found to be significant. In line with the findings, it can be said that as the weekly leisure duration of individuals increases, their nomophobia also increases. Again, it was determined that these individuals only experienced fear of being deprived of smartphones in relaxing and developmental activities. This may be due to the fact that individuals get bored in leisure. Because it has been observed in the literature that the increase in the weekly leisure period bores individuals (Yaşartürk et al., 2020). Due to the limited literature, it is difficult to compare the findings obtained on the effect of weekly leisure on nomophobia and activity type. Therefore, it is thought that the findings will shed light on future studies. In addition, the possibility that the duration of daily free time also affects nomophobia can be tested in other studies.

The correlation between the age of the individuals and the total score and sub-dimensions of the nomophobia scale was analyzed. According to the findings, no statistical relationship was found between age and nomophobia. Studies supporting the findings were found in the literature (Apak & Yaman, 2019; Hoşgör et al., 2017; Jahrami et al., 2021; Minaz & Çetinkaya Bozkurt, 2017). However, there are studies that do not support the findings (Erdem et al., 2017; Farchakh et al., 2021). In the study conducted by Gurbuz and Ozkan (2020), the mean scores of individuals in the 17-19 age group were found to be high. Starting from the age of 20 years, it was observed that nomophobia decreased with increasing age. The fact that different results were obtained in the studies conducted may have resulted from the differences in the sample groups. A significant positive correlation was found between the age of the individuals and the total score of LAPS, relaxing activity, developmental activity, socializing activity, activity with an attractive environment, productive activity and exciting activity. In other words, as the age of individuals increases,

their tendency towards the activities mentioned above also increases. In the study conducted by [Şahin and Kırtepe \(2024\)](#), it was seen that the participation scores of teachers in the 22-24 years age group in recreation activities were higher than those of teachers aged 31 and over. [Bozdal and Şahin \(2020\)](#) found no significant difference between age groups in terms of recreational, cognitive and social activities. However, the level of participation in productive activities was found to be higher in the older age group than in the younger age group. All kinds of recreational activities can appeal to different age groups. Since the activities that individuals are interested in are different, this may have affected the results of the research.

Significant positive correlations were found at low levels between relaxing activity and not being able to access information and not being able to communicate; developmental activity and not being able to communicate; entertaining activity and not being able to communicate; and finally aesthetic activity and nomophobia, not being able to access information and losing connectedness. In other words, these activities can be interpreted as triggering the fear of being without a phone. In fact, when the research was planned and before the data were analyzed, it was predicted that various types of activities in leisure would reduce nomophobia in individuals. In fact, the socializing activities ended up supporting the idea. A negative relationship was also found between some sub-dimensions. However, the relationship between the sub-dimensions with statistically significant relationship was found to be positive. In the study conducted by [Kuzu \(2020\)](#), no significant relationship was found between the level of participation in recreational activities and nomophobia. In a study conducted by [Tokay Argan et al. \(2024\)](#), a study investigating the relationship between leisure participation and fear of missing out on events was conducted. As a result of the study, it was determined that individuals who frequently participated in leisure activities experienced a higher fear of missing out. Therefore, it is predicted that individuals who experience the fear of missing out on developments will also experience the fear of being deprived of their smartphones. In future studies, stronger data can be obtained by examining the relationship between nomophobia and the fear of missing the developments of individuals participating in recreational activities.

Limitations and Suggestions

In future studies, the research can be repeated by determining the type of activity specifically. In addition, research can be conducted on individuals in a certain age range. In studies, the strength and

direction of mediating variables between leisure activity type and nomophobia can be tested. For example, studies can be conducted with variables such as fear of missing out, social media/digital addiction, leisure boredom or recreation satisfaction. Finally, the current study was designed in accordance with quantitative research methods. It is recommended to conduct studies in which a qualitative approach is adopted.

Implications

Possible implications of the current study would be to identify the leisure activities that may play a protective or risk-enhancing role, that is different leisure activities have positive or negative relationships with nomophobia suggests that not all leisure activities are equally beneficial. Activities involving direct social interaction, physical exercise, nature, creativity, or skill development may potentially reduce excessive dependence on smartphones. Conversely, leisure activities that are heavily smartphone- or internet-dependent may reinforce problematic phone use. In addition, this study highlighted the importance of purposeful leisure planning and emphasized the need to move beyond simply encouraging people to spend leisure time and instead promote healthy and purposeful leisure choices. Leisure programs could deliberately incorporate activities that encourage face-to-face interaction, physical engagement, creativity, and psychological disengagement from technology.

Conclusion

Today, the importance of leisure time activities is increasing day by day. Utilizing leisure with any recreational activity has been proven to produce many positive biopsychosocial changes in individuals. On the other hand, the increase in nomophobic individuals continues rapidly in parallel with the development of technology. Whether the type of leisure activity influences nomophobia led to the idea of conducting this research. At the same time, it was tested whether the independent variables of individuals participating in leisure activities make a difference in terms of activity type and nomophobia. Except for marital status, other independent variables were found to have effects on leisure activity type and nomophobia. As a result of the research, it was determined that there were positive or negative relationships between the type of activity in which individuals engaged in leisure activities and nomophobia.

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