Prevalence of Nomophobia and Addiction to Smartphone among University Students in Tunisia Running Title: Prevalence of Nomophobia among University Students

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Abstract

Users of technology have to increase the time spent on their phone to feel satisfied, and express incessant and compulsive monitoring habits. For this reason, smartphones were designed as potentially addictive. This was a quantitative cross-sectional study describing the prevalence of nomophobia among students in University of Sfax in Tunisia. The predominant age range was 18-20 years with a predominance of the female gender (60%). According to the nomophobia questionnaire (NMP_Q), (99.6%) of the students were nomophobic. This result was reinforced by the Smartphone addiction scale (SAS_SV) which revealed that (97.4%) among them have an addiction on their smartphones. Our results provide a solid basis for developing recommendations for awareness about this topic. Deducing the prevalence of nomophobia especially among young people is a social emergency given its bio-psychosocial impact.

Keywords: Nomophobia; Smartphone; Addiction; Student

Abbreviations: NMP Q: Nomophobia Questionnaire; SAS_SV: Smartphone Addiction Scale

Introduction

People have always dreamed of being here and elsewhere at once. Indeed, university students are among the age groups most targeted by communication technologies. They are also the most interested in owning smartphones on which they spend a lot of time [1]. Nomophobia is the abbreviation for "No-Mobile Phone PhoBIA" and refers to fear of being enabled to use smartphone. And smartphone dependency can be defined as an overuse of smartphones as it disrupts the daily life of users [2]. Communication technology plays a significant role in everyday life. However, the unrestrained use of the smartphone leads to the development of behavioral addiction [3]. The problem has emerged worldwide to the point where the World Health Organization (WHO, 2015) has identified smartphone addiction as a public health issue requiring more research to understand these phenomena [4]. Over the previous few years, there has been increased research about this problematic [5]. For instance, a systematic review reported prevalence rates for nomophobia being between 13% and 79% [6]. Nomophobia has been increasingly studied among university students globally and it has been highlighted that the existing levels of nomophobia and smartphone addiction can be defined as an epidemic outbreak [7]. The aim of the present study was to explore the Nomophobia levels among youth students at the University of Sfax in Tunisia as well as its interrelatedness to smartphone addiction.

Methods

We conducted a descriptive cross-sectional study on students from university of Sfax in Tunisia. The data collection was carried out between March 2023 and April 2023 using an anonymous and self-administered questionnaire. The criteria for inclusion in the study were: being a student in high school, having a smartphone, and volunteering to participate in the study.

Data collection tools included two questionnaires

A nomophobia questionnaire and Smartphone Addiction Scale (SAS_SV). The Nomophobia Questionnaire (NMP Q) developed

by Yildirim and Correia in 2015 [8]. The questionnaire consists of four sub scales and 20 items, which are scored based on a 5-point Likert scale from 1 "completely disagree" to 5 "completely agree." The total score is calculated by summing up the answers given to the questions, and shows mild, moderate, and/or severe nomophobia.

NMP_Q score=20: no nomophobia

NMP-Q score between 21 and 60: slight nomophobia

NMP-Q score 60 and 100: moderate nomophobia

NMP-Q score 100 and 140: severe nomophobia

The Smartphone Addiction Scale (SAS_SV) is a 6-point Likert-type scale developed by know et al. [9] with 10 items. Each item will be rated from 1 to 6, depending on the answer of the subject (strongly disagree: 1, disagree: 2, slightly disagree: 3, slightly agree: 4, agree: 5, strongly agree: 6. At the end of the test a score of a minimum of 10 and a maximum of 60 is obtained. If it is greater than 31, it confirms the excessive user class. The scale comprises 10 items, the responses to which are scored between 1 and 6. The total scores range between 10 and 60. Higher scores for the scale indicate a higher risk of addiction. Statistical analysis of the data was performed using the SPSS 22.0 package program. For the data analysis, the percentage, mean ± SD, t-test, and Pearson's correlation coefficient were used. The significance level in the tests was $p < 0.05$.

Results

Among the 270 students, 162 (60%) were female. Their age was between 18 and 20 years. Half of the students (52.6%) had medium socioeconomic level and 40.0% of them had high socio-economic level. Our study showed that the majority of participants (83.0%) used smartphones for more than 3 years, 70.4% of them had a mobile data plan. Thus, 82.6% of students spend more than 3 hours browsing their smartphone and 64.4% of them check their smartphone more than 4 times per hour. In addition, 71.5% of students had up to 25 applications to download on their smartphones. We noted that 68.9% of students spend more than two hours logged on Facebook. At night, 58.5% spent more than one hour connecting before sleeping. 78.7% of participants said their relatives told them they were using their smartphones too much, and 83.5% of students were using their smartphones for longer periods than expected. According to NMP-Q, our study showed that 25.2% had severe nomophobia, 63.3% had moderate nomophobia and 11.1% had mild nomophobia.

The mean scores of the students participating in the study revealed that the average SAS_SV score was 45.14±7.34. Among students, 68.5% have severe addiction, and 28.9% have moderate addiction. Regarding the degree of impatience and irritation when they don't have their smartphones, our result showed that 27.8% of students responded with 60% "agree" and 24.4% with "strongly agree." The results of our study showed that 78.7% of participants

said their relatives told them they were using their smartphones too much, and 83.5% of students were using their smartphones for longer periods than expected. The correlation between smartphone addiction and nomophobia, was examined. It was determined that the relationship between smartphone addiction and nomophobia was positive (p= .03; r=.132).

Discussion

Nomophobia is a new type of fear that has emerged as a result of advances in technology and the excessive use of the Internet and Smartphones. The current study explored the NOMOPHOBIA levels among youth students at Sfax University and its interrelatedness to problematic internet use. Most of our students (82.6%) reported that they use their smartphones more than 3 hours per day, and 64.4% of them check their smartphones more than 4 times per hour, 20.4% check them 2 to 4 times per hour. Bartwal and Nath study [10] showed that 62.1% of students spend more than 3 hours on their smartphones and 57.6% check their smartphone more than 10 times a day, while 59.5% do it more frequently.

Findings revealed that there is a high prevalence (88.8%) of NOMOPHOBIA which was similar to a recent study conducted among university students that found that there are moderate to severe nomophobia prevalence amounting to 90.6% of their sampled students [11]. The findings of the current study were similar to the findings of other studies, which showed levels of NOMOPHOBIA between 35% and 99% of different levels among students around the world [12-14]. The nomophobia questionnaire NMP_Q, showed 25.2% had severe nomophobia, 63.3% had moderate nomophobia and 11.1% had mild nomophobia. These results are similar to the study of Daei et al. [15]. They showed that 12.4%, 63.2%, and 23.8% had mild, moderate, and severe nomophobia, respectively. The mean scores of the students participating in this study revealed that average SAS_SV score was 45.14±7.34. These results are different from those found by Okasha et al. [4] They showed that 59.57% of university students meet the criteria of smartphone dependency, with an average SAS_SV score of 38.07±12.95 [16]. Regarding the degree of impatience and irritation when they don't have their smartphones, our result showed that 27.8% of students responded with 60% "agree" and 24.4% with "strongly agree." These results were similar to those found by Obi et al. which showed that (51.8%) of respondents had a persistent inability to resist the impulse to use a smartphone, (47.7%) felt anxious, irritable or dysphoric after a period of withdrawal of their smartphones [17].

The results of our study showed that 78.7% of participants said their relatives told them they were using their smartphones too much, and 83.5% of students were using their smartphones for longer periods than expected. Our study showed that smartphone addiction was highly positive correlated with nomophobia (p < .03; r = .132). This finding was congruent with a study conducted by Gezgin et al. who found a positive correlation between Internet

Addiction and NOMOPHOBIA levels as "the higher the Internet addiction level, the more NOMOPHOBIA behaviors were exhibited" [12]. The study demonstrated that there is a positive and significant relationship between smartphone addiction and nomophobia. Considering that nomophobia triggers smartphone addiction, it has been reported that the level of addiction may increase if nomophobic individuals are not provided interventional [12].
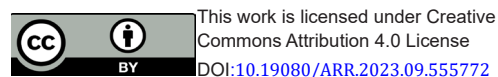
Limitations

This study has some limitations. The study data were collected from students in Sfax University; this can be considered as a limitation in terms of generalizing the study results for the entire population. In addition, it is thought that it would be beneficial to have a study group comprising students from different education levels (primary and secondary school students), since the use of smartphones falls at younger ages.

Conclusion

i. This study raises a serious warning alarm for academic authorities to face the increasing pressing risks of smartphone use among students. We live in an age of technology, and it is not possible for them to abandon the use of smartphones. However, interventions to minimize smartphone use should be implemented as well as health education strategies to raise their awareness about the harmful biopsychosocial effects of Smartphone misuse.

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