Latest Research & Reviews on Psychiatry

Chapter 1

Nomophobia

Serhat TUNC[1*]; Ece BUYUKSANDALYACI TUNC[2]

[1]Assistant Professor, Kafkas University School of Medicine, Department of Psychiatry

[2]Psychiatrist, Kars Harakani State Hospital, Department of Psychiatry

*[*]**Correspondence to: Serhat TUNC,** Assistant Professor, Kafkas University School of Medicine, Department of Psychiatry*

Email: drserhattunc@gmail.com

1. Introduction

The term NOMOPHOBIA or NO MObile PHone PhoBIA is used to define a psychological condition when people live fear of being separated from a mobile phone connection. Nomophobia is accepted a modern age phobia presented to our lives as a byproduct of the communication between people and mobile data and communication technologies, particularly smartphones. It means to fear of unable to use a mobile phone and communicate with missing the connectedness that mobile phones allow, unable to reach information through smartphones, and leaving the simplicity that smartphones supply [1]. Nomophobia is described as the anxiety of being out of mobile phone (MP) communication and is thought to be a phobia of the modern world [2]. Wang et al. (2014) described it as the feelings of restlessness, anxiety, irritability or distress that result from being out of connecting with a mobile phone, even leading suicidal thoughts as well as attempts [3]. King et al. (2014) modified the description of Nomophobia for increasing its modern-day attention as anxiety of being unable to connect through a mobile phone [4]. Nomophobia is a term that means a collection of behaviors or symptoms associated with mobile phone use. Thus, people with Nomophobia or nomophobes would have an unreasonable fear of being out of the mobile phone with experiencing intense anxiety and discomfortable emotions [5]. The four fundamental dimensions described for Nomophobia are (1) unable to communicate (2) missing connectedness (3) unable to reach information (4) giving up convenience [1].

It is a kind of 'over-connectedness syndrome' because over-use mobile phone decreases the

total time for face to face communication. This disrupts our social and family communications significantly. The terminology 'techno-stress' is usually used to direct a situation when people refrain face to face social communications and are limited within themselves, without concern for others. Finally, they may have depression in future life [6].

Nomophobics choose virtual communications and refrain face to face social communications. Consequently, they keep opening their phones also in sleeping. Some of them usually check the phone screen to refrain to loss any notification, which is named as 'ringxiety' [7].

Nomophobia can result in economic burden in the family due to the overuse of mobile phone, which is also expensive. Nomophobia may also result in physical problems like pain in elbows, hands, and necks due to continuous use [7].

2. History & Epidemiology

Nomophobia is originated from technological developments and progresses that have been produced by virtual contact. Nomophobia is presented to our lives as a result of the interaction between people and mobile data and communication [2].

The term 'NOMOPHOBIA' was introduced by the United Kingdom (UK) Post Office in 2008 throughout research who licensed YouGov, a UK-based study organization. That study aimed to measure the probability of anxiety disorders took place due to the excessive use of mobile phones. The research showed that approximately 53% of British who used mobile phones, behave to be worried when they 'lose their mobile phone, end off battery or credit, or have no network connection.' That study also demonstrated that nearly 58% of male and 47% of female troubled with the mobile phone anxiety and moreover 9% felt nervousness when their mobile phones were shut down. 55% of the participants accepted that they are unable to sustain connectedness with their love and near one, which was the major cause for their phobia. According to the comparison of stress levels, it was reported that the anxiety level was on equal terms with those of marriage day nervousness [8].

A study was administered among undergraduate students in Health Services, reported that out of 547 males, 23% of the students were classified as Nomophobia, while 64% of students were at risk of having Nomophobia. Nearly 77% of students controlled their mobile phones more than 35 times daily [9]. Another study demonstrated that more than 50% nomophobics never shut down their mobile phones [7].

We are not able to run away from the effect of modern technology in 21st age. New challenges are occurring on a usual basis. The phobia due to technological improvements is also named TECHNOPHOBIA. The mobile phone was firstly presented in 1983; today, these

devices be at the center of life in most of the communities [10]. Smartphones are reported as 'probably the biggest non-drug dependence of the 21 st century.' Today college students spend more than 9 hours per day with their cell phones, which causes addiction. It is a tragedy of technology having both the feature of freedom and enslaving. Freedom from the actual life and enslaving to the imaginary World [10]. It has been noticed among students that low-grade point average (GPA) and high anxiety levels are correlated with continuous mobile phone usage. The decrease in GPA among students may be due to distractibility by the excessive usage of mobile phones during a lecture. Pressure for virtual network connectedness may increase anxiety, as it leads no time for alleviating daily stress during loneliness, which is necessary for our well-being [11].

The mobile phones are controlled after awakening in the morning by 61% of people, according to a study [12]. Smartphone research performed in Austria studied the association between the participant's frequency of mobile phone use and their psychological involvement with the use of Mobile Phone Involvement Questionnaire (MPIQ). Some psychological factors were measured by the researchers that might affect the participant's mobile phone use. A moderate distinction was noticed among the participant's psychological relationships with mobile phones and their over-use. Although no pathological conditions were detected, however signs of attachment were noticed due to over-use of mobile phone. Mobile phone addiction was detected in another study performed on adolescents and rising adults as they might be passing through a social identity crisis phase in their life [12]. Mobile phone dependence research among medical graduates was performed by Dixit et al. (2010) [13]. The study showed that most of the students (73%) did not shut down their mobile phones for 24*7 hours. 20% of students replied that they became distressed with no mobile phone or its battery is exhausted. 38.5% of students replied that they maintained repetitively controlling their mobile phones for notifications. Nearly 56% of students responded that feel safe with their mobile phones [13].

The pre-service teachers' nomophobia levels are reported higher than the mean, and they have feelings of anxiety about unable to communicate and unable to reach information [14]. High-end mobile phone users assessed their sleep quality as weak and were severely limited. Moreover, excessive use of mobile phones leads to more unsatisfactory physical and psychiatric health results [15].

3. Clinical Risk Factors

Determining psychological predictors has excellent clinical relation since this information could be used for screening and both diagnosis and prognosis. Researchers indicated some psychological predictors for supposing nomophobia is a person who is 'self-negative opinions, being young, low esteem and self-efficacy, high extro/introversion, impulsivity, and feeling of rush and sensation seeking [16].

According to a study which conducted temperament and characteristics related to nomophobia, cooperation is reported as a characteristic that remarkably decreases nomophobia levels, especially for the two factors of Mobile Phone Addiction and Negative Consequences. Additionally, reward dependence seems to be positively associated to two of the factors included in nomophobia, namely Mobile Phone Addiction and Loss of Control, recommending an association between Nomophobia and personality [17]. These results should be discussed in terms of their usefulness for determining the personality predictors of nomophobia for improving prophylactic and intervention strategies.

4. Clinical Comorbidities

Double diagnosis is a significant issue of nomophobia like other psychiatric disorders. Comorbidity is talked since often disorders tend to come together, like anxiety and panic disorder, different types of phobia (specially social phobia), obsessive-compulsive disorder, eating disorders, depression (including atypical depression) and dysthymia, psychosis, alcohol and illicit drug use disorder, also other behavioral addiction disorders (including mobile and/or internet dependence, gambling, online gaming, compulsive buying) and personality disorders. All these disorders should also be thought in the differential diagnosis. In these cases, nomophobia may behave as an antecedent for a more severe psychiatric disorder [6].

It is reported that people with anxiety and panic disorders were more susceptible to nomophobia. A study in Brazil showed out 44% of participants from panic disorders group felt 'safe' with their mobile phones. Contrarily, 46% of the healthy group told that they would not feel safe when they had not their mobile phones. The research showed that 68% of the total participants notified mobile phone addiction. Participants with panic disorder told significantly more emotional symptoms and addiction to mobile phones in comparison to the control group when they are unable to reach their mobile phone [4].

It is prominent from questionnaires that young people are more likely to be dependent on nomophobia (Secure Envoy Study) [18]. The questionnaire defined that most of the adolescents demonstrated anxiety when they detached from their mobile phones.

The diverse psychological factors are included when a person uses the mobile phone excessively, e.g., low self-esteem, extrovert personality. Other psychiatric disorders like a social phobia and panic disorder may also provoke NOMOPHOBIC symptoms. It is very tough to differentiate NOMOPHOBIA from existing anxiety disorders demonstrate as NOMOPHOBIC symptoms [4].

As already defined, anxiety is promoted in nomophobia cases by numerous agents, such as missing mobile phones, missing the signal and exhausted batteries of cell phones. Nomophobics demonstrate some special features, such as – using cell phones impulsively, as

a protective mechanism to refrain social interaction. Occasionally, they bear many cell phones with a portable charger to refrain from the experience of disconnectedness from the imaginary world [6].

A normal person may encounter anxiety and stress responses in public places where mobile phone use is limited (such as in airports, schools, and workshops). Overusing mobile phone apps for buying like 'Booking", 'Amazon' etc., items can lead to financial danger for the person. The ability to sustain connectedness through a mobile phone yields the person serenity and safety unless they have anxiety and depression symptoms [6].

5. Clinical Diagnosis

The term 'phobia' is an inappropriate name due to mostly appearing to be a type of anxiety disorder. The term NOMOPHOBIA is built on definitions defined in the Diagnostic and Statistical Manual of Mental Disorders (DSM)-IV a 'phobia for a particular/specific thing' [6]. The reported common signs and symptoms in Nomophobia cases are anxiety, respiratory changes, thrilling, sweating, agitation, disorientation, tachycardia [7]. Although nomophobia is a debatable term, it is mentioned as dependence on mobile phones or an addiction to mobile phones [19]. Nomophobia can be accepted within the framework of non-substance behavior addictions. It could be defined as a syndrome analogous to substance addiction, however, with a focus on a specific behavior like substance consumption, produces short-term reward and may continue despite detrimental results (due to decreased control on the attitude) [17]. The DSM-5 (APA 2013) widens the category of 'Substance-Related Disorders' to 'Substance Use and Addictive Disorders' containing substance and non-substance-related addictions [20]. However, non-substance behavior addictions currently only contain pathological gambling. There are no certain and accepted diagnostic criteria for non-substance behavior addictions like nomophobia, although clinical knowledge demonstrates that the extreme use of new technologies is an exact problem that seriously influences particular people. Over again, history recurs itself: Gambling was identified as a nosological entity in 1980 when the APA presented it under the name of 'pathological gambling,' however, its presence was identified by professionals much earlier.

6. Assessment Tools

There are particular validated psychometric scales which are useable to diagnose nomophobia, among all, 'Questionnaire of Dependence of Mobile Phone/Test of Mobile Phone Dependence (QDMP/TMPD)'' scale is commonly used [7].

Questionnaire to assess nomophobia (QANIP) was developed by Olivencia-Carrion et al. (2018) and comprises of 11 items associated to text message abuse, high frequency of use, spending more than 4 hours per day using the mobile phone (using the mobile phone all of

the time), to cope with negative emotions or problems, to feel good, demonstrating extreme irritability and aggressive behaviour when unable to use the MP, progressive disruption in school/work and social/family functioning, and deteriorations in self and social perception. One to five scores each item [21].

Nomophobia Questionnaire (NMP-Q) was developed by Yıldırım and Correia (2015) and included 20 items over 7-point Likert type. The reliability coefficient (Cronbach's alpha) is found .95 [1]. According to Field (2005), if the reliability coefficient is greater than .80, then the reliability is very high and stated as excellent [22]. In addition to this, this scale contained four sub-scales namely; "unable to reach information" 4 items, "Missing connectedness" 5 items, "unable to communicate" 6 items, and "Giving up convenience" 5 items. Reliability coefficients of the sub-scales are .94, .87, .83 and .81 respectively. Turkish version of NMP-Q was adapted by Yıldırım et al. (2015) [1]. Reliability of Turkish version is demonstrated as .92; and sub-scales' are .90, .74, .94 and .91 respectively.

7. Treatment

Parents should increase their children to participate in social events that give them more opportunity for face to face communication. Parents should have consciousness about psychological problems like NOMOPHOBIA. Education authorities should invite health team personnel for educating and managing this problem. In various educational institutions, mobile phone use should be restricted. Teenager's energy requires to be transferred in an inventive way to sport, art, music, book which give them more chance for social communication. Their colleagues/advisors should detect NOMOPHOBIC. They may be consulted to take on-site consultancy. Therefore, the risk of NOMOPHOBIA can be decreased [7]. Currently, the treatment methods are very restricted due to the novelty of the concept. However, encouraging results are obtained with treatment methods like cognitive-behavior therapy and medication. Tranylcypromine and clonazepam drugs are occurring quite useful in nomophobia treatment. Cognitive-behavioral therapy appears to be very helpful as it augments the autonomous behavior, which is not dependent on techno-addiction. However, this treatment method is not accepted by any randomized control trial. Another promising treatment approach has arisen as 'Reality Approach,' or reality therapy. In this therapy, the patient is motivated to focus on social interactions (participating in sport, music, art activities) other than mobile phone use. Diaries which include daily mobile phone use have also been shown. Tranylcypromine and clonazepam combination are quite successful in nomophobia treatment, although benzodiazepines and antidepressants are used for anxiety disorders and not for nomophobia directly [4].

Mental Health services have a remarkable effect on rehabilitation as a person passes through the phases of anxiety and depression. After referring the people, urgent health and safety require psychosocial measurement should be recommended with available psychometric

scales. Psychological rehabilitation of addicted requires to be provided through counseling and parental care. Care should be supplied by supporting and non-offending caregiver [7].

8. Conclusion

Nomophobia is arising as a danger to our 'social, psychiatric, and physical health. The people should have consciousness about living the real world more than the virtual world. People have to reconstitute the human to human communications, face to face interactions. So, people need to restrict their use of mobile phones instead of prohibiting it because we can not neglect the power of technological developments. The clinicians should differentiate NOMOPHOBIA from any other underlying psychiatric disorders. NOMOPHOBIA is not categorized among the recent disorders in DSM-5 and ICD-10. Therefore, it should be thought of as a unique psychiatric disorder by the forthcoming editions. Distinctive diagnostic criteria should also be developed to enhance the identification of this disorder by the health professionals as well as to promote further scientific researches.

9. References

1. Yildirim C, Correia AP. Exploring the dimensions of nomophobia: Development and validation of a self-reported questionnaire. Computers in Human Behavior 2015;49:130-137.

2. Nagpal SS, Kaur R. Nomophobia: The problem lies at our fingertips. Indian Journal of Health & Wellbeing, 2016;7(12):1135-1139.

3. Wang PW, Liu TL, Ko CH, Lin HC, Huang MF, Yeh YC, Yen CF. Association between problematic cellular phone use and suicide: the moderating effect of family function and depression. Compr Psychiatry. 2014;55(2):342-8. doi:10.1016/j.comppsych.2013.09.006.

4. King ALS, Valença AM, Silva AC, Sancassiani F, Machado S, Nardi AE. "Nomophobia": impact of cell phone use interfering with symptoms and emotions of individuals with panic disorder compared with a control group. Clin Pract Epidemiol Ment Health. 2014;10:28-35. doi: 10.2174/1745017901410010028.

5. Szyjkowska A, Gadzicka E, Szymczak W, Bortkiewicz A. The risk of subjective symptoms in mobile phone users in Poland-an epidemiological study. Int J Occup Med Environ Health. 2014;27(2):293-303. doi: 10.2478/s13382-014-0260-1.

6. Bragazzi NL, Del Puente G. A proposal for including nomophobia in the new DSM-V. Psychol Res Behav Manag 2014;7:155-160.

7. Bhattacharya S, Bashar MA, Srivastava A, Singh A. NOMOPHOBIA: NO MObile PHone PhoBIA. J Family Med Prim Care. 2019;8(4):1297-1300. doi:10.4103/jfmpc.jfmpc_71_19.

8. Nikhita CS, Jadhav PR, Ajinkya SA. Prevalence of mobile phone dependence in secondary school adolescents. J Clin Diagn Res 2015;9):VC06-9.

9. Bivin JB, Mathew P, Thulasi PC, Philip J. Nomophobia-do we really need to worry about? Rev Prog 2013;1:1-5.

10. Mick DG, Fournier S. Paradoxes of technology: Consumer cognizance, emotions, and coping strategies. J Consumer Res 1998;123-143.

11. Lepp A. The relationship between cell phone use, academic performance, anxiety, and satisfaction with life in

college students. Comput Hum Behav 2014;31:343-350.

12. Walsh SP. Needing to connect: The effect of self and others on young people's involvement with their mobile phones. Aust J Psychol 2010;62:194-203.

13. Dixit S, Shukla H, Bhagwat AK, Bindal A, Goyal A, Zaidi A, et al. A study to evaluate mobile phone dependence among students of a medical college and associated hospital of central India. Indian J Community Med 2010;35:339-341.

14. Gezgin DM, Sumuer E, Arslan O, Yildirim S. Nomophobia prevalence among pre-service teachers: A case of Trakya University. Trakya Üniversitesi Eğitim Fakültesi Dergisi 2017;7(1): 86-95.

15. Papaconstantinou E, Bartfay WJ, Bartfay E. "Smartphone use, sleep quality and quantity, and mental health outcomes in a university population." Sleep Medicine 2017;(40):e251.

16. Bianchi A, Phillips JG. Psychological predictors of problem mobile phone use. Cyber Psychol Behav 2005;8:39-51.

17. Olivencia-Carrión MA, Ferri-García R, Rueda MDM, Jiménez-Torres MG, López-Torrecillas F. Temperament and characteristics related to nomophobia. Psychiatry Res. 2018;266:5-10. doi: 10.1016/j.psychres.2018.04.056.

18. Secure Envoy 2012. 66% of the population suffer from Nomophobia the fear of being without their phone. https://www.securenvoy.com/en-gb/blog/66-population-suffer-nomophobia-fear-being-without-their-phone / Access Date: September 15, 2019.

19. Forgays DK, Hyman I, Schreiber J. "Texting everywhere for everything: Gender and age differences in cell phone etiquette and use." Computers in Human Behavior 2014;31:314-321.

20. American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: Author.

21. Olivencia- Carrión MA, Ferri-García R, Rueda M, López-Torrecillas F. Reliability and construct validity of a questionnaire to assess the nomophobic (QANIP). BMC Public Health 2018 (In revision).

22. Field A. (2005) Discovering statistics using SPSS (2nd ed.). London: Sage Publication.