



The Role of Nomophobia in the Lifestyle among Adults.

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ABSTRACT

Can people become addicted to using their smartphones? To explore this possibility, this literature review summarizes previous research on smart-phone addiction, nomophobia. Nomophobia is one of the modern pathologies that has been born as a consequence of the impact that portable technologies have had on society and the dependence generated among citizens, especially towards smartphones. This phobia manifests itself and is intensified by the loss of immediate access to information, to the network of contacts, as well as by the impossibility of contacting or being contacted by other people. Nomophobia is defined as the fear of being out of mobile phone contact and is considered a modern age phobia introduced to our lives as a byproduct of the interaction between people and mobile information and communication technologies, especially smartphones.

All this ends up interfering with the development of the person's daily life (physical, physiological, psychological, social problems, among others). The study follows a descriptive, correlational, quantitative methodology. The standardized nomophobia questionnaire NMP-Q was used on a sample of $n = 100$ young adults. The results show moderate levels of nomophobia in most of the variables. However, the higher levels of nervousness, fear or anxiety stand out due to the inability to communicate instantaneously. Also, a higher prevalence of the problem is observed in the sector of the sample that claims to sacrifice rest time due to the use of their mobile phone. Although these numbers are not alarming, we must take into account that in some variables the prevalence is slightly higher, making it necessary to make educational interventions in this regard and to promote education for the responsible and critical use of media and technologies.

CHAPTER 1

Introduction

In the era of science and technology as far as communication is concerned it is a very important and trending field of research. Since the period of telegram to Long Term Evolution and IP based Smartphone, the pattern of growth is very interesting and it implicates the amazing transformation in human life. Even though the innovation in communication made human life very easy, fast and productive, excessive mining can be the reason for deteriorating human health and behavior patterns.

Very often we have seen that elderly people ask their children to keep away from smartphones, but the reality is that elderly people are also addicted to smartphones. A study by the Boston Medical College on some families while having a meal in restaurants in 2004, it was found that one third of family members were busy on a mobile phone during having a meal.

Present-day adolescents spend a lot of their time on their smartphones. They use them to play games, watch videos, browse the internet, and check notifications from social networking sites (SNSs). As a result, smartphone users find it difficult to refrain from using their smartphones. Further, when they are away from their smartphones, they experience anxiety. This phenomenon is called nomophobia (NO MOBILE PHONE phoBIA), and it refers to the anxiety that is experienced when one loses or is away from his or her smartphone and the fear that results from being unable to use one's smartphone

Today's generation of teenagers, born from 2000, aptly labeled the "iGeneration", are the most connected generation ever. These iGen teens are digital natives growing up in an era of a massive influx of technology. They do not know of a world that does not include the Internet and easy access to technology. Parents of iGen youth, however, are "digital immigrants".

The increased use of the internet increased the number of times a person checked his/her phone that is the habitual behavior and that led to mobile addiction and various other symptoms, like psychopathological symptoms, gaming disorders, gambling disorders and many more (Daria J. Kuss, Eiman Kanio, Mark Crook Romsey, Fraenze Kibowski, Grace Y. Wang, Alex Sumich, 2018)

And there's another similarity between behavioral addiction and cell phone overuse: the triggering of a chemical in the brain that reinforces the compulsive behavior. Brain contains several pathways that transmit a feel-good chemical called dopamine when you're in rewarding situations. For many people, social interaction stimulates the release of dopamine. Because so many people use their phones as tools of social interaction, they become accustomed to constantly checking them for that hit of dopamine that's released when they connect with others on social media or some other app.

That cycle can lead to a tipping point: when your phone ceases to be something you enjoy and becomes something you're virtually compelled to use. What researchers do agree on is the fact that adolescents are more likely to demonstrate addiction-like symptoms with their cell phone use than other age groups. Studies Trusted Source show that cell phone use peaks during the teen years and gradually declines thereafter. Excessive cell phone use among teens is so common that 33 percent of 13-year-olds never turn off their phone, day or night. And the younger a teen acquires a phone, the more likely they are to develop problematic use patterns.

For girls, dependent use patterns may develop because phones become important tools of social interaction, whereas boys demonstrate a greater tendency to use phones in risky situations.

A review Trusted Source of the available research revealed that several personality traits and conditions have been associated with problematic cell phone use.

These personality traits include:

- low self-esteem
- low impulse control
- anxiety
- depression

- being highly extroverted

Researchers point out it's not always clear whether the problems with cell phone overuse are causing these conditions, or whether the conditions themselves make people more vulnerable to overuse.

Symptoms of phone addiction

Some of the telltale signs include the following:

- You reach for your phone the moment you're alone or bored.
- You wake up multiple times at night to check your phone.
- You feel anxious, upset, or short-tempered when you can't get to your phone.
- Your phone use has caused you to have an accident or injury.
- You're spending more and more time using your phone.
- Phone use interferes with your job performance, school work, or relationships.
- People in your life are concerned about your phone use patterns.
- When you try to limit your use, you relapse quickly.

CHAPTER 2

Review of Literature

Manrique, G. A., Hernández, V. V. M., Cordoba, T. A., Gámez, G.G., Puertas, V. G., Puertas, L. G., (2018) A study was to analyze the relationship between the level of nomophobia and the distraction associated with smartphone use among nursing students during their clinical practicum. Methods A cross-sectional study was carried out on 304 nursing students. The nomophobia questionnaire (NMP-Q) and a questionnaire about smartphone use, the distraction associated with it, and opinions about phone restriction policies in hospitals were used. Results A positive correlation between the use of smartphones and the total score of nomophobia was found. Nursing students who show high levels of nomophobia also regularly use their smartphones during their clinical practicum, although they also believe that the implementation of policies restricting smartphone use while working is necessary.

Durak, H. Y., (2019). A study was conducted to determine nomophobia levels and smartphone addiction among 12–18 age group secondary and high school students and to investigate the demographic and academic variables predicting these levels. The population of this research consists of 612 students .Personal information form and two different scales were used in the research. Descriptive analyses and hierarchical linear multiple regression analysis were used in the analysis of the data obtained by means of data collection in the research. As a result of the research, there is a significant relationship between smartphone addiction and nomophobia.

Pew Research Center's Mobile Technology Fact Sheet (2014) .According to Pew Research Center's Mobile Technology Fact Sheet (2014), as of January 2014, 90% of the American adult population have some kind of a cell phone and 58% of American adults own a smartphone. Among adults who own a smartphone, 83% are aged 18-29, 74% are aged 30-49, 49% are aged 50-64, and 19% are aged 65 or older. Thus, smartphones are particularly popular among young adults. In fact, college students are regarded as the early adopters of

smartphones (Lee, 2014). The popularity of smartphones among college students is ascribable to the numerous features and functionalities they provide. Smartphones make it possible to perform a variety of daily tasks in one device, including, but not limited to, calling and texting people, checking and sending email messages, scheduling appointments, surfing the Internet, shopping, social networking, searching for information on the Internet, gaming, entertainment, etc. (Park, Kim, 2 Shon, & Shim, 2013). Because smartphones are ubiquitous and provide numerous capabilities, Kang and Jung (2014) propose that smartphones go beyond serving communication, information and entertainment purposes. They state that smartphones enable people to “fulfill needs such as learning, individual capability, safety, and human relationships” (Kang & Jung, 2014, p. 377), which is attributed to the mobility of smartphones

Krithika., M., Dr. Vasantha, S., (2013). The Mobile Phone Usage Among Teens And Young Adults Impact Of Invading Technology . In India 755 of the adolescents whose age ranges from 12-17 years own a smartphone and India being the second largest telecom industry in the world it has attracted a good crowd towards their service providers(Krithika. M, Dr.S. Vasantha, 2013). The method used for performing the research is descriptive research design. Stratified random sampling has been obtained from a non- probability sampling method only for a few selected students in south Chennai, Tamil Nadu, India. Tools and Techniques which were used during the course of the research are percentage analysis, chi-square, factor analysis, T-test analysis. The use of smartphones has adversely affected their academic performance, their driving safety and many more. Teenagers who are suffering from mobile addiction are being socially isolated and are more prone to stay within themselves(Pratibha Khosla, Piyali Chakraborty, Paramita Giri, Rashmita Sahoo, Pallabi Tripathy, Prativa Behera, Rakesh Ku Lenka, 2017).

Hooper, V., & Zhou, Y., (2009).”Addictive, Dependent, Compulsive? A Study of Mobile Phone 2009. In order to address the claims that mobile phone usage is addictive, a study was undertaken to categorize mobile phone usage behavior based on the underlying motivation. Six categories were identified: addictive, compulsive, dependent, habitual, voluntary and mandatory. A survey of 184 students found that the behavior cannot be conclusively categorized as any specific type, although there was stronger support for mobile phone usage being categorized as dependent, voluntary or mandatory behavior, rather than being addictive, compulsive or habitual.

Another research study conducted by Secuor Envoy (2012), a security company in the UK, surveyed 1000 employees and showed that the number of people suffering from nomophobia increased from 53% to 66%. Unlike the 2010 study, the 2014 study found that women were more susceptible to nomophobia, with 70% of the women compared to 61% of the men expressing feelings of anxiety about losing their phone or not being able to use their phone. In terms of the relationship between age & nomophobia, the study found that young adults, aged 18-24 were most prone to nomophobia with 77% of them identified as nomophobic, followed by users aged 25-34 at 68%. Moreover, mobile phone users in the age group of 55 & over were found to be the third most nomophobic users.

Aoki, K. & Downes, E. J., (2003). An analysis of young people's use of and attitudes toward cell phones .A study examined the prevalence of nomophobia and smartphone addiction among Filipino adolescents and investigated their association with adolescent lifestyle profiles (ALPs). Furthermore, this study examined gender and grade (i.e., junior vs. senior high school students) differences in nomophobia, smartphone addiction, and ALPs. Methods: A cross-sectional study, Pearson’s correlation analysis, multiple linear regression analysis, t-test, and one-way analysis of variance were conducted. during the academic year 2018–2019. Results: Only 0.5% of the participants (N = 1,447) did not have nomophobia. In contrast, 12.4% ,63.2% and 23.8% of them had mild, moderate, and severe nomophobia, respectively. Moreover, 62.6% (n = 906) of the participants had smartphone addiction. Pearson’s correlation analysis revealed that nomophobia and smartphone addiction were positively intercorrelated ($r = .615$; $p < .01$). Nomophobia was significantly related to overall ALPs ($r = .060$; $p < .05$) and some of its subdomains, namely, positive life perspective, interpersonal relationship, and spiritual health. However, positive life perspective and interpersonal relationship were significantly and negatively related to smartphone addiction. Both nomophobia and

smartphone addiction were significant predictors of ALPs. There was no significant grade difference in nomophobia, smartphone addiction, and overall ALPs. There was a significant difference in smartphone addiction and overall ALPs between the four nomophobia groups. Finally, those with and without smartphone addiction differed significantly in overall nomophobia, but not in overall ALPs.

Aoki, K., Downes, E. J., (2003) . In recent years cell phones, and other technologies gained huge recognition and have also conquered our lives in the present . In the year 2001 four focus group interview sessions were conducted with 32 college students who regularly use cell phones. The questionnaire was used to undergraduate students in an introductory communication course in a large Northeast university in December 2001 and January 2002. The results responses from the focus group interviews were: people used phones for personal safety and also in case of any emergency. Cell phones are not only communication devices, but are also used to keep important information such as phone numbers. social interaction among friends and family was a necessity among the responses received.

Wei, & Leung (1999) examined the issues of social use of cell phones in public spaces. They conducted a telephone survey using a probability sample drawn in Hong Kong. They found significant differences between users and non-users of cell phones; cell phone users were younger, wealthier, and better educated than nonusers. the researchers in the past have studied the effects of cell phone use and found that: there are intended and unintended uses of the technology; cell phones are forming particular subcultures among youths in many different countries; the use of cell phone is blurring the boundary between work and private life as well as the boundary between public and private space; and the cell phone can make the user susceptible to social control by friends, family and businesses.. A combination of qualitative and quantitative techniques was used to collect data. In October 2001 four focus group interview sessions were conducted with 32 college students who regularly use cell phones. Results: Mobile communication technologies are advancing rapidly. With advances in technology come changes in users' attitudes toward those technologies. These social and cultural phenomena may change the way technology evolves. This represents the social construction of technology. This social construction of technology is seen in the symbiotic relationship between the users of
362 K. Aoki, E.J. Downes / Telematics and Informatics 20 (2003) 349–364 the technology and the technology itself.

2.1 Nomophobia

According to Envoy (2014), Nomophobia is defined as “the fear of being out of mobile phone contact”. The term, nomophobia, is an abbreviation for no-mobile phone phobia and it was first coined during a study by a U.K. Post Office in 2008 to investigate anxieties mobile phone users suffer. In order to refer to people with nomophobia, two other terms were introduced and colloquially used; nomophobe and nomophobia. A nomophobe is a noun and refers to someone who is affected with nomophobia. The term, nomophobic, on the other hand, is an adjective and is used to describe the characteristics of nomophobes &/or behaviors related to nomophobia.

Nomophobia is considered a modern age phobia introduced to our lives as a byproduct of the interaction between people and mobile information and communication technologies, especially smartphones. The Diagnostic and Statistical Manual of Mental Disorders (DSM) is considered to be the gold standard manual for assessing psychiatric diseases and is currently in its fourth version (DSM-IV), while a fifth (DSM-V) has just been released in May 2013. The DSM-V Anxiety Work Group has put forward recommendations to modify the criteria for diagnosing specific phobias.

King, Valença, Silva, Sancassiani, Machado, & Nardi, 2014. This phobia has emerged as computers and cellular phones become more technologically developed and versatile in applications and communication.

The recent definition by Nardi (2014), defines nomophobic as follows:

“Nomophobia is the modern fear of being unable to communicate through a mobile phone or the Internet... Nomophobia is a term that refers to a collection of behaviors or symptoms related to mobile phone use. Nomophobia is a situational phobia related to agoraphobia and includes the fear of becoming ill & not receiving immediate assistance.” Another definition by International Business Times (2013) seems to put an emphasis on the feelings of anxiety caused by unavailability or inaccessibility of mobile phones.

Nomophobia or “no mobile phone phobia” is an anxiety which people face when they feel they could not get signal from a mobile tower, run out of battery, forget to take the phone with them or simply do not receive calls, texts or email notifications for a certain period of time. In short, it is a psychological fear of losing mobile or cell phone contact.

Symptomology of Nomophobia:

The suffering client expresses multiple symptoms.

The classical symptoms of nomophobia are

- anxiety
- depression
- trembling
- perspiration
- tachycardia
- loneliness
- even panic attacks in extreme cases.

The DSM-5, states that non-substance addictions and conventional addictions have a high comorbidity with other disorders such as alcoholism and major depressive disorders.

You are Nomophobic when:

- If you wake up at night every two hours just to check your phone.
- You check your phone even when you are having lunch or dinner.
- You start to panic when your phone is about to run out of battery & you can't rest until you put it on charging.
- Feeling that you're missing out on life when there is no signal.
- Urge to answer the call, no matter how busy you are.
- Taking my mobile phone to the washroom/ bathroom.
- You've checked your phone twice reading this article.

It is detrimental because:

- It causes anxiety. People suffering from nomophobia tend to suffer from anxiety when separated from their phones. This causes high blood pressure. It also reduces the attention span of an individual, which can harm one's work productivity.
- It's a colossal waste of time. Avoid looking at your phone, while doing other activities. Recent research suggests that this multitasking doesn't work, as you can't retain and process information at the same time.
- It affects your sleep patterns. The blue light emitted from the phone signals to your brain that it's time to wake up and it suppresses melatonin, the hormone responsible for dictating your sleep rhythm.
- It leads to skin trouble. Constant contact with your phone can cause acne, allergies and dark spots. Other symptoms in the long run seen are deafness and cancer.
- It affects your relationship with friends and family, thus affecting your social skills. It's considered rude if you constantly check your phone, when you're talking to them.

Nomophobia is a specific phobia that is defined as “the discomfort or anxiety caused by the non-availability of a mobile phone, personal computer (PC) or any other virtual communication device”

Rationale of the Study

Smartphones offer several conveniences in our life, but we also need to be aware of the negative effects of smartphone use, the most concerning aspect being smartphone addiction. Smartphone addiction is a phenomenon that pertains to uncontrollability of smartphone use. People with this problem encounter social, psychological, and health problems (Heron and Shapira, 2004; Young, 1999). Specifically, adolescents are a high risk group for smartphone addiction. Adolescents are strongly attached to their smartphone, and they regard a smartphone as their second self. Many smartphone users have reported that they would not be able to live without a smartphone (Wajcman., 2007).

Because of the excessive increase in smartphone use among young adults, it is important to look at the impact of this dependence on the individuals' lifestyle and on their quality of life. Hence an attempt is being made to assess the level of nomophobia among the adolescents of urban areas.

The present study has taken up the variables of Nomophobia as independent variables and adolescence male and adolescence females as dependent variables.

CHAPTER 3

Methodology

3.1 Objectives

- To assess nomophobia among females in the age group of 15 to 20 in urban areas.
- To assess the nomophobia among males in the age group of 15 to 20 in urban area

3.3 Hypotheses

HO: There will be no significant difference in the change of behavior attitude among the age group of 15 to 20 years due to nomophobia

3.4 Operational Definition

Nomophobia: The term NOMOPHOBIA or NO MOBILE PHONE PHOBIA is used to describe a psychological condition when people have a fear of being detached from mobile phone connectivity.

3.5 Research design and participants

In the present study an attempt is made to find out the behavioral issues among the adolescents in the age group of 15 to 20 due to nomophobia and smartphone addiction. Type of research done in this present study would be a survey method

This cross-sectional study examined the relationship between nomophobia, among the age group of 15 to 20 years. Smartphone users participated in this study. The Questioner was forwarded to the participant online through Google Forms via whatsapp and emails. The sample size of this study is 100 from which 50 are female and 50 are male .

3.6 Research instruments

3.6.1 NOMOPHOBIA

The fear of not having access to their mobile phone is called Nomophobia, this term was first used by YouGov . There are various questionnaires used for identifying Nomophobia. We are going to use the following set of questions that were used in our study for detection of mobile phone addiction among the age group of 15 to 20 years.

For the collection of information, the Nomophobia Questionnaire (NMP-Q scale), prepared by Yildirim and Correia (2015), and adapted to the Spanish context by González-Cabrera(2017) and Gutiérrez-Puertas et al. (2016) was used. A questionnaire was prepared and validated. It contained three parts, the demographic details, the Nomophobia Questionnaire (NMP-Q), developed in English by Yildirim and Correia in 2015. NMP-Q covers four dimensions; not being able to communicate, losing connectedness, not being able to access information and giving up convenience. It contains 20 questions and each question has to be responded to on a 7-point Likert scale, with 1 being 'Strongly Disagree' and 7 'Strongly Agree'. Total score Nomophobia Questionnaire (NMP-Q) This scale consists of 20 questions and four dimensions: not being able to communicate (6 items), losing connectedness (5 items), not being able to access information (4 items), and giving up convenience (5 items). Responses to each item were recorded on a 7-point Likert scale that ranged from 1 (strongly disagree) to 7 (strongly agree) (Yildirim & Correia, 2015).

Total scores were computed and classified as follows: No (20), Mild (21–59), Moderate (60–99), and Severe nomophobia (100–140).

CHAPTER 4

Results and Discussions

4.1 Sociodemographic characteristics of the participants

The sample (N=100) consists of 50 (50%) of males and 50(50%) of females. Approximately (n=54) were in the age group of 15-17years and (n=46) were in the age group of 18-20 year.

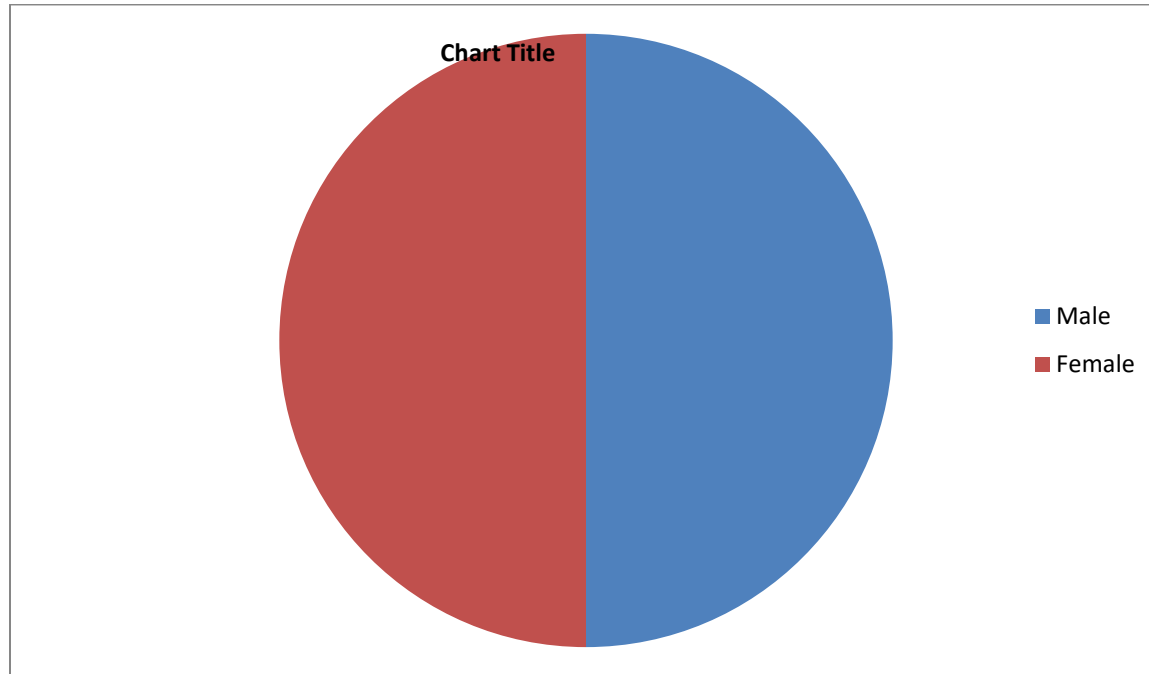


Figure 1: Sample participated in the research

4.2 Nomophobia among males and females

4.2.1 Nomophobia in Females in age group of 15-17

Figure 2 shows Nomophobia addiction in Females in age group of 15-17 where n=13

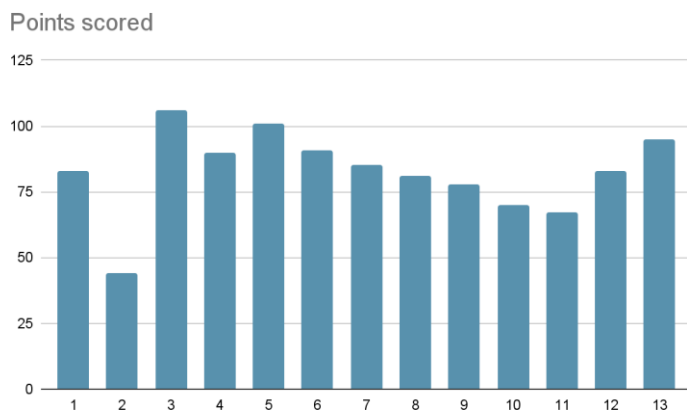


Figure 2 Nomophobia addiction in Females in age group of 15-17

4.2,2 Nomophobia in Females in age group of 18-20

Figure 3 shows Nomophobia in Females in age group of 18-20 where n=12

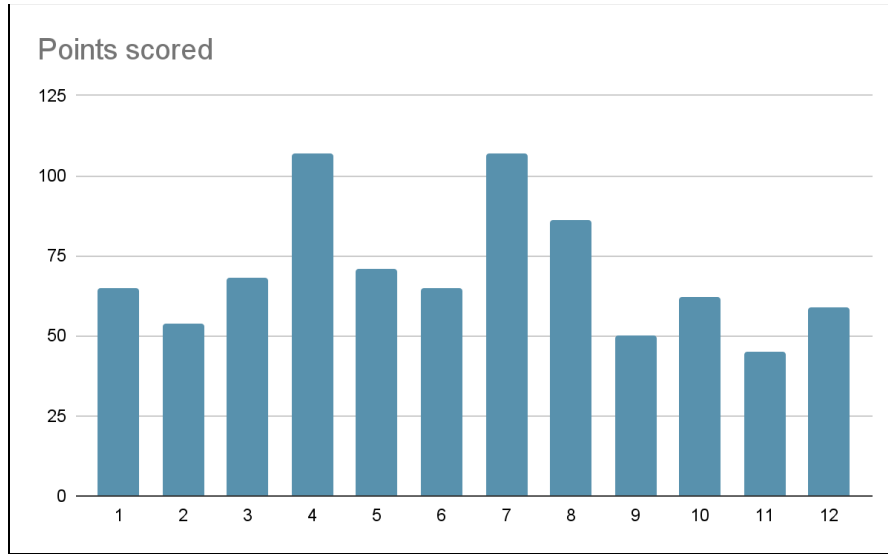


Figure 3 . Nomophobia in Females in age group of 18-20

4.3.3 Nomophobia in Males in age group of 15-17

Figure 4 shows Nomophobia in males in age group of 15-17 where n=12

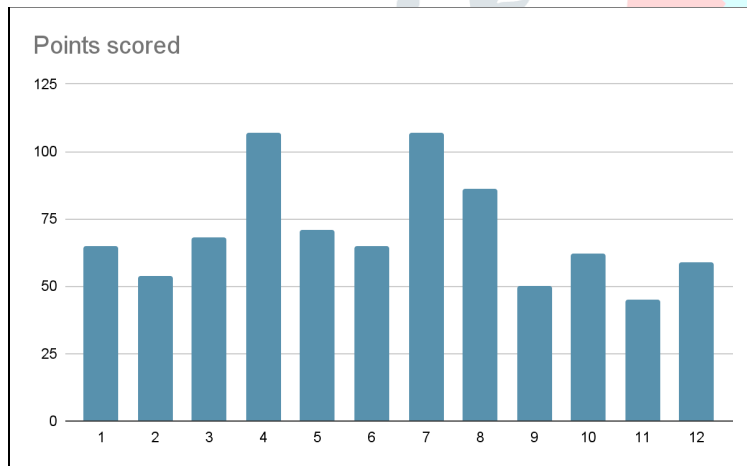


Figure 4 Nomophobia in males in age group of 15-17

4.3.4 Nomophobia in Males in age group of 18-20

Figure 5 shows Nomophobia in males in the age group of 18-20 where n=13

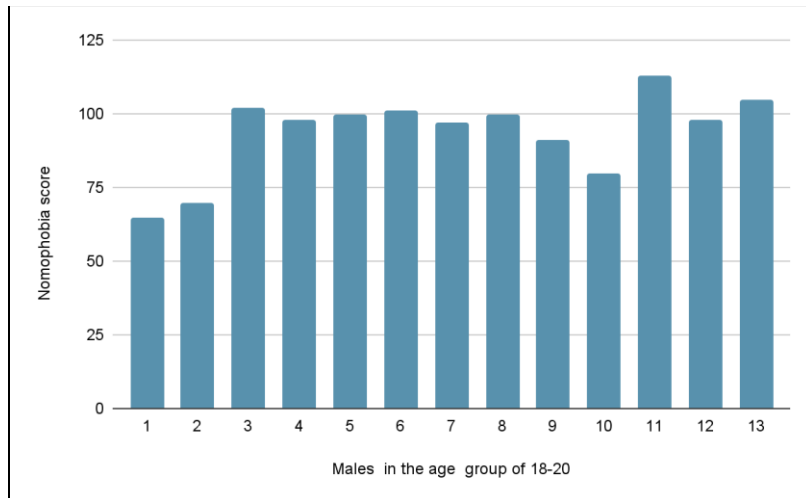


Figure 5 Nomophobia in males in age group of 18-20

4.4 Prevalence of nomophobia

Among (N=100) 50 participants were from participants who did not have nomophobia and 50 participants had Nomophobia.

Table 1 and figure 2 depicts the distribution of nomophobia among the participants. Specifically, participants(n=5) had mild nomophobia (n=28)had moderate nomophobia and (n=17) had severe nomophobia.

Severity of Nomophobia

Table 1

Mild	Moderate	Severe
5	28	17

4.5 Dimensions of Nomophobia

Figure 12 shows the different dimensions of nomophobia among the participants. The dimensions of nomophobia are:

- not being able to communicate
- losing connectedness
- not being able to access
- giving up conveniences

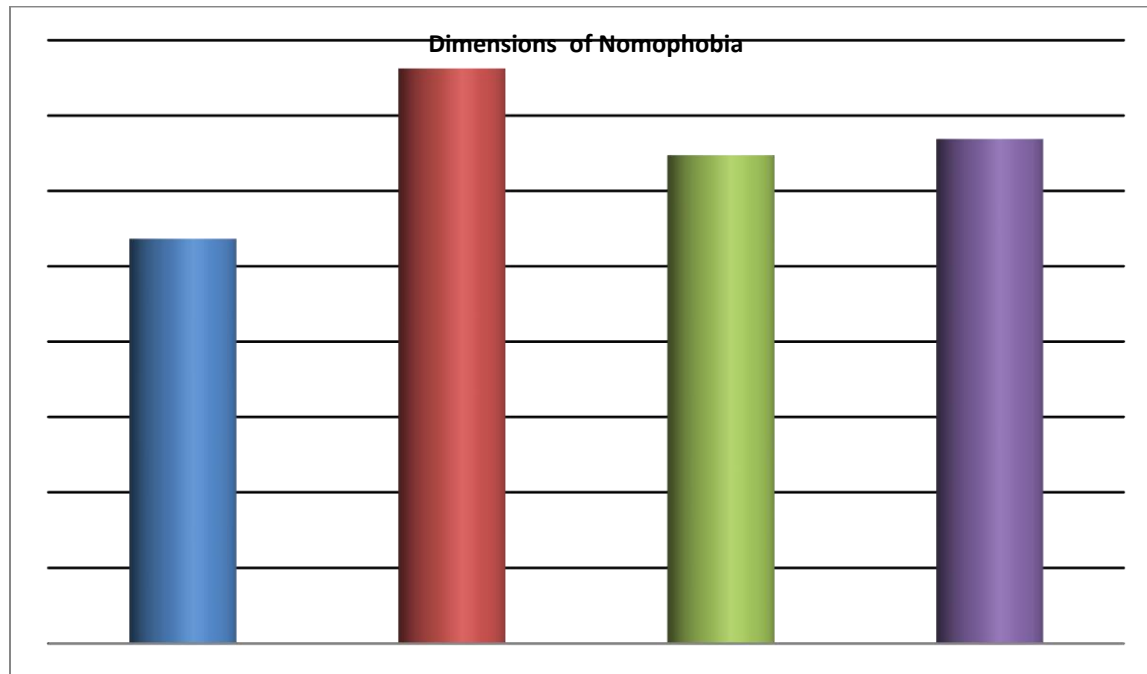


Figure 6. The four dimensions of Nomophobia

The study has shown that Nomophobia promotes the development of mental disorders, personality disorders, as well as problems in people's self-esteem, loneliness, and happiness, especially in the younger population. All of this has a great impact on health, which has negative repercussions on other aspects of life such as study and work, by creating a strong dependence on mobile technology, affecting professional practice by provoking constant distractions. In addition, it is influencing the relationships and interactions between individuals, producing a distance and isolation from the physical world.

4.6 Association between No Nomophobia and the Nomophobia

It has been observed that there is no correlation among the participants who had No nomophobia and the Nomophobia. Table 2, shows the data obtained from the participants for No nomophobia and the Nomophobia

The correlation coefficient r was found to be $r=0$ which means that there is no significant relationship between No-Nomophobia and Nomophobia.

Table 2

No Nomophobia X	Nomophobia Y	d(x)	(d(y)	(dx) ²	(dy) ²	d(x)d(y)
20	83	0	-1.12	0	1.2544	0
20	44	0	-40.12	0	1609.6144	0
20	106	0	21.88	0	478.7344	0
20	90	0	5.88	0	34.5744	0
20	101	0	16.88	0	284.9344	0
20	91	0	6.88	0	47.3344	0
20	85	0	0.88	0	0.7744	0
20	81	0	-3.12	0	9.7344	0
20	78	0	-6.12	0	37.4544	0

20	70	0	-14.12	0	199.3744	0
20	67	0	-17.12	0	293.0944	0
20	83	0	-1.12	0	1.2544	0
20	95	0	10.88	0	118.3744	0
20	65	0	-19.12	0	365.5744	0
20	54	0	-30.12	0	907.2144	0
20	68	0	-16.12	0	259.8544	0
20	107	0	22.88	0	523.4944	0
20	71	0	-13.12	0	172.1344	0
20	65	0	-19.12	0	365.5744	0
20	107	0	22.88	0	523.4944	0
20	86	0	1.88	0	3.5344	0
20	50	0	-34.12	0	1164.1744	0
20	62	0	-22.12	0	489.2944	0
20	45	0	-39.12	0	1530.3744	0
20	59	0	-25.12	0	631.0144	0
20	89	0	4.88	0	23.8144	0
20	67	0	-17.12	0	293.0944	0
20	75	0	-9.12	0	83.1744	0
20	121	0	36.88	0	1360.1344	0
20	84	0	-0.12	0	0.0144	0
20	86	0	1.88	0	3.5344	0
20	65	0	-19.12	0	365.5744	0
20	137	0	52.88	0	2796.2944	0
20	85	0	0.88	0	0.7744	0
20	126	0	41.88	0	1753.9344	0
20	57	0	-27.12	0	735.4944	0
20	81	0	-3.12	0	9.7344	0
20	65	0	-19.12	0	365.5744	0
20	70	0	-14.12	0	199.3744	0
20	102	0	17.88	0	319.6944	0
20	98	0	13.88	0	192.6544	0
20	100	0	15.88	0	252.1744	0
20	101	0	16.88	0	284.9344	0

20	97	0	12.88	0	165.8944	0
20	100	0	15.88	0	252.1744	0
20	91	0	6.88	0	47.3344	0
20	80	0	-4.12	0	16.9744	0
20	113	0	28.88	0	834.0544	0
20	98	0	13.88	0	192.6544	0
20	105	0	20.88	0	435.9744	0
Total: 1000	4206	0	0	0	21037.28	0
Mean of X1= 20	Mean of y=84.12	r=0				

4.8 Association between nomophobia among the males and females among the age groups of 15 to 20

It was found that there exists the negative correlation among the Nomophobia in males and females Table 4, shows the data obtained from the participants for Nomophobia in male and Nomophobia in females The negative correlation coefficient r was found to be ($r=-0.01670$) which shows that there exists positive correlations among smartphone addition and nomophobia

Table 3

Nomophobia male	Nomophobia female	d(x)	d(x) ²	d(y)	d(y) ²	d(x)d(y)
83	89	6.48	41.9904	-2.72	7.3984	-17.6256
44	67	-32.52	1057.5504	-24.72	611.0784	803.8944
106	75	29.48	869.0704	-16.72	279.5584	-492.9056
90	121	13.48	181.7104	29.28	857.3184	394.6944
101	84	24.48	599.2704	-7.72	59.5984	-188.9856
91	86	14.48	209.6704	-5.72	32.7184	-82.8256
85	65	8.48	71.9104	-26.72	713.9584	-226.5856
81	137	4.48	20.0704	45.28	2050.2784	202.8544
78	85	1.48	2.1904	-6.72	45.1584	-9.9456
70	126	-6.52	42.5104	34.28	1175.1184	-223.5056
67	57	-9.52	90.6304	-34.72	1205.4784	330.5344
83	81	6.48	41.9904	-10.72	114.9184	-69.4656
95	65	18.48	341.5104	-26.72	713.9584	-493.7856
65	70	-11.52	132.7104	-21.72	471.7584	250.2144
54	102	-22.52	507.1504	10.28	105.6784	-231.5056
68	98	-8.52	72.5904	6.28	39.4384	-53.5056
107	100	30.48	929.0304	8.28	68.5584	252.3744
71	101	-5.52	30.4704	9.28	86.1184	-51.2256

65	97	-11.52	132.7104	5.28	27.8784	-60.8256	
107	100	30.48	929.0304	8.28	68.5584	252.3744	
86	91	9.48	89.8704	-0.72	0.5184	-6.8256	
50	80	-26.52	703.3104	-11.72	137.3584	310.8144	
62	113	-14.52	210.8304	21.28	452.8384	-308.9856	
45	98	-31.52	993.5104	6.28	39.4384	-197.9456	
59	105	-17.52	306.9504	13.28	176.3584	-232.6656	
Total	1913	2293	0	8608.24	0	0	-151.36

Correlation coefficient $r = -0.01670$

CHAPTER 5

Conclusion and Implications

Nomophobia is an emerging adverse effect associated with mobile phone use. It is prevalent in all age groups and varied geographical locations and is associated with prolonged use of mobile phones. Early intervention for such unconventional problematic entities, in the form of lifestyle changes and promoting the judicious use of mobile phones, is required to avoid dependency and addiction of mobile phones and its adverse effects on individual's health.

The role of nomophobia and smartphone addiction were evident with the dimensions of nomophobia . not being able to communicate, losing connectedness, not being able to access information and giving up convenience. Since most people usually spend a lot of time using their mobile phone, this being more common among the young population, since prolonged and dependent use of it can cause physical symptoms ,depression, pathological addiction, fear, anxiety ,low productivity or poor academic performance. For this reason, it is necessary to develop prevention activities and programs that contribute to promoting controlled, conscious and responsible use from an early age, with special emphasis on teacher training.

Therefore null hypothesis H_0 that there is no significant difference in the change of behavior attitude among the age group of 15 to 20 years due to nomophobia is rejected

5.1 Coping with Nomophobia:

- Limit the use of mobile phones.
- Turn off the mobile before going to bed.
- Customize notifications on the phone. Constant notifications from various apps in your phone are distracting.
- Delete apps that are not required.
- Use a watch & calculator instead of apps.
- Take phone breaks while working.
- Balance screen time and in-person time each week.

- Place your phone at least 15 inches away from you at night. This helps to keep you in a safer zone.
- Cultivate a habit of book reading, love the books.
- Involve in sports, out -door games and in social activities.
- Consult the health personnel if symptoms persist beyond control.

5.2 Self-help tips for smartphone addiction

- **Recognize the triggers that make you reach for your phone**
- **Understand the difference between interacting in-person and online.**
- **Build your coping skills..**
- **Recognize any underlying problems that may support your compulsive behavior.**
- **Strengthen your support network.**

CHAPTER 6

Delimitations and Limitations:

Delimitations and Limitations:

Intervention programs should be designed and implemented in schools for adolescents in the most vulnerable populations facing the adverse effects of smartphone use, particularly nomophobic behavior. This study collected quantitative data from adolescents. Yet there are limitations in explaining the reasons for the relationship of nomophobic behavior with social media addiction, social media usage, and loneliness. Qualitative studies should be conducted on this subject. The accuracy of personally reported data depends on the honesty of the participant. For this reason, different data collection methods should be developed in future research.

Suggestions for further research:

In this technological spectrum, the Internet cannot be forgotten as a technology whose access has been enhanced with the expansion of mobile devices. These new addictions, typical of the digital era, tend to proliferate in economically developed regions, where citizens have the resources and means to have the necessary technology. Future research can further examine through qualitative studies the nature of the relationship between nomophobia and social media addiction.

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