

Neurological Syndrome Of Anxiety And Depression As An Outcome Of Nomophobia

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DOI: 10.47750/pnr.2022.13.507.940

Abstract

Conceptual Frameworks

People frequently utilise their mobile phones for the most of the day due to their appealing features. Some people, particularly college students, use them for roughly 9 to 10 hours a day. Addiction is a psychological condition that is characterised by the inability to stop taking a substance or acting in a certain way. Smart phones do not fit the definition of a chemically addictive substance as given by the DSM-V. Although DSM-V covers other disorders that are not related to drug consumption, such gambling disorder. Therefore, excessive cellophane use is viewed as an addiction.

Methodology

We sought to determine whether there was a relationship between nomophobia and other psychiatric disorders such depression, anxiety, and stress in this study. The investigation's design is based on related patterns seen in cross-sectional and quantitative research methods. Such a study strategy provides insight into the interactions between two or more factors. India was chosen at random for the sample. There were 200 people in the research study group, 100 of whom were women and 100 men. the same percentage of each gender. These people, who lived in India, were young adults (18 to 25 years old). The members' average age was 21.5 years.

Findings of the Research

Users are more likely to develop attached to their smartphones if they consider them as an extension of themselves, which in turn makes people more prone to experience nomophobia by enhancing the desire for close proximity to their phones. Which in turn causing stress and anxiety.

Limitations of the Research

The study's age restrictions placed participants between the ages of 18 and 25. The study was solely done on young people living in cities. Since self-rating scales were utilised to collect the data, the limitations of these scales apply to the current investigation.

Keywords:- Nomophobia, Mobile addiction, Mobile proximity, Mobile Anxiety, Technophobia, Screen Addiction

INTRODUCTION

Smartphones have permeated every aspect of daily life, acting as "an irresistible intruder in time or place" and providing "the extension of ear and voice" for communication with others around us. (Han Seunghee, Ki Joon, and Jang Hyun Kim) (2017). Utilizing smartphones frequently has led to psychological, social, and academic problems as well as addictive behaviours (Augner & Hacker, 2012; Bian & Leung, 2015; Choliz, 2012). But smartphones have been deemed potentially addicting and detrimental to people's personal and professional lives. They cause tolerance, which means that users need to spend more time on their phones to feel content, and they encourage compulsive checking behaviours that can negatively impact daily life (Oulasvirta A, Rattenbury T, Ma L, Raita E., 2012). (Griffiths M. 2005). Modern times have seen the emergence of technology and digitalization. The creation of a digital India is something that the prime minister himself is in favour of. Online access is now available for all services. We may tap our mobile devices to access communication, food delivery, shopping, transportation, and even medications. They encourage compulsive checking behaviours that can negatively affect daily life and they lead to tolerance, which means that users need to spend more time on their phones in order to feel satisfied (Oulasvirta A, Rattenbury T, Ma L, Raita E., 2012). (2005) Griffiths M. The advent of technology and the digital revolution may be witnessed in the modern era. The prime minister himself is in favour of the development of a digital India. All services can now be accessed online. medications, we can use our mobile

devices. When compared to actual human interaction in the real world, people tend to spend more time on such technological devices. Due to its capacity to carry out all PC-related tasks, it can also be referred to as a minicomputer. Imagine having access to your computer's full contents anytime and wherever you want.

The college and school going students can use these smartphones as their learning devices. A lot of information can be gathered from the internet using their phones which are otherwise not present in their traditional textbooks (Jones, 2013).

They can get access to word meanings using online dictionary apps or find the locations of various places using google maps. Online encyclopedia and other educational apps and sites are also easily available that could provide a lot of help to these students. Nowadays many educational gaming apps have been developed that provide knowledge along with fun. These apps can also be used by kids and make learning interesting for them. Therefore, there are very popular among the parents of little kids. Students can complete most of their assignments on smart phones which can help them go paperless and thus save environment. Adolescents are more attracted to the social media apps as they have a desire to socialize and make new friends and relationships. They always want to have larger groups of friends, gain popularity and be liked by majority; therefore, they use social media applications from their phones to post about the happenings of these life.

Mobile phones to reached our markets before 1990, since then the popularity of these devices kept on increasing. International Data Corporation (2011) gave a report about the increased member of people using mobile phones. Around 500 million users were reported in 2000, 3.3 billion in 2008 and 5.3 billion in 2013. Mobile apps were 10.1 billion in 2010 which has risen to 182.7 billion in 2015. Mobile phone market in India is one of the largest markets in the world.

Addiction of Mobile Phone during Covid-19

Due to the attractive features of mobile phones, people tend to use them for most of the time during the day. Some people use them for about 9-10 hours a day, especially the college going students. Addiction can be defined as a psychological disorder characterized by being unable to stop using a substance or engaging in a behavior. Addiction can be of any type or of anything. such as alcohol, drugs, certain food items, beverages, smoking, gambling gaming, stealing, using internet, watching television and also of using mobile phones. (Park, 2005). A per the DSM-V's definition of substance addiction, smart phones are not a chemically addictive substance. Although DSM-V includes some non- substance abuse such gambling disorder.

Nomophobia

Nomophobia is a psychological ailment that makes people uncomfortable without their phones or afraid they may misplace them. The sufferer of this disorder worries that without a cell phone, they may lose contact with the outside world. Dependence on cell phones has a direct link to fear. These individuals frequently check their smartphone notifications. (Enoch, et al. 2014), which makes it difficult to focus on other tasks like work or study. Even when they are engaged in vital work, they frequently access their social media apps only to skim through their news feed. These people have no interest in any of the other tasks. According to studies, children are most prone to experience this disorder's effects. Young people and even adults are so reliant on their mobile devices that they never leave the house without them, even if they are simply going to the corner grocery shop., A person with Nomophobia exhibits behavioral signs as anxiety and irritability. If people can't locate their mobile devices, they often become anxious and uneasy. If their anxiety persists, it may also result in stress. (2013) King et al. Nomophobia causes a number of physiological, social, and physical side effects in addition to anxiety. Their anxiety can also lead to stress if prolonged. (King et al., 2013). Apart from being anxious, nomophobia has several physiological, social and physical symptoms as well. All these are directly related to dependency on mobile phones. It is a mental condition that requires understanding and treatment (King, Valença, Silna, Baczynski, Carvalho & Nardi, 2013). It is a growing concern for any nation so it can lead to distraction among the youth. This would ultimately affect the development of a country as the youth are considered future of a nation. College going students are so much dependent on mobile phones that they don't feel the need of concentrating on any other aspect of life. And therefore, being away from their phones develop fear and distress. These people have the condition called nomophobia yet they themselves are unaware of the disorder and its consequences. The development of AI mechanisms that may help with automatically thinking, learning, adjusting, and gathering experience for autonomous functioning was one of the main goals of data science (Vajpayee, 2019), which is naturally linked to an increase in gaming and smartphone addiction.

REVIEW OF LITERATURE

Nomophobia

Smart mobile phones have become a necessity in today's life as it is the best way of communication and keeping in touch with others (Bartwal, J.; Nath, B, 2019). these are amazing gadgets that not only help us contact our peers but also enhances our social life (Prasad, M.; Patthi, B.; Singla, A.; Gupta, R.; Saha, S.; Kumar, J.K.; Malhi, R.; Pandita, V., 2017). mobile phone subscribers are so much dependent on these devices that the later have become an integral part of their life. (Park, C.S.; Kaye, B.K., 2019). Early in the morning as soon as one wakes up the first thing to take in hand is one's mobile phone as well as the last thing before bed is also the inanimate gadget (Bragazzi, N.L.; Simona, T.; Zerbetto, R., 2019). These smart phones have brought about major changes in the lives of individuals possessing them and even on the present generation (King, A.L.S.; Valença, A.M.; Nardi, A.E., 2010). People have become so attached to mobile phones that they can't even imagine going out of their houses without phones (Kneidinger-Mueller, 2019).

The availability of countless apps on mobile devices makes life easier for users, which is just one of its many benefits. A smart phone that has an internet connection functions like a small computer. A person may access all of the world's knowledge simply tapping on the device's screens, which is small enough to fit in their pocket. It has proven to be a blessing for people. However, like every other innovation built by humans, this one too has a lot of drawbacks and has caused a lot of issues for its consumers (Lin, C.Y.; Griffiths, M.D.; Pakpour, A.H., 2018).

Excessive use of this device has made people dependent on it so much so that the person is addicted (Pivetta, E.; Harkin, L.; Billieux, J.M.; Kanjo, E.; Kuss, D.J., 2019). mobile phone addiction just like addiction of other substances has proved detrimental for the health of the person having it (Basu, S.; Garg, S.; Singh, M.; Kohli, C., 2018). It has resulted in deteriorating effects on a person's mental health leading into various psychological problems and are considered dangerous (Aboujaoude, E., 2019). Apart of other psychological disorders, a new mental condition call Nomophobia is visible among the users (Tams, S.; Legoux, R.; Léger, P.M., 2018). Nomophobia refers to 'No Mobile Phone Phobia' that means developing a fear of losing or being away from one's mobile phone (Adawi, M.; Zerbetto, R.; Re, T.S.; Bisharat, B.; Mahamid, M.; Amital, H.; Del Puente, G.; Bragazzi, N.L., 2019).

The dependency on mobile phones for almost everything has created this fear among the subscribers. They feel that if their phones would be away from them, it will become difficult for them to communicate with the world (Lee, S.; Kim, M.W.; McDonough, I.M.; Mendoza, J.S.; Kim, M.S., 2017). This disorder has now been recognized as a clinical disorder in psychology. The number of persons affected is going on increasing at a very rapid rate and nomophobia has taken a specific position in our modern society (Ahmed, S.; Pokhrel, N.; Roy, S.; Samuel, A.J., 2019). Nomophobia would make a person feel disconnected from the digital world and create a sense of isolation in the patient (Al-Balhan, E.M.; Khabbache, H.; Watfa, A.; Re, T.S.; Zerbetto, R.; Bragazzi, N.L., 2018).

Nomophobia can be categorized into the following main divisions: 1. fear of not being able to communicate with family and peers; 2. fear of losing connections; 3. fear of not being able to access the required information and 4. fear of losing the comfort provided by their phones (Ali, A.; Muda, M.; Ridzuan, A.R.; Nuji, M.N.N.; Izzamuddin, M.H.M.; Latiff, D.I.A., 2017). The fear of being away from one's phone leads to several other mental and psychological disorders, personality disorders, behavioural disorders, social relations, anxiety, nervousness and feeling desolate (Lee, S.; Kim, M.; Mendoza, J.S.; McDonough, I.M., 2018). Such problems have been witnessed among people of all ages, but the youth has been maximum affected (Gutiérrez-Puertas, L.; Márquez-Hernández, V.V.; Aguilera-Manrique, G., 2016).

The young population is dependent on these phones on almost every activity of their lives and therefore they fear extensively of losing it. This fear deteriorates their physical health too and as a result creates a negative impact on their studies as well as work [29, 30]. Being so much dependent on technology also has a negative impact on their own problem-solving skills [30]. Using mobile phones every now and then and almost everywhere also results in distractions from study and job, which obviously is harmful in the long run [31]. The people of modern generations are so much engrossed in their digital devices that they have weakened their relationships with real people in the real world. Nomophobia is a psychological condition in which the person develops a phobia of losing the device and ultimately losing connection with the digital world. This mere feeling of losing the device generates several other mental health problems like anxiety, depression, anguish, anger, irritation, nervousness, shakiness, stress (Yildirim, C.; Sumuer, E.; Adnan, M.; Yildirim, S., 2016). Some people with severe condition of nomophobia even lose their sleep and develop insomnia resulting in poor physical health (González-Cabrera, J.; León-Mejía, A.; Pérez-Sancho, C.; Calvete, E., 2017). The emotional health is also affected and damaged in people suffering from such disorders (Gentina, E.; Li-Ping, T.; Dancoine, P.F., 2018). In majority of cases, it has been observed that just by losing internet connection for some time resulted into anxiety among the youths (Ayar, D.; Özalp, G.; Özdemir, E.Z.; Bektaş, M., 2018).

Being categorized as a digital disease, it has a tendency to affect the young minds extensively (Betoncu, O.; Ozdamli, F., 2019). Their minds do not possess emotional stability and can thus be easily harmed (Arpaci, I.; Baloğlu, M.; Özteke, H.I.; Kesici, S., 2017). Economically developed regions provide the necessary services and resources to its people and make them dependent on these technologies to a large extent. Internet has a very important role to play in creating a condition of dependency on technology (Rojas-Jara, C.; Henríquez, F.; Sanhueza, F.; Núñez, P.; Inostroza, E.; Solís, A.; Contreras, D., 2018). Various applications provided by the manufacturers have attracted the youth and teenagers into using these devices. Social media apps, online gaming apps are highly recommended applications by the people. These two have a tendency to keep one on their phones for a lot of time. Using these applications give a sigh of relief to the person using it. But this relief is short term, ultimately it is going to harm the mental health.

Digital media provides opportunities to its users to remain connected with the world, play interactive games and have fun, make new relationships, explore new areas, and get access to almost everything by just using their phones (Rojas-Jara, C.; Ramos-Vera, J.; Pardo-González, E.; Henríquez-Caroca, F., 2018). There are many introvert persons who feel awkward when interacting with real people but are extremely comfortable in making friends in digital world. Their behaviour is totally different when using social media connections and when meeting actual people (De la Villa Moral, M.; Suárez, C., 2016). These people think that internet is their whole world and they start dreaming about their virtual life. Not only thinking and dreaming but they start living in this fake world. Therefore, after a certain period of time also

develop a fear of losing this digital world of theirs and their dreams being shattered. As they live their lives digitally, they don't pay much attention to their real life and result in being sedentary, developing eating disorders, not paying much attention to their hygiene, remaining awake late nights, getting irritated with their closed ones, developing aggressiveness and ultimately falling into isolation. They tend to believe that they are needed and loved by their family members or friends and gradually start developing hatred for them thinking that they are being neglected. They also tend to develop a feeling of jealousy for their own siblings thinking that the parents are paying more attention to the later. As a result, they start losing connections with their closed ones and are more attracted to the digital family (Buiza-Aguado, et.al., 2017). Digital technological advancements have changed are habits and life style. It has the capability of solving almost all our life's problems by providing solutions at our fingertips. There are many advanced applications on our mobile phones such as educational apps, social networking apps, shopping apps, online delivery apps and many more (Guedes, E., et.al., 2016).

Rationale of the Study

The present study deals with a psychological disorder called nomophobia. It indicates a fear developed due to staying away from one's mobile phone. Those who are addicted to their smart devices find it very difficult to stay away from them. A mere thought of loosing or forgetting their phones disturbs them mentally. In this study we have taken a group of 200 people, 100 females and 100 males, age group 18 to 25. These people were given a questionnaire to be filled, from which we tried to analyze their addiction and dependence on mobile phones. The questionnaire also gave us an idea of relationship between nomophobia and other mental disorders.

Hypothesis

H01- There will be significant nomophobia among youth during pandemic time.

H02- There will be significant anxiety among youth during pandemic time.

H03- There will be significant stress among youth during pandemic time.

H04- There will be significant relationship between NOMO phobia and significant State anxiety among youth during pandemic time.

H05- There will be significant relationship between NOMO phobia and significant Trait anxiety among youth during pandemic time.

METHODOLOGY

Research Design

In this study we have aimed to find the correlation between nomophobia and other psychological disorders such as depression, anxiety and stress. The investigation is designed based on relational patterns from the quantitative and cross-sectional research approach. Such research approach gives us an idea about the inter-relationships between two or more variables (Cohen, Manion & Morrison, 2007; Mc Millan and Schumacher, 2006). These studies are based on relational patterns and they provide functionality for two important functions (1) To explain important human behavior and (2) To predict possible results of such behavior (Fraenkel, Wallen and Hyun, 2012). Along with this, the present study aims to determine the predictive power of the determined independent variable (nomophobia) on the dependent variables (stress, depression and anxiety).

Research Group

The sample was drawn randomly around India. The research study group comprised a total of 200 members, among which 100 were females whereas 100 males. Equal proportion of both the genders. These people were in the age group 18 to 25 years youth residing in India. Mean age of the members was 21.5 years. The majority of participants stated that they own smart phone (N= 198, 99%). Out of these members 98% of them had an active internet pack. 78% of the members agreed that they carry their phones everywhere and all the time. Among the descriptive findings in the research group daily usage of mobile phones were questioned. 65.2% of them confirmed that they spend most of their leisure time using various applications on their devices. They also agreed that staying away from their phones made them anxious and distressed. It was also found that they had a habit of checking their phones even when it is not ringing. Some of them accepted that they feel the vibrations of their phones or hear it ringing even when it was not. A few of them accepted to have shown angry behaviors on not finding their phones. The actual data has been shown in tabular form given in this thesis.

Sample and source of sample:

The present study explores the level of nomophobia and its association with anxiety and stress among the youth during pandemic through snow balling effect and personal communication.

A sample comprising of 200 youths, in which 100 are females and 100 are males.

The sample subject comprised an age group of 18 to 25 years old

- 1) Male of age group 18- 25 old
- 2) Female of age group 18- 25 years old

TOOLS

1. Nomophobia Questionnaire

The Nomophobia Scale (NMP-Q), developed by Yildirim and Correia (2015), was used as a data collection tool in the study. The scale is composed of a total of 20 five-point Likert-type items with four subscales: wisdom warning (four items), link loss (five items), communication failure (six items), and comfortable disability (five items). The reliability coefficient for the study is .97. The reliability coefficients of the subscales are found as .89, .90, .94, and .94, respectively. In addition, this data collection tool has been used in various other studies. This questionnaire consists of 20 items. It is a self-rating scale from 1 to 7 (1 being the lowest and 7 being the highest).

Score	Interpretation
20	Absence of nomophobia
21-59	Mild level of nomophobia
60-99	Moderate level of nomophobia
100-140	Severe nomophobia

RESULTS AND DISCUSSION

When data has been obtained, it is necessary to organize them for interpretation. Qualitative data may have to be summarized and treated statistically to make significant clean.” Olive R.A.G. According to Good, Barr and Scates, “Analysis is a process which enters into research in one form or another, from the very beginning. It may be fair to say that research, in general, consists of two large steps i.e., gathering of data and the analysis of research data.”

Hypothesis Testing

Hypothesis 1: There will be significant nomophobia among youth during pandemic time.

Table 1: Nomophobia among the youth during the pandemic time.

Group	Size	Mean	SEM	t Value	Level of significance
Male	100	91.92	5.680	2.506	Significant
Female	100	97.60			

This table shows the impact of nomophobia among the youth during pandemic. For female the mean is 91.92 and for male the mean is 97.60. Since the obtained ‘t’ value is 2.506 which is not much of difference than table value at both 0.05 and 0.01 level, then it is considered to be significant. Since the value is significant, we can accept the hypothesis that there is significant nomophobia among youth during pandemic time.

Graphical Representation of Mean Score of Nomophobia Among the Youth During Pandemic

Hypothesis 2:

- There will be significant anxiety among youth during pandemic time.

Group	Size	Mean	SEM	t Value	Level of significance
Male	100	47.25	0.2700	0.5999	Not Significant
Female	100	47.52			

This table shows the impact of anxiety among the youth during pandemic. For female the mean is 47.25 and for male the mean is 47.52. Since the obtained ‘t’ value is 0.599 which is greater than 0.05, hence it is not considered to be significant. Since the value is not significant, we can say that there is no significant anxiety among youth during pandemic time.

Hypothesis 3:

- There will be significant stress among youth during pandemic time.

Group	Size	Mean	SEM	t Value	Level of significance
Male	100	28.86	1.130	2.657	Significant
Female	100	29.99			

This table shows the impact of stress among the youth during pandemic. For female the mean is 28.86 and for male the mean is 29.99.

Since the obtained ‘t’ value is 2.657 which is not much of difference than table value at both 0.05 and 0.01 level, then it is considered to be significant. Since the value is significant, we can accept the hypothesis that there is significant stress among youth during pandemic time.

Hypothesis 4:

- There will be significant relationship between NOMO phobia and significant State anxiety among youth during pandemic time.

Group	Size	Mean	SEM	t Value	Level of significance
Nomophobia	200	94.76	-35.73	30.22	Significant
State Anxiety	200	59.039			

This table shows the relationship between NOMO phobia and State anxiety among youth during pandemic. For NOMO phobia the mean is 94.76 and for state anxiety the mean is 59.03.

Since the obtained 't' value is 30.22 which is not much of difference than table value at both 0.05 and 0.01 level, then it is considered to be significant. Since the value is significant, we can accept the hypothesis that there is significant relationship between nomophobia and state anxiety among youth during pandemic time.

Hypothesis 5:

- There will be significant relationship between NOMO phobia and significant Trait anxiety among youth during pandemic time.

Group	Size	Mean	SEM	t Value	Level of significance
Nomophobia	200	94.76	-34.01	28.48	Significant
Trait Anxiety	200	60.76			

This table shows the relationship between NOMO phobia and Trait anxiety among youth during pandemic. For NOMO phobia the mean is 94.76 and for trait anxiety the mean is 60.76.

Since the obtained 't' value is 28.48 which is not much of difference than table value at both 0.05 and 0.01 level, then it is considered to be significant. Since the value is significant, we can accept the hypothesis that there is significant relationship between nomophobia and trait anxiety among youth during pandemic time.

CONCLUSION

This study proposes and validates a theoretical model that explicates a possible process in which smartphone users experience nomophobia. As smartphones evoke more personal memories, users extend more of their identity onto their smartphones. When users perceive smartphones as their extended selves, they are more likely to become attached to the devices, which, in turn, leads to nomophobia by heightening the phone proximity-seeking tendency.

Although many people seek happiness through electronic devices, happiness is highly individualised (Patwari et al., 2022a) and people should choose the correct paths to happiness, such as yoga and mindfulness (Vajpayee et al., 2022). There are traditionally rich ways as well for keeping a calm and equanimous mind (Vajpayee, et al. 2017). Community based intervention for the help of people can also be helpful (Joshi, et al, 2004,). According to studies, those who exhibit an insecure and anxious attachment style (Patwari et al., 2022b) are more likely to become addicted to mobile devices.

New technologies, including mobile phones, offer both benefits and drawbacks. They have not only enhanced global communication but also given us the ability to complete a variety of tasks quickly and efficiently thanks to new social media, social networking sites, social informatics, and "social software." On the other side, sustained use triggers compulsive behaviour. The findings of our study clearly demonstrate youth dependence on mobile phones and rising narcissism, stress, and anxiety among the younger generation. Further research may determine the factual issue, examine the psychological causes and treatments for Nomophobia in greater detail, and conduct multi-centric

Further Prospects

The suggestions for further work related to this research are as follows:

The age criterion could be adjusted to include a range of ages in the study. A larger geographic area, such as a state or a metropolitan area, can be chosen. The same variables can be used across various platforms and populations in the research. Various factors, including depression, self-esteem, stress, and anxiety, can be linked to nomophobia. A future study might be carried out to gather information from people of various ages. Personality tests and social media use may be used in research. Research into social media addiction may be done. It is suggested that if community development programmes can help people to integrate with and participate in the cultural life of other groups, their lives can be less stressful and relatively free from mental health issues (Mishra et al, 1996).

REFERENCES

1. Aboujaoude, E. (2019). Problematic Internet use two decades later: Apps to wean us off apps. *CNS spectrums*, 24(4), 371-373.
2. Adawi, M. Bragazzi, N.L. Argumosa-Villar, L. Boada-Grau, J. Vigil-Colet, A. Yildirim, C. Del Puente, F. Watah, A. (2018). Translation and validation of the nomophobia questionnaire in the Italian language: Exploratory factor analysis. *JMIR Mhealth Uhealth*, 6, 1-9.
3. Adawi, M. Zerbetto, R. Re, T.S. Bisharat, B. Mahamid, M. Amital, H. Del Puente, G. Bragazzi, N.L. (2019). Psychometric properties of the brief symptom inventory in nomophobia subjects: Insights from preliminary confirmatory factor, exploratory factor, and clustering analyses in a sample of healthy Italian volunteers. *Psychol. Res. Behav. Manag.*, 12, 145-154.
4. Aguilera-Manrique, G. Márquez-Hernández, V.V. Alcaraz-Córdoba, T. Granados-Gamez, G.

5. Ahmed, S. Pokhrel, N. Roy, S. Samuel, A.J. (2019). Impact of nomophobia: A nondrug addiction among students of physiotherapy course using an online cross-sectional survey. *Indian J. Psychiatry*, 61, 77–80.
6. Aksnes, D.W. Sivertsen, G. (2019). A Criteria-based Assessment of the Coverage of Scopus and Web of Science. *J. Data Inf. Sci.*, 4, 1–21.
7. Ali, A. Muda, M. Ridzuan, A.R. Nuji, M.N.N. Izzamuddin, M.H.M. Latiff, D.I.A. (2017). The relationship between phone usage factors and nomophobia. *Adv. Sci. Lett.*, 23, 7610–7613.
8. Al-Balhan, E.M. Khabbache, H. Wafra, A. Re, T.S. Zerbetto, R. Bragazzi, N.L. (2018). Psychometric evaluation of the Arabic version of the nomophobia questionnaire: Confirmatory and exploratory factor analysis—Implications from a pilot study in Kuwait among university students. *Psychol. Res. Behav. Manag.*, 11, 471–482.
9. Aljomaa, S. S., Qudah, M. F. A., Albursan, I. S., Bakhiet, S. F., & Abduljabbar, A. S. (2016). Smartphone addiction among university students in the light of some variables. *Computers in Human Behavior*, 61, 155–164.
10. Andreassen, C.S., Pallesen, S., Griffiths, M.D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behavior*, 64, 287–293.
11. Anshari, M. Alas, Y. Hardaker, G. Jaidin, J.H. Smith, M. Ahad, A.D. (2016). Smartphone habit and behavior in Brunei: Personalization, gender, and generation gap. *Comput. Hum. Behav.*, 64, 719–727.
12. Arpacı, I. Balo glu, M. Ozteke, H.I. Kesici, S. (2017). Individual differences in the relationship between attachment and nomophobia among college students: The mediating role of mindfulness. *J. Med. Internet. Res.*, 19, e404.
13. Arpacı, I. Balo glu, M. Kesici, S. (2019). A multi-group analysis of the effects of individual differences in mindfulness on nomophobia. *Inf. Dev.*, 35, 333–341.
14. Argumosa-Villar, L. Boada-Grau, J. Vigil-Colet, A. (2017). Exploratory investigation of theoretical predictors of nomophobia using the Mobile Phone Involvement Questionnaire (MPIQ). *J. Adolescent*, 56, 127–135.
15. Gutiérrez-Puertas, V. Gutiérrez-Puertas, L. (2018). The relationship between nomophobia and the distraction associated with smartphone use among nursing students in their clinical practicum. *PLoS ONE*, 13, e0202953.
16. Augner, C., & Hacker, G. W. (2012). Associations between problematic mobile phone use and psychological parameters in young adults. *International journal of public health*, 57, 437–441.
17. Bartwal, J. Nath, B. (2019). Evaluation of nomophobia among medical students using smartphone in north India. *Med. J. Armed Forces India*.
18. Basu, S. Garg, S. Singh, M. Kohli, C. (2018). Addiction-like behavior associated with mobile phone usage among medical students in Delhi. *Indian J. Psychol. Med.*, 40, 446–451.
19. Bian, M., & Leung, L. (2015). Linking loneliness, shyness, smartphone addiction symptoms, and patterns of smartphone use to social capital. *Social science computer review*, 33(1), 61–79.
20. Buiza-Aguado, C. García-Calero, A. Alonso-Cánovas, A. Ortiz-Soto, P. Guerrero-Dfáz, M.
21. Choliz, M. (2012). Mobile-phone addiction in adolescence: the test of mobile phone dependence (TMD). *Progress in health sciences*, 2(1), 33–44.
22. De la Villa Moral, M. Suárez, C. (2016). Factores de riesgo en el uso problemático de Internet y del teléfono móvil en adolescentes españoles. *Rev. Iberoam. Psicol. Salud*, 7, 69–78.
23. Enoch, D. (2014). A defense of moral deference. *The Journal of Philosophy*, 111(5), 229–258.
24. Gutiérrez-Puertas, L., Márquez-Hernández, V. V., & Aguilera-Manrique, G. (2016). Adaptation and validation of the Spanish version of the nomophobia questionnaire in nursing studies. *CIN: Computers, Informatics, Nursing*, 34(10), 470–475.
25. González-Molinier, M. Hernández-Medrano, I. (2017). Los videojuegos: Una afición con implicaciones neuropsiquiátricas. *Psicol. Educ.*, 23, 129–136.
26. Han, S. Kim, K.J. Kim, J.H. (2017). Understanding Nomophobia: Structural Equation Modeling and Semantic Network Analysis of Smartphone Separation Anxiety. *Cyberpsychology Behav. Soc. Netw.*, 20, 419–427. *Int. J. Environ. Res. Public Health* 2020, 17, 580, 19
27. Joshi, S., Vajpayee, A., & Mishra, R. C. (2005). Community Mental Health and Psychological Interventions. *Social Science International*, 21(2), 103
28. King, A.L.S. Valença, A.M. Silva, A.C.O. Baczynski, T. Carvalho, M.R. Nardi, A.E. (2013). Nomophobia: Dependency on virtual environments or social phobia? *Comput. Hum. Behav.*, 29, 140–144.
29. Kneidinger-Mueller B. (2019). When the smartphone goes offline: A factorial survey of smartphone users' experiences of mobile unavailability. *Comput. Hum. Behav.*, 98, 1–10.
30. Lee, S. Kim, M.W. McDonough, I.M. Mendoza, J.S. Kim, M.S. (2017). The Effects of Cell Phone Use and Emotion-regulation Style on College Students' Learning. *Appl. Cogn. Psychol.*, 31, 360–366.
31. Lin, C.Y. Griffiths, M.D. Pakpour, A.H. (2018). Psychometric evaluation of Persian Nomophobia Questionnaire: Differential item functioning and measurement invariance across gender. *J. Behav. Addict.*, 7, 100–108.
32. Nabil Almunawar, M., Susanto, H., & Anshari, M. (2013). A cultural transferability on IT business application: I Reservation system. *Journal of Hospitality and Tourism Technology*, 4(2), 155–176.
33. Oulasvirta A, Rattenbury T, Ma L, Raita E. (2012). Habits make smartphone use more pervasive. *Personal and Ubiquitous Computing*, 16, 105–114.
34. Patwari P. & Seth Grover S. (2022a). Relationship Between Subjective Happiness and Social Media Usage: Self-Esteem as a Mediator. *International Journal of Indian Psychology*, 10(2), 604–613. DIP:18.01.062.20221002, DOI:10.25215/1002.062
35. Patwari P. and Vajpayee, A (2022) A Study of Attachment Style, Neuroticism and Emotional Eating Among Young Adults. Published in *British Journal of Administrative Management* (Listed in ABDC, SCI). 58(156):247-256
36. Park, W. K. (2005). Mobile phone addiction. *Mobile communications: Re-negotiation of the social sphere*, 253–272.
37. Pivetta, E. Harkin, L. Billieux, J.M. Kanjo, E. Kuss, D.J. (2019). Problematic smartphone use: An empirically validated model. *Compute. Hum. Behav.*, 100, 105–117.
38. Prasad, M. Patthi, B. Singla, A. Gupta, R. Saha, S. Kumar, J.K. Malhi, R.; Pandita, V. (2017). Nomophobia: A cross-sectional study to assess mobile phone usage among dental students. *J. Clin. Diagn. Res.*, 11, 34–39.
39. Tams, S. Legoux, R. Léger, P.M. (2018). Smartphone withdrawal creates stress: A moderated mediation model of nomophobia, social threat, and phone withdrawal context. *Compute. Hum. Behav.*, 81, 1–9.
40. Vajpayee, (2019) Reconnoitering Artificial Intelligence in Knowledge Management. *International Journal of Innovative Technology and Exploring Engineering (IJITEE)* ISSN: 2278-3075, Volume-8 Issue-7C May 2019.
41. Vajpayee, A. and Chakraborty, D. K. (2017). The Societal Culture of Bhutan and its Impact on Organizational Culture Industrial Relation and Employee Satisfaction in Manufacturing Companies of Bhutan. *IOSR Journal of Business and Management*. Vol-19, Issue9. PP-01-07
42. Vajpayee, A and Sanghani P (2022). Eternal Happiness and Endurance of life through Buddhism in Bhutan. *British Journal of Administrative Management*. Vol. 52, Issue 151, Pp 10-23