NOMOPHOBIA AND ITS IMPACT ON HEALTH AND MIND - A STRUCTURED REVIEW

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ABSTRACT:

Introduction: The term used to describe a growing fear in today’s world is Nomophobia, a portmanteau for “no mobile phone phobia”, refers to the discomfort or anxiety caused to a person by the non-availability of a phone. Nomophobia arises from a feeling of not being able to make and receive phone calls, send or receive text messages, losing internet connectivity and access to social networking sites and being able to access information online. The aim of the review is to explore Nomophobia and its impact on health complications.

Materials and methods: The articles were collected from PubMed Database and the selection criteria for screening the literature were population with Nomophobia age group between 17 - 25. The search keywords included were nomophobia, cell phone addiction, health implication, anxiety, no mobile phone phobia. The study was conducted in the year 2020. The study group consisted of a population with Nomophobia between the age group 17-25.

Result and Conclusion: This review is done to understand the clinical symptoms, complications and various preventive measures taken against nomophobia and from the obtained results after screening relevant articles based on selection criteria it can be concluded that the addiction towards cell phones and social media might lead to depression, loss of memory and anxiety.

KEY WORDS: Nomophobia; cell phone addiction; smartphones; anxiety.

INTRODUCTION:

A term used to describe a growing fear in today’s world. Nomophobia, a portmanteau for “no mobile phone phobia”, refers to the discomfort or anxiety caused to a person by the non-availability of a phone. Nomophobia arises from a feeling of not being able to make and receive phone calls, send or receive text messages, losing internet connectivity and access to social networking sites and being able to access information online (Yildirim and Correia, 2015). This phobia has emerged as computers and cellular phones become more technologically developed and versatile in applications and communications.
Nomophobia developed as a disorder due to instantaneous communication and gratification smartphones provide, growing into compulsive and addictive behavior. People addicted to the usage of phones tend to avoid feared situations. The increasing use of new technologies and virtual communications involving personal computers, tablets, and mobile phones are causing changes in individuals' daily habits and behavior. (King et al., 2013) Nomophobia and smartphones share more qualities, but the primary trait each disorder shares is that the smartphone is a source of relief and comfort. Independent and mindful people are less susceptible to nomophobia, while individuals who prefer sacrificing and submitting in relationships are at a greater risk. (Arpaci, Baloglu, and Kesici, 2019) Although smartphones are useful gadgets, excessive use of the same is harmful. (Durak, 2019) Nomophobia is also defined as the pathologic fear of remaining out of touch with technology. (King et al., 2017) Employees with nomophobia often tend to be emotionally exhausted. (‘The Effect of Problematic Internet Use, Social Appearance Anxiety, and Social Media Use on Nursing Students’ Nomophobia Levels’, 2018) Nomophobia developed as a disorder due to instantaneous communication and gratification smartphones provide, growing into a compulsive and addictive behavior. Advanced drug therapy methods can help to treat smartphone addiction. The introduction of mobile phones and new technologies has shaped our lives, with positive and negative aspects. Previously our team had conducted numerous original studies (Thejeswar and Thenmozhi, 2015; Hafeez and Thenmozhi, 2016; Krishna, Nivesh Krishna and Yuvaraj Babu, 2016; Menon and Thenmozhi, 2016; Pratha, Ashwatha Pratha and Thenmozhi, 2016; Subashri and Thenmozhi, 2016; Sekar et al., 2019) and surveys (Samuel and Thenmozhi, 2015; Sriram, Thenmozhi and Yuvaraj, 2015; Choudhari and Thenmozhi, 2016; Kannan and Thenmozhi, 2016; Keerthana and Thenmozhi, 2016; Nandhini et al., 2018; Seppan et al., 2018; Johnson et al., 2020) over the past 5 years. Now we are focusing on applying this knowledge to write the review on the study I am currently working on.

The current review is an attempt to explore and collect precise data relevant to the causes, symptoms, and complications of nomophobia that may help to take effective preventive measures. Hence the aim of the review is to explore the health impact of Nomophobia.

METHODS:
The articles were collected from the PubMed database and contain peer-reviewed articles. They were collected with a restriction in time basis from 2010-2020. When article holder websites were analyzed on the topic of Nomophobia and its health impact, many articles were found, it was shortlisted based on a few keywords and its relevance to selection criteria. The search keywords included were nomophobia, cell phone addiction, health implication, anxiety, no mobile phone phobia. They were used to screen out the relevant articles from all the other reviews done under this topic. The study was conducted in the year 2020. The selected articles were assessed for its quality using risk of bias assessment tools ROBINS 1 (Sterne et al., 2016) and were found to be at low risk of bias. It manifests behavior that might serve as an indication for a possible anxiety disorder. The characteristics of the study were tabulated and results are analysed (Table-1).

RESULTS:
The relevant articles were filtered from all the other reviews which populate based on a few keywords nomophobia, definitions, clinical relevance, complications, treatment and preventive measures. Selected articles were analyzed and were at low risk of bias. The characteristics of studies were tabulated (Table 1) under the following subheadings:

1. Definition:
Nomophobia which is a combination of the phrases mobile phones and addiction. Is a consequence of anxiety, stress and fear due to lack of access to mobile phones and related issues. (Darvishi et al., 2019) Nomophobia, a state of socio-psychological illness, refers to lack of access to mobile phones, which is thought to be a modern age disorder that causes negative health risks and harmful psychological effects. (Daei, Ashrafi-Rizi and Soleymani, 2019) Nomophobia is a no mobile phone phobia the fear of being without a mobile device or beyond mobile phone contract. (Farooqui, Pore and Gothankar, 2018) The dependence on smartphones and the internet. (Cain and Malcom, 2019) In the article written by Ahmed, Nomophobia was defined as mobile usage. (Ahmed et al., 2019). Defined as fear of no-cellular phone contact, by Arpaci. (Arpaci, Baloglu and Kesici, 2019)

2. Clinical symptoms: Nomophobia was described as no mobile phone phobia. Addiction towards the use of smartphones can be an important clinical symptom. (Daei, Ashrafi-Rizi and Soleymani, 2019) In the article written by Venkatachalam, it was stated that overuse of mobile phones is one of the symptoms. (Venkatachalam et al., 2019) Similarly in a study by Farooqui, stated that increased mobile phone dependence is a symptom of nomophobia. (Farooqui, Pore and Gothankar, 2018) According to another study, it was stated that mobile usage is a symptom. (Gurbuz and Ozkan, 2020) Fear of no cellular phone contact is a major clinical symptom for nomophobia. (Arpaci et al., 2017)

3. Complication: Nomophobia in most cases leads to anxiety, depression and anger. (Darvishi et al., 2019) But on reviewing other articles, it was stated to cause socio-physiological illness. (Daei, Ashrafi-Rizi and Soleymani, 2019). In an article written by Farooqui, Nomophobia leads to time, money waste. (Farooqui, Pore and Gothankar, 2018) On another similar study nomophobia causes a negative impact on academic performance. (Ahmed et al., 2019) But in an overall review most author’s stated that nomophobia leads to anxiety, frustration, loss of memory and harmful psychological needs.

4. Treatment: In an article written by Mohammad Darvishi, the author stated that it is important to understand the pattern of phone users to treat nomophobia. (Darvishi et al., 2019). Another study stated that reducing unnecessary usage of phones will help in treating nomophobia. (Venkatachalam et al., 2019) In a similar article written by Arpaci, stated that mindfulness based therapy is a method to treat nomophobia during advanced stages of addiction. (Arpaci et al., 2017)

5. Preventive measures: Steps taken to reduce the addiction towards the phone is by reducing the usage of phones. (Darvishi et al., 2019) In the article written by Daei, the preventive measures are by conducting educational programs. (Daei, Ashrafi-Rizi and Soleymani, 2019). It is necessary to educate the population with sufficient information. (Venkatachalam et al., 2019). It is also important to understand the complications which leads to anxiety frustration and depression. (Cain and Malcom, 2019)

Today, cell phones have become an important part of life, especially for young people. According to studies teenagers are more attached to their phones than adults. Studies by experts on the negative, physical, psychological complications of excessive use of cell phones indicate that it can lead to dependency syndrome. Nomophobia is a modern phobia which is a consequence of interactions between a human being and mobile communications technology, especially smartphones. Most important characteristics of this disorder include discomfort, anxiety, anger, or stress due to lack of contact with the cell phone. The article with a sample size of about 100 students in Iran. The author defined it as a no mobile phone phobia due to addiction of cell phones. The research suggests that nomophobia negatively
leads to anxiety, depression and anger. The author also stated that it is important to minimize the usage to avoid its complications. (Darvishi et al., 2019)

**DISCUSSION:**

On comparing this article with the review written by Azra Daei, the study consisted of about 320 university students. The author gave a different definition stating that it is the fear of lack of access to mobile phones. Adding on to the complications stated by the previous author he stated that increased use might lead to socio-psychological illness. And it is important to organise educational programs and drug therapy for advanced stages. (Soleymani, Daei and Ashrafi-rizi, 2019)

In a similar study by Iqbal Ahmed Farooqui, he defined nomophobia similar to how Darvishi defined the no mobile phone phobia and the author stated that along with various complications mentioned by the previous authors there is a possibility of waste of money and time. (Farooqui, Pore and Gothankar, 2018)

In comparison with the review written by G.Jilisha, aimed to study the prevalence and also factors leading to nomophobia. In this study the author did not mention the complications and the various preventive measures, against nomophobia. (Venkatachalam et al., 2019)

The article written by Jeff Cain (2019), states about the psychological attachment to smartphones among the college students and defined it as internet and smartphone dependence. The author stated that it leads to anxiety and depression, as stated by the previous author. (Cain and Malcom, 2019)

In comparison with a cross-sectional survey conducted by Sohel Ahmed (2019), defined it as fear of no mobile phones. Adding on to the complications given by the other authors, the author stated that nomophobia has a negative impact on academic performances. (Ahmed et al., 2019)

Ana Galhardo in 2020 assessed nomophobia’s complications through a structured questionnaire. Defined as no-mobile phone phobia. This is due to the lack of smartphones and incapability to use the internet. But the author did not mention much about the complications and treatment, hence the study needs further explanation. (Galhardo et al., 2020)

Mohammad Advi, (2018), gave a similar definition as the other authors, no mobile phone phobia. But did not go in detail with the clinical symptoms of nomophobia and the complications. (Bernardini, 2018)

Ismail Bulent Burluz (2019), investigated the prevalence and level of nomophobia among people in Turkey. He defined it as the mobile usage dependence. Leads to social, media addiction. On comparing with other articles, the author did not specify the clinical symptoms nor the complications. (Gurbuz and Ozkan, 2020). In a similar study written by Ibrahim Arpaci (2017), defined it as a fear of no-cellular phone contact. The author stated that it is important to undergo mindfulness based therapy to reduce the addiction over smartphones and social media, to reduce various complications. (Arpaci et al., 2017)

**CONCLUSION:**

This review is done to understand the clinical symptoms, complications and various preventive measures taken against nomophobia. From the obtained results through reviewing the shortlisted literature it can be concluded that the addiction towards cell phones and social media might lead to depression, loss of memory and anxiety. Hence it is important to reduce the usage of mobile phones by organizing educational programs to create awareness about the various risk factors of nomophobia.

**ACKNOWLEDGMENT:** We thank Saveetha Dental College for providing us the support to conduct the study.
AUTHOR CONTRIBUTION:

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<tr>
<th>SI.no</th>
<th>AUTHOR NAME</th>
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<tbody>
<tr>
<td>1.</td>
<td>Aarthi</td>
<td>Study design, data collection, drafting manuscript.</td>
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<tr>
<td>2.</td>
<td>Dr. Lavanya Prathap</td>
<td>Study design, Revising manuscript, final approval of manuscript.</td>
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<tr>
<td>3.</td>
<td>Ms. Jothi Priya</td>
<td>Collection of reviews, drafting manuscript</td>
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<tr>
<td>4.</td>
<td>Dr. S Preetha</td>
<td>Collection of reviews.</td>
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</table>

CONFLICT OF INTEREST: Nil

REFERENCES:


TABLE 1:

CHARACTERISTICS OF INCLUDED STUDY

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<td>Mohamad Darvishi- 2019</td>
<td>Iran</td>
<td>100 college students</td>
<td>Addiction-cell phones</td>
<td>No mobile phone phobia</td>
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<td>Minimize phone usage.</td>
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<td>G.Jilisha</td>
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<td>Utilising smartphone</td>
<td>Overuse mobile phones</td>
<td>Anxiety, frustration</td>
<td>Reduce, unnecessary usage</td>
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<td>Sample Size</td>
<td>Condition</td>
<td>Main Findings</td>
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<td>Jeff Cain</td>
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<td>Sohel Ahmed</td>
<td>India</td>
<td>157 students</td>
<td>Smartphone addiction</td>
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<td>Ana Galhardo</td>
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<td>Ibrahim Arpaci</td>
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<td>Phobic disorder, Feeling of discomfort, anxiety</td>
<td>Mindfulness based therapy</td>
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Information regarding the study by Jeff Cain includes understanding complications.