

The relationship of cell phone and degree of nomophobia: A literature based narrative review

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Abstract

Introduction: Gradually people becomes so dependent and addictive to cell phones but they became unaware of the darker side of the cell phone. All those compulsive behaviour, phantom vibrations leads to one thing Nomophobia a modern fear of being unable to communicate and study suggest that adolescent are the one who is most vulnerable to nomophobic manifestations.

Method: A comprehensive systematic search of published literature and journal articles from PubMed, EBSCOHOST, Delnet, Microsoft academics, Elsevier's Science-Direct data repository was done. Search strategy specific to each data repository was used. During initial search 2134 titles were retrieved and after screening of 621 articles, finally 7 research articles were selected based on the inclusion criteria.

Result: Out of 5 articles, Ist claim Adolescents were intensive cell phone users and analysis showed a statically significant association with cell phone dependence & depression. IInd study suggest a strong increased in anxiety over time when cell phone was restricted. IIIRD study compile that compulsive usage of smart phone and techno stress are positively related to psychological traits. IVth study results showed majority of the respondent who used the phone intensively and headache were found significantly more often to the people who talk more frequent and long in comparison with others. Vth article results showed that there was a significant inverse relationship between mental health and habitual behaviours such as Dependency, Addiction, and Incontinence in using mobile phone.

Conclusion: This review conclude that there be an intensified effort to understand cell phone usage and nomophobia symptoms but future qualitative studies is needed to understand and develop strategic approaches which met the need of different age groups.

Keywords: Rinxiety, cell phone abuse, nomophobia, phone usage, phantom signal, phantom phone signals, bad vibrations, cellxiety & subjective symptoms

Introduction

Today we live in an era of technical advancement man achieved high end machines to live their life at more ease. Today machine becomes productive and man becomes just a functional unit of machine. Devices becomes needs of man's upgraded self. Since 1983 the first remote communication device touch the market and started era of modern communication there lies the origin of modern cell phone according to source there are 4.77 billion cell phone lies in the palm of people worldwide. And India stands IInd in this list according to Wikipedia. Gradually people becomes so dependent and addictive to cell phones but they became unaware of the darker side of the cell phone. All those compulsive behaviour, phantom vibrations leads to one thing Nomophobia a modern fear of being unable to communicate and study suggest that adolescent are the one who is most vulnerable to nomophobic manifestations.

Need for the Study

Globally numerous strategies and studies has been conducted to discover severity, factors and its dimensions associated with the population group around globe articles found out that females are usually more nomophobic rather than male population and prone age group is adolescent according to available literature. An online survey study was conducted to investigate the prevalence and predictors of

imagined cell phone signals and 403 participants evolve in the study data were analysed anonymously finds that 50% of the participants indicate to experience some form of phantom phone signal at least once per week and results clearly stated that phantom phone signal phenomenon far more frequent for the young groups between 18 to 44 when compare to 45 to 65. Hence adolescent are more vulnerable to these threats and there is necessity to gather more evidence in the area. (M'Tanis, Camiel *et al.* 2015)

India is now growing as one of the fastest growing economy of world and its Smart phone market is seeks to outnumber other potential threat like cost effectiveness cell phones later or now India would face the excessive and compulsive usage on smart phones and its associated symptoms hence finding relation between its usage patter and symptoms will enable researchers to better understand the dimension of nomophobia and develop effective care interventions.

Aim

The aim of this review is to understand the relationship of cell phone usage with nomophobia psychological and pathological traits.

Objectives

To discover the relationship between cell phone usage and nomophobia symptoms.

Methodology

Search Strategy

An electronic search of articles published in various journals till 2017 (December) was conducted. Search was restricted to only English language. The database search done was PubMed, EBSCOHOST, Delnet, Microsoft Academics and Elsevier's Science-Direct. Articles containing following key search terms were retrieve.

ringxiety[All Fields] OR (("phantoms, imaging"[MeSH Terms] OR ("phantoms"[All Fields] AND "imaging"[All Fields]) OR "imaging phantoms"[All Fields] OR "phantom"[All Fields]) AND ("vibration"[MeSH Terms] OR "vibration"[All Fields] OR "vibrations"[All Fields])) OR (("cell phone"[MeSH Terms] OR ("cell"[All Fields] AND "phone"[All Fields]) OR "cell phone"[All Fields]) AND ("substance-related disorders"[MeSH Terms] OR ("substance-related"[All Fields] AND "disorders"[All Fields]) OR "substance-related disorders"[All Fields] OR "abuse"[All Fields])) OR ("homophobia"[MeSH Terms] OR "Nomophobia"[All Fields]) OR ("cell phone"[MeSH Terms] OR ("cell"[All Fields] AND "phone"[All Fields]) OR "cell phone"[All Fields] OR "cellphone"[All Fields]) AND ("anxiety, separation"[MeSH Terms] OR ("anxiety"[All Fields] AND "separation"[All Fields]) OR "separation anxiety"[All Fields] OR ("separation"[All Fields] AND "anxiety"[All Fields])) OR (("phantoms, imaging"[MeSH Terms] OR ("phantoms"[All Fields] AND "imaging"[All Fields]) OR "imaging phantoms"[All Fields] OR "phantom"[All Fields]) AND phone[All Fields] AND ("signal transduction"[MeSH Terms] OR ("signal"[All Fields] AND "transduction"[All Fields]) OR "signal transduction"[All Fields] OR "signaling"[All Fields])) OR ("smartphone"[MeSH Terms] OR "smartphone"[All Fields]) AND ("behavior, addictive"[MeSH Terms] OR ("behavior"[All Fields] AND "addictive"[All Fields]) OR "addictive behavior"[All Fields] OR "addiction"[All Fields])) OR (Restricting[All Fields] AND phone[all])

Search Engine Strategy

An electronic comprehensive combine unencrypted data repository article search for combine literature search into indexed search engine. Search was restricted towards paywalls, subscription and encrypted databases search string is as follow:

insite: pubmed,ebsco-host,delnet,Microsoft-academics, science-direct:nomophobia,rinxiety,cellphone-abuse,cell-phone-uasge-pattern..etc

insite: {website+adress}:variable{1},variable{2}

Type of study: Questionnaire Survey Design, Descriptive Design, Randomized Control Trail, Applied Research Survey, Cross Sectional Survey Design

Type of participant: Adolescents including: Students, male and female cell phone owners.

Setting: Community- Urban set up.

Outcome: There is a positive relationship in cell phone usage specially (WSMD) Wireless Sophisticated Mobile Devices and Nomophobia Symptoms.

Result

The systematic search was conducted by framing the terms individually and in combination with all synonyms, also according to the database. In addition to this, a manual PubMed search was undertaken using the keywords and search synonyms from already found articles. Additions of 5 articles were found. Initial search retrieved 2458 articles over which 1810 articles were selected manually and Duplicates were removed and reviewed 621 articles for eligibility, 1189 articles were excluded because of duplications in databases. 45 articles assessed for eligibility 576 studies were excluded due to unavailability of full text. Hence 5 articles were screened due to rigid criteria in which includes quantitative study.

Prisma Flow Chart

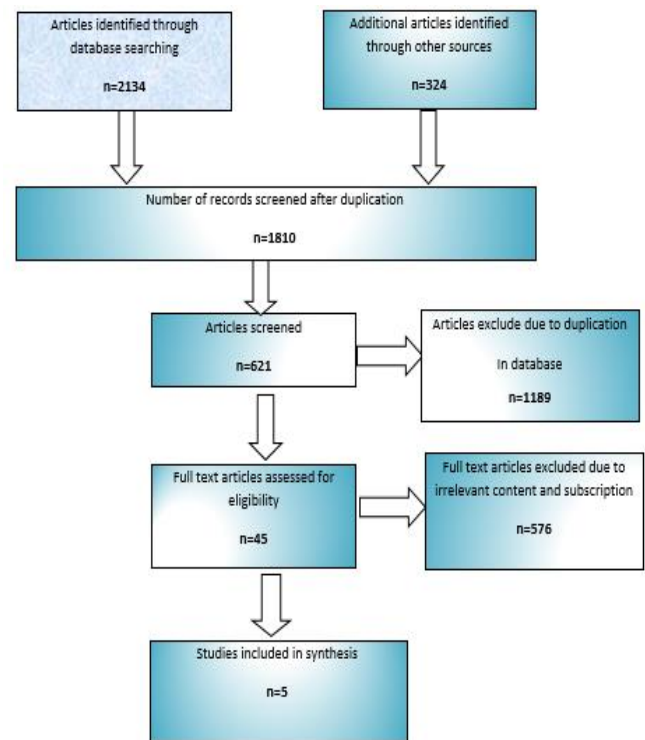


Fig 1

Data extraction Table

Table 1

SR. & Author	Source & title	Country	Variables	Instruments	Sample & sampling Technique	Design	Findings	Conclusion
1. (M.S. Martinez, 2009) ^[1]	Factors Associated With Cell Phone Use In Adolescents In The Community Of Madrid	Madrid SPAIN	Cell Phone Use, depressive-symptoms	Anonymous Survey Questionnaire	N=1,328 Purposive & Non Randomized Sampling	A Cross-sectional Descriptive Study	The results claim Adolescents were intensive cell phone users and analysis showed a statically significant association with cell phone dependence & depression	More health education is needed to teach correct and effective cell phone use to adolescents
2. (N.A. Cheever, <i>et al</i> , 2014) ^[2]	The impact of restricting wireless mobile device use on anxiety levels among low moderate & high users	California USA	Cell Phone Usage, Anxiety Level, Interaction Time	STAI: State-trait anxiety (Questionnaire) (DWMU) Daily Wireless mobile usage (Questionnaire)	N=163 Randomized sampling	Randomized Control Trial	The results suggest a strong increased in anxiety over time with only the linear thread	The goal of the study was to determine how cell phone use might cause anxiety in those who are unable to use their phone for a short time
3. (YU-Kang, Chang, Lin and Zhao Cheng, 2014) ^[3]	The darker side of smart phone usage: Psychological traits, compulsive behaviour and technostress	TAIWAN	Psychological traits and compulsive behaviour	Construct Questionnaire (Incorporated Literature)	N=325 Convenience sampling	Survey Design	The results suggest that compulsive usage of smart phone and techno stress are positively related to psychological traits	The reasons behind compulsive usage of smart phone are related to external locus, materialism, social interaction anxiety and need for touch and first two factors are found more influential.
4. (A. Szykowska, Elszbieta, Wieslaw & Alicja, 2014) ^[4]	The risk of subjective symptoms in mobile phone users in Poland	POLAND	Subjective symptoms, mobile phone use	Anonymous questionnaire survey	N=587 Purposive sampling	An Epidemiological Study	The results showed majority of the respondent used the phone intensively and headache were found significantly more often to the people who talk more frequent and long in comparison with others	Results show that mobile phone users may experience subjective symptoms, the intensity of which depends on the intensity of use of mobile phone.
5. (Z. B. Akashe, Bibi, Yasamin, hojaetolah And Nasim, 2014) ^[5]	The relationship between mental health and addiction to mobile phone among university students of Shahrekord, Iran	IRAN	Mental Health, Addiction To Mobile Phone	Symptom checklist: (90-R(SCL90R) Questionnaire) Behaviour Scale: (32-Point Scale Questionnaire)	N=296	Applied research survey	The results showed that there was a significant inverse relationship between mental health and habitual behaviours-dependency, addiction, incontinence in using mobile phone.	Survey results showed that with increased and improved mental health, the student's rate of cell phone addiction reduced.

Summary and Findings

The available literature refined to get 5 quantitative review. Out of 5 articles, Ist claim Adolescents were intensive cell phone users and analysis showed a statically significant association with cell phone dependence & depression. -M.S. Martinez, (2009) ^[1] IInd study suggest a strong increased in anxiety over time when cell phone was restricted. -N.A. Cheever, *et al.* (2014) ^[2] IIIrd compile that compulsive usage of smart phone and techno stress are positively related to psychological traits. - YU-Kang, *et al.* (2014) ^[3] IVth results showed majority of the respondent who used the phone intensively and headache were found significantly more often to the people who talk more frequent and long in comparison with others. -A. Szyjkowska, *et al.* (2014) ^[4] Vth results showed that there was a significant inverse relationship between mental health and habitual behaviours such as Dependency, Addiction, Incontinence in using mobile phone. -Z. B. Akashe, *et al.* (2014) ^[5]

Importance in Society

As the use of these devices increases, so too do the problems of intensive cell phone use and addiction, problems that occur largely in young users. Nevertheless, the cell phone has received little attention in the literature despite its importance as a tool for the young. The cell phone has become a fundamental part of the way of life influence of social interaction anxiety on the compulsive usage of smartphones suggests that individuals may rely on their phones to reduce feelings of discomfort during social contacts. Recent smartphone designs may have been influenced by users' need for touch. Known as "touch phones", the newest phones (especially smartphones) feature high-resolution touch screens which allow tasks to be accomplished tactilely with the fingers. -Peck & Childers, *et al.* (2003) of young people in countries like India with sophisticated technology young people took as a way of forming and expressing their identity. How smartphones have become such an important possession. Actually, many people use expensive and prestigious phones as a form of social performance, simply to show off -Caronia *et al.* (2004) Intensive cell phone use in adolescents might be included in the group of behavioural problems syndrome. A family-based and medical preventive approach for intensive cell phone use and substance use should be implemented for adolescents Physicians, and society in general, should have a better understanding of the beneficial and harmful effects of the different communications media so they can make general recommendations to parents.

Future Significance

The review helps to understand the relationship of cell phone usage with nomophobia psychological and pathological factors. 30% of India's total population comprises of adolescents and youth aged 10 – 24 years. Hence, it is necessary to create awareness among people, especially the adolescents, regarding various nomophobia related aspects as the adolescents are the future of the country and they are most susceptible of acquiring nomophobic symptoms.

Limitation

- Database search was limited towards subscription and English language.

- Meta – analysis will give more accuracy.
- Was limited to only in Adolescents.
- Was limited to Qualitative studies due to narrow criteria.

Strength

- Article search was carried out on a significant criteria.
- Review found positive relationship between cell phone usage and nomophobia symptoms.

Weakness

- Unavailability of Indian articles due to subscription.
- Only 5 quantitative articles were included for data synthesis due to limitations.
- One of the study doesn't include sampling technique.

Conclusion

These findings were consistent relationship between addiction to mobile phone and mental health in dimensions of behavioral problems, anxiety and depression. Recreational programs for student's leisure time to maintain student's mental health, and thereby decrease addiction to a variety of new digital media such as the Internet, chat rooms, computer games, and mobile phones. Therefore, it is necessary that the university authorities and higher education institutions develop training programs, and make efforts to maintain physical and mental health of students and parents prohibit the excessive dependency of youngsters on various digital devices and encourage them to utilize them as healthy assets. Future researchers must develop effective interventions for this globally emerging threat.

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- M.S. Martinez, (2009) ^[1]
- N.A. Cheever, *et al.* (2014) ^[2]
- YU-Kang, *et al.* (2014) ^[3]
- A. Szyjkowska, *et al.* (2014) ^[4]
- Z. B. Akashe, *et al.* (2014) ^[5]

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