

Original Article

Effect of Mobile Phone Addiction on Mental Health of College Students

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Abstract

The present study examines the effect of mobile phone addiction on the mental health of college students. The study focuses on undergraduate final-year students in Nagpur City and investigates the level of mobile phone addiction, the mental health status of students, and the effect of mobile addiction on their mental health. A descriptive survey method was adopted, and a purposive sample of 200 undergraduate students was selected. Self-designed Mobile Addiction and Mental Health questionnaires were used for data collection. The collected data were analyzed using mean, standard deviation, and t-test. The findings indicate that the level of mobile phone addiction among students was 71.30%, suggesting a more-than-average level of addiction, while their mental health level was 58.38%, indicating an average level. The calculated t-value of 6.19 was found to be significant, leading to the rejection of the null hypothesis. The study concludes that excessive mobile phone addiction has a significant effect on the mental health of undergraduate college students.

Keyword: Mobile Phone Addiction, Smartphone Addiction, Mental Health, College Students, Mobile Phone Usage, Psychological Well-being, Undergraduate Students

Introduction

Now a day our personal life is highly dependent on the technology that people have developed. Technology has advanced with years and it has changed the way we purchase products, the way we live, the way we communicate, the way we travel, the way we learn and so many changes have been brought about by these continuous technological advancements when we talk about mobile phone the type of mobile phone we had in 1995 are no longer on demand in this century, the demand of mobile phone users have changed greatly. Now people demand simplicity and more functionality, which has forced mobile phone, manufactures to develop computer minded smart phones which are so easy to use but also they come with more functionality compared to the type of mobile phone we used to have in the past. Recently Smart phone addiction has emerged as a significant problem among users. Smart phone offers several conveniences in our life. Our phones have made life easier. But overuses of mobile phone can affect social and psychological well-being and health we also need to be aware of the negative effect of Smartphone use, the most concerning aspect being Smartphone addiction. The negative effects of Smartphone overuse on physical health include cancer, brain tumour, nervous disturbances, weakening of the immune system, problems with the eardrum, pain in the wrist, neck and joints, fatigue and sleep disorders. An addiction is when the think you are addicted to begins to control your daily activities; work and relationship mobile phone usage is very common and become rampant among college students. Students use mobile phone even though many warnings regarding the harmful effects of the usage of mobile phones given to them consistent mobile phone use cause a chain reaction affecting student's life. Mobile phone overuse (Smartphone addiction, cell phone addiction, problematic mobile phone use, or mobile phone dependency) is a proposed form of psychological or behavioural dependence on cell phones closely related to other digital dependencies such as social media addiction or internet addiction disorder. Overuse is often defined as a "dependence syndrome", which is the term used by the World Health Organization (Who Expert Committee, 1964) to replace addiction or habituation.

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This is categorized either as substance abuse, such as from psycho-active drugs, alcohol and tobacco under ICD-10, or a behavioural addiction, such as a Mobile Phone Addiction. Smartphone addiction can

Background of Research Topic:

The addiction to mobile games is a big problem to a large number of people across the globe and the number is only increasing day-by-day. Many times it happens that, we sit down to play a mobile game for a few minutes and we end up wasting hours. It is a clear sign of mobile game addiction. Well hundreds of thousands of people are in the same boat. Mobile/hand phones are powerful communication devices, first demonstrated by Motorola in 1973, and made commercially available from 1984. In the last few years, hand phones have become an integrate part of our lives. The number of mobile cellular subscriptions is constantly increasing every year. In 2025, approximately 85.5% of Indian households are expected to own at least one smartpone. This translate to a significant penetration of smartphones in the Indian market. While specific figures for overall smartphone usage percentages are not available, the survey data suggests a high level of adoption. Smartphone addiction, or problematic smartphone use, affects a significant portion of students. Studies in India have estimated the prevalence of smartphone addiction among adolescents to be around 39-44%. Other research indicates that globally, the prevalence of smartphone addiction among children, adolescents, and young adults can range from 10% to 67%, according to a study by the National Institutes of Health (NIH).

Factors contributing to smartphone addiction among students:

1. **Social Media:** Students may be heavily influenced by social media, seeking recognition and popularity through platforms like Instagram and Tik Tok.
2. **Lack of Co-curricular Activities:** Limited engagement in other activities can lead students to rely more heavily on their smartphones for entertainment and connection.
3. **Mental Health:** Students may turn to smartphones during periods of depression or anxiety, exacerbating addiction.
4. **Academic Performance:** Smatphone addiction can negatively impact academic performance, with studies showing a correlation between phone use and lower grades.
5. **Family Dynamics:** Students from nuclear families may have a higher prevalence of smartphone addiction, and students living in hostels may also be more susceptible.

be compared to substance use disorders in that smart phones provide the drug (entertainment and connection) while acting as the means by which the drug is consumed.

6. **Longer Phone Usage:** Students indicate that students who spend a significant amount of time on their phones, such as five or more hours a day, are more likely to be addicted.

Consequences of Smartphone Addiction:

1. **Mental Health:** Students may experience increased anxiety, depression, and poor sleep quality due to excessive phone use.
2. **Academic Performance:** Addiction can hinder academic progress and negatively impact grades

Mobile phone addiction and withdrawal from mobile network may increase anger, tension, depression, irritability, and restlessness which may alter the physiological behaviour and reserve work efficacy. Hence, the present study was planned to study the addiction behaviour of mobile phone usage using an online survey.

Mobile /Smart Phone:

A mobile phone, cell phone or hand phone, sometimes shortened to simply mobile, cell or just phone, is a portable telephone that can make and receive call over a radio frequency link while the user is moving within a telephone service area. The radio frequency link establishes a connection to the switching systems of a mobile phone operator, which provides access to the public switched telephone network (PSTN). Modern mobile telephone services use cellular network architecture and therefore, mobile telephones are called cellular telephones o cell phones, in North America. In addition to telephony 2000 s-era mobile phones support a variety of other services, such as text messaging, MMS, E-mail, Internet access, short range wireless communications (infrared, Bluetooth), business applications, video games and digital photography. Mobile phones offering only those capabilities are known as feature phone, mobile phones which offer greatly advanced computing capabilities are referred to as smart phones. The first handheld mobile phone was demonstrated by John F. Mitchell and Martin cooper of Motorola in 1973, using a handset weighing 6.2 kilograms. In 1979, Nippon Telegraph and Telephone (NTT) launched the world's first cellular network in Japan. In 1983, the Dyna TAC 8000X was the first commercially available handheld mobile phone. From 1983 to2014, worldwide mobile phone subscriptions grew to over seven billion enough to provide one for every person on Earth. In first quarter of 2016, the top Smartphone developers worldwide were Samsung;

Apple and Hawaii and Smartphone sales represented 78 percent of total mobile phone sales. For feature phones from 2016, the largest were Samsung Nokia and Alcatel.

Mobile Phone Addiction:

Mobile phone addiction sometimes referred to as problematic mobile phone use, is a behavioural addiction thought to be similar to that of an internet, gambling, shopping or video game addiction and leads to severe impairment of distress in our's life. Earlier addiction was found in from of drugs, alcohol, television etc. But with the boom of technology the sign of addiction can also be found in the form of cell or mobile phone. The use of cell phones have risen to that extent that people are substituting on a grand scale the valuable experience of face-to-face conversation with simply sending a text that consists of a few words. Mobile addiction, especially among students evidently results in that they don't know how to act when they are not using their cell phones. Smartphone addiction, sometimes colloquially known as "nomophobia" (fear of being without a mobile phone), is often fuelled by an internet overuse problem or internet addiction disorder. Smartphone addiction can encompass a variety of impulse control problem. Smart phone or mobile phone addiction is a disorder involving compulsive overuse of the mobile device, usually quantified as the number of times users access their devices and/or the total amount of time they are online over a specified period. The internet is very useful for as variety of purposes, such as convener client electronic commerce, rapid sharing of information, contact with other cultures emotional support and entertainment specifically, adolescents are a high risk group for Smartphone addiction into day's life. Adolescent are strongly attached to their Smartphones and they regard a Smartphone as their second self. Many Smartphone users have reported that they would not be able to laic without a Smartphone.

Mental Health:

Being mentally healthy means feelings a sense of control over one's life, feelings able to make decisions, coping with life's challenges and participation in life in meaningful ways because there is balance in the social, physical, spiritual, economic and mental aspects of life. When people of any cultural background are feeling mentally healthy, they can feel good about themselves most of the time. Traditionally, Aboriginal cultural view of mental health and wellbeing is a balance of the body, mind, emotions and spirit which is maintained through good relationships within oneself with others within the community and

creation. Mental Health is a level of psychological well-being our absence of a mental disorder. It is Psychological state of someone who is function at satisfactory level of emotional and behavioural adjustment. Mental Health represents a critical indicator of human development serves as a key determinant of well-being, quality of life and hope, has an impact on a range of development outcomes and is a basis for social stability. According to the World Health Organization, health means the person is not only free from any physical and psychological illness but he should be fit socially too as well as no health without mental health. According to the modern concept, mental health is the capacity to keep oneself integrated in the face of stress and strain through integrative adjustment. Mental Health maybe better understood by its comparison with physical health. From a different perspective, mental health may include & individuals' ability to enjoy life and create a balance between life activities and efforts. Mental Health is the full & harmonious functioning of the whole personality. Mental Health is a level of psychological well-being in satisfactory adjustment to the society & ordinary demand of life. Mental Health is a term used to describe to how well the individual is adjusted to the demand and opportunities of life. Mental Health stands for a balance that is dynamic.

Mobile Phone and Mental Health:

Mobile phones have a great inference on the human's psychological mind. Various problems like stress sleep disturbances and symptoms of depression are commonly observed, especially in young adults. Consistent phone use can cause a chain reaction affecting one aspect of a user's life and expanding to contaminate the rest. It usually starts with social disorders which can lead to depression and stress and ultimately affect lifestyle habits such as sleeping right and eating right.

Effect of Mobile Phone Addictions On Mental Health:

The addiction to smart phone can become a serious problem and causes many effects in both your personal and professional life. The behavioural addiction can be dangerous too.

The effect of mobile phone addictions on Mental Health are follows:

1. Back and Neck problem
2. Anxiety
3. Stress and Depression
4. Health Issue
5. Sleep Deprivation and Disruption
6. Social Effects
7. Become less productive
8. Eyesight and Hearing problems

Need and Importance of the Topic:

But studies have shown that overuse can have a negative impact on your posture, eyesight, and hearing, not to mention distract drivers and pedestrians. More recently researches who study the relationship of mobile phone use and mental health have also found that excessive or "Maladaptive" use of our phone may be leading to greater incidences of depression and anxiety in users. Human brain isn't fully developing until the age of 25 years. Therefore there is decreased brain connectivity in students especially who suffer from mobile phone addictions which also effects on their Mental Health.

Statement of the Topic:

"Effect of Mobile Phone Addiction on Mental Health of College Students".

Research Objectives:

- 1) To study the mobile addiction among college students.
- 2) To study the Mental Health of college students.
- 3) To study the effect of mobile addiction on mental health of college students.

Hypothesis:

There will be no significant relationship between Mobile Phone Addiction and Mental Health.

Assumption:

- 1) Mobile phone has a great influence on students.
- 2) All college students use mobile phone.
- 3) Most of the college students feel in secured without mobile phone.
- 4) Without mobile phone college students feel helpless to perform their activities.

Functional Definitions Related to the Topic:

- 1) **Mobile Phone Addiction:** Mobile addiction is defined as chronic or periodic obsessions caused by repeated use of mobile phone which may lead to intense and sustained demand and reliance. It is a typical example of improper use of mobile phone.
- 2) **Mental Health:** Mental Health refers to our cognitive, behaviours and emotional wellbeing it is all about how we think feel, and behave.

Objective wise Analysis:

Objective No.1: To study the mobile addiction among college students.

Table No.1

The Table showing the mobile addiction among college students

S.N.	Responses	Total No. Of Students	Mean	Standard Deviation	Percentage	Remarks
1	Students	200	20.75	4.4	71.30%	More than average

The term Mental Health is sometimes used to mean an absence of a mental disorder.

- 3) **College Students:** The students of under graduate who wants to study for higher education after 12th Std. are called as college students.

Scope and Limitation:

Scope:

Scope of the topic is very vast. It will be applicable to all college students of Nagpur District.

Limitations:

- 1) Research is limited to college going students only.
- 2) Study is limited to the research objectives of the present study only.
- 3) Finding of the research will be limited to undergraduate college students.
- 4) Research is limited to English Medium college students only.
- 5) Research work is limited only for effect of Mobile Addiction on Mental Health.

Review of Related Literature:

Researcher has gone through many researches to define the limits of her research.

Research Method:

Researcher has made use of the descriptive survey method for the research purpose.

Sample & Population:

Population: The Population in the present research includes all the undergraduate final year student in Nagpur City.

Sample: The researcher has selected the Purposive sampling Method for the selection of 200 hundred undergraduate final year students of Nagpur.

Tools:

For the present survey the researcher will be using the following tools:

Self-Design: Mobile Addiction Questionnaires
Self-Design: Mental Health Questionnaires.

Statistical Procedure:

The Data collected is organized, classified and tabulated. For the analysis researcher used:-

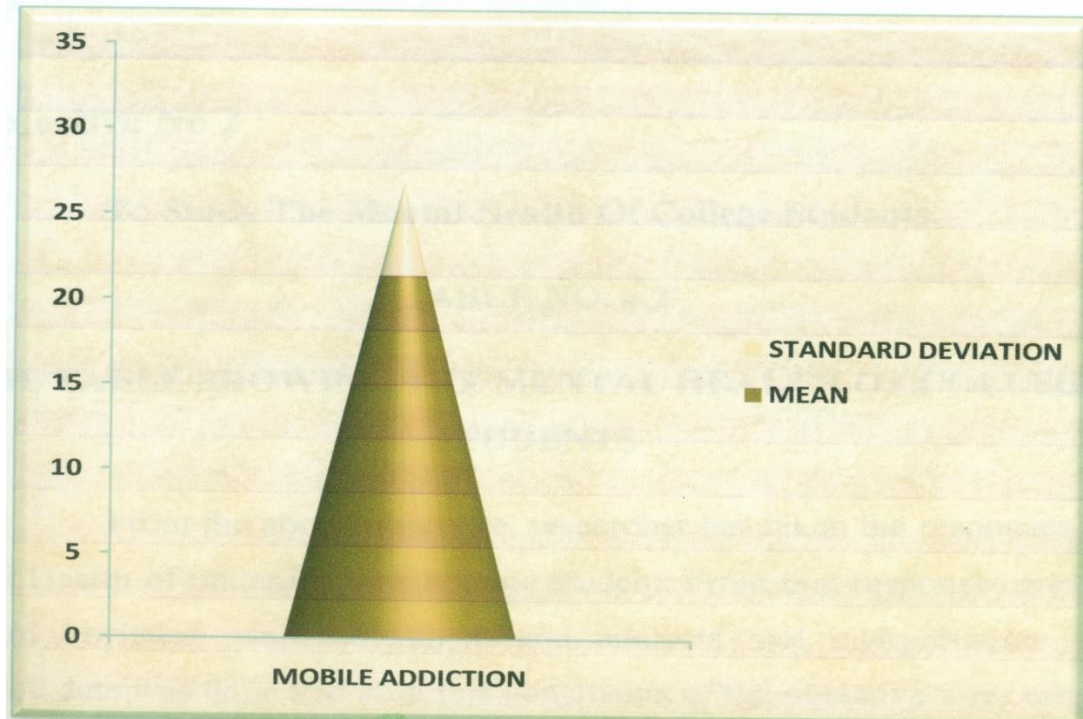
1. Mean (M)
2. Standard Deviation (S.D.)
3. t-test
4. Degree of freedom

From the above objective, researcher has taken the responses about mobile addiction of undergraduate college student. From that responses mean and standard deviation were calculated and analysis

and interpretation of the collected data was done and after this conclusion of the objective were drawn.

Graph No.1

The Graph Showing the Mobile Addiction among College Students



Observation: In present research total 200 undergraduate college students were included and mean of their responses about mobile addiction is $M=20.75$ and standard deviation is $SD=4.4$ and percentage of their responses is 71.30%.

Interpretation: In present research, from the above objective we observed that percentage of responses about mobile addiction among undergraduate college students is 71.30%. It means the level of mobile addiction among undergraduate college students is more than average.

Objective No. 2: To study the Mental Health of College Students.

Table No.2

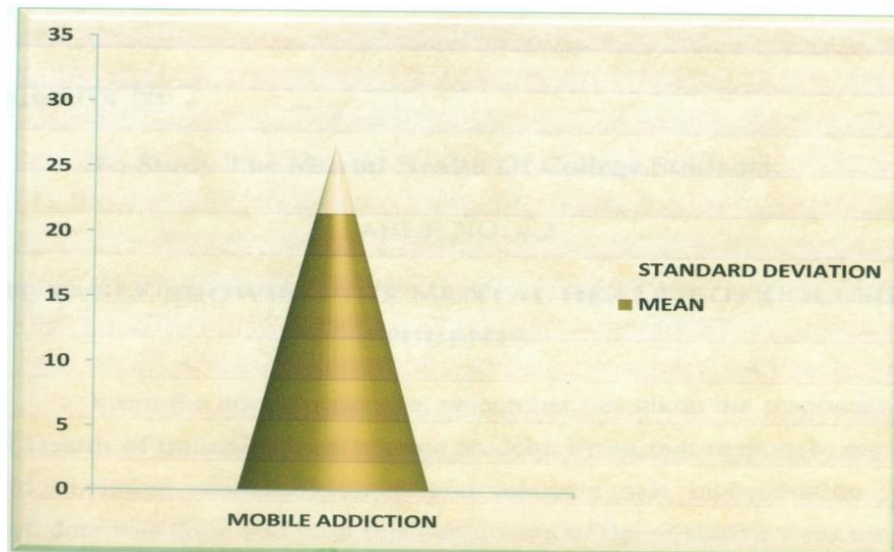
S.N.	Responses	Total No. Of Students	Mean	Standard Deviation	Percentage	Remarks
1	Students	200	16.85	2.4	58.38	Average

The Table showing the mental health of college students

From the above objective, researcher has taken the responses about Mental Health of undergraduate college student. From that responses mean and standard deviation were calculated and analysis

and interpretation of the collected data was done and after this conclusion of the objective were drawn.

Graph No.2
The Graph Showing the Mental Health of College Students



Observation: In present research total 200 undergraduate college students were included and mean of their responses about Mental Health is $M=16.85$ and standard deviation is $SD=2.4$ and percentage of their responses is 58.38%.

Interpretation: In present research, from the above objective we observed that percentage of responses

about Mental Health of undergraduate college students is 58.38%. It means the level of Mental Health of undergraduate college students is average level.

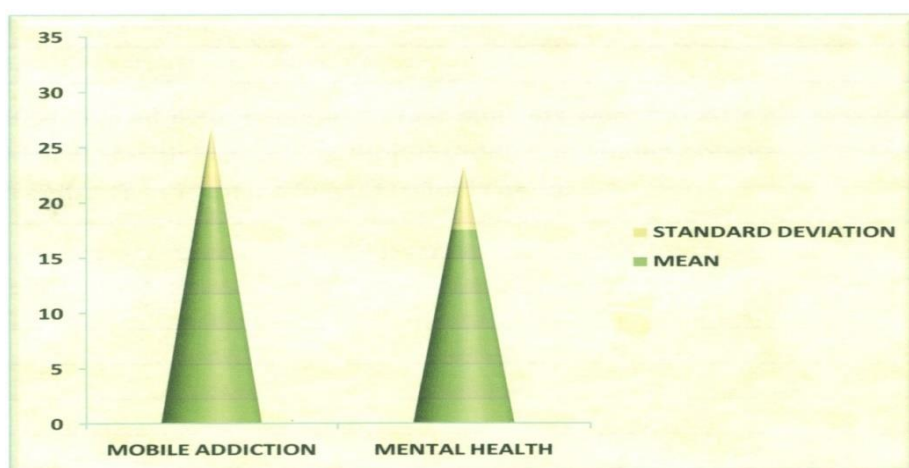
Objective No.3:

To study the Effect of Mobile Addiction On Mental Health of College Students.

Table No.3
The Table Showing the Effect of Mobile Addiction on Mental Health of College Students

S.N.	Factor	Sample	Mean	Standard Deviation	't' value
1	Mobile Addiction	200	20.75	4.4	6.19
2.	Mental Health	200	16.85	2.4	

Graph No.2
The Graph Showing the Effect Of mobile Addiction on Mental Health of College Students



Observation: In the following research the effect of mobile addiction on mental health is calculated by computing the 't' value. The t value is 6.19.

Interpretation: From the table NO. 3 & graph shows that the mobile addiction affected the mental health of college student.

Testing of Hypothesis: There is no significant effect of mobile addiction on Mental Health of College students.

Table No.4

S.N.	Factor	Mean	S.D.	Per%	t value	Level of significance	Significant/ Insignificant
1	Mobile Addiction	20.75	4.4	71.30	6.19	0.01 (2.60)	Significant
2.	Mental Health	16.85	2.4	58.38		0.05 (1.97)	

Observation: For the testing of Hypothesis, the t value for the effect of mobile addiction on mental health is calculated 6.19. This t value is greater than table value. It means that the t value is significant. Thus the present null hypothesis is rejected.

Interpretation: It means mobile addiction affected the mental health of undergraduate college students.

Objective wise Conclusion:

- 1) Percentage of Mobile addiction among undergraduate college students is 71.30% which shows the level of Mobile Addiction more than average.
- 2) Percentage of Mental Health of undergraduate college students is 58.38% which is belongs to average level.
- 3) From the observation & interpretation we can conclude that mobile addiction affects the mental health of college students.

Hypothesis Wise Conclusion:

If mobile addiction of college student were more, it affects that their mental health is poor.

Acknowledgement

I express my sincere gratitude to all those who provided their valuable support and guidance in completing the research study entitled "Effect of Mobile Phone Addiction on Mental Health of College Students." The study examined mobile phone addiction and its effect on the mental health of undergraduate college students.

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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