



A Study on "Smartphone Obsession: A Generation of Digital Zombies"

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Abstract : Numerous apps and advanced features present in smartphones are influencing behavior and lifestyles of people in many harmful ways. Obsessive urges towards their smartphones are increasing among people. These obsessive urges are leading people to smartphone obsession, also known as smartphone addiction. Smartphone obsession is reflected in excessive use, which includes both excessive frequency and excessive duration of smartphone usage. Our study aims to find various behavioral and physical effects of excessive smartphone usage in the respondents. Our study focuses on smartphone addiction in 490 respondents from

different age groups. A survey was conducted to collect the psychological variables (e.g., anxiety, intolerance, compulsive urges) and physical health variables (e.g., dry eyes, headache, and wrist pain) of the participants.

By doing a statistical analysis of the data, we found that both male and female respondents are equally obsessed with their smartphones. We found that adults between the age of 18 to 35 years are more obsessed with their smartphones as compared to other age groups. We also found that excessive smartphone use contributes to the disturbance in sleep schedule and affects the ability to concentrate on participants.

Keywords: *Smartphone Obsession, Digital Zombies, Smartphone Addiction, Social Media, Nomophobia, Compulsive Disorder*

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Introduction :

Smartphones have become an essential part of our day to day life. We are now a little less lonely; with the power to connect with anyone at any time. We like to be updated with everything with the help of this little digital assistant. We love this little gadget so much that we keep it near us while sleeping, eating, and even in our bathrooms. "Life was so simple when apples and blackberries were fruit, a tweet was the sound of nature, and Facebook were photo albums."- (Carl Henegan).

Since the introduction of the iPhone by Steve Jobs in the year 2007, smartphones have become a runaway success story. This is reflected in a large number of smartphone users around the globe. The recent statistics suggest that more than two billion people use smartphones to communicate, surf the Web, navigate unknown territory, or simply play video games worldwide (Duke, Éilish et. al., 2017). Nowadays, people rely more on technology instead of nature. Smartphones have several benefits in increasing critical thinking (Rambitan V.MM., 2015) and improving the academic achievement of students (Higgins Steven, et. al., 2012).

However, prior research suggests that excessive usage of smartphones can decrease academic achievements of students (Manumpil Beauty et. al. 2015) and can impact on physical health because of decreasing muscle mass related to decrease in body activities like walking and other sports activities (Kibona Lusekelo et. al., 2015 and Sung-eun, Jin-woo et al., 2015). "Smartphone addiction" is considered as one of the forms of technological addictions. Griffiths (Griffiths, Mark. (1999) has defined technological addiction as one type of behavioural addiction that involves human-machine interaction and is non-chemical in nature. The disorder of smartphone addiction consists of excessive use, which includes both excessive frequency and excessive duration of smartphone usage (Lin et. al., 2015). For instance, Aakash uses his smartphone for 18 hours a day always in bursts of 45 minutes. Whenever he leaves his phone at home, he feels anxious. He always wants to be connected with his friends and remains updated. But this habit has slowly affected his everyday routines. The people these days are so addicted to these devices and social media that when our Instagram is getting slower, we feel like, "Did I do something wrong?" "People do not like me anymore!" The trauma for young kids is to be unfriended. And addiction when it reaches to the level of compulsion, it becomes an obsession. Smartphone addiction consists of four components – tolerance, withdrawal, compulsive symptoms, and functional impairment. This is because a main characteristic of the smartphone is the use of Internet-based applications (Lin et. al., 2015).

There is nothing wrong with social media and smartphones, it is the imbalance. Therefore, smartphones need to be used smartly. Today

problematic smartphone usage and Internet addiction is a growing issue. Easily access to these devices and media, the kids as they grow older, too many kids do not know how to form deep meaning for relationships, they will admit that many of their friendships are superficial, they do not have the coping mechanisms to deal with stress. So, when stress starts to sharpen their lives, they are not turning to persons, they are turning to social media, they are turning to the things that offer temporary relief and thus making them digital zombies. These things need balance. Nomophobia or 'No Mobile Phobia' is a modern age phobia. It is the fear of being without a mobile device or beyond mobile phone contact. Although Internet addiction is recognized in the DSM-V (Diagnostic and Statistical Manual of Mental Disorders, Nomophobia is yet to be recognized (Yildirim et.al., 2015 and Billieux et. al., 2015). The results obtained in this research may add more perspective to this emerging issue.

Therefore, this study aims to find the various behavioural and physical effects of excessive smartphone usage among of different age groups. In this study, the total of 511 samples have been collected, out of which there are only 490 (i.e. approx. 96%) subjects who own smartphones. The age of the subjects lies between 11 to 60 years. The age groups were teenagers, adults, middle-aged, and old-age people. Among these age groups, 69% reported a disturbance in sleep schedule due to excessive use of smartphones. 67% of the respondents get angry when their smartphones are taken away. Out of those 67% of people, 38% use aggressive ways such as 'asking back rudely', 'throwing a temper tantrum' and 'snatching' back their smartphone. Amongst those who use aggressive ways are the behavior of the age group from 18 to 25 years (i.e. 23%) becomes more aggressive and starts snatching back their smartphone.

The paper is organized as follows. Section II describes the characteristics of smartphone addiction. Section III establishes the technological aspects of our study. In section IV, we explain the methodology used for the study. In the next section, we discuss the results. The last section VI covers the conclusion.

Characteristics of Smartphone Addiction :

According to a report by CNN (W. Jun, 2015), 10 signs of smartphone addiction are reported.

1. When you check your phone to see the current temperature instead of opening a window, and/or when you check your phone to see the current time instead of looking at the watch that's right on your wrist.
2. When you have to consciously say to your spouse "Let's put our phones away" while watching TV because it's more common that they're out than away.
3. If you are answering emails in a dimly lit reception area while waiting for your massage therapist to destress you, you may have a problem.
4. When your kids have to text you their carry-out orders because you've lost the ability to retain information that is not received on your phone.
5. When you hope you hit a bunch of red lights on the way home so you can comment on a Facebook post.
6. When one of your daughter's first drawings of you has a BlackBerry in your hand.
7. When you wake up, you grab your phone and check it before you get up to pee.
8. When you drop a phone on your face because you're dozing off.
9. When you choose your clothing based on the best pockets to hold your phone.
10. When you are staring at photos you took on your phone while the actual moment is taking place right in front of you.

Technostress & Behavioral Disorders :

The core features of a smartphone are to provide access to the Internet through Web browsers and features through a wide range of software applications. Everything is now available to us in the form of apps. This has led to an increase in smartphone usage during the past years. Technostress is the phenomenon of experiencing stress due to information and communication overload in end users. The technostress problem is more present in information technology (IT) professionals, who simultaneously create new technology and are affected by it (Wang et al., 2008). Researchers have found that their subjects check their phones 34 times a day not necessarily because they really need to check that many times, but because it has

simply become a habit (Oulasvirta et al., 2012).

Many apps send users notifications about unnecessary things like Facebook tags or Twitter suggestions which are designed to look like human interaction and are there to draw users back to the app. The unpredictability of notification and infinite scrolling is used to keep the users engaged in the news feeds of many apps. Since human eyes are naturally drawn towards warmer colors and hence warmer colors are being heavily used in designing the color themes of many apps. So, it is no coincidence that we are addicted to our smartphones.

Addiction to the Internet and problematic smartphone usage has resulted in addictive and behavioral disorders such as Internet addiction disorder (IAD), Nomophobia, and social media addiction (Tams et al., (2018) ; Turel et al., (2018) ; Tao, Ran, et al. (2010); Sha, Peng, et al. (2019)). People who experience problematic smartphone usage spend a large amount of time on their smartphones to achieve the same level of satisfaction from digital media consumption. They are absorbed in their media use and show withdrawal symptoms such as experiencing nervousness/frustration/anxiety when they cannot use their smartphones for a period of time. These symptoms are found to be related to Internet addiction (Tao, Ran, et al., 2010). Researchers have found that the average daily amount of time spent on the Internet (frequency of Internet use) is strongly related to problematic Internet use with physical complaints. Internet use can also indirectly affect physical health by affecting users' physical activities and exercise patterns (Zheng et al., 2016). Moreover, dysfunctional smartphone usage results in a negative impact on our mental health (Augner et al., 2012).

Objectives :

- To study the causes of smartphone obsession.
- To study the effects of smartphone obsession on physical health and mental health.
- To study how smartphone technology is affecting our generation.

Hypothesis :

- Women are more obsessed with smartphones as compared to men.
- Teenagers and young adults are more obsessed with smartphones.

- Excessive use of smartphones causes physical complaints and compulsive behaviour tendencies.

These hypotheses are supported by the questions given below:

1. How angry we get when someone takes our phone?
2. How many of us use smartphones as a means of relief from stress?
3. Do we have any sign that concludes us being mentally connected with our smartphones all the time?

Hence, the result satisfies our questions that people are more obsessed with smartphones.

Methodology :

Area of Study: The survey was conducted online through Google forms and in various schools and colleges of Patna. The names are as follows:

- Amin Girls High School, Exhibition Road, Patna.
- L.N Mishra Institute of Social Sciences, Bailey Road, Patna.
- Patna Women's College, Bailey Road, Patna.

Sample Size: Data was collected through questionnaires from nearly 500 smartphone users of different age groups (i.e. Kids, Teenagers, Middle-aged people, and Old people)

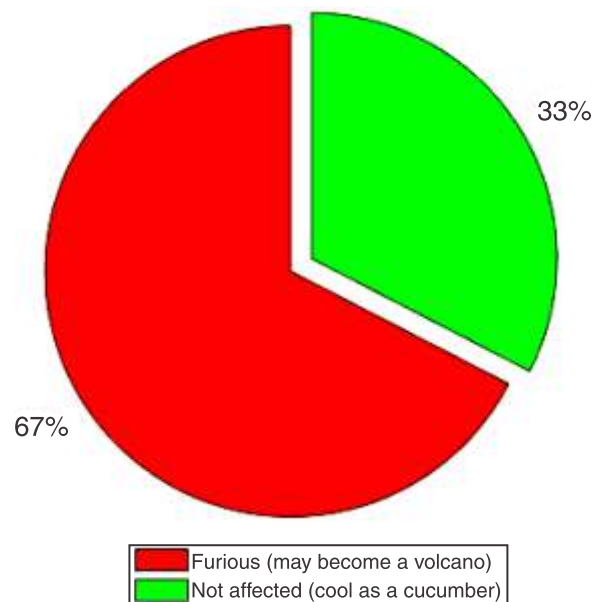
Tools and Techniques for Data Collection: Data was gathered from various sources such as Google Forms, Questionnaires, and Field Survey. A list of written questions was to be answered by respondents of the particular study.

Method of Data Analysis: Data collected from questionnaires and Google forms was analyzed and interpreted using a simulation tool MATLAB. The statistical method of quantitative analysis in data gathering was Mean, which is also known as the average of the data.

Results & Discussion :

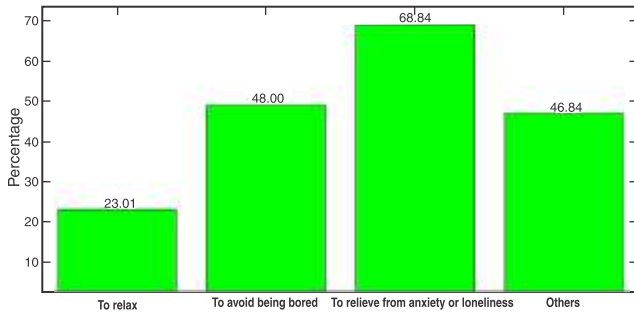
This study aims to find the various behavioral and physical effects of excessive smartphone usage among male and female respondents of different age groups. In this study, the total of 511 samples have been collected, out of which there are only 490 (i.e. approx. 96%) subject

who own smartphones. The age of the subjects lies between 11 to 60 years. Among these, 46% are men and 54% are women. The age groups were teenagers, adults, middle-aged and old age people. Among these age groups, 69% reported a disturbance in sleep schedule due to excessive use of smartphones. 67% of respondents get angry when their smartphones are taken away. Out of those, 67% people, 38% use aggressive ways such as 'asking back rudely', 'throwing a temper tantrum', and 'snatching' back their smartphone. Amongst those who use aggressive ways the behavior of the age group from 18 to 25 years (i.e. 23%) becomes more aggressive and starts snatching back their smartphone as shown in plot 1.



Plot 1. (self) Anger experienced by respondents when their smartphones are taken away.

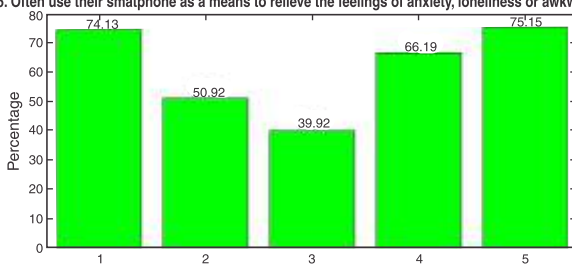
However, this study reveals that smartphones are being used as a medium of slackening of mind, avoid getting bored and loneliness. In our study, there are 23% people who use their smart phones to relax. Moreover, there are 49% people who use their smartphones to avoid getting bored. Further, many people (i.e. 69%) use smartphones as a means of easing anxiety and loneliness. In plot 2, we can observe the reasons of constant use of smartphones. The feature of portability in using smartphones also serves as a means of relief from social anxiety.



Plot 2: (self) Reasons of constantly checking smartphone

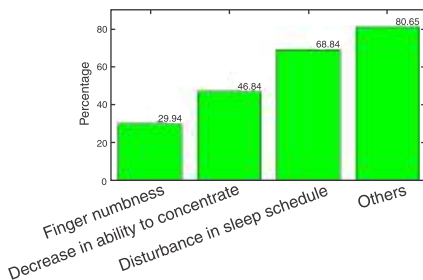
In addition, we have also observed that most of the people are mentally connected with their smartphones. The plot 3 shows that people become anxious when their smartphones are left behind, always feeling the urge to keep their smartphones on vibration or silent mode, often using smartphones as a means to relieve the feeling of anxiety, loneliness, or awkwardness, and often check for new notifications.

1. Become anxious when they find that they left their phone behind when going somewhere
2. Always feel the urge to keep their smartphone on silent or vibration mode
3. Often feel that their phone is vibrating even when it does not
4. Often check for any new notifications to ensure that they are not missing out anything new
5. Often use their smartphone as a means to relieve the feelings of anxiety, loneliness or awkwardness



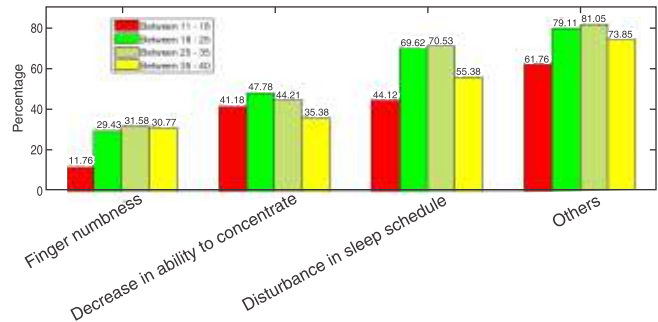
Plot 3: (self) Compulsive behaviour found in respondents

The plot 4 clearly depicts the effects one faces due to the prolonged use of smartphones. 69% of the respondents face the issue of disturbance in sleep schedule due to the excessive use of smartphones. Other issues faced by the respondents as reported by them are dry eyes, declining eyesight, cervical, lumbar, wrist pain, loss of appetite, fatigue, and headache.



Plot 4: (self) Physical complaints reported by respondents

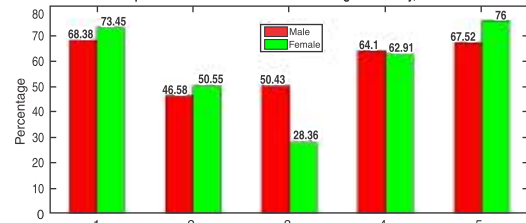
In this study, we observed that 61.4% adults below the age of 25 reported that they spend too much time on their smartphones than they intend to and there is no change in the number when it comes to adult of 25 to 35 years of age (i.e. 61.5%) whereas this number decreases to 49% in adults of age range 35 to 60 years. Our research shows that 51% of adults below the age of 25 are the prisoners of this habit which is less when compared to adults age 25 to 35 years. In the plot given below, we can see that the decrease in the ability to concentrate and disturbance in sleep schedule is more in adults between 25 to 35 years of age. In plot 5, we can see that adults between 18 to 35 years of age are more obsessed than adults of 35 to 60 years of age. **Hence this proves our hypothesis that adults age between 18 to 35 years are more obsessed with smartphones when compared to others.**



Plot 5: (self) Physical complaints reported by different age groups

Moreover, in this study, we have observed that obsession is not specific to a gender. 75% of men reported that they always feel the urge to constantly check the smartphone. The issue of disturbance in sleep schedule with prolonged use of smartphones is almost equal in men and women (i.e. 67% and 65%, respectively). In plot 6 we can see the data related to the symptoms of compulsive behavior in the respondents. **Hence, we conclude that obsession is not specific to a particular gender.**

1. Become anxious when they find that they left their phone behind when going somewhere
2. Always feel the urge to keep their smartphone on silent or vibration mode
3. Often feel that their phone is vibrating even when it does not
4. Often check for any new notifications to ensure that they are not missing out anything new
5. Often use their smartphone as a means to relieve the feelings of anxiety, loneliness or awkwardness



Plot 6: (self) Compulsive behaviour based on gender

Conclusion :

Smartphones have become an essential part of our day to day life. Literature suggests that excessive usages of smartphones can decrease the academic achievements of students and can have adverse impact on physical health because of decreasing muscle mass related to a decrease in body activities like walking and other sports activities. In this study, we observed that the excessive use of smartphones could lead to degraded physical & mental health, intolerance, social withdrawal, compulsive symptoms, and functional impairment. Our result shows that 69% reported a disturbance in sleep schedule due to excessive use of smartphones. 67% of people get angry when their smartphones are taken away. Out of those 67% of people, 38% use aggressive ways such as 'asking back rudely', 'throwing a temper tantrum', and 'snatching' back their smartphone. The issue of disturbance in sleep schedule with prolonged use of smartphones is almost equal in men and women (i.e. 67% and 65%, respectively). Hence we can conclude that obsession is not specific to a particular gender.

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