Study of Mobile Addiction among Students w.r.t. Gender and Education

Archana T. Bhise¹, Dr. Archana A. Ghatule² & Dr. Arjun P. Ghatule³

Abstract- Mobile phone services were introduced in India about 15 years ago. Prior to it, people were communicating through the land line phones or writing letters. But introduction of mobile phones changed the definition of communication. Due to the other facilities available with mobile, students got attracted most and use of mobile turned to the term “Mobile Addiction”. The paper gives study of mobile addiction among students. Paper also studies relationship of mobile addiction with Gender and Education.

Paper concludes that the percentage of mobile addiction is more than 75% among students. It is independent of Gender but dependent of Education.

Keyword: Mobile Addiction, Mobile Phones, Gender, Cell Phones, Students, Education.

I. INTRODUCTION

Mobile is an essential part of our daily life. Human being can not imagine life without mobile. If we remember the era before mobiles, human life was very different. Although, there was some discomfort without mobile, people used to communicate each other by having meetings and sending letters. Mobile made communication and availability very easy, but is it virtual. Besides communication, mobile brought digital era of “on the tip information”, games, personal calendar and what not. Cell phone equipments are becoming easy and useful to handle. Due to usefulness, available apps, games, information, entertainment, mobile usage has become habitual. This usage is in such large extent among college youths, has become addiction.

Today people have mobile phones with them all the time and use to them to organize and manage every moment of their life, from work to free time. The function of mobile is to control distance in communication and relationship. By using mobile phone we can communicate very easily.

It has become vital element to every person but it is reason of addiction also. The addiction is spreading continuously among college youths and teenagers.

According to a survey by Pew Research Center, 25% of adult Americans had smart phones in 2011. Fast forward a year and that percentage is now up to 45%; this number includes almost half of all U. S. adults, and it surpasses those who have regular cell phones. Teens are following right behind adults, but are teens becoming addicted to smart phones?[1]. Scenario in India is not different. Mobile phone services were introduced in India about 15 years ago. Nearly 1.63 million of people signed up for mobile phone services in February 2004 wherein the percentage of College youth and teenagers is 40%[2].

II. LITERATURE SURVEY

Val Hooper et.al.[3] studied mobile phone usage whether it is addictive, dependent or compulsive. They did survey of 184 students and found out that behavior cannot be conclusively categorized as any specific type, although there was stronger support for mobile phone usage being categorized as dependent, voluntary or mandatory behaviour, rather than being addictive, compulsive or habitual.

Ritu Nehra et.al.[4] studied whether excessive use of mobile phones are reflecting towards emerging behavioral addiction. They used 46 item scale.

Louis Leung[5] worked to link Psychological Attributes to Addiction and Improper Use of the Mobile Phone among Adolescents in Hong Kong. The study found that the larger the social capital one enjoyed (i.e., the more opportunities taken to spend time with classmates, family, and friends face-to-face), the higher the likelihood that one would use the mobile phone in inappropriate places. This may suggest that adolescents see mobile phones as a symbol of individuality that helps social networking and expresses their identity in a ubiquitous way.


Jayanti P. Acharya et. al.[9] analysed the Common Health Effects of Cell-Phones amongst College Students. They concluded that almost all the students cell phones, and the device is used for a greater part of the day.
Headache was found to be the commonest symptom followed by irritability/anger. Other common mental symptoms included lack of concentration and poor academic performance, insomnia, anxiety etc. Among physical symptoms-body aches, eye strain, digital thumb were found to be frequent. Accidents are caused due to cell phone driving.

Ishfaq Ahmed et. al.[10] in their study regarding Mobile phone to youngsters: Necessity or addiction have given that youngsters use their cell phones under reasonable limits and do not tend towards extreme behaviours leading towards addictive cell phone usage.

Abhas Tandon et. al.[11] in the study “Mobile phone and internet adoption and consumption patterns of college students in India” concluded that the college students in India are highly addicted to the use of mobile phones and internet and excessively use the above technological services. Their life now highly depends on phone and internet.

III. PRESENT STUDY

Present study concentrates on mobile addiction among students and the behavioral aspects of mobile addiction. Study also checks whether mobile addiction really exists among the students by using 10 item scale. It also reveals whether there is any relationship between Gender and mobile addiction. Also whether mobile addiction depends on education taken by students or not.

Objectives:
1. To study what is mobile addiction.
2. To study % of mobile addiction among students.
3. To study behavioral aspects of addiction.
4. To study dependency of mobile addiction with Gender and Education.

Hypothesis:
1. $H_1$: Mobile Addiction and Gender are independent.
2. $H_0$: Mobile Addiction and Educational Qualification are independent.
3. $H_1$: Mobile Addiction and Educational Qualification are dependent.

Data Collection:
Data is collected as primary data from 672 students. Questionnaire is used for collecting the data. Questionnaire contained 10 item scales to analyse behavioral aspects of the mobile addiction. Besides this there were demographic question.

Data Analysis and Hypotheses Testing:
Data is analysed using tables and graphs which are drawn through MS Excel. To test the hypotheses Chi-Square test is used.

Mobile Addiction: The Concept -
Addiction is evident when an obsession with something disrupts the more important things in life, like personal relationships, schooling, or jobs. People can become addicted to pretty much anything. While teens are far more likely to become addicted to their cell phone, they will become adults and that addiction may still be unresolved. People who are shy and have low self-esteem are more likely to become cellular addicts because, with text messaging, you can make 'texting friends' that you never actually have to meet, very much like internet chatting. The cell phone has been dubbed 'the new cigarette' and 'one of the biggest non-drug addictions of the 21" century'. Psychiatrists consider mobile phone addiction to be an obsessive-compulsive disorder. Mobile phone addiction can totally isolate its victims, ruin them economically and even turn them into criminals. Addicts can easily run up phone bills over $1,000 a month, and, like drug addicts, some turn to crime to pay them. Take this quick assessment to learn more about the warning signs of cell phone addiction and help you to determine whether or not you may be a cellular addict.

Addicted peoples forget real purpose of their phone, they waste large part of time in unnecessary interaction like playing games, video, messaging etc over their phone. Peoples get disturbing when phone ringing and they are doing work. This also happen with students. The mobile addiction hampers most while driving and may lead to serious accidents. The serious health issues of mobile addiction are Nomo phobia, Insomnia, mental disorder etc.

Risk factors for Mobile Addiction:
1. People suffer from anxiety-
   People may use the mobile to distract you from their worries and fears. An anxiety disorder like obsessive-compulsive disorder may also contribute to excessive SMS/MMS checking and compulsive mobile use.
2. People are depressed-
   The mobile can be an escape from feelings of depression, but too much time online can make things worse. Mobile addiction further contributes to stress, isolation and loneliness.
3. Peoples lack social support-
   Addicts often use social networking sites by using Internet, instant messaging, or online gaming as a safe way of establishing new relationships and more confidently relating to others.
4. Peoples are less mobile or socially active than they once were-
   For example, people may be coping with a new disability that limits their ability to drive. Or you may be parenting very young children, which can make it hard to leave the house or connect with old friends.
5. Peoples are stressed-
While some people use the mobile to relieve stress, it can have a counterproductive effect. The longer they spend online, the higher their stress levels will be.

**Signs of Mobile Addiction:**
1. People spend more on accessories than on their phone.
2. People having alarms telling them when to do everything in their life.
3. They install different apps in mobile.
4. When people meet other people they talk about mobile.
5. People use it in bathroom also.
6. Experience anxiety when phone is misplaced.
7. Feel uncomfortable if more than two hours pass without checking phone for messages.
8. Experience extreme emotions when a cell phone connection is lost.
9. Answer calls and text messages while driving.
10. The first thing upon waking is check phone forugeot.

**IV. DATA ANALYSIS, FINDINGS & DISCUSSIONS**

Out of 1000 peoples 672 students agreed to participate. The data were grouped according to different demographic factors such as educational level, age and gender. Table (a) shows descriptive statistics. Responses to behavioral questions are shown in Table (b).

### Table (a): Descriptive statistics based on gender

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Description</th>
<th>Frequency / Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gender</td>
<td>Female - 288 / 42.80%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male - 384 / 57.20%</td>
</tr>
<tr>
<td>2</td>
<td>Education</td>
<td>BA.B.Ed. - 151 / 22.47%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DE - 79 / 11.76%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HSC - 60 / 8.93%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 yrs UG - 163 / 24.26%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BE - 158 / 23.51%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PG - 41 / 6.1%</td>
</tr>
</tbody>
</table>

**Table (b): Responses to behavioral questions**

<table>
<thead>
<tr>
<th>Q. No.</th>
<th>Question</th>
<th>Yes</th>
<th>Y/N</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do you always feel anxious about your cell phone, especially when you are unable to use it (meeting, class, church)?</td>
<td>595</td>
<td>43</td>
<td>35</td>
</tr>
<tr>
<td>2</td>
<td>Do you have your cell phone with you continuously, even at home you have it in your pocket or right next to you</td>
<td>297</td>
<td>187</td>
<td>189</td>
</tr>
</tbody>
</table>

The responses to 10 item scale (10 questions in questionnaire) are analyzed using Likert Scale style. Each item has three response options; Yes, Y/N (Neither Yes nor No) and No. The “Yes” response is assigned weight 1 and “Y/N” and “No” options are given weight 0. The responses of each student to all items (questions) are summed and total score for each student is calculated. The response scores varied from 0 (if any student says either Y/N or No to all items) to 10 (if any student says Yes to all items). If the total score is greater than 5, then that student is considered to have mobile addiction otherwise no serious addiction is there. Table (c) shows frequency of samples regarding mobile addiction based on calculation described above.

### Table (c): Frequency of Addiction

<table>
<thead>
<tr>
<th>Addiction</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>481</td>
<td>71.58%</td>
</tr>
<tr>
<td>N</td>
<td>191</td>
<td>28.42%</td>
</tr>
</tbody>
</table>

Table (c) clearly shows that 71.58% students have mobile addiction. Table (d) shows the frequency considering gender of the student and Table (e) gives frequency of addiction based on education.
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Table (d): Frequency of Addiction based on Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>266 (69.27%)</td>
<td>118 (30.73%)</td>
</tr>
<tr>
<td>Female</td>
<td>215 (74.65%)</td>
<td>73 (25.25%)</td>
</tr>
<tr>
<td></td>
<td>481</td>
<td>191</td>
</tr>
</tbody>
</table>

Degrees of freedom = 1

Table value at 1 degree of freedom and 5% level of significance is 3.841. So, Calculated Value < Table Value and calculated value comes in acceptance region of H₀. Thus H₀ is accepted and H₁ is rejected at 5% level of significance.

So, it can be concluded that Mobile Addiction is independent of Gender.

Hypothesis 2:
H₀ : Mobile Addiction and Educational Qualification are independent.
H₁ : Mobile Addiction and Educational Qualification are dependent.

Table (g) shows the calculation required of Chi Square test for the hypothesis

Table (e): Frequency of Addiction based on education

<table>
<thead>
<tr>
<th>No.</th>
<th>Education</th>
<th>Y</th>
<th>N</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>SSC</td>
<td>20 (100%)</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>2.</td>
<td>HSC</td>
<td>55 (91.67%)</td>
<td>5</td>
<td>60</td>
</tr>
<tr>
<td>3.</td>
<td>DE</td>
<td>64 (81.01%)</td>
<td>15</td>
<td>79</td>
</tr>
<tr>
<td>4.</td>
<td>3 Yrs. UG</td>
<td>124 (76.07%)</td>
<td>39</td>
<td>163</td>
</tr>
<tr>
<td>5.</td>
<td>BE</td>
<td>81 (51.27%)</td>
<td>77</td>
<td>158</td>
</tr>
<tr>
<td>6.</td>
<td>BA. Bed.</td>
<td>114 (75.50%)</td>
<td>37</td>
<td>151</td>
</tr>
<tr>
<td>7.</td>
<td>PG</td>
<td>23 (56.10%)</td>
<td>18</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td></td>
<td>481</td>
<td>191</td>
<td>672</td>
</tr>
</tbody>
</table>

Table (e) shows that addiction observed more among SSC, HSC and Graduate students.

Hypothesis Testing:
Two hypotheses are tested using Chi Square test at 5% level of significance.

Hypothesis 1:
H₀ : Mobile Addiction and Gender are independent.
H₁ : Mobile Addiction and Gender are dependent.

Table (f) shows the calculation required of Chi Square test for the hypothesis

Table (f): Calculation of Chi Square for Hypothesis 1

<table>
<thead>
<tr>
<th>Oij</th>
<th>Eij</th>
<th>(Oij-Eij)²</th>
<th>(Oij-Eij)²/Eij</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>266</td>
<td>274.86</td>
<td>-8.86</td>
</tr>
<tr>
<td>1.2</td>
<td>118</td>
<td>109.14</td>
<td>8.86</td>
</tr>
<tr>
<td>2.1</td>
<td>215</td>
<td>206.14</td>
<td>9.86</td>
</tr>
<tr>
<td>2.2</td>
<td>73</td>
<td>81.86</td>
<td>-8.86</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chi Square Value 81.64

Source: Table (e)

Degrees of freedom = 6

Table value at 6 degree of freedom and 5% level of significance is 12.592 So, Calculated Value > Table Value and calculated value comes in rejection region of H₀. Thus H₀ is rejected and H₁ is accepted at 5% level of significance. So, it can be concluded that Mobile Addiction and education are dependent.
V. CONCLUSION

As per this study it seen that more than 75% students are addicted to mobile. The addiction is like using mobile 24 X 7 and feeling uncomfortable while not using mobiles. Some percentage of feeling anxiety is also noted. Mobile addiction is seen to be independent on gender whereas it is depending on education.

VI. REFERENCES

[7] Improper Use of the Mobile Phone among Adolescents in Hong
[8] Louis Leung, “Linking Psychological Attributes to Addiction and

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