

## Original Article

# Pattern of Mobile Phone Usage and Its Health Impact among the University Students

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## Abstract

### Introduction:

Mobile phone is the most common information access device which is one of the important wonders of modern science. The aim of this study was to find out the pattern of mobile phone usage and its health impact among the university students as young people are more likely than any other demographic group to use mobile phones and adopting mobile phones as an integral part of their daily lives.

### Method and materials:

This cross sectional study was conducted from July 2014 to June 2015 on 440 students of Bangladesh University of Engineering and Technology (BUET), Dhaka University, BRAC University and Jagannath University. Data were collected by face to face interview and recorded in pretested written self-administered questionnaires.

### Results:

The mean age of 440 respondents was about  $22 \pm 2.3$  years. More than two-third (71%) of the respondents were male. Most of the respondents (63.4%) were under graduate, more than three-fourth (88%) of the respondents was unmarried. Two-third of the respondents (66%) used one mobile handset, more than half (55%) use smart phone. More than one-third (42%) of the respondents spend 0-3 hours over phone daily, More than one-third (38.6 %) using mobile phone for 3-5 years, more than half (54.3%) of the respondents spent 500 taka per month for maintaining mobile phone. All of the respondents (100%) used mobile phone for communication purpose, more than three-quarter (79.1%) of them used mobile phone also for net browsing, more than half used for playing games (55.9%) and for taking pictures (59.3%). More than one-third (39.32%) of the respondents faced different health problems such as inattentiveness (46.62%), headache (42.69%), insomnia (34.26%) and eye problems (24.71%).

### Conclusion:

The main reason for using a mobile phone was for socializing, as well as for personal affair, safety and privacy purposes. There were some health impacts documented in this study. There should be more research in this topic as this study was done on a limited number of subjects.

**Key words:** Mobile phone, health impact, university students

## Introduction

Mobile phones are one of the most common information access devices with majority of the global population having access.<sup>1</sup>

The number of mobile phone users around the world is increasing so that in 2008 the number of mobile users around the world was around 2 billion people and reached up to 4.6 billion subscribers by the end of 2009.<sup>2</sup>

Bangladesh enters the mobile world in 1993. Now Bangladesh is the 10<sup>th</sup> position according to the number of mobile phone users. Mobile phone users have increased from 300,000 in 2001 to 50 million in 2013 in Bangladesh to an announcement by Bangladesh Telecommunication Company Limited (BTCL), Bangladesh has a total of 58 million mobile phone users in May 2014 (www.techlahore.com). People have adopted mobile phone technology with almost extraordinary

interest to the effect that the status of a mobile phone has changed from an unfamiliar device to a necessary device in the distance of less than ten years.<sup>5</sup>

This emerging phenomenon attracted the attention of researchers and has been studied from a variety of divergent perspectives for example, marketing and economic field, cultural perspective, physical adverse effects,<sup>21</sup> psychological adverse effects.<sup>8</sup>

Mobile phone use patterns have been studied in different age groups. Numerous research related to mobile phone usage reveals that mobile usage pattern varies from one group to another.<sup>18</sup> The results of these researches also have demonstrated that young people are more likely than any other demographic group to use mobile phones and adopting mobile phones as an integral part of their daily lives.<sup>6</sup>

Beneficial and adverse effects of mobile phones in college students have been studied. A number of studies proposed that having mobile phone is necessary for college students to keep in touch with their family.<sup>15</sup>

The results of Ahmed et al. (2011) that explored the pattern of mobile phone usage among youngsters in Pakistan demonstrated that youngsters use their cell phones under reasonable limits and do not tend towards extreme behaviors leading towards addictive cell phone usage.<sup>2</sup>

University students in India use mobile phones differently from their American counterparts.<sup>1</sup> Since the use of the mobile phone is a massively significant social and cultural phenomenon, to investigate of mobile phone use pattern in communities and the demographic groups is important.<sup>4</sup>

Every comfort introduced by technological development also brings some hostile impacts along with. Extreme Mobile phone dependent students have strong association with different health problems.<sup>17</sup> Jayanti P Acharya (2013) reported 51.5% had headache, 47.4% and 35.4% suffered from lack of concentration and insomnia respectively.<sup>13</sup>

While numerous studies have been conducted on use of mobile phones among college students in developing countries<sup>14</sup> little is known about the use of mobile phones among the university students in Bangladesh. There has been an insufficient and limited study to find out the pattern of mobile phone usage and its health impact among the university students in Bangladesh.<sup>27</sup>

This study will be helpful to specify mobile phone usage pattern and its health impact. This study explores new ideas for the program managers and policymakers to allocate resources and develop strategies to address health status among mobile phone dependent university students in Bangladesh.

#### Methodology:

This cross sectional type of descriptive study was carried out among the 440 university students of BUET, Dhaka University, BRAC University and Jagannath University conducted from July, 14 to June, 15. Purposive sampling technique was adopted. Data were collected by pretested semi-structured self administered questionnaire. The collected data were analyzed by SPSS (version 20). Only descriptive statistics were computed.

#### Results

The mean age of 440 respondents was about  $22 \pm 2.3$  years ranging from 19 to 26 years. More than two-third (71%) of the respondents were male. More than half of the respondents (63.4%) were under graduate, more than three-fourth (88%) of the respondents was unmarried. Two-third of the respondents (66%) used one mobile handset, more than half (55%) use smart phone. All of the respondents (100%) used mobile phone for communication purpose, more than three-quarter (79.1%) used mobile phone also for net browsing, for listening music (72.4%), more than half used for playing games (55.9%) and for taking pictures (59.3%) (table1).

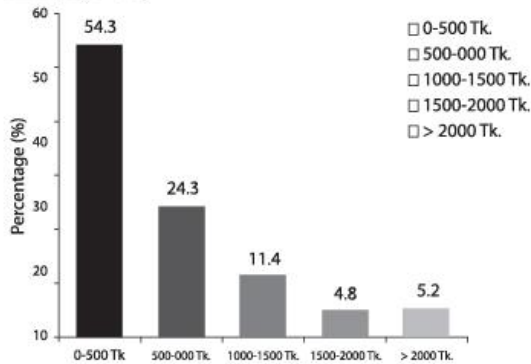
**Table-1: Distribution of the respondents by purpose of mobile phone use (n=440)**

Using Purpose	Frequency (%)
Communication (n=440)	440 (100)
Internet (n=348)	348 (79.1)
Games (n=246)	246 (55.9)
Taking pictures (n=261)	261 (59.3)
Listening music (n=310)	310 (72.4)

More than one-third (42%) of the respondents spend 0-3 hours over phone daily, 41% of the respondents make 1-5 calls daily, 38.6 % using mobile phone for 3-5 years. More than half of the respondents (61.38%) kept phone in vibration and silent mode, more than one-third (38.6%) kept ringing, 60.5% use soft ring tone. More than half (54.3%) of the respondents spent 500 taka per month for maintaining mobile phone (figure no 1).



**Figure no 1: Distribution of the respondents by amount of money spent in phone maintaining per month (n=440)**



More than one-third (39.32%) of the respondents faced different health problems such as (46.62%) had inattentiveness, (42.69%) had headache, (34.26%) and (24.71%) suffer from insomnia and eye problems respectively (table no 2).

**Table-2: Distribution of the respondents by having health problems associated with mobile phone (n=440)**

Health related problem	Frequency (%)
Having problem	178 (39.32)
Headache	76 (42.69)
Blurring of vision/ Eye ache/watering from eye	44 (24.71)
Hearing defect	40 (22.93)
Insomnia	61 (34.26)
Inattentiveness	83 (46.62)
Other problems	13 (7.30)
No problem	262 (60.68)

Response rate was more than 100% due to multiple responses

#### Discussion:

The mean age of 440 respondents was about  $22 \pm 2.3$  years. More than two-third (71%) of the respondents were male. More than half of the respondents (63.4%) were under graduate and most (88%) of the respondents were unmarried. Two-third of the respondents (66%) use one mobile handset, more than half (55%) used smart phone. Arwa Jamal (2012) found 53.2% used smart phone in Taibah University Saudi Arabia.<sup>2</sup> All of the respondents used mobile phone for communication purpose, besides communication mobile phone used also for net browsing (79.1%), also for listening music (72.4%), use for playing games (55.9%) and (59.3%)

also for taking pictures. Democracy watch (2011) found that 68% students use mobile phone also for listening music, followed by 62% and 45% for taking pictures and playing games respectively.<sup>13</sup>

More than one-third (42%) of the respondents spend 0-3 hours over phone daily, more than half of the respondents (61.38%) kept phone in vibration and silent mode. Similar findings found in Mangalore, South India. That study reported that 60% kept phone in vibration and silent mode.<sup>15</sup> Among the respondents 60.5% use soft ring tone. Democracy watch (2011) reported 77.6% students use soft ring tone. More than half (54.3%) of the respondents spent 500 taka per month for maintaining mobile phone. Democracywatch (2011) found highest 45.2% students monthly expenditure for mobile phone was 300 to 500 taka per month.

More than one-third 178 (39.32%) of the respondents faced different health problems. MACRO (2004), Mumbai reported that 37% had hazards. Respondents having health problems such as inattentiveness, headache, insomnia and eye problems respectively. Jayanti P Acharya (2013) found similar findings. That study reported 51.5% had headache, 47.4% and 35.4% suffered from lack of concentration and insomnia respectively.<sup>13</sup> Arwa Jamal (2012) found 43.3% had inattentiveness in Taibah University Saudi Arabia.

#### Conclusion:

This study will enrich the information pool on volume of the mobile phone usage pattern and its health impact of Bangladeshi university students. As this study was done on a limited number of subjects, to establish a standard for Bangladeshi people, further study is required by using large number of samples.

#### Acknowledgement:

The authors were acknowledged to the students of N 18 F batch and all the staffs of the Community Medicine department of Dhaka National Medical College.

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