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Impacts of Mobile Phone and Social Media Use among the Medical Students of Chittagong

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Abstract **Original Research Article**

Now-a-days mobile phone has become an essential part of our life. However despite the convenience its use along with social media brings to affect our daily life in negative sense. The aim of the study is to explore the pattern of mobile phone and social media usage among the medical students of the Chittagong city, Bangladesh to observe the extent of addictive behavior towards the usage of mobile phone and social media. This will be an observational study. The study will be performed in different medical colleges of Chittagong for a period of 1 year. Responses on general and specific variables will be documented. Data will be collected with predesigned questionnaire. At the end of the study data will be analyzed by using windows based computer software devised with SPSS-23 using statistical method. Results will be published, presented and utilized for the quality usages of mobile phone and social media and betterment of our life.

Keywords: Mobile phone, social media, medical students.

INTRODUCTION

The need for social contact and relationship with other peoples is an integral part of human nature. Communication style has evolved throughout the history to the most modern means such as cell phones. Even these have steered towards the most sophisticated application, in which presently, texts are more important than actual calls. Furthermore, there has been a shift from interpersonal communication to group communication mostly in written form, in which the written word substitutes oral conversation.

Mobile phones were introduced in few markets in the 1980s and their use spread only in the mid-1990s.Subscribers increased from12.4 million in 1990 to 500 million in 2000 to 3.3 billion in 2008 and 5.3 billion at the end of 2010 [1].

Smartphone is a phone with advanced computing ability, combining the functions of a multimedia player (allowing for music/video storage and playback) and a personal digital assistant (PDA), offering mobile Internet connectivity, built in GPS and camera, and the ability to run a wide variety of third party application (such as game, communication software, applications offering weather or traffic information etc) [2].

Mobile phone dependency, defined as inappropriate use of a mobile phone, is broadly viewed as a behavioral or technological addiction which could lead to significant social and emotional impairment [3]. Excessive mobile phone use is common among the young people and negatively associated with academic performance, interpersonal relationship, self–esteem, self-regulation and life satisfaction [4]. In addition social extraversion has been shown to have a positive

association with mobile phone addiction, while self–esteem has a negative association [5]. Frequent social networking could increase the risk of mobile phone addiction [6].

OBJECTIVES

General Objective

To assess the impact of mobile phone and social media use among the medical students of Chittagong.

Specific Objectives

1. To find out the common use of mobile phone and social media.
2. To learn the family and social problems due to modern cellular technology among the respondents.
3. To identify the health problems caused by mobile phone.
4. To get idea about the bad impacts of mobile technology on the respondents.
5. To observe socio demographic differentials of the respondents.

METHODOLOGY

Study Design

Descriptive type of cross-sectional study.

Study Place

The study will be carried out in 3 selected medical college of Chittagong city.

Study Period

The study will be conducted within 1 year, from January to December, 2018.

Study Population

Under graduate medical students.

Sample Size

300 participants from different levels will be selected for this study.

Sampling Technique

Non-probability type of purposive sampling according to the inclusion and exclusion criteria will be followed.

Data Collection Procedure

Focused group discussion (Modified Delphi technique).

All data will be collected by the researcher for minimizing errors in data collection.

Data Collection Tool

Pretested, pre-design mixed questionnaire.

Data Storage

Obtained data will be preserved in a secure database with strict confidentiality under direct supervision of the researcher.

Data Analysis

Data will be collected, compiled and tabulated according to key variables and taking special notification on research objectives. The analysis of different variable will be done according to standard statistical analysis by using SPSS version 23.

SELECTION CRITERIA

Inclusion Criteria

- Graduate medical students.
- Willing to participate.

Exclusion Criteria

- Not willingly to participate.
- Who are not available during data collection?

RESULTS

A descriptive type of observational study was conducted among the 300 medical students of Chittagong Medical College, USTC, Chittagong Maa-O-Shishu Medical College; Chittagong to obtain the impacts of mobile phone and social media use among the medical students of Chittagong. The specific objectives were to find out the common use of mobile phone and social media, to learn the family and social problems due to modern cellular technology, to identify the health problems caused by mobile phone, to get idea about bad impacts of mobile technology on the respondent, to assess the socio demographic differentials related to medical students of 3 selected medical college of Chittagong. The results of this study are stated below in details:

Table 1: Distribution of the respondents by age

Institute	Gender	Age		
		Range	Mean	SD
CMC	Male	20-24	21.16	0.78
	Female	20-23	20.95	0.63
	Total	**20-24**	**21.04**	**0.71**
CMOSMC	Male	19-22	20.73	0.84
	Female	18-27	20.77	1.41
	Total	**18-27**	**20.75**	**1.21**
USTC	Male	20-24	21.77	1.02
	Female	19-26	21.14	1.17
	Total	**19-26**	**21.34**	**1.16**
Total		**18-27**	**21.04**	**1.08**

The study was conducted on 300 respondents, among them male 38.0% and female 62.0% belonged to 18-27years.The mean age was 21.04 years, and the SD of 1.08 years.

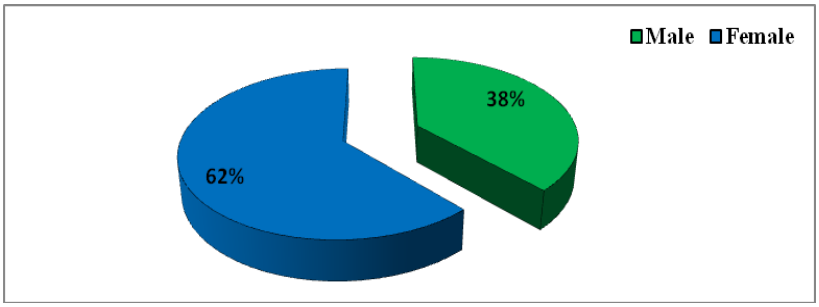

Figure 1: Distribution of the respondents by gender (n = 300)

This pie diagram shows that 186 (62%) respondents were female and 114(38%) were male. The ratio of male and female of the study was 186:114.

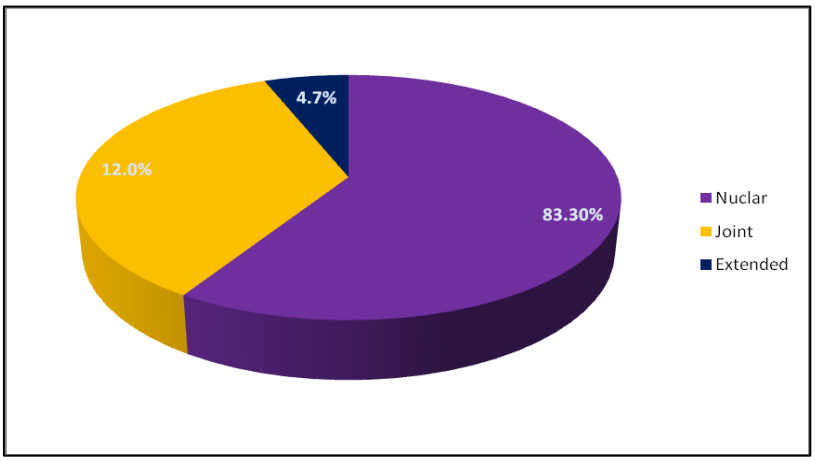

Figure 2: Type of family among the respondents (n-300)

It can be seen from the above pie chart that 83% of the respondents lived in nuclear families, whereas only 2.0% of them lived with extended families.

Table 2: Distribution of respondent's purpose of mobile phone uses

Institution	CMC (n=100)		CMOSMC (n=100)		USTC (n=100)		Total (n=300)	
	n	%	n	%	n	%	n	%
Texting	1	1.00	1	1.00	0	0.00	2	0.70
Conversation	9	9.00	6	6.00	8	8.00	23	7.70
Entertainment	14	14.00	3	3.00	21	21.00	38	12.70
Study	1	1.00	1	1.00	2	2.00	4	1.30
Others	1	1.00	0	0.00	2	2.00	3	1.00
Multiple uses	74	74.00	89	89.00	67	67.00	230	76.70

Table shows that most of the medical students use their mobile phone for multiple uses (76.70%), for entertainment (12.70%) and for conversation (7.70%).

Table 3: Where they prefer using mobile phone and social by the respondents

Institution	CMC (n=100)		CMOSMC (n=100)		USTC (n=100)		Total (n=300)	
	n	%	n	%	n	%	n	%
Home	70	70.00	63	63.00	68	68.00	201	67.00
College	1	1.00	1	1.00	1	1.00	3	1.00
Travelling	1	1.00	1	1.00	6	6.00	8	2.70
Others	28	28.00	35	35.00	25	25.00	88	29.30

It is evident that medical student uses mobile phone mostly at home (67%).

Table 4: Type of connection used by the respondent

Institution	CMC (n=100)		CMOSMC (n=100)		USTC (n=100)		Total (n=300)	
	n	%	n	%	n	%	n	%
Mobile data	27	27.00	55	55.00	44	44.00	126	42.00
Wi-fi	50	50.00	22	22.00	38	38.00	110	36.70
VPN	1	1.00	0	0.00	0	0.00	1	0.30
Others	3	3.00	1	1.00	0	0.00	4	1.30
Mobile data and Wi-fi	19	19.00	22	22.00	18	18.00	59	19.70

Above table shows that, out of 300 medical students, 126 (42%) uses mobile data, 110(36%) uses Wi-Fi for internet connection.

Table 5: Preferred time of use of mobile phone and social media

Time	CMC (n=100)		CMOSMC (n=100)		USTC (n=100)		Total (n=300)	
	n	%	n	%	n	%	n	%
Night	59	59.00	52	52.00	34	34.00	145	48.30
Evening	15	15.00	10	10.00	25	25.00	50	16.70
Early morning	0	0.000	0	0.000	1	1.00	1	0.30
Afternoon	7	7.00	5	5.00	10	10.00	22	7.30
Free time	14	14.00	29	29.00	26	26.00	69	23.00
Evening and night	5	5.00	4	4.00	4	4.00	13	4.30

Most of the respondents used mobile phone and social media at night time (48.30%).

Table 6: Impact of mobile phone use on study and family life (n=300)

Impacts		CMC		CMOSMC		USTC		Total		p value
		n	%	n	%	n	%	n	%	
Use during study	Yes	77	77.00	52	52.00	56	56.00	185	61.70	0.000*
	No	23	23.00	48	48.00	44	44.00	115	38.30	
Helps in study	Yes	97	97.00	95	95.00	95	95.00	287	95.70	0.711
	No	3	3.00	5	5.00	5	5.00	13	4.30	
Hampers study	Yes	77	77.00	72	72.00	64	64.00	213	71.00	0.124
	No	23	23.00	28	28.00	36	36.00	87	29.00	
Family conflict	Yes	41	41.00	26	26.00	32	32.00	99	33.00	0.076
	No	59	59.00	74	74.00	68	68.00	201	67.00	

p values calculated by Chi square test (*means p< 0.05)

Table 7: Influence of mobile phone use on change in socio-cultural behavior (n=300)

Behavior	Level of influence	CMC		CMOSMC		USTC		Total	
		n	%	n	%	n	%	n	%
Social crime	Not responded	7	7.00	0	0.00	0	0.00	7	2.30
	Strong	51	51.00	50	50.00	19	19.00	120	40.00
	Moderate	20	20.00	34	34.00	16	16.00	70	23.30
	Less	2	2.00	5	5.00	5	5.00	12	4.00
	No influence	20	20.00	11	11.00	60	60.00	91	30.30
Sexual offense	Not responded	7	7.00	0	0.00	0	0.00	7	2.30
	Strong	48	48.00	56	56.00	20	20.00	124	41.30
	Moderate	19	19.00	25	25.00	6	6.00	50	16.70
	Less	6	6.00	7	7.00	10	10.00	23	7.70
	No influence	20	20.00	12	12.00	64	64.00	96	32.00
Decreased social bondage	Not responded	7	7.00	0	0.00	0	0.00	7	2.30
	Strong	35	35.00	43	43.00	21	21.00	99	33.00
	Moderate	34	34.00	24	24.00	10	10.00	68	22.70
	Less	9	9.00	18	18.00	16	16.00	43	14.30
	No influence	15	15.00	15	15.00	53	53.00	83	27.70
Substance abuse/ Addiction	Not responded	7	7.00	0	0.00	0	0.00	7	2.30
	Strong	24	24.00	30	30.00	10	10.00	64	21.30
	Moderate	19	19.00	19	19.00	2	2.00	40	13.30
	Less	20	20.00	24	24.00	19	19.00	63	21.00
	No influence	30	30.00	27	27.00	69	69.00	126	42.00

It is evident that there were strong associations with social crime, sexual offense, and decreased social bondage.

Table 8: Impact of mobile phone use on health of the students (n=300)

Physical symptoms		CMC		CMOSMC		USTC		Total	
		n	%	n	%	n	%	n	%
Sleep disturbance	Yes	64	64.00	61	61.00	67	67.00	192	64.00
	No	36	36.00	39	39.00	33	33.00	108	36.00
Eye ache	Yes	60	60.00	61	61.00	55	55.00	176	58.70
	No	40	40.00	39	39.00	45	45.00	124	41.30
Headache	Yes	70	70.00	84	84.00	74	74.00	228	76.00
	No	30	30.00	16	16.00	26	26.00	72	24.00
Neck pain	Yes	54	54.00	41	41.00	42	42.00	137	45.70
	No	46	46.00	59	59.00	58	58.00	163	54.30
Discomfort in hand	Yes	50	50.00	51	51.00	42	42.00	143	47.70
	No	50	50.00	49	49.00	58	58.00	157	52.30
Altered feeding habit	Yes	38	38.00	31	31.00	23	23.00	92	30.70
	No	62	62.00	69	69.00	77	77.00	208	69.30
Lack of concentration	Yes	77	77.00	73	73.00	65	65.00	215	71.70
	No	23	23.00	27	27.00	35	35.00	85	28.30
Visual impairment	Yes	52	52.00	61	61.00	52	52.00	165	55.00
	No	48	48.00	39	39.00	48	48.00	135	45.00
Hearing loss	Yes	22	22.00	24	24.00	18	18.00	64	21.30
	No	78	78.00	76	76.00	82	82.00	236	78.70
Altered mood (Anxiety/ depression/ stress)	Yes	47	47.00	44	44.00	38	38.00	129	43.00
	No	53	53.00	56	56.00	62	62.00	171	57.00

Above table reveal that a good percentage of student suffering from sleep disturbance, headache, lack of concentration etc.

DISCUSSION

The data obtained from the study are divided into the socioeconomic as well as uses of mobile phone by the students society are influenced by different variables or factors, like housing condition, how many calls they received or make, preferred time for use, types of connection, duration, health impacts, altered food habits, family life, etc. Impacts of mobile phone and social media among the medical students of the Chittagong have been explained under the following headings:

An overview of the study reflected the common socio-demographic characteristics. Among the medical students, male 114(38%) and female 186(62%) were the age group within 18-27years. The mean age was 21.04 years, and the SD 1.08 years among the 300 respondents. It was noted that 221 (73.70%) of the people were followers of Islam while only 2 (0.70%) person was a follower of Christianism.

The study showed that majority (83.30%) of the respondents belonged to nuclear families, 12% were in joint family, whereas only 4.70% of them lived with extended families. Among the respondents, 16(5.30%) has no siblings 177(59%) had 1-2 siblings, 89(29.70%) had 3-4 children, and only 18(6%) had more than 4 siblings.

According to the socioeconomic status, most of the respondents were upper middle class 179 (59.70%), lower middle class 22.70%, upper class 16.70% and only 3 (1%) had lower class family.

It was documented that among the respondents majority admitted that they 221(73.70%) get their leisure time and with the duration of up to 30 mins 27(12.22%), 31-45 mins 11(4.98%) 46 mins-<1 hour 95(42.99%) and 2-3 hours 88(39.82%).

Those who were admitted that they students are enjoy their leisure activities are Watching TV 25,(11.31%), reading newspaper 5(2.26%), gossiping 18(8.14%), Shopping 3(1.36%), religious activity 7(3.17%), sports 4(1.81%), reading book 6 (2.71%) others 20(9.05%) and multiple activities 33(60.18%).

According to the study, 19(6.30%) respondents are fond of listening music, whereas 29(9.70%) preferred watching movie on TV, 43(14.30%) liked travelling, reading book 23(7.70%), gardening 4(1.30%) others 18(6.00%) and multiple hobbies 164(54.70%).

This study revealed that among the 300 respondents, they first started using their mobile phone at class 6-10, 23.30%, after SSC, 49.70% and After HSC, 26.70%.

They uses their mobile phone for multiple purpose like texting, 2(0.7%), conversation 23(7.70%),

entertainment 38(12.70%), study 4(1.30%) and others 3(1%).

They mostly uses their mobile phone at home 201(67.0%), at college 3(1%) travelling 8(2.70%) and others 88(29.30%) with the duration of less than 1 hour 14.40%, 1-2 hours 39.30%, 3-4 hours 27% and more than 4 hours 19.30%.

They preferred time for using their mobile phone at night 145(48.30%) at free time 69(23%), at evening 50(16.70%) and at afternoon 22(7.30%).

Majority of the students used mobile data 42%, wi-fi 36.70%, VPN 0.30%, both mobile data and wi-fi 19.70%.

From the study it is assume that most of the students use to call 0-5 number of calls 239(78.7%), 6-10 call (14.0%), 11-15 calls 6(2.0%) and more than 15 calls 16(5.0%).

Number of the call received by the students were 236(78.8%) and the daily expenditure for their mobile phone was 1-30 taka 249(83%), 31-60 taka 27(9%) and 61-90 taka 5(1.70%) and more than 91 taka 19 (6.30%)

Study revealed that among the 300 respondents, 57 medical students like face book (19.0%), Twitter users (1.70%). According to the study Instagram users 20(6.70%) Youtube users 37 (12.30%), Viber users 10 (0.30), WhatsApp 23(7.70%) and others (0.30%). Among them most of the students used multiple social media 156(52.00%).

According to the study, respondents uses during study, 185 (61.70%) & don't use Mobile phone and social media. According to the study most of the respondents thought that mobile phone and social media helps in their study 287(95.70%), among them 213 (71.00%) also thought that social media hampers their study. Most of the medical students thought that social media don't make family conflict 201 (67.00%) but 33% thought it causes family conflict.

The study reveal that regarding social crime, strong influence due to mobile phone and social media that is 40%, moderate influence 23.30%, less influence 4% and a good number of respondents thought that no influence due to social media.

Sexual offense due to social media has got strong influence, 124 (42.30%), moderate influence16.70%, less influence 7.70% and 96 (32.00%) thought that there was no influence. Among the medical students 99(33.0%) give opinion that decreased social bondage due to mobile phone, some of the respondents thought that moderate influence 22.7% occurred due to it, less influence 14.30% and 27.7% said no influence. Substance abuse/Addiction- might not be due to social media. Most of the respondents said that improper dress-up not took place due to social media.

A good number of health problems arise due to mobile phone and social media [7]. 192 (64%) respondents said that they experienced sleep disturbance where 36% disagreed. Among the respondents 76% and 58% told, they had headache and eye ache respectively while other said no problem.54% of the respondents had no neck pain while 137(45.70%) told about neck pain due to mobile phone. Some of the respondents said there was discomfort in hand 47.70% and 52.30% had no discomfort in hand. Only 30.7% medical students admitted that they had altered feeding habit.

Lack of concentration 215(71.70%) was most pronounced among the respondents.

Visual impairment 165(55.00%) is another infirmity they developed due to mobile phone and excessive use of social media [8]. Hearing loss was not happened due altered mood (Anxiety/ depression/ stress) also experienced by the respondent [9].

CONCLUSION

By conducting this research, it would be tried to bring attention to potential risks that cell phone and social media can cause to the users. Attempt should be made to provide some solution how to mitigate side-effects of cell phones and mobile devices on the users by limiting cell phone/smart phone and handled devices usage or with special physical exercise. Mobile phones and new technologies have both positive and negative aspects. They have not only helped improve worldwide communication, newer technology through new social media, social network sites, social informatics and social software enables us to perform many jobs quickly and efficiently. The outcome the study align perfectly with other previous studies mentioned in the literature review. Time spent on social media was negatively impacts academic performance. The researcher found association with impact on health of the medical students. They mostly suffered from sleep disturbances, eye ache, headache, neck pain, discomfort in hand, altered feeding habit, lack of concentration, visual impairment and some of them also complained of loss of hearing and some extent of altered mood (Anxiety, Depression and stress).

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