

Original Article

INTERNET ADDICTION AND FAMILY RELATIONSHIP IN ADOLESCENTS: A CROSS SECTIONAL STUDY FROM BANGLADESH

Shamima Gulshan Ara Shampa^{1*}, Farzana Arjumand², Afsana Mahjabin³, Md. Ziaul Islam⁴

ABSTRACT

Background: Internet Addiction (IA) undermine personal relationship when internet replace friends and family. But internet strengthen ties because it makes communication simpler. The aim of this study was to assess the association between IA and family relationship among adolescents.

Methods: This cross sectional study was carried out among 203 adolescents (15-19 years) irrespective of their sex who used Internet. The study was conducted at two selected schools in Dhaka city over the period of one year from January to December 2017. Respondents were selected by systematic random sampling; data were collected by face-to-face interview with a semi-structured questionnaire to observe socio-demographic characteristics, scale of Young's Diagnostic Questionnaire (YDQ) for Internet addiction and Index of family relations (IFR) for family relationship. Data were analyzed by IBM software- SPSS 23 version. Ethical issues were maintained strictly.

Results: The study revealed that 34.5% participants were addicted to Internet. Association between sex and internet addiction was found statistically significant ($p < 0.01$). Restriction by family ($p < 0.01$) and acceptance of physical or mental torture by family members due to internet use ($p < 0.01$) was significantly associated with IA. Among the apps, Facebook ($p < 0.01$) and Instagram ($p < 0.05$) use was significantly associated with IA. Among the purposes, entertainment ($p < 0.05$), making new friends ($p < 0.01$), communication with friends ($p < 0.05$), playing games ($p < 0.05$) and use of Internet by the influence of other family members ($p < 0.01$) were significantly associated with IA. Study revealed that, IA was significantly associated with family relationship. ($p < 0.01$).

Conclusion: Findings of this study revealed that IA was associated with family relationship. Effective measures such as: engaging adolescents in outdoor sports, book reading and encouraging them to flourish their hobby can solve the problem of internet addiction.

JOPSOM 2022; 41(2): 1-11

<https://doi.org/10.3329/jopsom.v41i2.69542>

Keywords: Internet addiction, family relationship, adolescents.

1. MBBS, MPH, Lecturer, Department of Community Medicine Potuakhali Medical College, Potuakhali
2. MBBS, MPH, M.Phil. Deputy Secretary, Ministry of Defense. Ganabhaban Complex. Sher-e-Bangla Nagar. Dhaka-1207.
3. MBBS, MPH, PGD, MSc (H. Economics), PhD, Professor and Head, Dept. of Community Medicine, National Institute of Preventive and Social Medicine (NIPSOM), Mohakhali, Dhaka-1212, Bangladesh.
4. MBBS, MPH. Associate Professor, Monno Medical College, Manikganj.

*Correspondence: Shamima Gulshan Ara Shampa, Email: sga.shampa@gmail.com

INTRODUCTION

The Internet is a contemporary instrument for communication that, in essence, can alter and simplify the ways in which people communicate with one another. It also removes geographical barriers and reduces actual distances between individuals. It serves as an unstoppable resource for knowledge and data on everything people would be interested in. It represents a particularly comprehensive source of information, offering a wide range of types, formats, contents, validity, costs, and quality. It is conceivably the largest market for products, information, and services.¹ The Internet has now become an integral part of daily life; it is used for entertainment and communication as well as education. Despite its widely identified advantages, negative impacts of Internet use have progressively emerged. In Bangladesh, the number of Internet users increasing from 0.1 million in 2000 to 62 million in 2016² whereas in September 2017 subscribers has reached to 79.23 million.³ In Bangladesh, 94% of the total

subscribers accessed Internet via mobile phones until April 2016² and obviously, youths are the major consumers of the mobile Internets. Young people often enjoy the freedom to make their own decisions and utilize the Internet, regardless of their living situation, such as living with family or in university residence halls. Then, taking into account their developmental stage, during which they are working to establish their own identities, careers, and romantic relationships, they may utilize the Internet to support the anticipated progress, which in time may appear as an addictive behavior.⁴

The Young was first introduced the term of internet addiction in 1996. Young has described Internet addiction as an impulse-control disorder that does not involve an intoxicant.⁵ Over the past few years, Young has defined Internet addiction as any online-related, compulsive behavior which interferes with normal living and causes severe stress on family, friends, loved ones, and one's work environment.⁶ High school kids often go through significant physiological and psychological changes during adolescence, and if they participate in problem behaviors, they may face more severe problems than those of other ages. There is mounting evidence that high school students are becoming more susceptible to PIU (Problematic Internet Use) as a result of easy access to the Internet.⁷

According to research, adolescents' physical health, psychosocial development, academic achievement, and family connections are all impacted by their use of the Internet.⁸ A family is the smallest social group whose members are closely linked by marriage and blood ties and who provide for one another's needs throughout the life cycle in a certain manner.⁹ The family has been found to be a protective factor in keeping teenagers from engaging in risky and problematic behaviors, such as the use of alcohol, illegal drugs, and tobacco, as well as unsafe sexual practices.¹⁰ Adolescent IA is reportedly linked to harmful circumstances such as a fractured family, family conflict, and low family functionality.¹¹ The socioeconomic position of the family, parental divorce, living with one or both parents, insufficient parental supervision, parental drunkenness, and child abuse are general family characteristics associated with addictive behavior.¹² It's crucial to look at how family cohesion and parental participation relate to Internet use because they can prevent addictive behaviors.¹³

Recently use of internet has reached a skyrocket level and affect everyone's life in the society but mostly affect the adolescents and young adult. Internet addiction can cause harm to personal relationship when Internet takes the place of family and friends. But Internet can make relationships stronger as communication make easier by it. Most amazing aspect of Internet use is making new friends and communicates with relatives live any corner of the world. People can meet through chat rooms, discussion forums, sending mails; can find groups where they share their interests like literature, travel, cooking, game, religion, culture, health problems, knowledge, technologies and anything else. Therefore, the aim of this study was to assess the association between Internet addiction and family relationship. Previous research work in our country did not assess any relationship of IA with family relationship and IA did not assessed among adolescents. Hence, we conducted a cross sectional study to fill the gap and explore the association between Internet addiction and family relationship in adolescents.

METHODS

Study setting

This cross-sectional study was conducted over the period of one year from January to December 2017. A total of 203 adolescents (aged 15-19 years) irrespective of their sex from class IX to class XII were selected as study population. Participants were selected by systematic random sampling from two schools in Dhaka city- Birsreshtho Munshi Abdur Rouf Public School and College & Government Laboratory High School and College.

Data Collection

Data collection instrument were finalized by necessary corrections & modifications on the basis of the findings of pretest. Face to face interview was conducted with a semi-structured questionnaire for observing socio- demographic characteristics, Young's Diagnostic Questionnaire (YDQ) to observe the Internet addiction and Index of family relationship (IFR) – a 25 item scales used to measure the extent, severity or magnitude of problems that family members have in their relationships with one another.

Measurement of Internet Addiction

Internet Addiction was measured by **Young’s Diagnostic Questionnaire (YDQ)**-8 questions with yes/no response produced by Dr. Kimberley Young. ‘0’ score for response ‘no’ and ‘1’ score for response ‘yes’. Score 0-2 indicate no addiction (NA), 3 or 4 indicate Potential Addiction (PA) and ≥ 5 indicate IA.¹⁴

Measurement of Family Relationship

This is measured by **Index of Family Relations (IFR)**. This questionnaire is designed to measure the way one feel about his or her family as a whole. The IFR is a 25-item scales used to measure the extent, severity or magnitude of problems that family members have in their relationships with one another produced by Walter W. Hudson.¹⁵ Responses for each item are: 1 = None of the time 2 = Very rarely 3 = A little of the time 4 = Some of the time 5 = A good part of the time 6 = Most of the time 7 =All of the time. The IFR is scored by reverse-scoring of items 1, 2, 4, 5, 8, 14, 15, 17, 18, 20, 21, and 23.

Scoring system: Summing the scores, subtracting the number of completed items, multiplying this figure by 10, and dividing by the number of items completed times 6. This will produce a range from 0 to 100 with higher scores indicated greater magnitude or severity of problems.

Score used for family relationship: In the scale IFR <35 indicate absence of a clinically significant problem; score 35-70 indicate the potential presence of a clinically significant problem, score >70 indicates that clients are experiencing severe stress with the possibility that some type of violence might be present or used in dealing with problems.¹⁵

Statistical Analysis

All data were analyzed by IBM software- Statistical Package for Social Sciences (SPSS) 23 version. Descriptive statistics were presented by mean, standard deviation and frequency of the variables. Inferential analysis included Chi-square test. Test was significant at 95% Confidence Interval (CI), at $\alpha < 0.05$ level.

Ethical Clearance

Prior to the study, ethical clearance was taken from Institutional Review Board (IRB) of NIPSOM. Before the interview, informed written consent was taken from the participants of 18 years or above and assent were taken from participants below 18 years. Privacy and confidentiality were maintained strictly.

RESULTS

Among 203 participants, 75.90% were male and 24.10% were female. The majority (42.90%) of the participants were 17 years. The mean (\pm SD) age of the participants was 17.03 ± 0.875 years. More than two-third (70.00%) of them were from class 11. Most of the participants (94.10%) were Muslim. Majority (88.20%) of them belonged to nuclear family and 51.20% of them had a family of 2-4 members. The mean (\pm SD) of number of family members was 4.83 ± 1.484 person. The mean (\pm SD) of monthly family income was Tk. 48408.87 ± 39978.402 . The majority (89.70%) of the participants was under guardianship of both parents and 73.40% lived with both parents. It was found that, 64.50% of participants slept 6-8 hours/day (Table 1).

Table 1. Socio-demographic characteristics of the participants

Characteristics		Frequency (f)	Percentage (%)
Gender	Boy	154	75.90
	Girl	49	24.10
	16	61	30.00

Age (Years)	17	87	42.90
	18	42	20.70
	19	13	6.40
	Mean (\pm SD)	17.03 \pm 0.875	
Class	Class IX	49	24.10
	Class XI	142	70.00
	Class XII	12	5.90
Type of family	Nuclear family	179	88.20
	Joint family	24	11.80
No of family members	2-4 persons	104	51.20
	5-8 persons	92	45.30
	9-11 persons	7	3.40
	Mean (\pm SD)	4.83 \pm 1.484	
Monthly family Income (Tk.)	15000-20000	49	24.10
	20001-50000	99	48.80
	50001-100000	41	20.20
	100001-150000	14	6.90
	Mean (\pm SD)	48408.87 \pm 39978.402	
Guardianship	Both (father & mother)	182	89.66
	Father	4	1.97
	Mother	13	6.40
	Other relatives	4	1.97
Participants live With	Both (father & mother)	149	73.40
	Father	3	1.50
	Mother	24	11.80
	Others	27	13.30
Sleep duration (hrs/day)	4-6	58	28.60
	6-8	131	64.50
	>8	14	6.90

Tk. = Taka, Hrs: Hours, %: Percentage, f: frequency

Most (96.60%) of the participants used the internet at home. Majority (89.70%) of them used mobile as a media of Internet use. Among the participants, 89.20% used Face book and 79.30% used You Tube. Most of the respondents used these apps for information collection (92.60%), communication with friends (92.60%) and entertainment (90.60%). Among the adolescents, 40.90% faced restriction by their family to use Internet, 80.80% of them were insisted by their family members to use Internet less frequently or in less duration, 73.90% of them did not feel better to pass time in using Internet than with family members or friends and 52.20% suffered physical or mental torture by family members due to use Internet in excess duration (Table 2).

Table-2: Distribution of participants by pattern of Internet use

Pattern of internet use		Frequency (f)	Percentage (%)
Place of Internet use*	Home	196	96.60
	Internet café	5	2.50
	School	9	4.40
	Relatives/ friend's home	27	13.30
	Other places	13	6.40
Media of Internet use*	Mobile	182	89.70
	Desktop	46	22.70
	Laptop	41	20.20
Apps used in Internet*	Facebook	181	89.20
	Twitter	24	11.80
	Instagram	62	30.50
	Google	143	70.40
	Skype	21	10.30
	Mail	37	18.20
	YouTube	161	79.30
	Others	56	27.60
Purpose of using Apps*	Information collection	188	92.60
	Entertainment	184	90.60
	Making new friends	148	72.90
	Communication with friends	188	92.60
	Playing games	131	64.50
	Communication with relatives	161	79.30
	Influence of other family members	52	25.60
Family restriction to use internet	Yes	83	40.90
	No	120	59.10
Advised to use internet less frequently	Yes	164	80.80
	No	39	19.20
Suffered physical/mental torture by family	Yes	106	52.20
	No	97	47.80

*Multiple response, f: frequency, %: Percentage

Out of 203 participants, 32% had no addiction, 33.5% had potential Internet addiction and 34.5% were addicted in Internet (Figure 1). [*Figure present other than image form*]

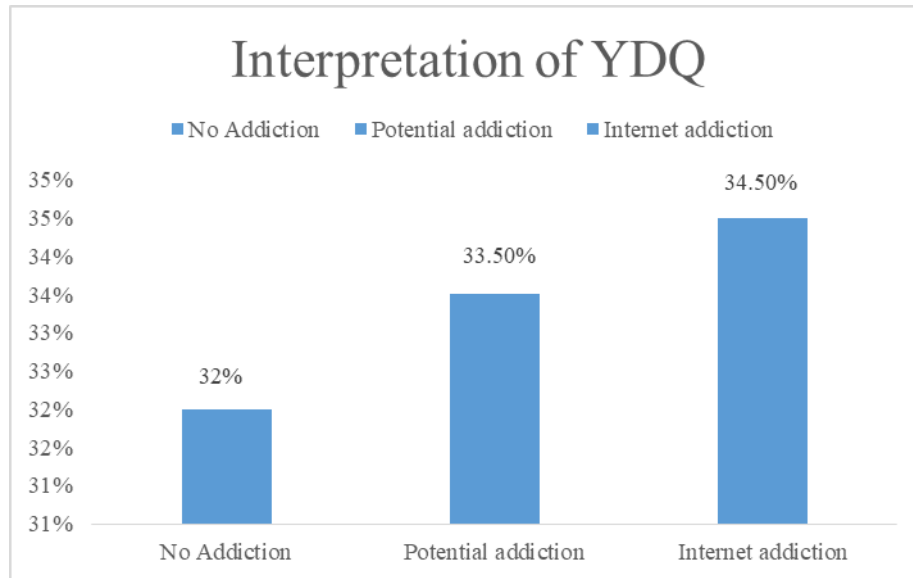


Figure 1. Distribution of participants according to their addiction on Internet using by YDQ*

*YDQ: Young`s Diagnostic Questionnaire

Among the 203 participants, 54.20% had no clinically significant problem, 28.10% had potential presence of a clinically significant problem and 17.70% indicated that there was severe stress and violence used in dealing with problem (Figure 2).

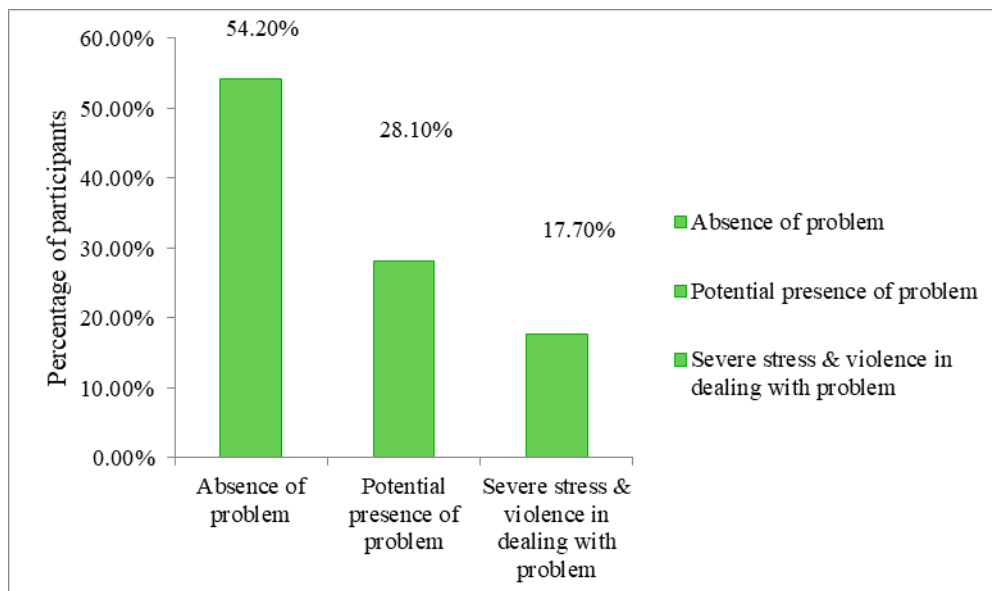


Figure 2. Distribution of participants by family relationship

Socio-demographic characteristics were compared to different level of addiction. It was found that there was significant association between internet addiction and gender of the adolescents (Table 3).

Table-3: Distribution of participants according to gender and Internet addiction

Gender of the participants	Internet addiction			Significance
	No Addiction	Potential Addiction	Internet Addiction	
	f(%)	f(%)	f(%)	
Boy	39 (25.3%)	57 (37%)	58 (37.7%)	p=0.001*
Girl	26 (53.1%)	11 (22.4%)	12 (24.5%)	
Total	65 (32%)	68 (33.5%)	70 (34.5%)	

* χ^2 -test, significance at p= 0.01 at 95% CI level, f: frequency, %: Percentage

Restriction of the family to use Internet and bearing physical or mental torture from family members for using Internet were significantly associated with Internet addiction (p<0.01). Among the apps used by the participants only Facebook (p<0.01) and Instagram (p<0.05) use were significantly associated with Internet addiction. Among the purposes of Internet use- entertainment, making new friends, communication with new friends, playing games and use of Internet by the influence of family members were significantly associated with Internet addiction (p<0.05) (Table 3).

Table-3: Association between pattern of Internet use and Internet addiction

Pattern of Internet use	Level of Internet addiction			Significance
	NA f (%)	PA f (%)	IA f (%)	
a. Family restriction to use Internet				
Yes	14 (16.9%)	28 (33.7%)	41 (49.4%)	p=0.000*
No	51 (42.5%)	40 (33.3%)	29 (24.2%)	
b. Suffered physical/ mental torture by family for Internet use				
Yes	11 (10.4%)	38 (35.8%)	57 (53.8%)	p=0.000*
No	54 (55.7%)	30 (30.9%)	13 (13.4%)	
Apps used in Internet				
a. Facebook				
Yes	50 (27.6%)	64 (35.4%)	67 (37%)	p=0.001*
No	15 (68.2%)	4 (18.2%)	3 (13.6%)	
b. Instagram				
Yes	12 (19.4%)	22 (35.5%)	28 (45.2%)	p=0.023**
No	53 (37.6%)	46 (32.6%)	42 (29.8%)	
Purpose of using Apps				

a. Information collection				p=0.177
Yes	57 (30.3%)	65 (34.6%)	66 (35.1%)	
No	8 (53.3%)	3 (20%)	4 (26.7%)	
b. Entertainment				p=0.011**
Yes	58 (31.5%)	57 (31%)	69 (37.5%)	
No	7 (36.8%)	11 (57.9%)	1 (5.3%)	
c. Making new friends				p=0.000*
Yes	32 (21.6%)	52 (35.1%)	64 (43.2%)	
No	33 (60%)	16 (29.1%)	6 (10.9%)	
d. Communication with friends				p=0.011**
Yes	55 (29.3%)	65 (34.6%)	68 (36.2%)	
No	10 (66.7%)	3 (20%)	2 (13.3%)	
e. Playing games				p=0.019**
Yes	33 (25.2%)	49 (37.4%)	49 (37.4%)	
No	32 (44.4%)	19 (26.4%)	21 (29.2%)	
f. Communication with relatives				p=0.118
Yes	46 (28.6%)	57 (35.4%)	58 (36%)	
No	19 (45.2%)	11 (26.2%)	12 (28.6%)	
g. Use of Internet by the influence of other family members				p=0.004*
Yes	8 (15.4%)	18 (34.6%)	26 (50%)	
No	57 (37.7%)	50 (33.1%)	44 (29.1%)	

χ^2 -test, significance at *p=0.01, **p=0.05 at level 95% CI, f: frequency, %: percentage

Among the Internet addicted, 40% had absence of clinically significant problem, 34.3% had potential presence of a clinically significant problem and 25.7% faced severe stress and violence in dealing with problem. There was statistically significant association between Internet addiction and family relationship ($\chi^2= 15.088$, $p<0.01$) (Table 4).

Table- 4: Association between Internet addiction and family relationship.

Internet addiction	Family Relationship			Significance
	Absence of problem	Potentially presence of problem	Severe stress & violence in dealing with problem	
	f (%)	f (%)	f (%)	
No addiction	47(72.3%)	12(18.5%)	6(9.2%)	p=0.005*
Potential IA	35(51.5%)	21(30.9%)	12(17.6%)	
IA	28(40%)	24(34.3%)	18(25.7%)	

* χ^2 -test, significance at p=0.01 at level CI 95%; IA = Internet addiction, f: frequency, %: Percentage

DISCUSSION

This cross-sectional study was conducted among adolescents (15-19 years) of two schools in Dhaka city over one year. The study aimed to assess the association between IA and family relationship among adolescents.

Majority of the participants 75.9% were male as this study included one boys' school. Another study conducted in North South University, Bangladesh, also included more male participants than female.¹⁶ In present study, majority of the participants (48.8%) had monthly family income within tk. 20001 - 50000. This study had not found any association between monthly family income with Internet addiction. Another study among graduate students of Bangladesh¹⁷ showed that most of the participants were from middle class (60%) family. Possibly both studies included the institutions where majority of the students came from middle income family. That study¹⁷ showed socio-economic status as a strong risk factor of PIU but present study did not find any association.¹⁷

Present study found that there was no association between sleep duration and IA. Another study conducted in Southern Chinese showed that IA test score was significantly associated with sleep disturbance.¹⁸ Possibly dissimilarity occurred because present study did not use any scale to identify sleep disturbance and rely only on verbal response of adolescents.

This study showed 67.7% participants used mobile, 17.1% used computer and 15.2% used laptop as a media of Internet use. Among all apps, Facebook (89.2%), Google (70.4%) and YouTube (79.3%) were mostly used apps. Among the apps used by the adolescents only Facebook ($p < 0.01$) and Instagram ($p < 0.05$) use were significantly associated with Internet addiction. Another study among students of Dhaka University also showed that mostly used app was Facebook (92.9%).¹⁹ Both the study findings were similar because Facebook is the mostly used Social media in Bangladesh.

Among the adolescents, majority used apps for information collection and communication with friends. Among the purposes of Internet use: entertainment, making new friends, communication with new friends, playing games and use of internet by the influence of family members were significantly associated with IA ($p < 0.05$). A previous study showed that students who communicated with friends via internet had a higher percentage of IA like this study.²⁰ It may be due to the fact that making online friend is common now-a-days and it is more prevalent among adolescent to make new online friends without knowing them which in turn increases the chance fraud and other illegal activities.

The study revealed that 34.5% had Internet addiction, 33.5% had potential Internet addiction and 32% had no addiction. IA was significantly higher among boys (37.7%) compared to girls (24.5%) ($p < 0.01$). Study among European adolescents showed the prevalence of Pathological Internet users (PIU) was significantly higher among males than females which was similar to present study.²¹ Present study also revealed that there was statistically significant association between IA and family relationship ($p < 0.05$).

Cross sectional design of the study limited the directional or causal conclusion. The study found that there was association between IA and family relationship of the adolescents but the directional or causal relationship could not be identified. Present study only focused on IA and family relationship without addressing other variables which might also influence these two variables. As the study was conducted in urban settings, the study result might not be the representative of the whole country. Further analytical studies should be conducted to reveal the actual relationship between IA and family relationship.

CONCLUSION

Study revealed that among the participants about one-third participants had IA and boys were more addicted than female. Internet addicted suffered more with severe stress and violence in dealing with problem than non-addicted or potentially addicted group and IA had association with family relationship. It is essential to use Internet for its beneficial part but excessive use had harmful effect on health of the individual and on the society. Adolescents addicted to Internet need enough support and consideration. Policy maker should take some kind of measures so that addicted persons can

engage themselves in realistic life. Activity in Internet should be monitored that will help to maintain good mental health and family relationship among the most vulnerable group e.g. adolescents.

Conflict of Interest

Authors declare that there is no conflict of interest.

Funding

The study didn't get any funding from any government or non-government source.

Acknowledgement

Authors are indebted to all the participants for their voluntary and spontaneous participation.

References:

1. Žáčok L and Žáčková Z. Internet as a tool to educate managerial staff at schools. *The New Educational Review*. 2008; 16(3-4): 15.
2. BTRC.(2016). *Internet subscribers in Bangladesh April, 2016*. Dhaka: Government of Bangladesh. [Internet]. Available from: <http://www.btrc.gov.bd/content/internet-subscribers-bangladesh-april-2016>.
3. BTRC. (2017).[Internet]. Available from: www.btrc.gov.bd/telco/internet [Accessed on 4 November 2017].
4. Lanthier RP & Windham RC. Internet use and college adjustment: The moderating role of gender. *Computers in Human Behavior*. 2004; 20(5):591–606.
5. Young KS. Internet addiction: The emergence of a new clinical disorder. *CyberPsychology Behavior*. 1998; 1:237–244.
6. Young, K. S. (2011). *Facts and Questions*. [Internet]. The Centre for Internet Addiction. Available from: <http://www.netaddiction.com>. [Accessed on 17 October 2017].
7. Ghassemzadeh L, Shahraray M, Moradi A. Prevalence of internet addiction and comparison of internet addicts and non-addicts in Iranian high schools. *Cyber psychology Behavior*. 2008 December;11(6):731–733.
8. Tsitsika A, Critselis E, Louizou A, Janikian M, Freskou A, Marangou E, *et al*. Determinants of internet addiction among adolescents: A case–control Study. *Scientific WorldJournal*. 2011;11:866–74.
9. Zhang Q. Family communication patterns and conflict styles in parent-child relationship. *Communication Quarterly*. 2007;55(1):113-128.
10. Miller P, Plant M. Parental guidance about drinking: Relationship with teenage psychoactive substance use. *Journal of Adolescence Health*. 2010;33:55–68.
11. Niaz U, Siddiqui SS, Hassan S, Husain H, Ahmed S, Akhter R. A survey of psychosocial correlates of drug abuse in young adults aged 16–21, in Karachi: Identify “high risk” population to target intervention strategies. *Pakistan Journal of Medical Science*. 2005; 21(3):271–277.
12. Park JK. and Bae SM. The Effects of Internet Use Motivation, Parent-child Communication and Psychological/emotional Problem on Internet Addiction for Early Adults. *Korean Journal of Psychology: General*. 2012;31(2):419-434.
13. Shek DTL, Sun RCF, Yu L. Internet addiction. In: Pfaff DW, editor. *Neuroscience in the 21st Century*. New York: Springer; 2013. p. 2775–2811.
14. Li W, O'Brien JE, Snyder SM, Howard MO. Diagnostic Criteria for Problematic Internet Use among U.S. University Students: A Mixed-Methods Evaluation. *PLOS ONE*. 2016; 11(1): e0145981.

15. Hudson WW. *The WALMYR Assessment Scales Scoring Manual*, Tallahassee, FL: WALMYR Publishing Company, 1997.
16. Arefin A, Bashar K, Asha MM, Bhuiyan FP, Tithi MK and Haque MM. Internet Dependency and Its Association with Depression among the Students of North South University of Bangladesh. *Ec Psychology and Psychiatry*. 2016;1(2):44-48.
17. Islam MA, Hossain MZ. Prevalence and risk factors of problematic internet use and the associated psychological distress among graduate students of Bangladesh. *Asian Journal of Gambling Issues and Public Health*. 2016;6(11).
18. Tan Y, Chen Y, Lu Y and Li L. Exploring Associations between Problematic Internet Use, Depressive Symptoms and Sleep Disturbance among Southern Chinese Adolescents. *International Journal of Environmental Research and Public Health*. 2016;13(313).
19. Shahnaz I, Karim AKMR. The Impact of Internet Addiction on Life Satisfaction and Life Engagement in Young Adults. *Universal Journal of Psychology*. 2014;2(9):273-284.
20. Wu CST, Wong HT, Yu KF, Fok KW, Yeung SM, Cheuk Ho Lam CH, *et al*. Parenting approaches, family functionality, and internet addiction among Hong Kong adolescents. *BMC Pediatrics*. 2016;16(130).
21. Durkee T, Carl, V, Floderus B, Wasserman C, Sarchiapone M, Apter A, *et al*. Pathological Internet Use and Risk-Behaviors among European Adolescents. *International Journal of Environmental Research and Public Health*. 2016;13(294).