

LONELINESS, NUMBER OF FACEBOOK FRIENDS, AND FACEBOOK ADDICTION AMONG UNIVERSITY STUDENTS

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ABSTRACT

Facebook addiction gets huge attention among researchers as a new form of behavioral addiction. The present study aimed to assess the role of loneliness and the number of friends on Facebook as risk factors of Facebook addiction. Necessary information was collected from a sample of 234 students who were selected through non-probability sampling techniques using a structured questionnaire that contained the UCLA Loneliness scale, Bergen Facebook addiction scale, questions regarding the number of Facebook friends and personal information. Results showed male Facebook users had higher number of Facebook friends than female users. Results also explored that loneliness, the number of Facebook friends, and being female were significant predictors of Facebook addiction. These findings would help respective authorities take proper initiative for reducing loneliness and Facebook addiction and ensuring sound mental health for making students as future leaders of the country's development.

Keywords: Loneliness, Facebook, Facebook friends, Facebook addiction.

INTRODUCTION

Social networking sites (SNSs) has turned out to be an imperious part of communication over the last few decades. Among SNSs, Facebook is the most popular one. Users use Facebook to maintain relationships, pass the time, and share their information, feelings, self-expression, self-documentation, entertainment, virtual community, companionship and socialization (Alhabash, Chiang, and Huang 2014). But it is mentionable that overuse of Facebook causes addiction to it (Alabi 2013). Facebook addiction is the excessive and compulsive use of Facebook. Addictive Facebook use has some obvious signs like substance addictions, i.e., a strong attachment for using Facebook at large extent, an experience for social escape, ignorance of personal life events, reduce the pleasure over time and finally using lamp excuses and defense mechanisms to hide addiction signs (Kuss and Griffiths 2011). Excessive Facebook use declines

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one's productivity and interfere one's social life (Patterson 2012). Studies suggested that Facebook addiction is associated with depression, loneliness, etc (Balci and Gölcü 2013; Moreu, Laconi, Delfour, and Chabrol 2015). In the present study, loneliness was our main concern.

Loneliness is a common and familiar experience to all. Even though the person has numerous social relationships, it is an unintentional or uncontrollable state of social withdrawal, lack of closeness, emotionality, sincerity and the feeling of being alone (Ozben 2014). Discrepancy between the individual desires and their reality often gives rise to loneliness (Cacioppo *et al.*, 2003). Lonely people lose contact with their surroundings, which can lead to tough periods in their lives and negative health effects (Cacioppo and Hawkley 2009). Thus, loneliness put a need for having a meaningful relationship with others which may enhance survival (Baumeister and Leary 1995).

Bozoglan, Demirer, and Sahin (2013) suggested loneliness as the most significant predictor of internet addiction. Lonely individuals are somewhat more likely to feel that they can better express themselves with others online than they can with those who know themselves offline. Sheldon (2008) revealed that socially anxious people are fond of using Facebook to reduce their loneliness. The study showed that time spent on Facebook was negatively correlated with loneliness and shyness (Scott *et a.*, 2018). Spending an excessive amount of time on Facebook may cause negative impacts on their personality and distort the social and psychological well-being of individuals (Harzadin 2012). However, excessive Facebook use does not problematic Facebook use or Facebook addiction, although it works as a risk factor of developing a dependency on Facebook. Kim *et al.*, (2009) suggested that lonely individuals who did not have good social skills would likely to develop strong problematic internet use behaviors. As Facebook is an internet-based social media, a question arises in mind. Is loneliness leads to dependency on Facebook? The present study aimed to seek an answer to this question. A study suggested that lonely people search for online contacts to reduce loneliness and make more online friends (Morahan-Martin and Schumacher 2003). The present study was also intended to assess the role of the number of Facebook friends on the relationship between loneliness and Facebook addiction.

Facebook addiction has become a significant research topic for its alarming and pervasive harmful effects. Studies suggested that the prevalence rate of Facebook addiction in Bangladesh is higher that ranged from 19% (Ahmed and Hossain

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2018) to 25.4% (Akteer 2019). As Facebook addiction significantly affects users' mental health (Rahman and Ahmed 2018), there is a growing demand to identify possible risk factors of the Facebook addiction. Based on above discussion, loneliness might be playing a role as a risk factor for developing Facebook addiction. The present study aimed at assessing the role of the subjective feeling of loneliness along with the number of Facebook friends on developing the dependency on Facebook addiction. The present study's main objective was to explore the relationship among loneliness, the number of Facebook friends, and Facebook addiction. Another objective of the present study was to find out whether there any mean differences in the number of Facebook friends, Facebook addiction, and loneliness in terms of users' gender.

METHODS

Participants

The population of the present study was university students of Bangladesh. Among universities in Bangladesh, the University of Chittagong was selected by convenience sampling technique. From eight faculties of this University, three faculties (Social Sciences, Arts, and Biological Sciences) were selected randomly using the lottery method. From these 3 faculties, a sample of 234 students was selected via purposive sampling technique. The only selection criteria of selecting the sample was that participants must have at least one-year usage experience of Facebook. Participants' age *mean* was 20.24 years and *standard deviation* was 1.85 years. Participants' distribution in gender, year, residence type, family type by their corresponding faculty is presented in Table 1.

TABLE 1: RESPONDENTS' DISTRIBUTION IN GENDER, YEAR, RESIDENCE TYPE, FAMILY TYPE

Faculty	Gender		Year				Residence		Family Type	
	Male	Female	1 st	2 nd	3 rd	MS	Resident	Non-resident	Single	Joint
BS	36	47	34	30	12	7	30	53	68	15
Arts	54	52	95	0	11	0	21	85	93	13
SS	16	29	45	0	0	0	16	29	38	7
Total	106	128	174	30	23	7	67	167	199	35

BS = Biological Sciences, SS = Social Sciences, MS = Masters

Measures

A questionnaire booklet including the UCLA Loneliness Scale version 3 (Russell 1996; Ahmed 2019), the Bergen Facebook Addiction Scale (BFAS: Andreassen *et al.*, 2012; Ahmed and Hossain 2018), a questions regarding the number of Facebook friends, and demographic information form that included age, gender, residence status (whether participants were residing in halls or outside of halls), family type, etc. was used to collect data for this study. Participants' were asked to write the number of friends on Facebook.

The UCLA Loneliness Scale – version 3

The UCLA Loneliness Scale – version 3 is a 20-question assessment tool to assess one's subjective feelings of loneliness and social isolation. Participants answered each question utilizing a four-point Likert-type scoring (1 = never to 4 = always). Among 20 items, 9 items were reversed scored. A higher score suggests more subjective feelings of loneliness. The internal consistency reliabilities of this scale were ranged from .89 to .94 across samples. The Bangla version of this scale comprised of 17 items as the rest three items were excluded due to low item-total correlation and factor loading. The total score of the Bangla version of this scale ranged from 17 to 78. The cut-off score to be classified as having loneliness feeling is 47. The *Cronbach's Alpha* of this measure in the present study was .913.

The Bergen Facebook Addiction Scale

The BFAS is a 6-item scale that assessed the six core elements of addiction - salience, tolerance, mood modification, conflict, relapse, and withdrawal. Participants expressed their opinion on this scale utilizing a five-point Likert-type scale (1 = very rarely to 5 = very often). Total score ranged from 6 to 30. A higher score suggests higher level of addiction symptoms. The authors reported good psychometric properties of this scale both in Original and Bangla version (Ahmed and Hossain 2018; Andreassen *et al.*, 2012). The *Cronbach's Alpha* of the BFAS in the present study was .824.

Procedure

The above-mentioned data collection instruments were administered to the participants in their classroom. The respondents were communicated about the study goals and importance, and the required rapport was established. The participants were assured that their responses would be keep confidential and used

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only for the study purposes. Along with the questionnaire, they were given written instructions. They were requested to carefully read each item on the questionnaire and to express their thoughts by ticking (√) the appropriate answer boxes that best expressed their feelings. They were also requested not to miss any of the questions on the questionnaire. They were thanked for their enthusiastic participation in the research.

Statistical Analysis

The IBM SPSS version 25 was used to process the collected data. The descriptive statistics (e.g., frequency, percentages, mean, standard deviation, skewness, and kurtosis), the independent two-sample t-test, and binary logistic regression were performed in SPSS. Frequency and percentages were used to assess the number of addicted and lonely participants. Skewness and kurtosis were used to check the normality of the data. Kim (2013) suggested that absolute z-value of skewness and kurtosis over 3.29 suggested non-normality of the distribution when sample size is between 50 and 300. The independent two-sample t-test was performed to assess the mean differences in study variables by gender. The binary logistic regression was performed to estimate the relationship among study variables.

RESULTS AND DISCUSSION

Primary Analysis

TABLE 2: DESCRIPTIVE STATISTICS OF LONELINESS, NUMBER OF FACEBOOK FRIENDS, AND FACEBOOK ADDICTION

Variables	Mean	SD	Skewness		Kurtosis	
			Statistics	SE	Statistics	SE
Loneliness	37.94	10.34	.285	.159	-.621	.317
Number of Facebook friends	515.77	618.64	3.183	.160	14.613	.318
Facebook Addiction	14.33	5.18	.414	.159	-.393	.317

Standard scores (Statistics/SE) of skewness and kurtosis of the loneliness (1.79, -1.96, respectively) and Facebook addiction (2.60, -1.24, respectively) suggested that distribution of these variables were normally distributed. However, standard scores of skewness and kurtosis for the number of Facebook Friends (19.89, 45.95, respectively) suggested that distribution of this variable is not normal. As two out of three study variables are normally distributed, parametric statistical tests were applied to analyze the data.

Final Analysis

Among 234 participants of the present study, 17.9% were classified as addictive Facebook users and 19.7% were having a subjective feeling of loneliness. Ahmed and Hossain (2018) suggested that 19% of Facebook users, studying at universities, are at risk of addiction.

TABLE 3: MEAN DIFFERENCES IN LONELINESS, NUMBER OF FACEBOOK FRIENDS, AND FACEBOOK ADDICTION BY GENDER

Variable	Groups	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	95% Confidence Interval		Effect size
						Lower	Upper	
Loneliness	Male	106	38.75	9.94	1.09	-1.19	4.15	.14
	Female	128	37.27	10.64				
NFF	Male	106	725.67	619.16	4.97***	231.22	535.12	.65
	Female	128	342.51	559.44				
Facebook Addiction	Male	106	14.44	4.34	.31	-1.14	1.55	.04
	Female	128	14.23	5.08				

*** $p < .001$; NFF = Number of Facebook Friends.

Facebook friends of male Facebook users was significantly higher (t -value = 4.97, $p < .001$, 95% CI [231.22, 535.12], effect size = .65) than female Facebook users, very similar to previous reports (Irshad, Saleem, Kausar, and Javaria 2015; Rana, Ahmed, and Hossain 2016). In addition, female users had a significantly few number of Facebook friends than male users and male use Facebook for making new relationships where female use Facebook for maintaining existing relationships, academic purposes, etc. (Mazman and Usluel 2011). The reason behind male participants have higher Facebook friends than female as they use SNSs mostly for acquiring new friends whereas female participants interest in communicating with their real life friends only. Moreover female Facebook users usually concern more with privacy issues than male which limits their excessive number of Facebook friends.

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TABLE 4: REGRESION ANALYSIS OF THE FACEBOOK ADDICTION

		B(SE)	Odds Ratio	95% CI of Odds Ratio		Sig.
				Lower	Upper	
Constant		-1.297 (.25)	.182			<.001
Gender	Male (ref.)	-	-			
	Female	-.813 (.40)	2.255	1.034	4.916	.041
Number of Facebook Friends		.001 (.000)	1.001	1.000	1.001	.016
Loneliness	Non-lonely (ref.)	-	-			
	Lonely	1.060 (.39)	2.885	1.346	6.182	.006

R²= .07 (Hosmer & Lemeshow), .07 (Cox & Snell), .11 (Nagelkerke)

Table 4 shows that Facebook addiction significantly predicted by gender (OR=2.255, 95% CI [1.034, 4.916], p=.014), number of Facebook friends (OR=1.001, 95% CI [1.000, 1.001], p=.016), and loneliness (OR=2.885, 95% CI [1.346, 6.182], p=.006). People, having the experience of loneliness, use internet more for getting emotional support from other internet users (Morahan-Martin and Schumacher 2013). For such support, these users may make more Facebook friends. Klingensmith (2010) suggested that a higher level of friend sickness is positively associated with higher Facebook use. As users have more online friends, they need to spend more time to maintain these relationships. Excessive amount of time spent on Facebook is an indicator of Facebook addiction.

Limitations: The present study had some limitations. That's why results of this study could be considered primary and interpreted with caution, due to the small sample size. Unfortunately, this study could not be conducted over a larger part or other universities of the country due to time and cost issues. There was a possibility that respondents might be overestimated or underestimated the aspects of using Facebook and their addiction on it.

Despite these limitations, this study offers important information regarding the relationship between Facebook addiction and loneliness. This would play an important role by providing valuable information about Facebook addiction to responsive authorities to take proper measure for ensuring the students' sound mental health.

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