FACEBOOK ADDICTION: RELATION WITH DEPRESSION, ANXIETY, LONELINESS AND ACADEMIC PERFORMANCE OF PAKISTANI STUDENTS

Maham Zaffar[1,] Shazara Mahmood[1,] Muhammad Saleem[1*] Ezarina Zakaria[2]

[1]Department of Applied Psychology. The Islamia University of Bahawalpur, Pakistan
[2]Department of Psychology and Human Development. University Kebangsaan Malaysia
*Corresponding email: chsaleem_1@hotmail.com

ABSTRACT: *The subjected study investigates the relationship between Facebook addiction, depression, anxiety, loneliness and academic performance among 150 higher secondary school & college students, including 75 male and 75 female students of Bahawalpur Zone. The data has been collected through convenient purposive sampling by using Bergen Facebook Addiction Scale Andreaessen and colleagues for measuring Facebook addiction, Patient Health Questionnaire–9 (2006) for measuring depression, Severity Measure for Generalized Anxiety Disorder for measuring anxiety © 2013 American Psychiatric Association, UCLA loneliness scale (1996) was used to measure loneliness & academic performance was measured by asking their previous class percentage. Correlation technique was employed for statistical analysis and significance was measured. Study revealed that there is linear interaction between Facebook addiction and anxiety as well as depression, however there was no correlation found between Facebook addiction, loneliness & academic performance. According to stated study it is concluded that Facebook is imparting negative impact on mental and social life of the students which are spending maximum time. The study also reveals that in future prospective interaction may be occurring on the performance of the students in their respective studies. Suggestions are made to conclude the study that some monitoring bodies must be implanted to monitor the misuse of social sites.*

Key terms: Facebook Addiction, Depression, Anxiety, Loneliness, Academic Performance, Pakistani Students

INTRODUCTION

One would have never imagined that a tool for networking developed solely for U.S military in 1969 would turn into a rich wellspring of information, stimulation, correspondence and numerous more. Significant advantages have been drawn from networking sites being a connecting and specialized medium. It is through the social networking sites that millions of people can be connected. Obviously it is an amazing thing that with a single click one passes information to thousands of people in a fraction of seconds, that's the power of social media. Social Media and the youth are quite inextricable [1]. Facebook is the most recent and largest social networking site ranks among the top five websites in the world. This popularity thus led to Facebook being a significant research topic. Facebook has induced social anxieties and pressures, as a notable number of people check Facebook even before getting out of bed. On the basis of several research findings on Facebook, it has been found that it's having a great impact on the lives of young people especially students. Most of the researches were carried out in other countries, so it was found necessary and important to carry out a study in Pakistan on the impact of Facebook on the HSSC students. The Pakistani population, more particularly the HSSC students of Bahawalpur, has not been spared as most of them are now connected to online social networks such as Facebook on a daily basis. Such a study would provide an insight on the influence of Facebook on the mental health, behavior, mood, loneliness and academic performance of HSSC students in the country.

Every pleasurable behavior influences our mood, consciousness and modify functioning of the brain. If such behaviors are used on a regular basis, they can cause impairment in life functioning the rewards given by Facebook accessing leads to the possibility of the user becoming addicted to it. There is preliminary evidence that although Facebook addiction is not a serious problem as drug and alcohol addiction is, but its overuse produces tolerance and withdrawal symptoms. Facebook addiction is spending an excessive amount of time on Facebook to such an extent that it interferons life and important activities [2]. There is a likelihood that heavy Facebook use can steer to mental illnesses such as depression and anxiety.

By now, the Facebook irony is known to most. It has been linked to undesirable mental health consequences such as Depression. Depression is not just sadness, people with it face significant impairment in their daily functioning such as lack of interest, pleasure, concentration, energy in daily activities, weight and sleep disturbances, worthless and guilt feelings and suicide ideation[3]. People being addicted to Facebook use it daily and compare their live with those of others known as "social comparison" , if it's an upward comparison it tends to make people feel more then worse due to which they may start living aloof. They may also develop anxiety to acquire those things which they have compared with the people.

Emotion characterized by worrying thoughts, tensed feeling, and increased blood pressure is known as anxiety [4].Anxiety levels are increased by Facebook as they take stress by comparing themselves with others, generate excessive worry about what's going on while they are offline which motivates them to continually check their profiles, notifications, newsfeeds etc. people get upset and uneasy if they are unable to access Facebook because of the constant impulse to check it The constant impulse to check updates also lead to frequent social comparison which intern leads to feelings of inadequacy and loneliness.

Loneliness is a universally common experience. Most people are probably going to have a significant experience of loneliness at some point in their lives. Loneliness is more of a

subjective and can be quantified through questions inquiring about ones feelings and perception about social activities and relationships. Victor and his colleagues [5] viewed loneliness as, a state where an individual can possibly interface with others however not doing as such is or an inconsistency between ones real and desired expectation of interaction with others and a perceived social interaction deprival. There is a positive and opposite both the relationship between the Facebook addiction and loneliness. On one hand, the more people use the Facebook, the lonelier they feel. On the other hand, lonely people tend to use Facebook and other such sites to spend the quality time. So it's harder to decide that "connectedness" is helpful or harmful. People tend to spend so many hours on Facebook which keep them away from making real connections through face to face contact with people around them , indulging in daily activities hence develop loneliness, lessened concentration, poor school attendance, lower school grades, dropping out of school etc. which results in poor academic performance[6].

Academic performance is how well one does in studies. Poor grades are considered bad academic performance. The lives of students have dramatically change over time ,now a days they live a life of social media including Facebook especially , they post & check status frequently, they text and tweet more than they talk to the person next to them. There is a continuous distraction in their lives because of notifications of Facebook, although it's an era of multi-tasking but responding to the notifications whilst studying affects the academic performance as it becomes unmanageable & may lead to procrastination. Even though still many are the people who have no negative impact on their academic performance [7].

LITERATURE REVIEW

The Facebook operates in such a great speed that it makes the users obtain new information in a more efficient way that may in turn help to improve the learning performance of students as to other online sites. Therefore, many researchers have begun to study that why students use Facebook, how its use influences students, affect their daily life and what students think about it [8]. Oluwole Folaranmi [9] observed the low levels of Facebook addiction among selected Nigerian undergraduates which was 1.6%.Further more multiple signs of Facebook addiction was shown by Research in Pakistan on medical students [10].

Article "Facebook depression?' Social networking site use and depression in older adolescents," Passed on to light a basic issue that until starting late has not been adequately given thought in behavioral physiology, mind research and psychiatric investigation [11]. Low self-esteem, low motivation, loneliness, anxiety and fear of rejection all are normally seen in depressive individuals, who may bring about successive utilization of the web, and the intuitive elements of the web subsequently prompt web dependence in people with such qualities according to [12]. The new findings show that Facebook overuse leads to depression. Facebook use among supple children can strengthen emotions of socially relating, yet have totally inverse impact on the individuals who are susceptible to depression [13]. In a study, depression was found being associated with internet and text messaging [14], another study revealed that excessive time on computer is mostly spent by adults with major depressive disorder found that adult spent more time on computers who have major depressive disorder[15]. Similar findings were also found in China [16, 17], Norway [18] South Korea [19, 20], and Iran [21].The study by Husain, Creed and Tomeson confirms the high prevalence of depressive disorders in Pakistan [22].

Anxiousness or anxieties are among factors that have been used to foresee overuse of Facebook. Internet addiction has been reported to be having association with anxiety disorders [23, 24]. the findings showed that, Facebook use is a significant predictor to anxiety and psychological worries they experience, virtual social contact is expanded through Facebook which consequently prompts to increased anxiety and worry amongst them [25].

Loneliness is particularly pertinent and important to be investigated among adolescence [26]. According to Sheldon socially anxious Individuals are more inclined to use Facebook in order to reduce their loneliness [27, 28]. Increased loneliness was predicted by intense Facebook use [29]. Morahan-Martin and Schumacher found undergraduate students who engage in pathological Internet use experience more loneliness as compared to those who do not [30]. Loneliness is identified to be the cause and effected by the problematic Internet use [31]. Studies have also shown that lower levels of loneliness are related to Facebook usage [14]. Study on undergraduate students of Pakistan revealed high levels of loneliness due to internet addiction [32].

Where, there are so many benefits of Facebook use there are hazards too. Visiting Facebook for the youth of Pakistan is becoming an addiction day by day. As they can't live without it during even their study time. This is leading to poor academics. Access to technology contributed to the learning enhancement of the students [33]. The quantity of use is not as important as quality of technology as it may be harmful when it's about students achievement [34]. Studies have found no effects of Facebook use on academic achievement, Kolek and Saunders found that Facebook use and GPA are not correlated [35]. An Exploratory study also found Facebook use being negatively correlated with academic achievement [36]. A cross sectional survey research indicated no significant relationship between Facebook addiction and academic performance [37]. Whereas, research conducted in Pakistan showed that internet use is one of the major factor effecting the academic performance [38]? Empirical study in Pakistan revealed the significant positive relationship between the social networking sites (Facebook & twitter mostly used) and students' academic performance [39].

Problematic internet use is correlated to depression [40, 41]. Studies have found a correlation between psychomotor agitation and anxiety [42], social anxiety and loneliness [43-46], academic performance [47-50]. Tokunaga and Rains found significant relationship between loneliness and internet use, and depression, and problematic Internet use [51]. Therefore it can be concluded that using Facebook as a part of moderate levels has beneficial outcome on people, however inordinate use of Facebook results in anxiety, loneliness, depression and poor academic performance

Researches have examined effect of internet use on academic performance and social life [38], Facebook addiction: narcissistic behavior and self-esteem [52], Facebook addiction, big five personality factors and academic performance [53]. However the précised role of Facebook addiction has not been studied hence research is expected to be conducted to look at whether using Facebook addiction has any association with anxiety, depression, loneliness and academic performance. Hence, the present research focuses on impacts of Facebook. The basic purpose of current research is primarily to inspect the Facebook addiction among HSSC students and secondly to assess the relationship between Facebook and mental health variables (depression & anxiety) and social variables (loneliness and academic performance). We speculate that intemperate Facebook use leads to impairment in mental health and poor academics.

Rationale of the Study
The pervasive and rapidly expanding force of disease i.e. Facebook addiction has been a topic of significant research for the last few years. The costs associated with Facebook addiction can be high in physical, psychological and social terms especially the problem becomes more severe in country like Pakistan where parental check and balance is not very strict. Keeping in view that Facebook addiction is one of the common prevailing addictions in Pakistan. Current study expects to find out the impact of Facebook addiction: anxiety, depression, loneliness and academic performance among HSSC students of Pakistan.

Objectives
The objectives of the present study are stated below:
1.   To estimate the effect of Facebook addiction on depression among HSSC students.
2.   To estimate the effect of Facebook addiction on anxiety among HSSC students.
3.   To estimate the effect of Facebook addiction on loneliness among HSSC students.
4.   To estimate the effect of Facebook addiction on academic performance among HSSC students.

Hypotheses
The following hypotheses are formulated
H_1 : Facebook Addiction is a significant predictor of Depression among HSSC students.
H_2: Facebook Addiction is a significant predictor of Anxiety among HSSC students.
H_3: Facebook Addiction is playing significant role in inducing loneliness among HSSC students.
H_4: Facebook Addiction is playing significant role in effecting Academic Performance among HSSC students.

METHOD
Characteristics of Participants
The sample consisted of 150 HSSC students, of different colleges of Bahawalpur, Pakistan. Sample consisted of 75 female and 75 male students. Open ended Survey research design was used to collect the data. The rationale to include students at this level was that they need to work hard in order to attain marks to enter the graduate level of studies, i.e., Medical, engineering, marketing etc. Only HSSC students

were included as they are at the important level of their education.

Inclusion and Exclusion Criteria
Only HSSC students of Bahawalpur were invited to participate and participants were neither diagnosed with anxiety and depressive disorder nor was psychotropic medication used.

Measures and Covariate
The questionnaire comprised of a demographic form enquiring about the age, gender, previous academic performance, The Bergen Facebook Addiction Scale, Patient Health Questionnaire–9, Severity Measure for Generalized Anxiety Disorder, & UCLA loneliness scale version 3 was used on the respondents

The Bergen Facebook Addiction Scale (BFAS) [54] is an 18 itemed scale, scored on Likert scale of 5point on a continuum ranging from Very rarely-very often

Patient Health Questionnaire–9 [PHQ-9] [55] is a self-rated scale of 9 items scored on a continuum of 4-points ranging from not at all to nearly every day continuum, its total score is 27.

Severity Measure for Generalized Anxiety Disorder [56]. This is a 10-item measure for generalized anxiety, scored on a scale of 5-point with a scoring range 0-40.

UCLA loneliness scale version 3 [57]. This is A 20-item scale, scored on a scale from 1(never) - 4(often) with a scoring range 1- 80 and cut off score 30.

Procedure
Students were selected on the basis of their availability and interest. The questionnaires were administered on willing students fulfilling the inclusion/exclusion criteria. Respondents were instructed the procedure and were assured that their information shared would be kept confidential and only be used for research purpose. All the questionnaires required around 20 minutes to administer. Statistical Package for Social Sciences (SPSS) 21 software and descriptive statistics [58] was initially run to analyze the data following to it the correlation was analyzed.

Research Design
Cross-sectional quantitative open survey research design was used to collect data

Ethical Considerations
The participants were selected after their consent and were assured that, all the data and information provided by the participants would be kept confidential and only be used for the research purpose.

RESULTS
The table 1 shows that the Pearson correlation between Facebook Addiction and Depression is 0. 385 which shows the huge positive correlation between Facebook Addiction and Depression. Whereas the p-value is 0.000 between the two which is lesser than 0.025, shows that there is a significant relationship between Facebook Addiction and Depression.
The table 2 shows that the Pearson correlation between Facebook Addiction and Anxiety is 0.508 which shows the strong positive correlation between Facebook Addiction and Anxiety. Whereas the p-value is 0.000 between the two

which is lesser than 0.025, shows that there is a significant relationship between Facebook Addiction and Anxiety.

The table 3 shows that the Pearson correlation between Facebook Addiction and Academic Performance is .072

which shows the positive correlation between Facebook Addiction and academic loneliness. Whereas the p-value is 0.191 between the two which is greater than 0.025, shows

Table 1 *Correlation Analysis of Depression &Facebook Addiction.*

		Depression	Facebook Addiction
Pearson Correlation	Depression	1.000	.385
	Facebook Addiction	.385	1.000
Sig. (1-tailed)	Depression	.	.000
	Facebook Addiction	.000	.
N	Depression	150	150
	Facebook Addiction	150	150

Table 2 *Correlational Analysis of Anxiety &Facebook Addiction.*

		Anxiety	Facebook Addiction
Pearson Correlation	Anxiety	1.000	.508
	Facebook Addiction	.508	1.000
Sig. (1-tailed)	Anxiety	.	.000
	Facebook Addiction	.000	.
N	Anxiety	150	150
	Facebook Addiction	150	150

Table 3 *Correlational Analysis of Loneliness &Facebook Addiction.*

		Loneliness	Facebook Addiction
Pearson Correlation	Loneliness	1.000	.072
	Facebook Addiction	.072	1.000
Sig. (1-tailed)	Loneliness	.	.191
	Facebook Addiction	.191	.
N	Loneliness	150	150
	Facebook Addiction	150	150

Table 4 *Correlation between Facebook Addiction and Academic Performance.*

		Academic Performance	Facebook Addiction
Pearson Correlation	Academic Performance	1.000	-.017
	Facebook Addiction	-.017	1.000
Sig. (1-tailed)	Academic Performance	.	.418
	Facebook Addiction	.418	.
N	Academic Performance	150	150
	Facebook Addiction	150	150

that there is no significant relationship between Facebook Addiction and loneliness.

The table 4 shows that the Pearson correlation between Facebook Addiction and Academic Performance is -0.017 which shows the negative correlation between Facebook Addiction and Academic Performance. Whereas the p-value is 0.418 between the two which is greater than 0.025 shows

that there is no significant relationship between Facebook Addiction and Academic Performance.

DISCUSSION

The results revealed that there was a strong correlation between Facebook addiction & anxiety, & Facebook addiction & depression. Whereas no strong correlation was found between the Facebook addiction & loneliness, & Facebook addiction & academic performance. No strong correlation was found for loneliness & academic performance. Therefore, in our study Facebook addiction is playing a significantly huge role in causing anxiety and depression among HSSC students of Bahawalpur City. Whereas Facebook has no significant relation with loneliness and anxiety among HSSC students of Bahawalpur City.

The current study results suggested that addiction is playing significant role in causing depression among HSSC students (H1). Around the world numerous studies have supported the result. Studies found problematic internet use being correlated to depression [40,41]. Study revealed an association among depression and internet dependency [29]. A cross-sectional study by [31], depression was found to be as one of the discriminating factors for Internet addiction [40]. In a study moderately consistent relation between depression, and problematic Internet use was found [51]. Adults with major depressive disorders have found to be spending excessive amounts of free time on computers [15]. In Pakistan a research revealed that multiple signs of Facebook addiction were present in medical students [10].

Facebook addiction is playing significant role in causing anxiety among HSSC students (H2) was exhibited by the current study. Many researches supported result like Edinburgh Napier University showed positive correlation between Facebook use and anxiety [25]. Studies have examined the correlation between problematic internet use and anxiety [42] .Internet addiction has been reported to be having association with anxiety disorders [23, 24 & 43-46], academic performance [47-51].

Results of the study showed that Facebook addiction is not playing a significant role in inducing loneliness among HSSC students (H3). This means that according to our study there is no correlation between addiction and loneliness whereas most of the studies are contradictory to it as According to Sheldon individuals who are socially anxious are more likely to use to reduce their loneliness [27]. Study by Lou, Yan, Nickerson and McMorris found increased loneliness among intense internet users [29]. Many Previous studies have shown that use is related to lower levels of loneliness [14]. Studies have shown internet use correlated to loneliness and social anxiety [43-46].where as In Pakistan research on undergraduate students showed high levels of loneliness due to internet addiction [32].

The study also revealed insignificant role of Facebook addiction in effecting academic performance among HSSC students (H4), which means that there is no effect of addiction over academic performance. The reasons can be that students use for the sake of educational purpose and discuss educational matters on it. Studies examined no relationship between academic performance and use of computer [7]. No correlation between internet use and GPA was found in a study among students [35]. A cross-sectional survey in Jimma university Ethiopia among university students on relationship between Facebook addiction & academic performance indicated no positive relationship between the two [37]. An exploratory research reported a negative correlation between use and academic achievement [36]. Study conducted on selected undergraduate students revealed low levels of Facebook addiction which might be due to low level of internet accessibility [9].Strong correlation have been examined by Kubey, Lavin, and Barrows between poor academic performance and internet use [6]. Studies showed that there was a significant correlation between addiction & academic performance among students [47-51, 59]. The studies conducted in Pakistan showed that there is a significant positive relationship between academic performance and social networking sites like Facebook and twitter [39], internet use and academic performance [38].

The findings of the study have some important implications in the field of clinical psychology and academics in Pakistan. Findings of current research have numerous implications for colleges, universities and government regulatory bodies who may put some law and appeals to limit the potentially addictive usage of Facebook especially for those students whose personalities are more prone to developing addiction. Clinicians will benefit from present study findings as these may help them in formulating appropriate treatment approaches and therapy according to their individual needs. Finally, this research may help future researches in different ways like replication of original findings in other populations, and possibly supplement the additional diagnostic tools, formation of new therapeutic interventions.

Current research had some limitations. This research was limited in its respondents because of being limited to HSSC students only, it should be investigated at reasonable magnitude. Secondly a convenient sampling was used which confines the finding generalizability beyond students populations.

It can be deduced from the findings that moderate levels of Facebook usage has positive effect on students, but excessive use has converse relation to students. While it has insignificant relationship with loneliness and academic performance.

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