FACEBOOK ADDICTION AND LONELINESS OF UNIVERSITY STUDENTS FROM SAGAING DISTRICT

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Abstract

The primary purpose of this study is to examine Facebook addiction and loneliness of university students from Sagaing District. The sample consists of 760 university students (368 males and 392 females) from Sagaing University of Education, Sagaing University, Cooperative University Sagaing and Sagaing Technological Unversity. Bergen Facebook Addiction Scale designed by Andreassen, Torsheim and Brunborg (2012) was used to measure Facebook addiction of university students. The Revised UCLA Loneliness Scale designed by Russell, Peplau and Cutrona (1980) and Russell and Cutrona, (1988) was used to measure loneliness of students. According to results, 11.97% of the university students had higher level of Facebook addiction and male students were more addicted to Facebook than females. There were significant differences in Facebook addiction by university, by the time participant spend on Facebook in a day. Then, male students feel more loneliness than females. There were significant differences in loneliness by university. Finally, there was a significant positive correlation between Facebook addiction and loneliness.

Keywords: Facebook addiction, Loneliness

Introduction

As the youth of 21st century, being familiar with modern social media, Facebook is essential. Facebook has a total number of 2.2 billion user's monthly active, who spend hours per day on it (Donnelly, 2018).

Facebook is great for communication, networking and planning events. It is a social platform that was designed to connect people and clearly it achieves this in a number of ways. It also offers the opportunity of self-presentation, of creating and maintains relationships of manifesting different social and individual interest.

In Myanmar, Facebook is the most popular online social media and there are 16 million Facebook users. According to research by NapoleonCat.com, over 53% of all Facebook users who live in Myanmar are aged 18-24, the age of university students. Today's university students highly value Facebook and have integrated it into all aspects of their lives. Even though the use of these new technologies on the lifestyle of school age children and youth are beneficiary, such as better communication and self- improvement, the over using or misusing of Facebook may result in some physical and mental injury.

Facebook's utility and popularity often masks its more psychologically damaging aspects. Like everything else, there is an acceptable level of use and an unacceptable level of use, a point where normality becomes abuse and a point where the average social media user becomes a Facebook addict. Some of the people may feel a compulsion to check Facebook constantly and have trouble going one day without it. For a minority, the situation is a lot worse. Some people do not just feel compelled to use Facebook, but their Facebook use has become so out of control that it interferes with work, studies, relationships and normal social functioning. This is the point when a habit turns into an addiction or a pathological disorder.

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Facebook addiction is a common problem among adults, and young people (Cao Lin, Hanh Le, & Cheng, 2012). Facebook addicts display issues concerned with friendships, family, work or school environment. Addicts begin to spend less time with their friends, relatives or families, and stay home all day, activating on Facebook and being passive at the events that happen around them (cited in Balci et al, 2013).

Human beings are social creatures and they all need love and affection, as well as face-to-face communication with others (Shaw & Gant, 2002). It has been suggested that people possess a need to belong and if these needs are not met it can affect their emotions and drive them to experience negative emotional feelings such as loneliness (Baumeister & Leary, 1995). Loneliness is an important psychological problem that more people suffer in this modern era although there are a lot of tools which enables them to become more sociable. Loneliness has been defined as an experience that occurred when a person's network of social relations is lacking in some important way, either qualitatively or quantitatively (Peplau & Perlman, 1982; Perlman & Peplau, 1981). It is a complex and unpleasant feeling that usually arises when individuals experience a disparity between current social relations and desired social relations (Peplau & Perlman, 1982; Perlman & Peplau, 1981). Loneliness is a universal, depressing and a draining condition that can have a great effect on individuals' lives. It has been reported that it can make individuals feel as they are the only person in the world, and some go to the extreme and state that it can decrease individuals desire to live (Killeen, 1998).

By the review of some of the surveys, social communication by internet indicates it is very weak compare to face to face interaction and in the long run, it makes the over users to becomes lonelier (Shojaiee, 2008). Moreover, loneliness can also lead to negative impact on the physical wellbeing (Kristin, 2016). So, it is critical for researchers to focus on university students to gain a dynamic understanding of Facebook addiction and loneliness. Meanwhile, the previous studies have conflicting results as to the relationships of Facebook addiction and loneliness of students. While the study of Steggink (2015) show a significant relationship between Facebook addiction and loneliness, but a recent study of Karakose et al. (2016) reveals no significant relationship between the two variables. So, it is deemed relevant to study the relationship of Facebook addiction and loneliness in Myanmar society. But rooting research in Facebook addiction is really rare in Myanmar. In the recent years, there is one research about Facebook use and self-esteem done by Khin Mar Myint(2015) from Sagaing University of Education. But this research only revealed just normal usage of Facebook rather than addictive use of Facebook. So, this study would examine mainly on addictive use of Facebook and whether the relationship of the two variables Facebook addiction and loneliness exists or not among the university students of Myanmar context.

Aim of the Study

The main aim of this study is to examine Facebook addiction and loneliness of university students from Sagaing District.

The specific objectives are as follow:

1. To explore Facebook addiction of university students by gender.
2. To compare Facebook addiction of university students by university.
3. To compare Facebook addiction of university students by the time participant spend on Facebook in a day.

4. To compare loneliness of university students by gender.
5. To compare loneliness of university students by university.
6. To find out the relationship between Facebook addiction and loneliness of university students.
7. To find out the impact of Facebook addiction on loneliness of university students.

1.3 Research Questions

1. Are there any statistically significant differences in Facebook addiction of university students by gender?
2. Are there any statistically significant differences in Facebook addiction of university students by university?
3. Are there any statistically significant differences in Facebook addiction of university students by the time participant spend on Facebook in a day?
4. Are there any statistically significant differences in loneliness of university students by gender?
5. Are there any statistically significant differences in loneliness of university students by university?
6. Is there any significant relationship between Facebook addiction and loneliness of university students?
7. Is there any impact of Facebook addiction on loneliness of university students?

Scope of the Study

In this research, university students from Sagaing District of Myanmar were selected as participants.

Definitions of Key Terms

Facebook is the name of social networking site that was launched in 2004 (Dictionary. com, 2012).

Addiction is the need of strong desire to do or to have something, or a very strong liking for something (Cambridge Dictionary, 2018).

Facebook Addiction is a term coined by researchers that is applied to individuals who engage in excessive, compulsive Facebook use for the purpose of mood alternation, with negative personal outcomes (Ryan. et al., 2014).

Loneliness is the response of an individual with a lack of social relationships, or a lack of closeness, sincerity and emotionality in relationships, even though the individual has various social relationships (Ozben, 2014).

Methodology

Sampling

The survey research was conducted for the university students from Sagaing District. The university students who are attending in Sagaing Co-operative University, Sagaing Technological University, Sagaing University and Sagaing University of Education participated in this study. The sample consists of 200 university students from each university. The students were randomly selected. The total of participants in this study was 800 university students.

Method

Descriptive research design and questionnaire survey method were used in this study.

Instrumentation

In this study, Bergen Facebook Addiction Scale (BFAS, Andreassen, Torsheim & Brunborg, 2012) and the Revised UCLA Loneliness Scale designed by Russell, Peplau & Cutrona (1980) and Russell & Cutrona, (1988) were used to assess Facebook addiction and loneliness of university students. The Facebook Addiction Questionnaire was composed of 18 items and the Revised UCLA Loneliness Scale was composed of 20 items. The instrument were transformed into Myanmar version and expert's reviews were requested. The respondents completed the instrument using a Likert scale of four answers; ranging from ─strongly disagree to strongly agree. In this Questionnaire, the scores on (strongly disagree) items represented the lowest level of Facebook addiction while the scores on (strongly agree) indicated the highest level. The internal consistency (Chronbach alpha) of Bergen Facebook Addiction Scale and the Revised UCLA loneliness scale were 0.901 and 0.858 respectively.

Data Analysis

The data getting from questionnaires were entered into a computer data file and analyzed by using SPSS software. By descriptive analysis, the mean, standard deviation, maximum and minimum scores for participants' Facebook addiction scale and loneliness scale were calculated. Independent samples *t* test analysis was used to investigate whether there was a significant difference in Facebook addiction and loneliness of university students by gender. Then, to investigate whether there were significant differences between Facebook addiction and loneliness by university and by the time participant spend in Facebook in a day, one-way ANOVA was conducted. And then, Pearson-Product Moment Correlation was carried out to find out if there were any significant correlations between Facebook addiction and loneliness of the university students. Finally, bivariate or simple linear regression was conducted in order to be able to indicate prediction of one variable from another to investigate the impact of Facebook addiction on loneliness of university students.

Findings

Descriptive Statistics for Facebook Addiction

Facebook addiction scores of university students were pointed out by descriptive statistics. In terms of descriptive statistics, minimum and maximum scores, mean and standard deviation of the students' Facebook addiction were presented in Table 1.

Table 1 Descriptive Statistics for Facebook Addiction of Students

Variable	*N*	Minimum	Maximum	Mean	*SD*
Facebook Addiction	760	18	69	37.81	8.281

As shown in Table 1, the mean score in students' Facebook addiction was 37.81 and standard deviation was 8.281. The maximum score of students' Facebook addiction was 69 and minimum score was 18. The theoretical mean score is 45 and it was higher than the observed mean score. Therefore, in general, most of the students of the current study had low level of Facebook addiction.

Comparison of Facebook Addiction of Students by Gender

To find the difference in Facebook addiction between male and female descriptive analysis was conducted. The mean and standard deviations of male and female students were described in Table 2.

Table 2 The Result of Independent Samples *t* test on Facebook Addiction of Students by Gender

Variable	Gender	N	Mean	SD	Mean Difference	t	df	p
Facebook Addiction	Male	368	38.81	8.770	1.93	3.32***	785	0.001
	Female	392	36.88	7.689				

Note: ***The mean difference is significant at 0.001 level.

According to the results of Table 2, there were significant differences in Facebook addiction between males and females (*p*=0.001). So it can be said that male students have higher level of Facebook addiction than females.

Comparison of Facebook Addiction of Students by University

In order to investigate whether there were significant differences in Facebook addiction of students by university, descriptive statistics was conducted. All the four universities were coded in University 1, 2, 3 and 4. The mean scores and standard deviation of students' Facebook addiction by university were presented in Table 4.

Table 3 Descriptive Statistics for Facebook Addiction of Students by University

Variable	University	N	Mean	SD
Facebook Addiction	University 1	190	38.91	8.102
	University 2	190	36.76	7.956
	University 3	190	36.68	8.280
	University 4	190	38.89	8.552

According to Table 3, University 1 has the highest mean score and University 3 has the lowest mean score.

To explore the significant differences in students' Facebook addiction by university, one-way analysis of variance (ANOVA) was used.

Table 4 Results of ANOVA for Facebook Addiction of Students by University

Students' Facebook Addiction	Sum of Squares	df	Mean Square	F	p
Between Groups	900.541	3	300.180	4.437**	.004
Within Groups	51147.553	756	67.655		
Total	52048.093	759			

Note: **The mean difference is significant at 0.01 level.

ANOVA results showed that there were significant differences in Facebook addiction by university at 0.01 level. To obtain more detailed information in each group, Post-Hoc test was executed by Tukey HSD method.

Table 5 Result of Tukey HSD for Facebook Addiction of Students according to University

University(I)	University(J)	Mean Difference (I-J)	p
University 1	University 2	2.147	.054
	University 3	2.226[*]	.042
	University 4	.021	1.000
University 2	University 1	-2.147	.054
	University 3	.079	1.000
	University 4	-2.126	.058
University 3	University 1	-2.226[*]	.042
	University 2	-.079	1.000
	University 4	-2.205[*]	.045
University 4	University 1	-.021	1.000
	University 2	2.126	.058
	University 3	2.205[*]	.045

Note: * The mean difference is significant at the 0.05 level.

According to the Table 5, there was significant difference between University 1 and University 3 ($p<0.05$). There was also significant difference between University 4 and University 3 ($p<0.05$). It can be interpreted that students from University 1 and 4 have higher level of Facebook addiction than the other two universities and students from University 3 are least addicted to Facebook in comparing with the last three universities.

Comparison of Facebook Addiction of Students by the Time Participant Spend on Facebook in a Day

In order to investigate whether there were significant differences in students' Facebook addiction by the time participant spend on Facebook in a day, descriptive statistics was conducted.

Table 6 Descriptive Statistics for Facebook Addiction of Students by the Time Participant spend on Facebook in a Day

Variable	Hour	N	Mean	SD
Facebook Addiction	Over 1 hour	313	34.76	7.919
	Over 2 hours	196	38.51	7.198
	Over 3 hours	153	39.66	7.674
	Over 4 hours	60	41.60	7.452
	Over 5 hours	38	45.95	9.355

According to Table 6, the students who had used Facebook over 5 hours in a day have the highest mean score and those who had used Facebook over 1 hour in a day have the lowest mean score.

To explore the significant differences in students' Facebook addiction by the time spent of the respondent by using Facebook, one way analysis of variance (ANOVA) was used.

Table 7   Results of ANOVA for Facebook Addiction of Students by Time Participant Spend on Facebook in a Day

	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	6914.946	4	270.718		
Within Groups	45133.147	755	67.504	4.010**	.003
Total	52048.093	759			

Note: **The mean difference is significant at 0.01 level.

According to Table 7, ANOVA results showed that there were significant differences in Facebook addiction by the time participant spend on Facebook in a day at 0.01 level. To obtain more detailed information in each group, Post-Hoc test was executed by Games-Howell method.

Table 8 Result of Games-Howell for Facebook Addiction of Students by the Time Participant Spend on Facebook in a Day

(I) Hour	(J) Hour	Mean Difference (I-J)	Sig.
Over 1hour	Over 2 hours	-3.753[*]	.000
	Over 3 hours	-4.903[*]	.000
	Over 4 hours	-6.843[*]	.000
	Over 5 hours	-11.190[*]	.000
Over 2 hours	Over 1 hour	3.753[*]	.000
	Over 3 hours	-1.150	.642
	Over 4 hours	-3.090	.054
	Over 5 hours	-7.437[*]	.000
Over 3 hours	Over 1 hour	4.903[*]	.000
	Over 2 hours	1.150	.642
	Over 4 hours	-1.940	.468
	Over 5 hours	-6.287[*]	.000
Over 4 hours	Over 1 hour	6.843[*]	.000
	Over 2 hours	3.090	.054
	Over 3 hours	1.940	.468
	Over 5 hours	-4.347	.053
Over 5 hours	Over 1 hour	11.190[*]	.000
	Over 2 hours	7.437[*]	.000
	Over 3 hours	6.287[*]	.000
	Over 4 hours	4.347	.053

Note: * The mean difference is significant at the 0.05 level.

As shown in Table 8, there were significant differences between 1 hour users and the other users. It can be interpreted that those who use Facebook over 2 hours and above in a day are supposed to have higher level of Facebook addiction.

Descriptive Statistics for Loneliness

Students' loneliness scores were pointed out by descriptive statistics. In terms of descriptive statistics, minimum and maximum scores, mean and standard deviation of the loneliness scores were presented in Table 9.

Table 9 Descriptive Statistics for Loneliness Students

Variable	*N*	Minimum	Maximum	Mean	*SD*
Loneliness	760	20	63	35.78	7.294

As shown in Table 9, the mean score in students' loneliness score was 37.78 and standard deviation was 7.294. The maximum score of students' Facebook addiction was 63 and minimum score was 20.The theoretical mean score is 50 and it is higher than the observed mean score. Therefore, the students in the current study had low level of loneliness.

Comparison of Loneliness of Students by Gender

To find the difference between male and female students' loneliness, descriptive analysis was conducted. The mean and standard deviations of male and female students were described in Table 10.

Table 10 The Result of Independent Samples t test on Loneliness of Students by Gender

Variable	Gender	*N*	Mean	*SD*	Mean Difference	*t*	*df*	*p*
Loneliness	male	368	36.39	7.570	1.166	2.209*	758	0.027
	female	392	35.22	6.988				

Note: *The mean difference is significant at 0.05 level.

According to the results of Table 10, there were significant differences in loneliness between males and females at 0.05 level. So it can be said that male students feel more loneliness than females.

Comparison of Loneliness of Students by University

In order to investigate whether there were significant differences in students' loneliness by university, descriptive statistics was conducted. All the four universities are coded in University 1, 2, 3, and 4. The mean scores and standard deviation of students' loneliness by university were presented in Table 16.

Table 11 Descriptive Statistics for loneliness of Students by University

Variable	University	*N*	Mean	*SD*
Loneliness	University 1	190	36.04	7.876
	University 2	190	35.05	6.414
	University 3	190	34.87	7.023
	University 4	190	37.18	7.600

According to Table 16, the mean score of University 4 is highest and that of University 3 was lowest.

To explore the significant differences in students' loneliness by university, one way analysis of variance (ANOVA) was used.

Table 12   Results of ANOVA for Loneliness of Students by University

Students' Loneliness Scores	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	644.747	3	214.916	4.089**	.007
Within Groups	39737.863	756	52.563		
Total	40382.611	759			

Note: **The mean difference is significant at 0.01 level.

ANOVA results showed that there were significant differences in loneliness by university at 0.01 level. To obtain more detailed information in each group, Post-Hoc test was executed by Games-Howell method

Table 13 Result of Games-Howell for Loneliness of Students by University

University(I)	University(J)	Mean Difference(I-J)	Sig.
University 1	University 2	.995	.532
	University 3	1.174	.419
	University 4	-1.137	.480
University 2	University 1	-.995	.532
	University 3	.179	.994
	University 4	-2.132*	.017
University 3	University 1	-1.174	.419
	University 2	-.179	.994
	University 4	-2.311*	.012
University 4	University 1	1.137	.480
	University 2	2.132*	.017
	University 3	2.311*	.012

Note: * The mean difference is significant at the 0.05 level.

As shown in Table 13, University 4 has significant differences in comparing with University 2 and University 3. It can be interpreted that students from University 1 and 4 feel more loneliness than the students from University 2 and 3.

The Relationship between Facebook Addiction and Loneliness of University Students

In order to investigate the relationship between Facebook addiction and loneliness of university students, Pearson Product-Moment Correlation was applied.

Table 14 Correlation between Facebook Addiction and Loneliness of University Students

Variable	Facebook Addiction	Loneliness
Facebook Addiction	1	.336**
Loneliness	.336**	1

Note: ** Correlation is significant at the 0.01 level (2-tailed).

According to Table 14, the result indicated that there was a significant positive correlation between the students' Facebook addiction and loneliness (r = .366) at o.01 level which indicated that as Facebook addiction increased, loneliness will increase accordingly. Thus, it can be interpreted that students who addicted to Facebook feel more loneliness than those who are not addicts.

The Impact of Facebook Addiction on Loneliness of University Students

Then, bivariate or simple linear regression was conducted in order to be able to indicate prediction of loneliness from Facebook addiction. In order to know the percentage of prediction of loneliness from Facebook addiction, the model summary of predictor, the Facebook addiction item total, was described in the following model summary Table 4.21.

Table 15 Model Summary for Facebook Addiction and Loneliness of University Students

Model	*R*	*R* Square	Adjusted R Square	Std. Error of the Estimate
1	.336[a]	.113	.112	6.874

a. Predictors: (Constant), Facebook Addiction

The result indicates that the adjusted R square was 0.113. This indicates that 11% of the variance in loneliness was explained by Facebook addiction of the students.

The relationship between Facebook addiction and loneliness of students can be identified by the regression coefficient, which is the slope of the best-fit line or regression line. The regression coefficient was described in the following Table 16.

Table 16 Result of Regression Coefficient for Facebook Addiction and Loneliness of University Students

Model		Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.583	1.166		21.079	.000
	Facebook Addiction	.296	.030	.336	9.832	.000

a. Dependent Variable: Loneliness

According to Table 16, the identified equation to understand the relationship between Facebook addiction and loneliness was;

Loneliness = 24.583 + 0.296 Facebook Addiction.

Discussion

The current study was conducted to investigate prevalence of Facebook addiction of university students in Sagaing District, Myanmar. Descriptive analysis was conducted and the result showed that the mean score in students' Facebook addiction was 37.81 and standard deviation was 8.281. The maximum score of students' Facebook addiction was 69 and minimum score was 18. The theoretical mean score is 45 and it was higher than the observed mean score (37.81). Therefore, it can be interpreted that generally most of the students in the current study have low level of Facebook addiction. This result is congruent to the findings of Steggink (2015) which only minority of the students were addicted to Facebook. The reason for this result may be because most of the university students had their university activities which allow them to live in reality world more and more.

To find the difference in Facebook addiction between male and female descriptive analysis was conducted and it was found that the level of Facebook addiction is significantly higher for male students than that of females. The result of current study is consistent with the study of Yaman (2016) who found that Facebook addiction scores of male students were seen to have higher scores than females' students. This result may be because once males are deeply engaged in a task or game, they may not demonstrate much sensitivity to other people or their surroundings. While males excel in highly task-focused projects, females are great multi-taskers. Girls tend to more quickly transition between tasks than boys do (Gregory, 2014). So, boys should engage more in social activity and real life social interaction rather than spending too much time thinking about Facebook or planned used of Facebook.

To explore the significant differences in students' Facebook addiction by university, one way analysis of variance (ANOVA) was used. ANOVA results showed that there were significant differences in Facebook addiction by university at 0.01 level. To obtain more detailed information in each group, Post-Hoc test was executed by Tukey HSD method and found that there was significant difference between University 1 and University 3 (p<0.05). There was also significant difference between University 4 and University 3 (p<0.05). There was no significant difference between University 1 and 4. It can be interpreted that students from University 1 and 4 have higher level of Facebook addiction than the other two universities and students from University 3 are least addicted to Facebook in comparing with the last three universities. The reason for this result may be because the nature of the university and individual's characteristics of the participant.

To explore the significant differences in students' Facebook addiction by the time spent of the respondent by using Facebook, one way analysis of variance (ANOVA) was used. ANOVA results showed that there were significant differences in Facebook addiction by the time participant spend on Facebook in a day at 0.01 level. To obtain more detailed information in each group, Post-Hoc test was executed by Games-Howell method and the results showed that there were significant differences between 1 hour users and the other users. It can be interpreted that those who use Facebook over 2 hours and above had higher level of Facebook addiction. And then, participants who spend five or more hours on Facebook in a day are more addicted to Facebook than the other participants. The outcome of current study completely aligned with the result of the study of Şükrü and Abdülkadir (2013) and Karakose et al., (2016). According to Şükrü and Abdülkadir (2013), when Facebook operating time increased, Facebook addiction level will increase clearly. Karakose et al., (2016) also stated that participants who spent two, three, or five or more hours on Facebook in a day had significantly higher addiction levels than participants who spent one hour or less on Facebook in a day. This result may be because spending too much time on Facebook causes users to stay on Facebook more and more and also it causes users to spend little time with reality world and attachment to Facebook gradually grows and finally addicted to Facebook.

And then, descriptive analysis was conducted to explored mean and standard deviation of students' loneliness and the result showed that the mean score in students' loneliness score was 37.78 and standard deviation was 7.294. The maximum score of students' Facebook addiction was 63 and minimum score was 20. The theoretical mean score is 50 and it is higher than the observed mean score (37.78). It can be said that participants of the current study have low levels of loneliness. This can be regarded as a positive result. This result was consistent with the result of Rahamn et. al, (2012) who found that university students have low level of loneliness. The reason for this result may be because all of the participants in the current study are studying in the university and they have to attend day class. At school they are required to attend all classes so throughout most of the day they are surrounded by their peers. Their social relationships are more intense. Thus, they spend plenty of their time with their peers and this can reduce the feelings of loneliness. Ingvadóttir (2014) explained this as university students make contact with their friends; they prevent emergent feelings of loneliness.

To find the difference between male and female students' loneliness, descriptive analysis was conducted and it was found that the mean score of loneliness for male students exceeded 1.166 points than that of females. In order to determine whether it was significant or not, the

independent samples *t* test was used. The results of independent samples *t* test showed that there were significant differences in   loneliness between males and females at 0.05 level. It can be interpreted that male students feel more loneliness than females. the result of current study is in line with the statements of Yang (2009) and Saleem et al., (2015) that males were lonelier than females. The result may be because females are more sociable than males and have greater contact with their peers and this can reduce loneliness (Abdi, 2010).

In order to investigate whether there were significant differences in students' loneliness by university, descriptive statistics was conducted. All the four universities are coded in University 1, 2, 3, and 4. It was found that the mean score of University 4 is highest and that of University 3 was lowest. To explore the significant differences in students' loneliness by university, one way analysis of variance (ANOVA) was used. ANOVA results showed that there were significant differences in loneliness by university at 0.01 level. To obtain more detailed information in each group, Post-Hoc test was executed by Games-Howell method. University 4 has significant differences in comparing with University 2 and University 3. It can be interpreted that students from University 1 and 4 feel more loneliness than those from University 2 and 3 and the level of loneliness of students from University 3 is least. This result is reasonable because students from University 1 and 4 are most addicted to Facebook and Facebook addiction and loneliness is positively correlated. The greater the level of addiction, the more that it could increase the level of the loneliness of the students.

In order to investigate the relationship between Facebook addiction and loneliness of university students, Pearson Product-Moment Correlation was applied. The result indicated that there was a significant positive correlation between the students' Facebook addiction and loneliness (r = .366) at o.01 level which indicated that as Facebook addiction increased, loneliness will increase accordingly. Thus, it can be interpreted that students who use Facebook addictively suffer more loneliness than those who are not addicted to Facebook. This finding is in line with other research results which analyze Facebook addiction and loneliness such as Hu (2007), Antia (2014), Saleem et al., (2015), Steggink (2015), Shettar et al., (2017), Gretchen and Felix (2017), Biolcati et al., (2018) and Toma (2018). The reason for this correlation may be because Facebook addicts stay online and spend most of their time by using Facebook without participating in any social activities. This feeling of loneliness when a person became addicted to Facebook can be attributed to the lack of personal contact with real friends in the virtual environment. Thus, they are detached from the physical world which made them a desire for company. Hence, the more they addicted to Facebook, the more they far away from real social interactions and the more they suffer loneliness.

Then, bivariate or simple linear regression was conducted in order to be able to indicate prediction of loneliness from Facebook addiction. The result indicates that the adjusted *R* square was 0.113. This indicates that 11% of the variance in loneliness was explained by Facebook addiction of the students. It was also found that the independent variable (Facebook addiction) was the highest contributor of dependent variable (loneliness) in regression analysis. The researcher concluded that the identified equation to understand the relationship of Facebook addiction and loneliness was;

Loneliness = 24.583 + 0.296 Facebook Addiction.

Conclusion

Sure, Facebook can allow people to communicate with old friends, classmates and people from all over the world, but the nature of interaction on Facebook is conducive to more social isolation. And even if we are interacting with close friends and family on Facebook instead of face-to-face interaction, this is still no substitute for real life social interactions; the kind which human mind is geared towards. The problem with habitual or addictive Facebook use is that many people do come to accept this as a substitute. The more time they spend on the artificial social world of Facebook, the more isolated they will become. Human beings are a social species and they depend on hearing another's voice and seeing each other's facial expressions and body language for proper human interaction. Facebook and other social media platforms just don't meet these requirements.

Therefore, teachers should encourage students to actively involved in real life social activities rather than living on a virtual planet by using Facebook. Let the students know that Facebook is a tool which helps to polish and maintain relationship, however, not a tool for socialization in real life.

In addition, in the 21st century where Facebook and Internet usage is becoming more widespread, precautions should be taken to ensure that students make face-to-face contact at places outside of school and their social environment. With this respect, teachers should design university-wide outreach programming to provide larger groups of undergraduates with useful information regarding Facebook addiction. Additionally, talking directly about various aspects of Facebook addiction and how they relate to overall functioning with campus groups could generate much more discussion and self-exploration regarding Facebook addiction on university campuses.

The outcomes of this thesis should lead to a deeper understanding of whether Facebook addiction does actually exist, and to spread the knowledge of Facebook addiction and loneliness to all around Myanmar society. By performing this research, the existent of Facebook addiction should be revealed. It will then be possible to obtain a clearer picture about the Facebook addiction as a whole. This will be advantageous to Facebook addicts, as it will enable more accurate diagnosis. Furthermore, guidance and counseling professionals will be able to formulate more useful clinical interventions if they thoroughly understand Facebook addiction and loneliness and this may lead to the development of preventative strategies for Facebook addiction among university students. So, students would use Facebook as a useful tool for their education field and they can prevent suffering from loneliness as a side effect of Facebook addiction. The results of the current study will take part in a corner to create modernized and well-developed country with physically and mentally healthy person.

Acknowledgements

Reference

Abdi, B.(2010) Gender Differences in Social Skills, Problem Behaviors and Academic Competence of Iranian Kindergarten Children based on their parent and Teacher Rating. *Procedia- Social and Behavioral Sciences 5:1175-1179*

Antia, B.I.(2014). The relationship between Facebook addiction and loneliness; a comparison between high school students and university students. (Unpublished bachelor's thesis). Reykjavik University, Iceland.

Balci, S.(2013). Facebook Addiction among University Students in Turkey: "Selcuk University Example". *International Refereed Journal.*

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. Psychological Bulletin, 117(3), 497–529. doi:10.1037/0033-2909.117.3.497

Biolcati, T.,Mancini, G.,Pupi, V.& Mugheddu, V.(2018).Facebook addiction: onset predictors. *Journal of Clinical Medicine.2018,7,118;doi:10.3390/jcm7060118*

Cao, H., Sun, Y., Wan, Y., Hao, J., & Tao, F. (2011). Problematic Internet use in Chinese adolescents and its relation to psychosomatic symptoms and life satisfaction. *Bmc Public Health, 11.*

Donnelly, G.(2018). *75 Super-useful Facebook Statistics for 2018.* Retrieved November 18, 2018, from https://www. woedstream.com/blog/ws/2018/11/07/facebook-statistics

Gregory, L. J. Ph.D., (2014) Do you ever wonder why men and women think so differently? *Brain differences between gender.*

Gretchen, B.C. & Felix, C.C.(2017).Relationship between Facebook addiction and loneliness of Filipino high school students. *Liceo Journal of Higher Education Research.doi:http://dx.doi.org/10.7828/ljher.v13i1.1008*

Hu, M. (2007). *Social use of internet and loneliness.*(Doctoral dissertation, The Ohio State University, Japan)

Ingvadóttir, A. B. (2014). The relationship between Facebook use and loneliness: A comparison between high-school students and University students. *Unpublished Thesis, University of Reykjavik, Iceland.*

Karakose, T., Yiric, R., Uyagun, H. & Ozdemir, T. Y.(2016). Relationship between high school students' Facebook addiction and loneliness stauts. *Eurasia Journal of Mathematics, Science & Technology Education, 2016, 12(9), 2419-2429*Karim, R., & Chaudhri, P. (2012). Behavioral addictions: An overview. *Journal of Psychoactive Drugs, 44(1), 5-17.*

Khin, M.M.M.(2015). The impact of Facebook use on the self-esteem of f pre-service teachers from Sagaing University of Education. *Unpublished Thesis, Sagaing University of Education, Myanmar.*

Killeen, C. (1998). Loneliness: an epidemic in modern society. *Journal of Advanced Nursing, 28(4), 762–770.*

Kristin.T., (2016). Effects of Facebook on Teenagers: Positive and Negative. Retrieved August 18, 2018 from http://wehavekids.com/parenting/teens-and-Facebook

Saleem, M. et al (2015). Internet Addiction: It's relation with loneliness among undergraduate students of South Panjab, Parkistan. *Sci.Int.(Lahore),27(2),1469-1479,2015 ISSN 1013-5316; CODEN: SINTE 8*

Shaw, L. H., & Gant, L. M. (2002). In defence of the Internet: The relationship between Internet communication and depression, loneliness, self-esteem, and perceived social support. Cyber Psychology & Behavior, 5(2), 157–171.doi:10.1089/109493102753770552Shojaiee,M.S.(2008) Psychology and psychopathologoy of the internet. *Journal of Psycholog Internet with Religious, Number1, spring(Persian).*

Steggink, B.W. (2015). Facebook addiction: where does it come from?. A study based on the Bergen Facebook Addiction Scale. Stephanie, B.(2012). *An examination of relationship experiences in relation to loneliness and depressive symptomatology in emerging adulthood*. (Doctoral dissertation, Wayne State University, Machigan). Retrieved October 18, 2018 from http://digitalcommons.wayne.edu/oa_ dissertations

Shaw, L. H., & Gant, L. M. (2002). In defence of the Internet: The relationship between Internet communication and depression, loneliness, self-esteem, and perceived social support. Cyber Psychology & Behavior, 5(2), 157–171. doi:10.1089/109493102753770552

Shettar, M. et al.(2017) Facebook addiction and loneliness in the post graduate students of university in southern India. *International Journal of Social Psychiatry vol 63(4) 325-329* doi:https://doi.org/ 10.1177/ 0020764017705895

Şükrü, B. & Abdülkadir, G. (2013) Facebook Addiction among University Students in Turkey: "Selcuk University Example". Retrieved January 6, 2018 from   https://www.researchgate.net/publication/ 286214266_ Facebook_addiction_among_university_students_in_Turkey_Selcuk_University_example

Perlman, D., & Peplau, L. A. (1981).Towards a social psychology of loneliness. In Duck & Gilmour (Eds.), *Personal relationship disorder (pp. 31-56). Reterived from* https://www.researchgate. net/ publication/ 284034168

Perlman, D., & Peplau, L. A. (1982). Theoretical approaches to loneliness. In L.A. Peplau &D. Perlmman (Eds), *Loneliness: A sourcebook of current theory, research and therapy. P.p. 1-18)*

Saleem, M. et al (2015). Internet Addiction: It's relation with loneliness among undergraduate students of South Panjab, Parkistan. *Sci.Int.(Lahore),27(2),1469-1479,2015 ISSN 1013-5316; CODEN: SINTE 8*

Shojaiee,M.S.(2008) Psychology and psychopathologoy of the internet. *Journal of Psycholog Internet with Religious, Number1, spring(Persian).*

Steggink, B.W. (2015). Facebook addiction: where does it come from?. A study based on the Bergen Facebook Addiction Scale. Stephanie, B.(2012). *An examination of relationship experiences in relation to loneliness and depressive symptomatology in emerging adulthood*. (Doctoral dissertation, Wayne State University, Machigan). Retrieved October 18, 2018 from http://digitalcommons. wayne.edu/ oa_ dissertations

Toma, C.M.(2018). Living on virtual planet: predictors of Facebook addiction. *Romanian Journal of Cognitive Behavior Therapy and Hypnosis, Volume 5, Issue 1-2, January-June 2018.*

Yaman, C.(2016). Facebook Addiction levels of Students in the Physical Education and Sport Department. *Malaysian Online Journal of Educational Technology. Vol 4, issue 2.*

Young, K. S. (2004). Internet addiction - A new clinical phenomenon and its consequences. *American Behavioral Scientist, 48(4), 402-415.*