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Facebook Usage and Depression Levels of Selected Filipino College Students

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ABSTRACT

This study examined the relationship of sociodemographic characteristics and Facebook usage to the depression level of college students. A total of 347 respondents were purposively selected and completed a self-administered questionnaire. Results showed that: sex has a weak positive association with depression level (r=0.0962); age did not vary much across depression level; there is a moderate positive association between sexual orientation and depression level (r= 0.2794); socioeconomic status has an inverse relationship with depression level (r= -0.2126); and relationship status has a moderate positive association with depression level (r= 1.365). Further, there is a moderate positive association between the number of minutes spent on Facebook and depression level (r= 0.4229); there is a weak positive association between frequency of Facebook visits and depression level (r= 0.3052); and Facebook activities are positively correlated to depression. Young social media users are encouraged to use it moderately to avoid negative mental health outcomes.

Keywords:
Facebook usage, depression, adolescents, college students

1. Introduction

There is an estimated 350 million people suffering from depression worldwide (World Health Organization [WHO], 2016). Depression is the current leading cause of disability and likely to be the second leading cause of death across the globe by 2020 (WHO, 2018). It is a common but serious mood disorder manifested by the lack of interest in common things and experiences, low mood, and mixed emotional, cognitive, physical and behavioural symptoms (National Collaborating Centre for Mental Health, 2010).

Several studies have shown that there is a difference in the prevalence of depression between males and females (Galambos, Leadbeater, & Barker, 2004). Most studies point to hormonal difference as the major explanation. Women experience more hormonal fluctuations which is believed to be associated with depressive symptoms. Women are also more likely to suffer from hypothyroidism, known to be associated with depression (American Institute of Stress, 2016). Further, women tend to be more involved in interpersonal relationships than men, making them more vulnerable to stress and depressive symptoms.

Various studies reported that the prevalence of depression differs among age groups. Community surveys have shown that elder people have higher clinical depression compared with younger ones due to the occurrence of physical disorders caused by aging. Thus, the boundaries of depression become unclear because it is usually confused with symptoms of physical disorders (Drayer, Mulsant, Lenze, Rollman, , Dew

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et al., 2005). Adolescents are more susceptible to mental health disorders compared to other age groups because of the transitions they experience (Child Trends Databank, 2015). Burt and Masten (2010) point to the neurobiological brain changes during adolescence which make adolescents more sensitive to environmental changes. These result to problems in emotional and behavioural regulation. Emerging social roles may be another factor. Struggles arise as they seek independence in their academic, career, and personal life decisions.

The prevalence of depression may also differ due to sexual orientation (American Psychological Association (APA, 2008). Several reports showed that LGBT (lesbian, gay, bisexual, transgender) people have higher depression rates compared to heterosexuals (Kerr, 2016). The negative attitudes (e.g. bullying, teasing, harassment) directed toward the LGBT community lead to increased risks for mental health problems (Center for Disease Control and Prevention, 2014). Depression can cause them to suffer and function poorly at work, school, and in the family and at its worst, depression can lead to suicide (WHO, 2016).

One significant environmental risk factor related to depression is one's socioeconomic status (Jokela & Järvinen, 2011). Unemployment, poverty, and housing unaffordability were correlated to the risk of mental illness (Hudson, 2005). Life in the lower socioeconomic status is more stressful and may lead to depression (Eaton, Muntaner, Bovasso, & Smith, 2001; Jokela & Järvinen, 2011).

There is a direct relationship between romantic involvement and depressive symptoms (Compian, Gowen, & Hayward, 2004). Depressive symptoms seem to be connected to the negative qualities of romantic relationships, relational aggression (Greca & Harrison, 2005), and levels of romantic competence (Davila, Steinberg, Miller, Stroud, Starr, & Yoneda, 2009).

According to the Pew Research Center (2016), 89% of adults (aged 18-29) use social networking sites (SNS) for social interactions, information seeking and sharing, for entertainment, relaxation, expression of opinions, communication, business deals, and surveillance about others (Whiting & Williams, 2013). The most popular social networking site worldwide, based on the number of active accounts, is Facebook (Statista, 2016). People use Facebook because it satisfies the needs for belongingness, self-presentation (Nadkarni & Hofmann, 2012), self-worth and self-integrity (Toma & Hancock, 2013), and is advantageous in increasing connectivity and on-line learning (Pantic, 2014). According to Jelenchick, Eickhoff & Moreno (2013) and Datu, Valdez, & Datu (2012), there is no relationship between SNS and depression. However, Labrague (20140 and Lin et al. (2016) present the association of social media usage with increased depression. The more time young adults use social media, the more likely they are to be depressed. Also, users who allot the highest amount of time in social media showed decreased social bonding and increased loneliness (Theobald, 2014). Engagement in some activities on social media may give a feeling of wasted time which negatively influences mood. Excessive use of social media may lead to depression because the exposure to highly idealized representations of peers elicits feelings of envy and a distorted belief that others have happier and more successful lives (Lin et al., 2016). Lastly, it may increase the risk of exposure to cyber-bullying or other negative interactions, which can cause feelings of depression (University of Pittsburgh School of the Health Sciences 2016).

However, there is no research that specifically addresses the association of social media, particularly Facebook, and depression while considering the age, sex, sexual orientation, socioeconomic status, and relationship status of Filipino users. This study can increase consciousness regarding the relationship of Facebook usage and depression and the need to educate young social media users on its possible mental health outcomes. The research objectives were to:

1. Identify the sociodemographic characteristics of the college students
2. Determine the Facebook usage (e.g. number of minutes spent/day, frequency of visit, and frequency of performing the Facebook activities) of the college students
3. Determine the depression level of the college students
4. Determine the emotions felt by college students after engaging in Facebook
5. Determine the relationship of depression level of the college students to their sociodemographic characteristics and Facebook usage

2. Methods

This is a quantitative cross-sectional research which used the descriptive correlational design to explore the relationships between Facebook usage and depression levels. It was done at the University of the Philippines Los Baños in three sections of a General Education large class.

2.1.Participants

Purposive sampling for maximum heterogeneity was conducted to provide diverse responses in relation to the topic. A General Education (GE) class was selected due to the diverse composition of students coming from all the colleges and year levels. The GE class had three sections to which the questionnaires were given. There were 430 students enrolled in the three sections but only 347 participated, thus, a response rate of 80.70%. Their informed consent was obtained prior to data collection. Respondents accomplished the questionnaire in their respective residences or by electronic means.

2.2.Data Collection Instruments

A three-part questionnaire was used to gather data: the first part gathered the sociodemographic characteristics; the second part was about Facebook usage; and the third part was the depression scale. To determine the frequency of Facebook use, the modified questionnaire of Junco (2012) was used. Respondents were asked to estimate their time spent on Facebook, how often they checked their Facebook account, and how frequent they used the Facebook activities. Facebook activity items were coded using a five-point, positively anchored Likert scale ranging from Never to Very Frequently. The Cronbach alpha for this scale is 0.81 (Junco, 2012). They were also asked about their emotions after using Facebook. The Center for Epidemiological Studies-Depression (CES-D) was used to determine depression level. It is a 20-item self-administered questionnaire. Respondents were asked to rate how often they experienced symptoms associated with depression over the past week. Response options range from 0-3 for each item (0= Rarely/None of the time, 1= Some/little of the time, 2= Occasionally/Moderate amount of time, 3= All the time). The CES-D provided cutoff scores: 0-15: minimal depression; 16-26: mild depression; 27-60: major depression (Simoncic, 2012). Higher scores indicated greater depressive symptoms. The Cronbach alpha for the CES-D is 0.83 (Forteza and Torres, 2011).

2.3. Data Analysis

Tables and graphs were constructed to determine the respondents' profile and depression levels. Descriptive measures were computed for quantitative variables. To determine the relationship of depression level with qualitative characteristics, Cramer's V was used. To determine the relationship of depression level with quantitative characteristics, Spearman rank correlation analysis was done.

3. Results

3.1. Socio-demographic Characteristics

There were more female respondents (63%) than males (Table 1). The respondents' ages ranged from 17– 25 years old with a third aged 19 years old. Majority of the respondents were heterosexual (78.39%). More than half come from middle income families (61.38%) and majority were single (58.79%).

Table 1. Percentage Distribution of the Socio-demographic Characteristics of the Respondents

Socio-demographic characteristics	Frequency (f)	Percentage (%)
Sex		
Male	130	37
Female	217	63
Age		
17	33	9.51
18	94	27.09
19	119	34.29
20	62	17.87
21	24	6.92
22	10	2.89
23	3	0.86
24	1	0.29
25	1	0.29
Sexual orientation		
Attracted to the same sex	21	6.05
Attracted to the opposite sex	272	78.39
Attracted to both sexes	35	10.09
Attracted to all genders	12	3.46
Not attracted to any sex nor gender	3	0.86
Do not know to whom attracted to	4	1.15
Socioeconomic status		
₱7,890-15,780 (Low income)	81	23.34
₱15,780-118,350 (Middle income)	213	61.38
Above ₱118,350 (High income)	53	15.27
Relationship Status		
Single	204	58.79
Romantically involved	143	41.21

3.2. Facebook Usage of Respondents

The minimum amount of time spent in using Facebook was 10 minutes and the maximum amount was 900 minutes. The average number of minutes spent in using Facebook/day was 212.10 minutes. More than a quarter spent 250 minutes using Facebook (see Figure 1).

The minimum number of visits to Facebook/day was 1 and the maximum was 100. The average number of times they visit their Facebook account/day was 6.48. Nearly a quarter of the respondents visited Facebook 3 times a day.

Facebook was used very frequently for sending private messages/chatting (58.2%) and viewing videos (36%) while it was used somewhat frequently for commenting on statuses and pictures (32.6%) and sharing links (30.9%). Sometimes, it was used for posting photos (32%) and checking on someone (29.1%).

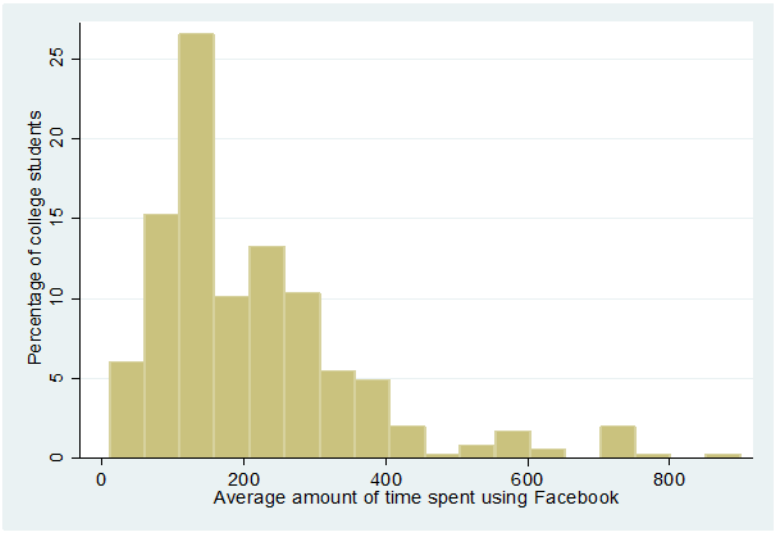

Figure 1. Average amount of time spent in using Facebook per day by the respondents

3.3. Depression Level of Respondents

Nearly half of the respondents (45.82%) had CES-D scores indicative of major depression (Table 2). The minimum observed score was 4 while the maximum was 57. The average CES-D score was 27, the lowest score in the range of the "major depression" classification. Results show that the respondents have higher depression levels as compared to the 245 undergraduate students (aged 18-23 years) in Simoncic's study (2012) where the average CES-D score was 17, within the range of the "mild depression", and only 12% have major depression.

Table 2. Percentage Distribution of Depression Levels of Respondents

Depression Level	Frequency	Percent
Minimal (0-15)	93	26.8
Mild (16-26)	95	27.38
Major (27-60)	159	45.82
Total	347	100

3.4. Relationship of Socio-demographics and Depression Level Respondents

3.4.1. Sex vs CES-D Scores

Respondents' sex category has a weak positive association with their depression level (r= 0.0962). Table 3 shows that there are more female students (47.22%) who experience mild and major depression levels than males (43.08%).

3.4.2. Age vs CES-D Scores

Respondents' age has a very weak negative association with their depression level (r= -0.0213). Based on mean scores, depression levels did not vary much across the ages, possibly due to their similar age group. The mean age for all depression levels was 19 years (Table 4).

Table 3. Depression level of respondents by sex

	Sex by %	
Depression Level	Male	Female
Minimal	32.3	23.61
Mild	24.62	29.17
Major	43.08	47.22
Total	100	10

Table 4. Depression level of respondents by age

Depression Level	Mean	Median	Sd	**Min**	**Max**
Minimal	**19.01**	19	1.37	17	23
Mild	**19.07**	19	1.21	17	22
Major	**19**	19	1.46	17	25

3.4.3. Sexual Orientation vs CES-D Scores

Sexual orientation has a moderate positive association with their depression level (r= 0.2794). Table 5 shows that those who are not heterosexual tend to have major depression (81.33%) as compared to the heterosexuals (36.03%).

Table 5. Depression level of respondents by sexual orientation

	Sexual orientation					
Depression level	1	2	3	4	5	6
Minimal	4.3	**93.55**	2.15	0	0	0
Mild	4.21	91.58	2.11	2.11	0	0
Major	**8.18**	61.64	**19.5**	**6.29**	**1.89**	**2.52**

(1= attracted to the same sex; 2=attracted to the opposite sex; 3= attracted to both sexes; 4= attracted to all genders; 5= not attracted to any sex nor gender; 6= does not know to whom he/she is attracted)

3.4.4. Socioeconomic Status vs CES-D Scores

Socioeconomic status (SES) has a moderate inverse relationship with their depression level (r= -0.2126). Those who have lower family incomes tend to have higher depression levels (65.43%) than those in the middle income (41.31%) and high income (33.96%) families (Table 6).

Table 6. Depression level of respondents by socioeconomic status

	Socioeconomic Status		
Depression level	1	2	3
Minimal	12.91	**66.66**	**28.65**
Mild	16.84	66.31	16.85
Major	**33.33**	55.35	11.32

(1= poor & lower income; 2= middle income; 3= upper middle income & rich)

3.4.5. Relationship Status vs CES-D Scores

Relationship status has a moderate positive association with their depression level (r= 0.1365). Table 7 shows that those who are romantically involved tend to have CES-D scores suggestive of major depression (51.75%) as compared to those who are single (41.67%).

Table 7. Depression level of respondents according to relationship status

	Relationship status	
Depression level	Single	Romantically involved
Minimal	56.99	43.01
Mild	**69.47**	30.53
Major	53.46	**46.54**

3.5. Relationship of Facebook Usage and Depression Level of Respondents

3.5.1. Number of minutes spent on Facebook vs CES-D Scores

There is a moderate positive association between the number of minutes spent on Facebook and depression level (r= 0.4229). As the number of minutes spent on Facebook increases, the depression level increases. Table 8 shows that those who were in the category of major depression spent an average of 274 minutes on Facebook/day compared to those in the minimal depression category (141 minutes).

Table 8. Depression level of respondents according to number of minutes spent on Facebook/day

Depression level	Obs	Mean	Median	Sd	Min	Max
Minimal	93	141.67	120	108.72	10	720
Mild	95	177.23	150	96.20	20	450
Major	159	**274.14**	240	171.84	15	900

3.5.2. Frequency of visit vs CES-D Scores

There is a weak positive association between the frequency of Facebook visits and depression level (r= 0.3052). The more frequent a student visits his/her Facebook account, the higher his/her depression level. Those who were in the category of major depression visited Facebook with an average of 8.58 visits/day compared to those in the minimal depression category with 4.14 visits (Table 9).

Table 9. Depression level of respondents according to frequency of Facebook visits/day

Depression level	Obs	Mean	Median	Sd	Min	Max
Minimal	92	4.14	3	2.96	1	20
Mild	94	5.28	5	3.84	1	20
Major	157	**8.58**	5	10.60	1	100

3.5.3. Frequency of Facebook Activities Usage vs CES-D scores

Depression level has positive correlations to all Facebook activities (Table 10). As frequency of usage of Facebook activities increases, their depression level also increases. Checking on someone has the highest correlation with depression level (r= 0.1903), followed by commenting (r= 0.1871), and viewing videos (r= 0.1716).

Table 10. Spearman Rank Correlation Coefficients for Facebook Activities and Depression Level

Facebook Activities	R
Checking what someone is up to	0.1903
Commenting	0.1871
Viewing videos	0.1716
Sharing links	0.1629
Sending private messages	0.156
Creating or RSVPing to events	0.1071
Posting videos	0.1015
Tagging videos	0.0863
Posting photos	0.0855
Posting status updates	0.0776
Tagging photos	0.058
Playing games	0.0543

3.5.4. Feelings after Facebook Usage

Facebook usage can cause both positive and negative feelings. Table 11 shows that feeling informed (79.25%), joyful (47.26%), and satisfied (40.92%) were the top positive feelings reported after using Facebook while the top negative feelings experienced were feeling envious (45.24%), tired (40.92%), and sad (40.06%).

Table 11. Percentage Distribution of the Respondents' Feelings after Facebook Usage

Feeling	Percentage
Informed	79.25
Joyful	47.26
Envious	45.24
Satisfied	40.92
Tired	40.92
Sad	40.06
Bored	36.89
Relaxed	35.55
Frustrated	31.79
Lonely	25.36
Angry	19.65
Guilty	17.87

4. Discussion

In this study, it was found that college students very frequently send private messages and view videos and frequently comment on other friends' posts and share links. According to Golder et al. (2007), most people

use Facebook to maintain and build social ties across distances through messaging. Instant messaging makes some adolescents feel a sense of belongingness and emotional relief (Favor 2015). Viewing videos is important for adolescents because it is an avenue for growing one's offline and online connections, for one's entertainment and leisure, and further growth of ideas (O'Keeffe and Clarke-Pearson 2011). People give comments on Facebook whenever they want to convey something to someone. Through commenting, they are able to freely express their thoughts and ideas on certain events and situations. Most Facebook users think that it is more satisfying to give or receive comments compared to likes (Kolowich 2015). Facebook users share links to bring valuable and entertaining content to their Facebook friends, give others a better sense of who they are and what they care about, stay connected to the people significant to them, share information which makes them feel more involved in the world, and support causes/issues they care about (Seiter 2016).

In terms of the relationship of sex category with depression level, this study found a weak positive association between them. There are more female students who experience mild and major depression levels than males in this study. According to WHO (2012), depression is two to three times more common in women. Peden et al. (2000) stated that sex has a significant role in the presence of depression in undergraduate females. There are several theories which correlate sex to genetic vulnerability, hormones, and environmental stress (Harvard Medical School 2011). It is believed that only women experience certain genetic changes linked to the development of depression. Also, fluctuations in the female hormones (e.g. estrogen) have a great effect on women's subjection to depression, thus, they have a higher possibility to become depressed during stressful events than men and are more prone to stress caused by child sexual abuse, adult sexual assaults, and domestic violence (Harvard Medical School 2011).

In this study, age has a very weak negative association with depression level. Based on mean scores, depression levels did not vary much across the ages, possibly due to their similar age grouping. The mean age for all depression levels was 19 years. However, neurobiological and social changes are occurring at this time which may explain this association. First, adolescence is the period where the brain undergoes drastic changes in prefrontal and subcortical regions (Miguel-Hidalgo 2013). Neurobiological changes (e.g. increased activity of the prefrontal region as an indication of maturation and diminished activity in irrelevant brain regions) happen which make the adolescents more reactive to their surroundings, in which emotional problems and behavioral regulation surface (Burt & Masten 2010; Casey et al. 2011). Secondly, the Developmental Task theory considers societal expectations according to age and these are used to judge the success of an individual (Strickland 2014). Not all adolescents are able to achieve these tasks such as preparing for a career after graduation in order to help the family's financial situation. Their disappointment in not meeting society's expectations commonly results to the build-up of a wall between them and their parents. They may get more involved with their peers which increases their susceptibility to problems like mental illness, early pregnancy, premature independence, and dropping out from school. Developmental tasks change when the adolescent becomes an "emerging adult" and they are likely to experience the pressures related to committing to a romantic relationship, building a family, career establishment, and civic work involvement.

Results of this study show that sexual orientation and depression level are moderately associated. Of those who are not heterosexual, majority have major depression levels. One explanation could be their need to cope with offenses against them or issues like verbal and physical abuse, discrimination, rejection by significant others, bullying, prejudice, harassment, and psychosocial hardships caused by HIV/AIDS. These experiences of the LGBTQ youth while growing up are forms of victimization which may give rise to psychological conflicts (Rivers and D'Augelli 2001). Concerning the socio-cultural level, some institutions (e.g. schools, families, faith communities) provide inadequate support in guiding the LGBT youth which results to non-empowerment of rights and non-protection leading to their vulnerability, thus, compromising their mental health. Positive family relationships are very important for their well-being (Steinberg & Duncan 2002) but most LGBT youth are frightened to let their parents know (Potoczniak et al. 2009) as they may be rejected due to their personalities (Ryan et al. 2009). Lastly, there are youth who are not equipped with intrapersonal skills and resources to get by with their minority stress experiences or may enhance maladaptive coping strategies as a result of stress related to discrimination and prejudice experiences (Hatzenbuehler et al. 2009; Meyer 2003). Homosexual adolescents were more likely to show poorer

emotional alertness compared to heterosexual peers; this inadequate emotional regulation was linked with later symptoms of depression and anxiety (Hatzenbuehler et al. 2008).

In this study, socioeconomic status (SES) has an inverse relationship with depression level. Those who have lower family incomes tend to have higher depression levels than those in the middle income and high income families. The connection between socioeconomic status and mental health concerns is one of the most significant aspects of the relationship of social structure to mental health and one of the most consistent relationships in the field of psychiatric epidemiology. Income is relatively important to an individual's well-being as it helps people to acquire their basic material needs (Clark et al. 2008). Those from lower SES are more susceptible to stressful life events beyond their control. They have lesser social and psychological resources that can aid them to get by stressful life events, thus, they become more vulnerable to stress. They also have a lesser chance to form, maintain, and access social networks that can protect them against the effects of stressful life events (Eaton et al. 2001). Hence, their greater exposure to more stressful life events affect their emotional functioning.

Relationship status and depression level were shown to be moderately associated in this study. Those who are romantically involved tend to have scores in the major depression category as compared to single adolescents. Involvement in a romantic relationship may cause feelings of depression (Greca & Mackey 2007). This could be due to the emotional intensity, depth of emotional investment, and variability in relationships. These are given greater attention by adolescents compared to other aspects of their social life such as school or family since one's romantic experience has a significant role to his/her self-concept and personal growth. They are more susceptible to use their relationship as an instrument to measure their self-worth (Rudolph & Conley 2005). Negative romantic interactions are associated with rejection sensitivity and may cause feelings of stress, which may lead to depression (Larson et al. 1999). Green et al. (2007) discovered that people who reflect on their past romantic relationships tend to feel distant from their ideal self and this may cause depression. Relationship issues have a great effect on mental health, particularly, if the commitment and personal investments are high. The deeper the person's relationship commitment, the greater the investment such as feelings, resources, and time for the other. A serious relationship also includes certain elements like shared activities, shared friends, and public displays of the relationship (Johnson 1991).

This study found that as the number of minutes spent on Facebook increases, the depression level increases as well. Those who were in the category of major depression spent more minutes on Facebook/day compared to those in the minimal depression category. Recent studies (Lin et al. 2016; Brooks & Longstreet 2015; Strickland 2014; Ólafsdóttir 2015) about the association of social media use and depression validate the results. There was a statistically significant relationship between Facebook usage (in terms of number of hours and frequency) and depression level of the students, especially for those who use it excessively (Starr & Davila 2009). Excessive Facebook usage promotes sedentary behaviors like sitting and lying down which affect one's mental health and increases the risk of developing depression (Sanchez-Villegas et al. 2008; Demyttenaere et al. 2004). People who spend more time in sedentary behaviors have less time for other endeavors such as face-to-face social interaction and physical activity/exercise, which are believed to be protective factors against mental disorders (Martinsen 2008). Prolonged engagement in sedentary behaviors also leads to the failure of social support which increases the risk of depression (Kraut et al. 2002). Further, depression is connected to sleep interruption due to social media use (Li et al. 2013). The mobile devices and computer screens emit high levels of blue light which disrupt the body's circadian rhythm responsible for the sleep cycle (Czeisler 2013) and may cause a negative effect on one's mental health. Sleep interruptions may limit one's ability to process certain neurotransmitters, making one more receptive to negative emotions (Strickland 2014). Longer Facebook use seems to make one vulnerable to distress.

The more frequent a student visits his/her Facebook account, the higher his/her depression level. Those who were in the category of major depression visited Facebook more times in a day compared to those in the minimal depression category. One significant process in adolescent life is identity formation. They often ask 'Who am I?' when they begin identity exploration (Subrahmanyam et al. 2006) and are influenced by reactions and opinions of significant others and other people in their lives. The internet has become a prominent means of discovering adolescent identity. They find that the internet and social personal web pages are a safe venue where they can explore or introduce new personalities without being rejected or

embarrassed (Subrahmanyam et al. 2006). Facebook, in particular, has provided the youth with a particular space where they can position themselves in a textural/multimedia forum where they can see and be seen by others. Most adolescents tend to use Facebook for positive self-presentation where they only select the socially desirable images to share on their profile (Uhlir 2015). Recent studies showed that frequent exposure to other's positive self-presentations on Facebook elicit feelings of envy and jealousy. The longer people use Facebook, the more they compare their lives to others (Chou & Edge 2012). Individuals tend to believe that others have better and happier lives than themselves (Chen & Lee 2013). Thus, frequent Facebook use is correlated to greater psychological distress.

Depression level also increases as frequency of usage of Facebook activities increases especially for checking on someone, commenting, and viewing videos. Facebook users often engage in surveillance about others (Whiting & Williams 2013). Checking on the status updates of Facebook friends, such as their achievements and activities, may lead to the belief that others are more successful. Social comparison via social networking sites is highly influential to adolescents (Shapiro & Margolin 2013). Invitations to important events and announcement of achievements can be posted, shared, and congratulated, and can be a point of comparison for ones' own accomplishments. Social comparisons made on Facebook are associated with depressive symptoms, especially when they are engaged in frequently (Raymer 2015). This affects individuals with low self-esteem more. As they see others' achievements, photos, and status updates, they evaluate themselves negatively (Vitelli 2015). Likewise, bad news, questionable information, and compromising pictures can quickly spread throughout the adolescents' social network. Their impulsive reaction to share the information quickly, together with the power of social networking sites in terms of rapid and wide distribution of communications, can significantly affect an adolescent's world.

Facebook usage can give rise to both positive and negative feelings. In order to experience successful social interactions, people depend on their capacity to understand another person's emotions (Norscia & Palagi 2011). This capacity may lead one to imitate other's expressions, dispositions, and actions, resulting to the convergence of emotions called "emotional contagion" (Hatfield et al. 1993). Recent studies revealed that emotions can be moved from one person to another, not only in face-to-face communication (Hancock et al. 2008; Neumann & Strack 2000), but also through computer-mediated-communication (Coviello et. al. 2014; Kramer 2012). Thus, seeing others' positive or negative news on Facebook may result to corresponding positive and negative emotions via emotional contagion.

Thus, it is important for the youth to regulate their social media use, particularly Facebook usage, to lessen the likelihood of emotional contagion of negative emotions, social comparison, and the emergence of feelings of envy and jealousy, which may be the origin of depressive symptoms.

5. Recommendations

It is recommended that young Facebook users should not excessively engage in it as a surveillance device to keep track of other's activities and achievements in order to avoid social comparisons, envy, and depression. This recommendation is highlighted for young females, youth who are not heterosexuals, youth coming from the low-income families, and youth with romantic relationships since these were the youth groups which showed weak to moderate relationships with depression levels. Balancing Facebook usage with face-to-face social interactions with significant others can be a more rewarding experience.

Parents are recommended to guide and monitor their children in their digital activities within negotiated limitations or rules and open communication. Forging family bonding activities may strengthen family relations, parent-adolescent interactions, and adolescent self-esteem.

Interventions like seminars and workshops can be done in the educational setting and in the communities to promote awareness on how social media usage may impact mental health states of the youth.

Future studies may explore other adolescent groups like out of school youth and high school students and different age groups like young professionals, middle-aged adults, and elders since using Facebook has been a significant part of Filipinos' lives. Other mental health scales may be utilized in assessing other mental

health states. A qualitative analysis on the emotions felt while or after using Facebook may also provide a better understanding of the antecedents of depression.

6. Limitations

The study aimed to determine the relationship of the level of depression of adolescents to their age, sexual orientation, socioeconomic status, relationship status, and Facebook usage only. Non-probability sampling was used, thereby, the results are applicable only to the concerned respondents. Generalized research findings should not be expected as the study does not reflect the overall condition of the college students in the Philippines. This research did not explore other social media sites which the youth utilize and other factors that may affect the level of depression of students such as family relationships, parenting styles, peer influences, and religious factors. The assessment test was based on self-reports and no clinical tests nor personal observations were used to further validate the answers of the respondents regarding their mental health state.

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