Psychological Predictors of Facebook Addiction Tendencies among Filipino Millennials in Metro Manila

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Abstract

With the widespread popularity of social media, particularly Facebook among millennials, this generation may be at risk for developing Facebook Addiction. This study utilized a cross-sectional predictive design to predict the variance of the psychological predictors, in relation to Facebook addiction tendencies among 1,000 Filipino millennials, age ranges from 18-34 years old from different universities and companies within Metro Manila through convenience sampling. Regression analysis was used to determine if Facebook addiction can be predicted by the scores on the measures of depression, self-esteem, Fear of Missing Out (FoMO), social comparison and neuroticism. Results indicated that there is no significant difference in terms of Facebook addiction tendencies between male and female participants. Additionally, Pearson's correlations revealed that depression and FoMo has significant positive relationship with Facebook addiction tendencies while self-esteem and social comparison showed negative influence with having tendencies towards Facebook addiction. Neuroticism had no significant relationship with Facebook addiction. Regression analysis model delineated that among the psychological predictors, only Depression and FoMO could possibly predict Facebook addiction tendencies. Results suggest that the more depressed the individual is, the more likely they exhibit Facebook addiction tendencies and the higher the individual experiences FoMO, the more likely he develops Facebook addiction.

Keywords: Facebook addiction, millennials, social media, social networking sites

Introduction

In our digital world today, where everything seems to be fast paced in just one click, it is an undeniable fact that the Internet has become an indispensable part of our everyday lives. With a wide array of functions, it has grown into a powerful tool that influences and connects people, allowing us to get real-time updates and easy access to a vast source of information. Indeed, the internet has redefined the way people relate and socialize, particularly since the advent of social media. Facebook is considered as the most popular and most widely used social media platform worldwide as of January 2018 with its 2.2 billion active monthly users according to Statista (2018).

Philippines was dubbed as the "Social Networking Capital" of the world by Russel (2011) topping the world's social media usage, primarily Facebook, with 71 million Facebook users (Napoleon Cat, 2019), spending an average of 4 hours and 12 minutes daily using social networking sites (Kemp, 2019). Filipinos are known for being sociable and for their close familial ties (Estares, 2019), According to Saito (2010), a typical trait among Filipinos is "*Pakikisama*" which refers to getting along with others or forming harmonious interpersonal relationship with each other In the Philippines, social networking sites serves as a platform for connectivity to establish and reinforce relationships (Estares, 2019).

The Majority of the total Facebook users are millennials or individuals from ages 18-34. In Asia, it was reported that out of 457.4 million total Facebook accounts, 369.8 million or approximately 81% of Facebook were owned by millennials (Kemp, 2015). Millennials greatly consider social media as an important tool for sharing their interests, emotions and activities in the online world. Indeed, it has become a novel channel for communication and distribution of information (Jambulingam, Selvarajah & Thuraisingam, 2014). With these studies in mind, it can be suggested that those who belong to the millennial generation may be at risk of developing Facebook addiction since a large percentage of users emanates from this group (Koc & Gulyagci, 2013; Marcial, 2013).

According to Open Access Government (2019), millennials are one of the most anxious and depressed generations and this can be attributed to their school and work-related stress, uncertainty for the future, and their struggle with fitting into a social media driven world. In fact, in a 2018 report by the Blue Cross Blue Shield, it was revealed that the number of clinically diagnosed depression among Millennials in the United States had risen by 47 percent in 2013 (Curley, 2019). The Royal Society for Public Health claimed that the tremendous rise in numbers of Millennials having mental health crisis may also be fueled by social media (Open Access Government, 2019). Moreover, they added that millennials who spend more than 2 hours daily on using social media are more likely to report issues on mental health such as anxiety and depression. Since millennials were the first generation to grow up in the digital and social media era, they are also being constantly being exposed to the lives of others through social networking sites and thus, leading them to compare their lives to others (Singh, as cited in Curley, 2019).

The millennial generation has been found to be active users of social media and social networking sites (Way, 2015). Studies show that the FoMO phenomenon also becomes widespread among users due to easier access to connect online almost anywhere. In a study by Harris Insights & Analytics, it has been reported that among American millennials, 7 in 10 or 69 percent experience FoMO. FoMO drives millennials to also show up, share and engage in

the online world in today's digital age where people broadcast their lives and experiences on social media (Lombardo, 2019).

Lyons and Kuron (2014) reported that there is a rising level of neuroticism, self-confidence and self-assuredness among millennials. Millennials are described as the generation who grew-up during the "self-esteem movement" wherein self-esteem was built on values such as physical beauty, prominence through entitlement, achievement, superiority and were taught that self-love is the greatest love of all (Twenge, 2014). Moreover, millennials have difficulty in expressing feelings and dealing with negative emotions and may have lack resilience which can be attributed to the type of parenting style they grew-up with, particularly the over-controlling parenting, which most likely interfered with the development of their autonomy, competence and emotional strength (Heck, 2015).

The Uses and Gratification theory by Katz, Blumler and Gurevitch (1974) is grounded on the assumption that people select media and content to satisfy psychological and social needs and wants. In this theory, Katz et al. (1974) identified five major needs: (1) personal integrative needs (enhance credibility, status), (2) affective needs (emotion, pleasure, feelings), (3) cognitive needs (acquire information, knowledge), (4) tension release needs (escape & diversion) and (5) social integrative needs (interact with family & friends). Similarly, the Dual-Factor Model of Facebook Use devised by Hofmann and Nadkarni (2013) explained the two motivational factors that drive an individual to use Facebook as a specific type of social networking site :(1) the need to belong, which refers to the intrinsic drive to affiliate with others and gain social acceptance and (2) the need for self-presentation, which relates to the continuous process of impression management (Hofmann & Nadkarni, 2013, p.5). The need to belong according to Baumeister and Leary (1995) is an essential human need and universal among all humans which requires regular meaningful interactions with other people to sustain one's optimum well-being. Facebook can be a helpful tool to alleviate feelings of social disconnection since it offers an ideal venue to address an individual's need to belong through its features that enable users to gather information and interact with their friends online with the possibility of obtaining approval from others (Sheldon, Abad, & Hirsch, 2011).The second motivational need identified by Hofmann and Nadkarni (2013) is the need for self-presentation. Michikyan, Dennis, and Subrahmanyam (as cited in Uhlir, 2016, p.3) defined self- presentation as – the behavior used to present information about the self to a real or imagined audience. They also added that one's purpose for self-presentation may include exploration, deception or impressing people. According to Hofmann and Nadkarni (2013), this particular social need seems to direct the individual's specific behaviors in presenting themselves through their Facebook profiles, such as their choice of profile and cover photos which are in line with their aimed impression formation.

Previous studies have explored different variables which could be related and associated with Facebook addiction tendencies. In her study, Sherman (2011) sought to determine which personality factor has the highest significance level for Facebook withdrawal, devotion and addiction by using the NEO personality inventory. Results revealed that among the five personality traits in the inventory, neuroticism had the most significance to high or frequent Facebook usage. Sherman (2011) concluded that since neuroticists are socially anxious, they most likely prefer online socializations such as in social networking sites instead of socializing on a face to face setting. Moreover, Steggink and Jansma (2015) investigated if psychological variables (such as social anxiety, loneliness, and depression), gender and Facebook usage types have direct and indirect relationships to Facebook Addiction in Netherlands. Findings revealed that strong predictors of Facebook addiction include social loneliness and Facebook anxiety.

Facebook anxiety may be a construct similar to FoMO. Findings from a study of Facebook users in Poland led by Reuters Health suggests as well that depression poses as a stronger predictor of vulnerability to becoming dependent on using social media (Lehman, 2015) since it serves as an ideal platform for depressed people to passively socialize with others, escape from their symptoms and disconnect from their own feelings (Koc & Gulyagci, 2013).

Another psychological variable that could possibly relate to higher Facebook usage and Facebook addiction tendencies is low self-esteem. Individuals who were low in self-esteem were linked with more time spent of Facebook per session and a greater number of Facebook logins per day (Mehdizadeh, 2010). People tend use Facebook to satisfy their two basic social needs: the need to belong and the need for self-presentation (Hofmann & Nadkarni, 2013). Lastly, since social networking sites such as Facebook offer a rich information about other's lives, social comparison is more likely to occur, Vogel, Rose, Okdie, Eckles, & Franz, (2015) discovered that individuals who scored high in Social Comparison Orientation (SCO) appeared to be heavy users of Facebook compared to those with low SCO. According to Buunk and Gibbons (2007), individuals with high scores in SCO are uncertain about themselves thus may use the rich source of information in Facebook for social comparison for self-evaluation and self-improvement (Vogel, et al., 2015).

Gender and Facebook Addiction

The majority of prior studies show that women spent more time on Facebook and thus, are more prone to develop Facebook Addiction (Sherman, 2011; Thompson and Lougheed, 2012; Hofmann & Nadkarni, 2013; Steggink, & Jansma, 2015). In a survey conducted by Pew Research Center in the US, they determined that 77% of Facebook users were women while 66% of Facebook accounts belong to men (Duggan, 2015).

According to Mellema (2014) in Social Media Today, women tend to have 8% more friends than men, which can be an indication of women's willingness and ability to connect and communicate with more people in the online world. Thompson and Lougheed (2012) also discovered in their study that women were more likely to believe that they can express their feelings more easily on Facebook as compared to men. Villareal (2014) also posited that Social Networking Sites (SNS) like Facebook are generally acclaimed as gossip platforms and majority of women tend to get interested in knowing the gossips and the experiences of others, particularly if their own lives were lacking in excitement and satisfaction. In the Philippines, it was reported that majority of the Filipino Facebook users are women which accounted for 52.4% of its entire Facebook users since September 2019 (Napoleon Cat, 2019).

Despite the considerable amount of research that claim women are more avid Facebook users, a study by Balci and Gölcü (2013) conveyed opposing findings. In a study by Balci & Gölcü (2013) where they measured Facebook addiction in Selcuk University in Turkey, findings showed that male users are more susceptible to Facebook addiction.

Depression and Facebook Addiction

Loneliness and depression are directly proportional to the time spent on social networking sites such as Facebook, and vice versa (Muduli, 2015). Researchers suggested that individuals experiencing loneliness and depression most likely turn to social networking sites to search for companionship (Muduli, 2015), to seek relief by gaining social support from others (Ryan, 2015) and as a safe communication outlet for expressing their emotions (Lin, Tov & Qui, 2014; Moreno et al., 2011). Furthermore, Newman (2015) added that Social Media sites like

Facebook serve as an ideal platform for depressed people to passively socialize with others, escape from their symptoms and disconnect from their own feelings (Koc & Gulyagci, 2013).

Self-Esteem and Facebook Addiction
Individuals who were low in self-esteem were linked with more time spent of Facebook per session and a greater number of Facebook logins per day (Mehdizadeh, 2010). Social networking sites like Facebook foster a sense of belonging, their use can boost self- esteem, through selective representation or the careful selection of what to post in their personal accounts (Baran & Davis, 2014; Gonzales & Hancock, 2011). People with low self-esteem tend to see Facebook as a self-promotional tool leading them to use Facebook more. People who are experiencing low self-esteem may be able to enhance their self-worth if they receive "likes" or positive feedback on posted photos, videos or status updates (Attrill, 2015).

FoMO and Facebook Addiction
FoMO is defined as the "a pervasive apprehension that others might be having rewarding experiences from which one is absent, it is characterized by the desire to stay continually connected with what others are doing" (Przybylski, Murayama, DeHaan & Gladwell, 2013,p.1). FoMO directly results to Facebook addiction (Steggink & Jansma, 2015). In a study by Przybylski, et.al (2013), results revealed that FoMO was a strong explanation for SNS use, and people low in psychological needs satisfaction were more likely to experience FoMO. Moreover, FoMO is one of the main reasons why people are hooked in using multiple social networking sites and why users develop obsession and compulsion in checking their smart phones frequently even during face to face conversations (Wortham, 2011).

Social Comparison and Facebook Addiction
Corcoran, Crusius, and Mussweiler (2011) defined social comparisons as "comparisons between the self and others – are a fundamental psychological mechanism influencing people's judgments, experiences, and behavior" (p.119). In Leon Festinger's Social Comparison Theory (1954), he postulated that the basic drive that urges people to compare themselves to others is their need to maintain a stable and accurate view of themselves. Pempek, Yermolayeva, and Calvert (2009) cited that compared to actually posting content, majority of the Facebook users spent more time observing content on the online world. Social Networking Sites (SNS) are ideal platform for social comparison to take place (Pempek, Yermolayeva, & Calvert, 2009) since it provides information about others. Vogel, et al., (2015) discovered that individuals who scored high in SCO appeared to be heavy users of Facebook compared to those with low SCO. According to Buunk and Gibbons (2007), individuals with high scores in SCO are uncertain about themselves thus may use the rich source of information in Facebook for social comparison for self-evaluation and self-improvement (Vogel, et al., 2015).

Neuroticism and Facebook Addiction
Neuroticism is operationally defined by Costa and McCrae (1992) in terms of traits relating to irritability, anger, sadness, anxiety, worry, hostility, self-consciousness and vulnerability. According to Correa, et al. (2010) since neuroticism is associated to feelings of loneliness, it can be posited that anxious and nervous individuals log in to social networking sites to seek for social support and company from others. Facebook may be a perfect platform for neurotic people to meet their need for belongingness that is not satisfactorily met offline (Seidman, 2013). Sherman (2011) also implied that since individuals with high levels of neuroticism are anxious and undergo levels of depression, it can be reasonable to conclude that they feel more comfortable socializing outside of a face-to-face setting such as through the Internet.

The different findings from these researches have generated an interest in the present study to further investigate the phenomenon of Facebook addiction tendencies among millennials in the Philippine setting to investigate the possible dynamics involved in this generation's increased FB addiction tendency.

The results of this current study aim to provide a better understanding of whether Facebook Addiction tendencies exist among Filipino millennials. Our results intend to significantly add to the literature on the predictive relationship of certain psychological variables like depression, self-esteem, FoMO, social comparison and neuroticism to Facebook addiction. With the widespread popularity of social media particularly Facebook among millennials, it is essential to understand the psychological factors that influence an individual's Facebook (FB) use, specifically with those using FB at higher levels and to identify those who may be at risk of developing addictive tendencies. On the basis of majority of the findings from existing literature, the present study posited the following:

> H1: Women will have more Facebook addiction tendencies as compared to men.
> H2: Depression is positively related to Facebook addiction. Those with higher depression scores will have higher Facebook addiction tendencies.
> H3: Self-esteem is negatively related to Facebook addiction. Those with lower Self-esteem will have higher Facebook addiction tendencies.
> H4: FoMO is positively related to Facebook addiction. Those with higher FoMO scores will have higher Facebook addiction tendencies.
> H5: Social Comparison is positively related to Facebook addiction. Those with higher Social Comparison scores will have higher Facebook addiction tendencies.
> H6: Neuroticism is positively related to Facebook addiction. Those with higher Neuroticism scores will have higher Facebook addiction tendencies.
> H7: There will be significant prediction of Facebook addiction tendencies by depression, self-esteem, FoMO, social comparison and neuroticism.

Methodology

Research Design
This study is cross-sectional predictive in nature. The aim of this present study is to predict the variance of the independent variables (depression, self-esteem, FoMO, social comparison and neuroticism) in relation to the dependent variable (Facebook Addiction tendencies among Filipino millennials.

Participants
This study gathered 1000 Filipino millennials (246 males and 754 females) through convenience sampling. Samples included full-time senior high school, college students and employees who belong to the Millennial group, with ages ranging from 18-34 ($M= 17.58$, $SD= 2.47$) and a monthly active Facebook user (has logged in and visited Facebook in the last 30 days as of the date of measurement) in universities and companies within Metro Manila. Exclusion criteria are as follows: (1) millennials who will not give their informed consent, (3) have not logged in and visited their Facebook in the last 30 days as of the date of measurement, and (3) have invalid responses on any of the six research measures (e.g. no answer, double answers). No participant was excluded in the present study based on these criteria. Informed consent was obtained from all eligible participants prior to administration of tests. Table 1 shows the descriptive statistics of the participants in terms of gender, Facebook addiction tendencies and psychological variables.

| | Gender | | | | Total (N= 1000) | |
| | Male (n= 246) | | Female (n= 754) | | | |
	x̄	(SD)	x̄	(SD)	x̄	(SD)
Facebook Addiction tendencies	16.11	(4.22)	15.76	(4.48)	15.84	(4.42)
Depression	29.07	(16.49)	29.72	(17.27)	29.56	(17.08)
Self Esteem	18.77	(5.43)	17.19	(5.54)	17.58	(5.55)
Social Comparison	27.80	(4.67)	27.23	(5.11)	27.37	(5.01)
FoMO	25.78	(7.20)	26.00	(7.73)	25.34	(7.60)
Neuroticism	41.65	(5.91)	44.59	(5.86)	43.87	(6.01)

Table 1: Descriptive statistics of participants in terms of Gender, Facebook Addiction
          Tendencies and Psychological variables

Measures

Facebook Addiction. The Bergen Facebook Addiction Scale (BFAS) developed by Andreassen, Torsheim, Brunborg, and Pallesen (2012) is a 6-item questionnaire that asks participants to answer how often they have experienced the symptoms during the last year on 5 point Likert scale ranging from 1= very rarely to 5= very often. The developers suggested that scoring of 4= "often" or 5= "very often" on at least four of the six items in the test may indicate Facebook Addiction. Sample items include: *"Used Facebook in order to forget about personal problems?"* and *"Used Facebook so much that it has had a negative impact on your job/studies?"*. In the study conducted by Andreassen et. al. (2012), the original scale obtained an alpha-coefficient of 0.83 and a 3-week test-retest reliability coefficient of 0.82. In a study by Pontes (2016), the validity of BFAS was established via correlation with preference for online social interaction (POSI) (r=.27) as the predictor of Facebook addiction. In the present study, the BFAS has a Cronbach's alpha of 0.75.

Depression. Goldberg Depression Scale developed by Dr Ivan Goldberg (1993) is an 18-item self-administered screening test for depression. Participants are asked to indicate the extent to which each item is true, from 0= "not at all"; 1= "just a little"; 2= "somewhat"; 3= "moderately"; 4= "quite a lot"; and 5= "very much", in connection to how they felt and behaved during the past week (Goldberg, 1993). *"My future seems hopeless"* and *"I have lost interest in aspects of life that used to be important to me"* are some of the sample statements found in this scale. In their study testing the validation of Goldberg Depression Scale among academic and non-academic individuals, the total reliability of the test yielded for people with high school degree was 0.901, university degree was 0.861 and others was 0.817(Aminpoor, Afshinfar, Mostafaei, & Ostovar, 2012). The Goldberg Depression Scale had a Cronbach's alpha of 0.92 in the present study.

Self-Esteem. Rosenberg Self-Esteem Scale is a 10-item questionnaire composed of statements, which refer to general feelings about oneself (Rosenberg, 1965). Responses are scored on a 4-point Likert Scale, from "strongly agree" to "strongly disagree". This scale is scored by obtaining the total of all ten items. The scores range from 10 to 40, where higher scores signify more positive evaluations of oneself. Exploratory factor analysis revealed two constructs of: (i) positively worded items such as *"I feel that I have a number of good qualities"* and (ii) negatively worded items such as *"I feel I do not have much to be proud of"*. Rosenberg Self-

Esteem Scale has a Cronbach alpha of 0.86 (Vermillion & Dodder, 2007). According to Rosenberg (1965), RSE has internal consistency which ranges from 0.77 to 0.88 and test-retest reliability ranges from 0.82 to 0.85. The whole scale had a Cronbach's alpha of 0.87 in this present study.

Social Comparison. The Iowa-Netherlands Comparison Orientation Scale (INCOM) by Gibbons and Buunk, (1999) is an 11-item self- report of social comparison. The participants are asked to specify how much they agree with the items pertaining to the way they compare themselves with others on a 5-point Likert scale, with "I disagree strongly" (1) to "I agree strongly" (5). *"I often compare myself with others with respect to what I have accomplished in life"* and *"I always like to know what others in a similar situation would do"* are sample items in the test. Total score is obtained by summing the responses from each item. Internal consistency of the original scale has a Cronbach alpha of 0.83. In the Turkish version of the INCOM scale, it was reported to have test-item correlations between 0.26 to 0.65 (Tekozel, 2000). In the present study, INCOM Scale had a Cronbach's alpha of 0.65.

FoMO. Fear of Missing Out (FoMO) Scale developed by Przybylski, Murayama, DeHann, and Gladwell (2013) is a 10-item scale that measures the individual's FoMO. Responses are scored on a 5-point Likert Scale, from "Not at all true to me" (1) to "Extremely true of me" (5). *"I fear others have more rewarding experiences than me"* and *"I get anxious when I don't know what my friends are up to"* are sample items found in the test. The scale is scored by obtaining the average responses to all ten items. The scale demonstrated good internal consistency with reliable composite measure, α = 0.87 to 0.90 (Przybylski, Murayama, DeHaan & Gladwell, 2013) and a strong internal consistency, α = 0. 93 based on the study by Reyes et al., (2018). In this present study, the scale had a Cronbach's alpha of 0.85.

Neuroticism. The Neuroticism Scale Questionnaire (NSQ), developed by Ivan Scheier and Raymond Cattell (1961), is a 40- item questionnaire that measures degree of neuroticism or "neurotic trend". This questionnaire consists of items pertaining to the attitudes and opinions the participants do and feel about certain situations; they are to indicate whether each item applies to them by putting a cross in one of the three choices- "Yes" "In Between" or "Undecided and "No". Responses are tallied by using a standard key-scoring system and converted to standard normative scores for interpretation. Higher scores indicate more neurotic trend. *"I sometimes get tense and upset as I think back on the day's happenings"* and *"Sometimes I let small things get on my nerves too much"* are sample items found in this test. According to Scheier and Cattell (1961), the Cronbach alpha coefficients of the NSQ are 0.74 for Tender- Mindedness (I), 0.76 for Depression (F), 0.69 for Submissiveness (E) and 0.84 for Anxiety (An). The reliability of Neuroticism Scale Questionnaire (NSQ), ranges from 0.60 and 0.70 (Bhandari & Bhandari, 2011). The whole scale had a Cronbach's alpha of 0.50 in this present study.

Procedures

Before conducting the study, permission from the Ethics Review Committee (ERC) at the University of Santo Tomas Graduate School and from the test developers through electronic mail were sought. Through convenience sampling, 1000 Filipino millennials who met the inclusion criteria were recruited for the study. Informed consent was obtained from all participants prior to administration of tests. The six measures were compiled and administered through a 20-30-minute paper survey in this order: Bergen Facebook Addiction Scale (BFAS), Goldberg Depression Scale, Rosenberg Self-Esteem Scale, Fear of Missing Out Scale, Iowa-Netherlands Comparison Orientation Scale (INCOM), Neuroticism Scale Questionnaire

(NSQ). Data were collected in different universities and companies within Metro Manila, Philippines. The participants received no remuneration.

Data Analysis

To determine if there were any significant differences between male and female participants in terms of Facebook addiction tendencies, Independent samples t-test was utilized. Pearson's Correlation Coefficient was used to measure the relationship of the psychological variables and Facebook addiction tendencies. Lastly, to test if the psychological variables significantly predict Facebook addiction tendencies, Stepwise Multiple Regression Analysis was utilized.

Results

Descriptive statistics revealed that in terms of Facebook Addiction tendencies, females scored higher (*M*=15.76, *SD*= 4. 48) than males (*M*= 16. 11, *SD*= 4. 22). Independent samples t-test was used to measure if there were any significant differences between our male and female participants. Result showed no evidence to support that Facebook Addiction Tendencies significantly differed across gender, as indicated by the t-test p-value of .28 (>. 05).

Table 2 presents the results of the correlational analysis between Facebook addiction tendencies and psychological variables. Pearson's Correlation Coefficient was utilized to measure the relationship of the psychological variables and Facebook addiction tendencies. With the exception of Neuroticism ($r (998)$ = -. 01, p= .854), the other psychological variables are significantly related with FB addiction tendencies: Depression ($r (998)$ = .20, p= .001) and FoMO $r (998)$ =. 24, p= .001) correlates positively with Facebook Addiction tendencies; Self-esteem ($r (998)$ = -. 08, p= .013) and Social Comparison ($r (998)$ = -. 11, p= .001) correlates positively with Facebook Addiction tendencies.

		Pearson's r	p-value
Facebook	Depression	.20	.001*
Addiction	Self-Esteem	-.08	.013*
Tendencies	Social		
&	Comparison	-.11	.001*
	FoMO	.24	.001*
	Neuroticism	-.01	.854

*$p \leq .01$

Table 2:   Correlation between Facebook Addiction Tendencies and Psychological Variables

Table 3 presents the final regression model which shows that only Depression and FoMO could significantly predict Facebook addiction tendencies. The model explained only 7% of the variance and the model was a significant predictor of Facebook addiction tendencies, $F (2, 997)$ =39.49, p<.01 which indicates that although depression and FoMO are contributory factors for Facebook addiction tendencies, the final model can only predict a very small percentage of the population. Both depression and FoMO had a significant positive correlation with Facebook addiction tendencies. The effects size shows that for everyone unit increase in depression there will be a corresponding .04 increase in Facebook addiction tendencies (β = .04, p<.01). Similarly, for everyone unit increase in FoMO there will be a corresponding .11 increase in Facebook addiction tendencies (β = .11, p<.01).

Predictors	B	SE B	ß	R^2 (Adjusted R^2)
Depression	.04	.01	.14	.27 (.07)
FoMO	.11	.02	.19	

Table 3: Final Model Stepwise Multiple Regression Analysis of Predictors of Facebook
        Addiction

Discussion

The present research found that Facebook Addiction tendencies did not significantly differ across gender, thus accepting the null hypothesis. The results of the present study are in contrary to the majority of previous studies which revealed that women are more prone to develop Facebook Addiction (Andreassen, 2015 ; Hofmann & Nadkarni, 2013; Sherman, 2011; Thompson and Lougheed, 2012; Steggink, & Jansma) ,because women are biologically wired for social networking (Vermeren, 2015). Variances in numbers across genders in terms of Facebook use from different studies can be attributed to the millennials' diversification into other social media platforms with similar features such as Instagram and Twitter (Kemp, 2015; Duggan & Smith, 2013). Research suggests that millennials favor newer and more graphic communications platforms based on the study conducted by the research firm eMarketer (Lomas, 2017). Although Facebook remains to be the most widely used social networking site around the world and the most popular among millennials, they are starting to abandon Facebook and migrate to Instagram and Snaphat which are both photo and video-sharing platforms which also allows connecting and communicating with people online (Guynn, 2017).

Results also revealed that depression and FoMO correlates positively with Facebook addiction thus refuting the null hypotheses. This implies that the more depressed an individual is and the more fearful of missing out, the higher the tendency of getting addicted to Facebook. Scherr and Brunet (2017) likewise postulated that people with depression use Facebook to fulfill psychological and social needs such as the need for social contact and to seek relief by gaining social support from others (Ryan, 2015). With the nature of depression which involves social isolation or diminished social activities, and possible lack of energy or drive to participate in direct face to face social interactions (Lin et al., 2016), depressed individuals try to compensate for their unmet needs with online connectedness thru social media use (Przybylski, Weinstein, Ryan, & Rigby, 2009). The lack of real-life social connectedness motivates people with depression to engage more in social networking sites which could contribute to higher Facebook addiction tendencies (Masur, Reinecke, Ziegele & Quiring, 2014). Przybylski et al. (2013) and Steggink and Jansma (2015) strongly emphasized that one's FoMO had a significant role in the increased usage of social networking sites such as Facebook. Because human beings have the inherent need to belong to groups, they also have the need to keep track of what others are doing (Jood, 2017). Millennials engage in social media sites not solely to socialize with others but to also be updated with the latest news and information about their online friends and almost about everything happening in the society (Media Insight Project, 2014). According to Fuster, Chamarro, and Oberst (2017), because of the high accessibility of going online in today's digital age via portable devices and smart phones, Facebook users who experience high FoMO are may have the urge to keep up to date with their online friends' activities.

Self-esteem and social comparison correlate negatively with Facebook addiction tendencies, thus refuting the null hypotheses. This indicates that the lower the self-esteem and social comparison, the higher the tendency of getting addicted to Facebook. Forest and Wood (2012) postulated that those with low self-esteem consider social networking sites as less threatening

as compared to face-to-face interactions when presenting and expressing themselves to others (Scissors, Burke, Wengrovitz, Way, & Park, 2016). Another motivating factor that drives an individual to use Facebook among low self-esteem individuals is the need for self-presentation since Facebook allows its users to control the content of their social media. In a study by Rantasalo (2017), he postulated that Facebook users consciously control the content of their Facebook account such as their profile pictures, the photos and status updates they post in order to project their best possible image to their online friends and cope with their low self-esteem. In relation to social comparison and Facebook addiction tendencies, Vries et al., (2018) postulated that those with high social comparison scores tend to have lower positive affect after seeing positive posts in their newsfeed which could possibly cause them to use Facebook less often, while those people with lower tendencies to compare themselves with others or lower social comparison had higher positive affect after seeing positive posts, which could drive them to engage on Facebook activities

The researchers also found no significant relationship between neuroticism and Facebook addiction, thus accepting the null hypothesis. In a similar study by Scherr and Brunet (2017), findings revealed that neuroticism only influence the motivations behind Facebook usage and not directly affect the time being sent on Facebook. Furthermore, Hughes, Rowe, Batey, and Lee (2012) concluded that although it has been revealed in their study that an individual's personality was related to Facebook usage, the correlations were not direct or significant as other research suggested as other factors such as motivation behind Facebook use, self-efficacy and intelligence could be influential.

Lastly, among all the psychological variables investigated in the present study, only depression and FoMO significantly predict Facebook addiction tendencies, nevertheless rejecting the null hypothesis. Ryan, Chester, Reece, and Xenos (2014), strongly suggested that people with low psychosocial wellbeing such as those with depression are more driven to use Facebook to seek for social support and as an escape from their negative moods. Moreover, individuals who scored higher in FoMO scale who may report negative feelings such as being anxious when there is a lack of constant connection online with what others are doing, are more likely to develop Facebook addiction tendencies.

In conclusion, results from this study implied that Facebook addiction tendencies between men and women did not significantly differ as opposed to other earlier studies. This suggests that Facebook addiction tendencies cannot be generalized into a specific gender group. Moreover, it could be implied that as years go by, millennials also diversify into other social media platforms with similar features with Facebook to fill their needs. Although Facebook has been long hailed as the most popular and most widely used social media site (Statista, 2018), a survey made by the Manifest Consumer Media Survey reported that Facebook's popularity is declining with the younger generation (Cox, 2019). The young generation is more enticed in newer and more visually-driven platforms that are suited for photo and video sharing without the need for words such as Instagram and Snapchat (Koprowski, 2018) mainly because photo sharing has become a prevalent routine communicative action in the young generation's everyday life (Lobinger, 2016).

Furthermore, the results revealed that from the different psychological variables used in the study, only depression and FoMO are possible predictors of Facebook addiction among participating Filipino Millennial but does not imply absolute causation to having Facebook addiction. This implies that although depression and FoMO can be considered as contributory factors in having Facebook addiction, other individual factors which may not be explored in

this study can affect one's tendency to have Facebook addiction. According to Bryant (2018), the use of media among adolescents is centered on staying connected at all times, that is to get to know people, stay in touch with friends, and present themselves to the world. Shapiro and Margolin (2014) also added that adolescence is a developmental phase for self-discovery, exploring new social skills, and creating values and affiliations. Furthermore, these media is a good avenue to facilitate identity exploration or the search for coherent sense of self (Subrahmanyam , Smahel & Greenfield, 2006) as adolescents use these sites for self-presentation by choosing how to represent themselves sonline and sharing aspects of their lives (Subrahmanyam & Smahel, 2011). Many developmental tasks associated with adolescence are extended into emerging adulthood (Arnett, 2007; Koepke & Denissen, 2012; Tanner, 2006). In Erik Erikson's psychosocial developmental the basic crisis during young adulthood is intimacy versus isolation where the individual is concerned with establishing intimate, long –term relationships with other people stages (Erikson, 1993). Forming relationships and being socially connected with others is evident among millennials especially with the aid of technology. At present, the integration of technology into the everyday lives of young adults is not reliant upon the individual's general willingness to experience new things but more likely due to the pervasiveness of technology into the lives of millennials (Gray, 2014). Moreover, because access to the online world is much easier today, individuals who do not have a Facebook account or gadget may have the tendency to feel socially isolated (Auter, 2007). During these phases when peer support and approval is significant, social media platforms support these needs (Hillier & Harrison, 2007).

With the widespread popularity of social media particularly Facebook among millennials, it is essential to understand the psychological factors that influence an individual's Facebook (FB) use, specifically with those using FB at higher levels and to identify those who may be at risk of developing addictive tendencies. An awareness and better understanding about the nature of Facebook Addiction as an arising disorder among Filipino millennials and the psychological predictors that predispose an individual to have this condition can help mental health practitioners to educate the public on prevention and management of Facebook Addiction among millennials and emphasize appropriate, disciplined and self-regulated use of social networking sites, particularly Facebook.

Future Directions

The present study leaves open the question of cause and effect whether psychological variables-depression, low self-esteem, FoMO, neuroticism and social comparison cause Facebook addiction tendencies or if having Facebook addiction tendencies causes an individual to have the abovementioned psychological effects. Thus, for future studies, possibly a longitudinal study that would explore more on the causal relationship of the variables, can help in unraveling this question. Moreover, an exploration on the possible relationships among the predictor variables and the possibility of mediating or moderating roles in predicting FB addiction tendencies is recommended since the present study's objective is only to measure the relationship of the psychological variables to the tendencies of having Facebook addiction,

Furthermore, an investigation on how the Filipino culture and values influence Facebook use and Facebook Addiction tendencies among Filipinos may also be pursued to explain how such factors contribute to the development and occurrence of Facebook Addiction tendencies in the Philippines. Also, since this study only involved millennial participants within Metro Manila, the use of samples in other geographic regions in the Philippines to represent the population may be carried out in future similar studies.

Lastly, our study gathered 1000 Filipino millennials with ages ranging from 18-34 who are monthly active Facebook users. The present study did not specifically determine the number of times spent on Facebook usage among the participants; thus, an exploration on the relationship of time spent on Facebook on FB addiction tendencies is encouraged for future similar studies. Additionally, to consider on the possible role of age differences in the Millennial generation and an investigation on whether gender acts as a potential covariate in predicting Facebook Addiction tendencies is highly recommended.

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