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Personality Traits and Demographics Influencing Social Networking Site Addiction

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Abstract

The purpose of this study was to examine the influence of personality traits and demographics on social networking site addiction. Survey research with a cross-sectional design was employed to examine social networking site addiction. Purposive sampling was used to collect the data from Internet users who had participated in social networking websites. The total samples were 460 (N = 460). Overall, the findings revealed that those exhibiting Extroversion were more likely to be addicted to social networking sites, whereas those exhibiting Emotional Stability and Conscientiousness were less likely to be addicted to social networking sites. Moreover, there were differences between age groups and social networking site addiction. People who were younger tended to be more addicted to social networking sites than those who were older. The results also showed no gender differences in social networking site addiction.

Keywords: personality traits, social networking site addiction, social networking site usage, demographics

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บุ

บุคลิกลักษณะและลักษณะทางประชากรศาสตร์ มีผลต่อการติดเว็บไซต์เครือข่ายทางสังคม

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บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาอิทธิพลของบุคลิกลักษณะและลักษณะทางประชากรศาสตร์ที่มีผลต่อการติดเว็บไซต์เครือข่ายทางสังคม การวิจัยนี้เป็นการวิจัยเชิงสำรวจโดยมีการเก็บข้อมูลแบบตัดขวางเพื่อศึกษาการติดเว็บไซต์เครือข่ายทางสังคม โดยการเก็บข้อมูลเป็นแบบเจาะจงในกลุ่มผู้ใช้เว็บไซต์เครือข่ายทางสังคม ผู้เข้าร่วมการวิจัยนี้มีจำนวนทั้งหมด 460 คน ผลการวิจัยพบว่า กลุ่มผู้ที่มีบุคลิกลักษณะชอบแสดงออกมีแนวโน้มในการติดเว็บไซต์เครือข่ายทางสังคม ส่วนกลุ่มที่มีความมั่นคงทางอารมณ์และมีสติตระหนักรู้มีแนวโน้มที่จะไม่ติดเว็บไซต์เครือข่ายทางสังคม นอกจากนี้ ผลวิจัยยังพบว่ากลุ่มที่มีอายุน้อยจะมีแนวโน้มในการติดเว็บไซต์เครือข่ายทางสังคมมากกว่ากลุ่มที่มีอายุมาก การศึกษานี้ไม่พบความแตกต่างระหว่างเพศและการติดเว็บไซต์เครือข่ายทางสังคม

คำสำคัญ: บุคลิกลักษณะ การติดเว็บไซต์เครือข่ายทางสังคม การใช้เว็บไซต์เครือข่ายทางสังคม ประชากรศาสตร์

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Introduction

Nowadays, the social networking site (SNS) has become prevalent and significant to people's lives and well-being. Social networking sites and social media applications (apps) have made our day-to-day activities more convenient and enjoyable. Social networking sites typically are online platforms that people use to interact with others, build relationships, and broadcast their information. The various functions that social networking sites could offer allow users to do multiple activities such as presenting themselves to others; maintaining current relationships; building new networks; and accessing news, information, and entertainment. As a result, some people may use these social networking sites excessively, and their usage possibly may affect their social relationships and personal lives.

The evidence from Internet World Stats (IWS, 2019) indicated that there were approximately 57 million (82.2%) Internet users (as of June 2019), with approximately 66.4% Internet users subscribed to Facebook in Thailand. In addition, Facebook and LINE were among the most popular sites/applications Thai people have used for social networking (Electronic Transaction Development Agency (ETDA, 2018).

Rationale for the Study

In the recent years, research on social networking site usage and addiction has been focused on various aspects. Scholars have investigated such topics as individual differences and SNS use (Krämer & Winter, 2008; Pornsakulvanich & Dumrongsiri, 2012), SNS motivation (Dumrongsiri & Pornsakulvanich, 2010, 2012; Pornsakulvanich & Dumrongsiri, 2013; Ross et al., 2009), SNS and social support (Pornsakulvanich, 2017b); SNS addiction (Blachnio, Przepiorka & Pantic, 2016), and Facebook addiction (Pornsakulvanich, 2018).

In Thailand, there were several studies on SNS usage (Pornsakulvanich, 2017b; Pornsakulvanich & Dumrongsiri, 2013) and Facebook addiction (Pornsakulvanich, 2018). Nonetheless, there has been limited academic research on the interrelationships among personality traits, demographics, and SNS addiction. Moreover, most research has investigated SNS addiction in only one dimension. Andreassen, Torsheim, Brunborg and Pallesen (2012) pointed out that SNS addiction can be studied as component models, rather than as one dimension.

Purpose of the Study

The main purpose of this study was to examine the influence of personality traits and demographic factors on social networking site addiction in six component models: salience, mood modification, tolerance, withdrawal, relapse, and conflict.

Theoretical Frameworks

Social Networking Site Addiction

Young (1998) introduced the concept of excessive use of the Internet or Internet addiction by using Pathological Gambling as a model to explain Internet-addicted behaviors. Internet addiction is “an impulse-control disorder which does not involve an intoxicant” (Young, 1998, p. 237). Young classified Internet addiction into five types: (1) cybersexual addiction to adult chat rooms; (2) cyberrelationship addiction to online friendships; (3) net compulsions to online gambling, auctions, or trading; (4) information overload to compulsive web surfing or databases searches; and (5) computer addiction to game playing and programming.

In a later study, Young (2009) suggested that Internet users can be addicted to different types of online usage including excessive gaming, online sexual preoccupation, and e-mailing/texting. In fact, addiction to social networking sites can be classified as a type of addiction to texting in which users excessively use social media by texting, making comments, responding to others, and chatting with other online network users.

This study applied the concept of social networking site addiction from previous studies of addictive behaviors (Andreassen et al., 2012; Wilson, Fornasier & White, 2010; Young, 1998). In addition, the addiction scale was adapted from past research, which contains six components of addiction: (1) Salient - the activity dominates people’s thinking and behavior, (2) Mood modification - the activity changes mood, (3) Tolerance - there are increases in amounts of the activity, (4) Withdrawal - the unpleasant feelings when the activity is reduced or discontinued, (5) Conflict - the activity causes conflict in relationships and other activities, and (6) Relapse - a tendency to return to patterns of the activity after trying to control it (Andreassen et al., 2012; Wilson et al., 2010). In the present study, SNS addiction refers to how people feel about their social networking site usage based on these six components of addiction: Salient, mood modification, tolerance, withdrawal, conflict, and relapse.

Personality Traits

This study applied the concept of the Five-Factor Model, or the Big Five, which categorized personality into five dimensions: Emotional Stability, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness (Costa & McCrae, 1995; Goldberg, 1993; Judge, Heller & Mount, 2002; McCrae & Costa, 1989; Saucier, 1994).

Emotional Stability (ES) refers to people who are self-reliant, stable, and adaptable to new situations. Extroversion (E) explains people who are sociable, gregarious, assertive, and cheerful. Openness to Experience (O) refers to people who are curious, unconventional, and imaginative. Agreeableness (A) refers to people who have the tendency to be cooperative, generous, altruistic, and warm. Conscientiousness (C) explains people who are dependable, organized, persistent, and goal-oriented (Goldberg, 1993).

The Big Five is a significant and comprehensive model of personality (Goldberg, 1993; Judge et al., 2002; McCrae & Costa, 1989; Pornsakulvanich et al., 2012). Past research included the Big Five personality traits as main variables to investigate SNS use and addiction (Pornsakulvanich, 2017b; Pornsakulvanich & Dumrongsiri, 2012; Ross et al., 2009). The Big Five has also been linked to social media addiction and usage (Correa, Hinsley & de Zuniga, 2010; Hong, Huang, Lin & Chiu, 2014; Moore & McElroy, 2012; Pornsakulvanich & Dumrongsiri, 2012; Ross et al., 2009). For instance, Pornsakulvanich and Dumrongsiri (2012) found that Extroversion positively predicted time spent on SNSs, while Emotional Stability and Conscientiousness negatively predicted time spent on SNSs. Similarly, Moore and McElroy (2012) found that Emotional Stability negatively predicted time spent on Facebook, while Extroversion negatively predicted frequency of Facebook use.

Review of Literature

Personality Traits, Social Networking Site Addiction, and Usage

Personality traits are crucial variables in the study of Internet and SNS use. Empirical studies have suggested the role of personality traits on media use and consequences. Several studies found a link between personality traits and Internet use (Pornsakulvanich, 2017a; Pornsakulvanich, Haridakis & Rubin, 2008), Internet addiction (Pornsakulvanich, 2008), Facebook addiction (Pornsakulvanich, 2018), SNS use (Correa et al., 2010; Moore & McElroy, 2012; Pornsakulvanich & Dumrongsiri, 2012), and SNS addiction (Tang, Chen, Yang, Chung & Lee, 2015).

For instance, Pornsakulvanich et al. (2008) reported that participants who perceived their face-to-face communication to be rewarding felt close to their online partners. Moreover, Pornsakulvanich (2008) found that Internet addiction among Thai college students was affected by their underlying characteristics. Those who believed their lives to be controlled by others and who used the Internet excessively tended to develop Internet-addicted behaviors. Pornsakulvanich (2018) revealed that those who were high self-monitors tended to be more addicted to Facebook than were those who were low self-monitors.

Past research has suggested mixed results on the associations among traits, SNS use, and SNS addiction. For instance, Tang et al. (2015) found that Agreeableness, Conscientiousness, and Neuroticism were negatively related to Facebook addiction. Correa et al. (2010) reported that Extroversion positively predicted and Emotional Stability negatively predicted social media use. Moreover, Pornsakulvanich and Dumrongsiri (2012) found a positive relationship between Extroversion and SNS use, and a negative relationship between Emotional Stability and SNS use. In addition, Ryan and Xenos (2011) reported that high extroverted people preferred using Facebook than low extroverted people.

In addition, those who scored high on Neuroticism (Emotional Instability) tended to post more photos than those who scored low (Amichai-Hamburger & Vinitzky, 2010). Ryan and Xenos (2011) found a significant positive relationship between Neuroticism and a negative association between Conscientiousness and time spent on Facebook. They also reported that high extroverted people preferred using Facebook more than low extroverted people.

Hughes, Rowe, Batey and Lee (2012) investigated the link between personality and Facebook and Twitter usage and found mixed results. Those who had high Emotional Instability scores were more likely to use Facebook for social use, whereas those who scored high on Openness and low on Conscientiousness were more likely to use Twitter for social purposes. Hong et al. (2014) found that those who had depressive characteristics could predict their Facebook addiction and suggested a positive relationship between Facebook usage and addiction.

Nonetheless, some studies found no association between traits and SNS usage. Moore and McElroy (2012) indicated that high extroverted people had more Facebook friends, but less frequently used Facebook. They also reported no relationship between Extroversion and time spent on Facebook. Ross et al. (2009) found that Extroversion was not related to time spent online and the number of friends on Facebook, whereas Neuroticism (Emotional Instability) was not associated with posting personal information on Facebook.

In respect to prior studies, the relationships between Extroversion and Emotional stability and SNS usage are evident. However, there is still insufficient evidence of the link between Big Five personality traits and SNS addiction. Accordingly, the first research question was posed:

RQ1: How do personality traits (i.e., Emotional Stability, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness) predict SNS addiction (i.e., salient, tolerance, mood modification, relapse, withdrawal, and conflict)?

Demographic Factors, Social Networking Site Addiction, and Usage

Demographic factors including gender and age are also essential variables to understand SNS addiction and usage. Past research has shown that there were gender and age differences in the use of Internet and SNSs. Dumrongsiri and Pornsakulvanich (2008) found that women sent more short messages via mobile phone than did men. In a later study, Dumrongsiri and Pornsakulvanich (2010b) reported that women spent more time using SNSs than did men. Correa et al. (2010) investigated whether the personality, age, gender predicted social media use. They found that women with higher levels of Extroversion and Openness would be more likely to use social media. Men who were highly extroverted and low in Emotional Stability tended more to use social media.

However, some previous studies did not find a link between demographics and SNS use. For instance, Baek, Holton, Harp and Yasschur (2011) found that gender and age were not related to the frequency of posting links on Facebook.

Prior researchers have looked at demographics and SNS usage, yet have not directly investigated SNS addiction. Hence, to understand further gender, age, and SNS addiction, two research questions were posed:

RQ2: Are there differences between men and women in SNS addiction?

RQ3: Are there differences among age groups in SNS addiction?

Method

Sample and Procedure

This study used a cross-sectional design to study the influence of personality traits and demographic factors on social networking sites addiction. Purposive sampling was used to collect the data from SNS users who had participated in at least one of the social networking websites

(i.e., Facebook, Instagram, and LINE). Data was collected from SNS users around Bangkok and adjacent areas. Participants were approached randomly in certain areas such as university campus and office areas and were asked for participation in the study. All participants were informed about the purpose of the study, duration to participate, and their right to withdraw from participation. Participants were ensured about the confidentiality of their responses to use only for academic purposes.

To calculate sample size, this study followed tables for determining sample size to minimize random sampling error (Zikmund, 2003). According to IWS (2016), the number of Internet users in Thailand is approximately 57 million. At a 95 percent confidence level with a 5 percent error, the sample size for the study was estimated at 322 when the size of population is 500,000 and higher. Overall, there were 460 participants ($N = 460$) in this study.

The questionnaire contains four sections: Social network site usage, social networking site addiction, personality traits, and demographics.

Measurement

Personality Traits

The personality traits were operationalized as the patterns of people's behaviors. The International Personality Item Pool (IPIP) (Goldberg, 1993) reflects the Five-Factor model traits: Agreeableness, Conscientiousness, Emotional Stability, Extroversion, and Openness to Experience. The scale contained 50 items with a 5-point scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (5). Participants were asked to rate how accurately each statement describing their behaviors. The scores of each trait were summed and averaged to create the personality trait indexes. The scale reliability from previous studies ranged from Cronbach α .82 to .65 (Pornsakulvanich & Dumronghiri, 2012; Pornsakulvanich et al., 2012). In this study, Cronbach alphas of the scale were Agreeableness (Cronbach $\alpha = .76$, $M = 3.73$, $SD = 0.50$), Conscientiousness (Cronbach $\alpha = .73$, $M = 3.42$, $SD = 0.51$), Emotional Stability (Cronbach $\alpha = .77$, $M = 3.07$, $SD = 0.56$), Extroversion (Cronbach $\alpha = .76$, $M = 3.11$, $SD = 0.56$), and Openness to Experience (Cronbach $\alpha = .73$, $M = 3.40$, $SD = 0.45$).

Social Networking Site Addiction

The social networking site addiction scale was adapted from the Bergen Facebook Addiction Scale (Andreassen et al., 2012). The scale comprised 18 items, six components of

addiction: salience, mood modification, tolerance, withdrawal, conflict, and relapse. It measures how people feel about their social networking site usage. The scale ranged from *Very Rarely* (1) to *Very Often* (5). The scores of each SNS addiction were summed and averaged to create the SNS addiction indexes: Salient (Cronbach $\alpha = .73$, $M = 3.07$, $SD = 0.77$), tolerance (Cronbach $\alpha = .73$, $M = 3.44$, $SD = 0.80$), mood modification (Cronbach $\alpha = .89$, $M = 2.83$, $SD = 1.09$), relapse (Cronbach $\alpha = .84$, $M = 2.64$, $SD = 0.93$), withdrawal (Cronbach $\alpha = .84$, $M = 2.69$, $SD = 0.94$), and conflict (Cronbach $\alpha = .79$, $M = 2.38$, $SD = 0.91$).

Social Networking Site Usage

The scale contained questions measuring participants' social networking site usage behaviors that included the duration of SNS use (months), and the amount of SNS use (average hours/day). Participants filled in the duration and the amount of each SNS use including Facebook, Instagram, and LINE. The scores of the duration and the amount of each SNS use were summed and averaged to create SNS use indexes.

Demographics

Participants responded to general demographic questions about gender, age, income, and education.

Data Analysis

A descriptive and reliability analysis was conducted to analyze general data and test measures. For Research Question 1, a multiple regression was employed to assess the influence of five personality traits on SNS addiction. Research Question 2 used an independent-sample *t* test to measure the differences between genders in SNS addiction. Research Question 3 used an Analysis of Variance to test the differences among age groups in SNS addiction.

Results

General Data

In this study, the total participants were 460; 31.1% male, 66.0% female, and 2.9% others (LGBT). Participants ranged in age of 18-25 (49%), followed by 26-32 (15.3%), 33-39 (10.3%), 40-47 (8.3%), 48-54 (8.8%), and 55 and above (8.3%). The majority of the participants were students (42.2%). They had monthly income less than 30,001 Thai Baht (83.6%) and earned a Bachelor degree (54.3%) the most.

For the SNS usage, participants reported the duration (average in months) of using Facebook ($M = 50$, $SD = 29.36$), Instagram ($M = 34$, $SD = 51.08$), and Line ($M = 35$, $SD = 20.79$); the average hours on Facebook daily ($M = 6.10$), Instagram ($M = 4.02$), and Line ($M = 6.00$).

Testing Research Questions

This study posed three research questions. Research Question 1 asked how personality traits (i.e., Emotional Stability, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness) would predict SNS addiction (i.e., salient, tolerance, mood modification, relapse, withdrawal, and conflict).

For predicting the overall SNS addiction, a multiple regression analysis showed that personality traits did contribute to SNS addiction, $R = .41$, $R^2 = .17$, $F(5, 454) = 18.65$, $p < .001$. Three major predictors of SNS addiction were Extroversion ($\beta = .20$, $p < .001$), Emotional Stability ($\beta = -.26$, $p < .001$), and Conscientiousness ($\beta = -.21$, $p < .001$). The finding showed that Extroversion positively predicted SNS addiction, while Emotional Stability and Conscientiousness negatively predicted SNS addiction (see Table 1).

For explaining each component of SNS addiction, a separate multiple regression analysis revealed that three predictors: Extroversion ($\beta = .18$, $p < .001$), Emotional stability ($\beta = -.12$, $p < .01$), and Conscientiousness ($\beta = -.10$, $p < .05$) contributed to salient, $R = .25$, $R^2 = .66$, $F(5, 454) = 6.39$, $p < .001$. Moreover, all five traits Extroversion ($\beta = .17$, $p < .001$), Openness to experience ($\beta = .11$, $p < .05$), Agreeableness ($\beta = .13$, $p < .01$), Emotional Stability ($\beta = -.20$, $p < .001$), and Conscientiousness ($\beta = -.13$, $p < .01$) contributed to tolerance, $R = .34$, $R^2 = .11$, $F(5, 454) = 11.93$, $p < .001$ (See Table 2).

For predicting mood modification, three traits: Extroversion ($\beta = .12$, $p < .01$), Emotional Stability ($\beta = -.23$, $p < .001$), and Conscientiousness ($\beta = -.19$, $p < .001$) were the major contributors, $R = .35$, $R^2 = .12$, $F(5, 454) = 12.71$, $p < .001$. Along the same line, three traits: Extroversion ($\beta = .18$, $p < .001$), Emotional Stability ($\beta = -.23$, $p < .001$), and Conscientiousness ($\beta = -.17$, $p < .01$) predicted relapse, $R = .36$, $R^2 = .13$, $F(5, 454) = 10.76$, $p < .001$ (See Table 2).

For predicting withdrawal, four traits: Extroversion ($\beta = .19$, $p < .001$), Openness to Experience ($\beta = .12$, $p < .01$), Emotional Stability ($\beta = -.18$, $p < .001$), and Conscientiousness ($\beta = -.15$, $p < .001$) were the major contributors, $R = .33$, $R^2 = .11$, $F(5, 454) = 11.26$, $p < .001$. For predicting conflict, Emotional Stability ($\beta = -.21$, $p < .001$) and Conscientiousness ($\beta = -.20$, $p < .001$) were the major contributors, $R = .33$, $R^2 = .11$, $F(5, 454) = 11.26$, $p < .001$ (See Table 2).

Table 1 Summary of Multiple Regression Analysis for Personality Traits Predicting SNS Addiction

Predictors $R^2 = .17^{***}$	SNS Addiction β
Emotional Stability	-.26 ^{***}
Extroversion	.20 ^{***}
Openness to Experience	.07
Agreeableness	.04
Conscientiousness	-.21 ^{***}

Note: ^{***} $p < .001$. β = Standardized Coefficients

Table 2 Summary of Separate Multiple Regression Analysis for Personality Traits Predicting each component of SNS Addiction

Predictors	SNS Addiction					
	Salient β	Tolerance β	Mood Modification β	Relapse β	Withdrawal β	Conflict β
	$R^2 = .06^{***}$	$R^2 = .11^{***}$	$R^2 = .12^{***}$	$R^2 = .13^{***}$	$R^2 = .10^{***}$	$R^2 = .13^{***}$
Emotional Stability	-.12 ^{**}	-.20 ^{***}	-.23 ^{***}	-.23 ^{***}	-.18 ^{***}	-.21 ^{***}
Extroversion	.18 ^{***}	.17 ^{***}	.12 ^{**}	.18 ^{***}	.19 ^{***}	.07
Openness to Experience	.04	.11 [*]	.05	.02	.12 ^{**}	-.00
Agreeableness	.06	.13 ^{**}	.02	.02	-.01	-.04
Conscientiousness	-.10 [*]	-.13 ^{**}	-.19 ^{***}	-.17 ^{**}	-.15 ^{**}	-.20 ^{***}

Note: ^{*} $p < .05$. ^{**} $p < .01$. ^{***} $p < .001$. β = Standardized Coefficients

For predicting each SNS addiction component, the findings showed an interesting addiction pattern, particularly Emotional Stability and Conscientiousness that negatively predicted all six SNS addiction components. People who received a high score in Emotional Stability and Conscientiousness would be less likely to feel that SNS usage could dominate their thoughts and behaviors, change their mood, increase the amount of SNS use, feel unpleasant when the activity is reduced or discontinued, have conflict in relationships, and return to patterns of the activity after trying to control.

Research Question 2 asked whether there were differences between men and women in SNS addiction. An independent-sample *t* test revealed no significant differences between men and women in overall SNS addiction, $t(441) = 1.13, p > .05$. The results suggested that there were no gender differences in SNS addiction.

Research Question 3 asked whether there were differences in age groups and SNS addiction. An Analysis of Variance showed significant effects of age on SNS addiction, $F(5, 451) = 7.11, p < .001$. In addition, a post hoc test indicated the mean score differences in three age groups, 18-25, 48-54, and more than 54. The mean score for (Group 1) 18-25 ($M = 2.95, SD = 0.65$) was significantly different than group (Group 5) 48-54 ($M = 2.41, SD = 0.58$), and (Group 6) more than 54 ($M = 2.50, SD = 0.53$). The results suggest that people who are in different age groups are diverse in SNS usage behaviors. Those who are younger tend to be more addicted to SNS than those who are older (see Table 3).

Table 3 Summary of Analysis of Variance for Age and SNS Addiction

Age Groups	Mean	SD
(G1) 18-25	2.95*	0.65
(G2) 26-32	2.78	0.76
(G3) 33-39	2.80	0.79
(G4) 40-47	2.58	0.78
(G5) 48-54	2.41*	0.58
(G6) More than 54	2.50*	0.53

Note: * $p < .05$

Discussion

Personality Traits Predicting SNS Addiction

SNS addiction is becoming one of the major problems in our society and affects people's lives, mental health, and well-being. The present study measured SNS addiction by using the SNS addiction scale that was adapted from the Bergen Facebook Addiction Scale (Andreassen et al., 2012). The scale comprised six components of addiction: salience, mood modification, tolerance, withdrawal, conflict, and relapse. SNS addiction means how people feel about their social networking site usage. The mean score of SNS addiction was medium ($M = 2.80$).

The results showed that people who were addicted to SNS could vary by certain personality traits and demographics. Personality traits, particularly Emotional Stability, Conscientiousness, and Extroversion were major contributors to SNS addiction. Those who had emotional stability and conscientiousness characters were less likely to be addicted to SNS, while extroverted people were more likely to be addicted to SNS. These findings were consistent with past research on the link between personality traits (i.e., Extroversion, Emotional Stability, and Conscientiousness), SNS usage, and addiction (Correa et al., 2010; Pornsakulvanich & Dumrongsiri, 2012; Tang et al., 2015).

To be more specific, personality traits – Emotional Stability and Conscientiousness – are two variables that were significantly predicted all six components of SNS addiction: salient, tolerance, mood modification, relapse, withdrawal, and conflict. The results are meaningful to understand people with Emotional Stability and Conscientiousness and their abilities to use SNS more consciously and carefully.

Moreover, one possible explanation is that extroverted individuals are more sociable and are inclined to spend their time chatting and doing activities with others both online and offline. It is possible that the amount of time extroverted people spent for sociable online may be greater than for those with other characteristics. Therefore, there is a possibility that extroverted people would be more addicted to SNS. This notion can be supported by prior research suggesting a positive relationship between Facebook usage and Facebook addiction (Hong et al., 2014). The amount of time spent online can be an important factor to predict addictive behaviors. While those who scored high on emotional stability and conscientiousness seem to have a higher sense of personal control of situations and actions (Goldberg, 1993). Their online usage may be more control and involved with rational thoughts. Thus, it is reasonable to speculate that SNS addictive behavior may be less likely to arise.

Demographics Predicting SNS Addiction

Regarding demographic factors and SNS addiction, the findings revealed the differences between age and SNS addiction in that those who were younger would be more likely to be SNS addicts than those who were older. Indeed, people in different Generations use the Internet and social media differently. Perrin (2015) reported the evidence from Pew Research Center indicating that young adults (18-29) are the most likely to use social media; nevertheless, social media usage among older adults (65 and above) are increasing so rapidly from 2% in 2005 to 35% in 2015.

Consistently, ETDA (2018) reported that among all four Generations (Baby Boomer, Generation X, Generation Y, and Generation Z), Generation Y spent time on social media on weekdays the most (3.45 hours/day), while Baby Boomers spent time on social media on weekday the least (2.51 hours/day). This evidence also indicated one of the major problems that occurred while doing activities online, which was users' obsessive usage and spending long hours online. This could be one of the indications of online usage problems, especially young adults who have spent most of their time online.

Moreover, there were no gender differences in SNS addiction. The findings were inconsistent with previous studies pertaining to gender differences and new media and SNS usage. For example, Dumrongiri and Pornsakulvanich (2008) found that women sent more short messages via mobile phone than did men. Another study indicated that women spent more time using SNSs than did men (Dumrongiri & Pornsakulvanich, 2010b). Also, Correa et al. (2010) found that men who were extroverted and low Emotional Stability tended more to use social media, whereas women with higher levels of Extroversion and Openness tended more likely to use social media.

Limitations and Future Directions

This study was conducted with caution in design and process, though there were some limitations that need to be addressed. First, this study used the Addiction Scale, which was reliable in this study to measure the SNS addiction. Also, this scale was found to be reliable in prior studies (Tang et al., 2015). However, addictive behaviors contain different indications and symptoms. Exploring the overall SNS addiction and each component of addiction may not provide us an insight into each symptom. Thus, future research should explore in-depth into the component of addiction to determine more specific symptoms of addiction to better understand the pattern of users' addictive behaviors.

Second, this study provided significant findings of the overall SNS addiction and personality traits. Nevertheless, it did not focus on addiction to a particular social networking site/application. Indeed, Facebook is one of the fast growing social networking sites that impact people's lives and well-being. With the rapid growth of Facebook users around the world, it is noteworthy to explore Facebook addiction. Numerous studies pointed out the vital need for investigation of Facebook addiction (Andreassen et al., 2012; Blachnio et al., 2016). Therefore, future research should explore Facebook addiction to obtain more meaningful and insightful results to understand how people use Facebook and how it impacts people's lives.

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