Excessive use of Facebook: The influence of self-monitoring and Facebook usage on social support

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ABSTRACT

This study examined the influence of self-monitoring and the amount of Facebook use on Facebook addiction, and the associations among self-monitoring, Facebook addiction, Facebook usage, and social support. A cross-sectional design was used to collect the data from 257 college students who have used Facebook. The findings indicated that high self-monitors were more likely to be addicted to Facebook than were low self-monitors. In addition, the number of friends and Facebook activities were the major predictors of the amount of time on Facebook. High self-monitors, Facebook activities, and the amount of time predicted Facebook addiction. Moreover, the number of friends and low-self-monitors were linked to social support.

Introduction

Social networking sites are one of the fast-growing media platforms allowing people to communicate and share information with others conveniently. Facebook is popular and its growth has been rapid around the world. To date (as of September 30, 2016), the number of Facebook active users worldwide is approximately 1.79 billion (Facebook, 2016). In Thailand, the statistics shows that almost 85 percent of Internet users have a Facebook account (Syndacast, 2015). Recently, Facebook was ranked the most influential brand in Thailand (The Nation, 2015).

Facebook usage has become epidemic and significant in people's lives and well-being. Communicating through Facebook has changed the way people connect with their social networks. With the various functions that Facebook offers, it allows users to do multiple activities such as presenting themselves to others, maintaining existing relationships, and building new networks and relationships. As a consequence, some users may spend a great amount of time on Facebook and their usage may affect social relationships.

The empirical evidence suggested that individual differences were related to new media usage (Pornsakulvanich & Dumrongsiri, 2009). In addition, personality traits and skills were related to Facebook usage patterns (for example, Parks-Leduc, Pattie, Pargas, & Eliason, 2014), and the amount of time spent on Facebook affected social relationships (for example, Liu & Yu, 2013).

Some people prefer to spend more time on Facebook, which may affect their social support. Research on SNS use and social support revealed inconsistent results. Some studies revealed a positive relationship between SNS use and social support. Hampton, Goulet, Rainie, and Purcell (2011) found that Facebook users reported greater levels of support (emotional, instrumental, and companionship) than non-Facebook users. However, some studies found no relationship between SNS use and social support. Research has shown that the intensity of Facebook use did not predict bonding social capital (Vitak, Ellison, & Steinfield, 2011).

Questions to be raised concern how a particular personality trait such as self-monitoring is related to Facebook

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usage and social support, how the behavior in a given situation of high self-monitors who are well adjusted differ in their Facebook usage from low self-monitors who are less likely to adjust themselves to a given situation, who is more addicted to Facebook, and how has Facebook usage affected people's social relationships.

This study will help in better understanding Facebook usage behavior and how personality traits are related to the amount of Facebook use and social support. This study will extend the body of knowledge in various disciplines including psychology, communication, and new media. Furthermore, the study might provide useful information for organizations and government agencies to consider people's social media usage more closely and to deal with any potential social relationship issues and problems more effectively.

Therefore, this present study aimed to investigate further the role of self-monitoring and the amount of Facebook use on Facebook addiction, and the associations among self-monitoring, Facebook addiction, Facebook usage, and social support.

Self-monitoring

Mark Snyder introduced a self-monitoring concept in 1974 to explain personality traits and people's expressive behavior. According to Snyder (1974), self-monitoring refers to the extent to which people monitor (observe and control) their behaviors when presenting themselves to others. High self-monitors are sensitive to others' expressions and presentations and are able to adjust and learn to express themselves for appropriateness and impression. They are able to monitor and manage their self-presentation in different social situations. On the other hand, low self-monitors have less concern for the appropriateness of their self-presentation and expressive behaviors.

Self-monitoring has been included in many studies to understand people's personality traits, skill, and motivation (Parks-Leduc et al., 2014). Research shows that high-self-monitors have larger social networks (Mehra, Kilduff, & Brass, 2001), are more flexible and adaptive (Day, Schleicher, Unckless, & Hiller, 2002), and are good at getting along (Day & Schleicher, 2006). Nevertheless, they tend to be more engaging in impression management to achieve a desired status (Turnley & Bolino, 2001). In contrast, low self-monitors tend to present their true selves, and are less willing to present a false image in order to impress others (Day & Schleicher, 2006).

Facebook Addiction

Internet addiction studies have been explored for decades. Young (1998) introduced the concept of Internet addiction and defined it as "an impulse-control disorder which does not involve an intoxicant" (p. 237). Young indicated that people who used the Internet for an average of 38 h or more per week tended to be addicted to the Internet.

Young (2009) suggested that Internet users can be addicted to different types of online usage. She differentiated three subtypes of Internet addiction—excessive gaming, online sexual preoccupation, and e-mailing/texting. Facebook addiction is a type of addiction to texting, in which users keep coming back to the site to check their Timeline, make comments, post pictures, and chat in Messenger. As Griffiths (2000) pointed out, users may not be addicted to the medium itself, but they may be addicted to particular Internet activities.

In past years, scholars have studied Internet addiction, for example, how Internet usage affected people's lives and well-being (Valkenburg & Peter, 2007; Young, 1998), how disposition is related to Internet usage (Morahan-Martin & Schumacher, 2000), and Internet addiction among college students (Pornsakulvanich, 2008).

Excessive use of Facebook has been a recent issue. Scholars have examined various topics such as personality traits and Facebook use (Lee, Ahn, & Kim, 2014; Moore & McElroy, 2012; Pornsakulvanich & Dumrongsiri, 2012; Ross et al., 2009; Ryan & Xenos, 2011), social comparison and Facebook use (de Vries & Kuhne, 2015), self-presentation on Facebook (Seidman, 2013), and Facebook use and well-being (Liu & Yu, 2013). Also, many studies found that excessive use of Facebook was affected by personality and usage behavioral patterns (Hong, Huang, Lin, & Chiu, 2014; Tang, Chen, Yang, Chung, & Lee, 2016).

Literature Review

Self-monitoring, Facebook Usage, and Facebook Addiction

Recent studies showed mixed results on the correlation between personality traits and Facebook use (Amichai-Hamburger & Vinitzky, 2010; Hughes, Rowe, Batey, & Lee, 2012; Moore & McElroy, 2012; Pornsakulvanich & Dumrongsiri, 2012; Ross et al., 2009; Seidman, 2013). For instance, Amichai-Hamburger and Vinitzky (2010) found that those who scored high on extroversion (sociable) and conscientiousness (goal-oriented) had more friends on Facebook, whereas those who scored high on neuroticism (emotional instability) posted more pictures. Other studies found that extroverts spent more time on Facebook (Pornsakulvanich & Dumrongsiri, 2012), were more frequent users of Facebook (Seidman, 2013), had more friends, and uploaded photos and updated their status more frequently (Lee et al., 2014). Moreover, emotional stability was negatively related to the time spent on Facebook (Moore & McElroy, 2012; Pornsakulvanich & Dumrongsiri, 2012).

Research is scarce on the relationship between self-monitoring and Facebook usage and addiction. For instance, Hall and Pennington (2013) studied self-monitoring and Facebook use and found that high self-monitors were associated with a high frequency of posting, had more friends, and posted a profile picture at a younger age. They also found that extroversion was correlated with self-monitoring. Another study reported a positive correlation between self-presentation and Facebook addiction (Masur, Reinecke, Ziegele, & Quiring, 2014).

According to the review of literature, high-self-monitors may prefer spending more time on Facebook to manage and present themselves to others. Furthermore, the

amount of time people spent on Facebook may lead them to become addicted to Facebook. Moreover, past research has not identified associations among self-monitoring, Facebook usage, and Facebook addiction. Thus, two hypotheses and two research questions were posed:

H1. Self-monitoring predicted Facebook addiction.

H2. The amount of use predicted Facebook addiction.

RQ1. How did self-monitoring, the duration of use, the number of friends, and activities predict the amount of Facebook use?

RQ2. How did self-monitoring, the duration of use, the number of friends, the amount of use, and Facebook activities predict Facebook addiction?

Facebook Usage and Social Support

Social support is a communication process in expressing emotional, appraisal, and instrumental support (House, 1981). Social support can link to physical and psychological well-being (Goldsmith, 1994). In the current study, social support refers to the extent to which a person feel close with their significant others, family, friends, and colleagues.

There has been no clear-cut evidence on Facebook usage patterns and people's social support and well-being. Some studies revealed a link between Facebook usage and social support. For example, Ellison, Steinfield, and Lampe (2007) found the correlation between Facebook usage and college students' social capital. More specifically, college students who reported low life satisfaction and low self-esteem would feel connect with other people or experience in bridging social capital when they used Facebook more intensely. Another study found that Facebook usage could help student to receive online social support; however online social support had little effect on well-being (Liu & Yu, 2013).

Recent findings reported an association between Facebook usage and the negative feeling of social comparison. Lee et al. (2014) found that those who used Facebook intensely were more likely to compare themselves with others and had a negative feeling from the comparison. Along the same line, de Vries and Kuhne (2015) found that Facebook usage was linked to negative social comparison, which would lead to negative perception about a person's social competence and physical attractiveness.

From the past research, there has been limited study on the associations among self-monitoring, Facebook usage, Facebook addiction, and social support. Hence, research question 3 was posed:

RQ3. How did self-monitoring, Facebook addiction, the duration of use, the amount of use, the number of friends, and Facebook activities predict social support?

Methods

This current study employed a cross-sectional design using purposive sampling to collect data from people who have used Facebook in the past few months. The data were collected from February to March, 2016. Participants were

college students ($N = 267$) at a public university in Thailand. They were asked to volunteer for the study. Before participation, they were informed about certain information: the purpose of the study, the duration of participation, and the right to withdraw from participation at any time. In addition, they were assured of the confidentiality of their responses and were informed that all data would be used for academic purposes only. The questionnaire contained five parts: Facebook usage and activities, Facebook addiction, self-monitoring, social support, and demographics.

Data Analysis

A descriptive analysis was performed to analyze the demographic data. Scale reliability analysis was conducted to test measures. For Hypotheses 1 and 2, a separate regression analysis was computed to measure how self-monitoring and the amount of Facebook use explained Facebook addiction. For Research Questions 1—3, a separate multiple regression analysis was used to determine variables predicting the amount of Facebook use (RQ1), Facebook addiction (RQ2), and social support (RQ3).

Measurement

Facebook Usage and Activities

Facebook usage contained three questions measuring the duration of Facebook use, the amount of time on Facebook, and the number of friends on Facebook. Facebook activities contained eight items asking how often participants did activities such as chatting in Messenger and posting message and pictures on Timeline. The scale used ranged from (1) *Never* to (4) *Always*. The eight items of Facebook activities received a Cronbach α value of .65 ($SD = 3.45$).

Self-monitoring

Mark Snyder's (1974) self-monitoring scale was used to measure participants' self-monitoring or the extent to which participants' adjust their behavior for the appropriateness of social situations. The scale contained 25 items with "Yes" and "No" answers (for example, "I have considered being an entertainer" and "I can only argue for ideas which I already believe"). For ranking scores, Snyder (1974) suggested that a high-self monitor would have a score between 13 and 25, whereas a low self-monitor would have a score between 0 and 12. The scale received a Cronbach α value of .60 ($SD = 3.61$).

Facebook Addiction

A shortened version of the Internet Addiction Test (Young, 1998) was adapted to measure participants' Facebook addiction. Participants were asked to think about their Facebook usage experiences with regard to eight statements (for example, "Do you feel the need to use Facebook with increasing amounts of time in order to achieve satisfaction?"). Young (1998) suggested that a person who answered "Yes" to five or more of the eight statements would be classified as an addicted user. The scale received a Cronbach α value of .67 ($SD = 1.80$).

Social Support

Social support was operationalized as the extent to which a person felt close with his/her family, friends, and colleagues. Weiser's (2001) Social Support Strength Index was adapted to measure participants' social support. The scale consisted of three items and ranged from (1) *Not Close at all* to (5) *Very Close* (for example, "Recently, how close (interpersonally, not geographically) do you think you have been with your friends?").

Due to the low reliability, one item was deleted. Two items received acceptable reliability ($SD = .74$, *Cronbach* $\alpha = .71$).

Demographics

Participants were asked about their general demographic information including gender, age, income, and education.

Results

Participants

In total, 257 people participated in this study with 139 females (54.1%), 112 males (43.6%), and 6 LGBT (2.3%). The majority of participants were college students aged from 18 to 25 years (93.4%), and had income of less than THB 10,000 (75.1%).

Regarding Facebook use and activities, on an average day, participants spent ($M = 199$) minutes on Facebook. They used Facebook for ($M = 62$) months. The average number of friends was ($M = 1,179$). Moreover, the most popular Facebook activities were reading messages and seeing pictures in newsfeed ($M = 3.37$), checking their own timeline ($M = 2.64$), posting messages ($M = 2.64$), chatting in Messenger ($M = 2.64$), checking others' timelines ($M = 2.20$), working on group projects ($M = 2.18$), using check-in apps ($M = 2.04$), and playing games ($M = 1.41$), respectively.

In the present study, the majority of participants (90.3%) were identified as non-addicted Facebook users, whereas 9.7 percent were addicted to Facebook. In addition, the majority of participants (66.5%) were identified as high self-monitors, whereas 33.5 percent of participants were reported as low self-monitors.

Hypotheses and Research Questions

Hypothesis 1 tested the association between self-monitoring and Facebook addiction. Hypothesis 1 was supported. Regression analysis revealed that self-monitoring accounted for 6.3 percent of the variance in Facebook addiction, $R = .25$, $R^2 = .06$, $F(1, 256) = 17.11$, $p = .000$. The finding showed that self-monitoring positively predicted Facebook addiction. This means that high self-monitors were more likely to be addicted to Facebook than were low self-monitors.

Hypothesis 2 posited that the amount of Facebook use predicted Facebook addiction. Hypothesis 2 was supported. Regression analysis indicated that the amount of Facebook use accounted for 12.4 percent of the variance in Facebook

addiction, $R = .35$, $R^2 = .12$, $F(1, 253) = 35.70$, $p = .000$. The amount of Facebook use positively predicted Facebook addiction. This means that people who spent more time on Facebook tended to be more addicted to Facebook than those who spent less time on Facebook.

For Research Question 1, multiple regression analysis indicated that self-monitoring, the duration of use, the number of friends, and activities explained the amount of Facebook use, $R = .56$, $R^2 = .31$, $F(4, 241) = 26.79$, $p = .000$. The main predictors were number of friends ($\beta = .13$, $p < .05$), and Facebook activities ($\beta = .51$, $p < .001$). The results showed that individuals who had more friends and were involved in Facebook activities would spend more time on Facebook (see Table 1).

Research Question 2 asked how self-monitoring, the duration of use, the number of friends, the amount of use, and Facebook activities would predict Facebook addiction. A multiple regression analysis indicated that predictors explained Facebook addiction, $R = .48$, $R^2 = .23$, $F(5, 241) = 13.92$, $p = .000$. Three main contributors to Facebook addiction were self-monitoring ($\beta = .20$, $p < .001$), the amount of Facebook use ($\beta = .19$, $p < .05$), and Facebook activities ($\beta = .28$, $p < .001$). The results indicated that those who were high self-monitors, spent more time on Facebook, and were involved in Facebook activities were more likely to be addicted to Facebook (see Table 1).

For Research Question 3, multiple regression indicated the predictive relationships among self-monitoring, Facebook addiction, the duration of use, the amount of use, the number of friends, and Facebook activities in explaining social support, $R = .27$, $R^2 = .07$, $F(6, 239) = 3.13$, $p < .01$. The two major contributors to social support were self-monitoring ($\beta = -.13$, $p < .05$) and number of friends ($\beta = .20$, $p < .01$). This finding indicated that people who were low self-monitors and had more friends on Facebook would feel close with their significant others (see Table 1).

Table 1

Summary of separate multiple regression analysis for variables predicting amount of use, Facebook addiction, and social support

Predictor	Amount of use	Facebook addiction	Social support
	β	β	β
Self-monitoring	.01		
Duration of use	.08		
Number of friends	.13*		
Activities	.51***		
$R^2 = .31***$			
Self-monitoring		.20***	
Amount of use		.19**	
Duration of use		−.05	
Number of friends		−.06	
Activities		.28***	
$R^2 = .23***$			
Self-monitoring			−.13*
Facebook addiction			−.01
Amount of use			.04
Duration of use			.07
Number of friends			.20**
Activities			.04
$R^2 = .07**$			

Note. *$p < .05$. **$p < .01$. ***$p < .001$. $\beta =$ Standardized coefficients.

In summary, Hypotheses 1 and 2 were supported. The findings showed that high self-monitors were more likely to be addicted to Facebook than were low self-monitors. Furthermore, those who spent more time on Facebook tended to be addicted to Facebook.

The three research questions revealed that the number of friends and Facebook activities were the major predictors of the amount of time on Facebook. In addition, Facebook users who had more friends and used Facebook for various activities would spend considerable time on Facebook, with high self-monitoring, Facebook activities, and the amount of time predicting Facebook addiction. Moreover, low-self-monitoring individuals who had more friends on Facebook would feel satisfied with their social support.

Discussion

Predicting Facebook Usage, Facebook Addiction, and Social Support

The purpose of the present study was to examine the role of self-monitoring and the amount of use on Facebook addiction, and the associations among self-monitoring, Facebook usage, Facebook addiction, and social support. Two hypotheses and three research questions were posed. Overall, the results of the study added to the body of knowledge on personality traits, Facebook usage, and Facebook addiction. In addition, this study provided empirical evidence to understand social networking usage and its consequences in Thailand.

The findings from this study revealed that high self-monitoring was related to the excessive use of Facebook. The more time a person spent on Facebook, the higher the likelihood that person would be addicted to Facebook. This study confirmed that high self-monitors were more addicted to Facebook than low self-monitors. It is plausible to assume that Facebook is an attractive platform for high self-monitors to present themselves to others, and to observe and manage their behaviors to impress others. Hence, high self-monitors preferred using Facebook and used it extensively. Nonetheless, low self-monitors do not have a high need for approval and impression management. They are less concerned with their self-presentation (Day & Schleicher, 2006). Thus, it is possible that low-self-monitors may spend less time on Facebook and are less likely to be addicted to Facebook.

In fact, personality traits like self-monitoring and extroversion are related (Hall & Pennington, 2013). Past research showed that extroverts spent more time on Facebook than introverts (Pornsakulvanich & Dumrongsiri, 2012). This study supported the assumption of the associations among extroversion, self-monitoring, and the amount of Facebook use. One possible explanation is that both extroverts and high self-monitors like to spend more time on Facebook for their self-presentation and impression management, which may lead them to be addicted to Facebook. As past research also showed, self-presentation was correlated with Facebook addiction (Masur et al., 2014).

Another point is the factors influencing a person to spend excessive time on Facebook and a feeling of social support. The results indicated that people who had more friends on Facebook and used Facebook for various activities would spend considerable time on Facebook. In fact, the number of friends predicted both the amount of time on Facebook and social support. People who had more friends on Facebook reported their feeling of closeness with significant others. Low self-monitors also reported relationship closeness with their social networks. The evidence shows that low self-monitors present themselves in a way that reflects their own self-image. They are less likely to project a false image to impress others (Day & Schleicher, 2006). Another possible explanation is that low self-monitors do not have to project themselves to satisfy others. As a consequence, they may feel satisfied, connected, and close in their social relationships.

Limitations and Future Research

Though this study was planned and designed carefully, there were still several limitations that need to be addressed. First, this study focused on studying one social networking site—Facebook. Thus, the overall results may not be applicable to other social networking platforms. Future research should study different social networking and/or social media because each platform has its own unique functions and characteristics. Some platforms may allow more self-presentation and self-disclosure than the others. For example, Facebook allows more self-presentation than Instagram and Youtube (Kaplan & Haenlein, 2010). This would affect the time spent on the sites and usage behaviors differently.

Second, self-monitoring is a significant personality variable to understand Facebook usage patterns. Nevertheless, it would be more meaningful to include other personality traits like the "Big Five" and social anxiety to fill the gaps in the literature on personality traits, social networking usage, and its consequences. Past research showed that those who were socially anxious did not feel close with others in online settings (Pornsakulvanich, Haridakis, & Rubin, 2008). As Amichai-Hamburger (2002) pointed out, personality traits were crucial factors to understand people's Internet usage behavior.

Third, this study examined Facebook addiction by looking at one of the subtypes of Internet addicts, which was addiction to texting (Young, 2009). Nevertheless, recent research suggested that addictive tendencies to social networking can be categorized into several components such as withdrawal, mood, and relapse (Andreassen, Torsheim, Brunborg, & Pallesen, 2012). Hence, including different components of addictive behaviors to social networking may provide more insightful into main reasons of addiction.

Conflict of interest

There is no conflict of interest.

References

Amichai-Hamburger, Y. (2002). Internet and personality. *Computers in Human Behavior, 18*(1), 1—10.

Amichai-Hamburger, Y., & Vinitzky, G. (2010). Social network use and personality. *Computers in Human Behavior, 26*(6), 1289–1295.

Andreassen, C. S., Torsheim, T., Brunborg, G. S., & Pallesen, S. (2012). Development of a Facebook addiction scale. *Psychological Reports, 110*(2), 501–517.

Day, D. V., & Schleicher, D. J. (2006). Self-monitoring at work: A motive-based perspective. *Journal of Personality, 74*(3), 685–713.

Day, D. V., Schleicher, D. J., Unckless, A. L., & Hiller, N. J. (2002). Self-monitoring personality at work: A meta-analytic investigation of construct validity. *Journal of Applied Psychology, 87*(2), 390–401.

de Vries, D. A., & Kuhne, R. (2015). Facebook and self-perception: Individual susceptibility to negative social comparison on Facebook. *Personality and Individual Differences, 86*, 217–221.

Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143–1168.

Facebook. (2016). *Statistics*. Retrieved from http://newsroom.fb.com/company-info/.

Goldsmith, D. J. (1994). The role of face work in supportive communication. In B. R. Burleson, T. L. Albrecht, & I. G. Sarason (Eds.), *Communication of social support: Messages, interactions, relationships, and community* (pp. 29–49). Newbury Park, CA: SAGE.

Griffiths, M. D. (2000). Internet addiction – Time to be taken seriously? *Addiction Research, 8*(5), 413–418.

Hall, J. A., & Pennington, N. (2013). Self-monitoring, honesty, and cue use on Facebook: The relationship with user extraversion and conscientiousness. *Computers in Human Behavior, 29*, 1556–1564.

Hampton, K., Goulet, L., Rainie, L., & Purcell, K. (2011). *Social networking sites and our lives*. Pew Internet & American Life Research Center. Retrieved from http://www.socialcapitalgateway.org/content/paper/hampton-k-goulet-l-rainie-l-purcell-k-2011-social-networking-sites-and-our-lives-pew-i.

Hong, F., Huang, D., Lin, H., & Chiu, S. (2014). Analysis of the psychological traits, Facebook usage, and Facebook addiction of Taiwanese university students. *Telematic and Informatics, 31*, 597–606.

House, J. (1981). *Work stress and social support*. Reading, MA: Addison-Wesley.

Hughes, D. J., Rowe, M., Batey, M., & Lee, A. (2012). A tale of two sites: Twitter vs. Facebook and the personality predictors of social media usage. *Computers in Human Behavior, 28*, 561–569.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons, 53*(1), 59–68.

Lee, E., Ahn, J., & Kim, Y. J. (2014). Personality traits and self-presentation at Facebook. *Personality and Individual Differences, 69*, 162–167.

Liu, C. H., & Yu, C. H. (2013). Can Facebook induce well-being? *Cyberpsychology, Behavior, and Social Networking, 16*(9), 674–678.

Masur, P. K., Reinecke, L., Ziegele, M., & Quiring, O. (2014). The interplay of intrinsic need satisfaction and Facebook specific motives in explaining addictive behavior on Facebook. *Computers in Human Behavior, 39*, 376–386.

Mehra, A., Kilduff, M., & Brass, D. J. (2001). The social networks of high and low self-monitors: Implications for workplace performance. *Administrative Science Quarterly, 46*(1), 121–146.

Moore, K., & McElroy, J. C. (2012). The influence of personality on Facebook usage, wall postings, and regret. *Computers in Human Behavior, 28*(1), 267–274.

Morahan-Martin, J., & Schumacher, P. (2000). Loneliness and social uses of the Internet. *Computers in Human Behavior, 19*(6), 659–671.

Parks-Leduc, L., Pattie, M. W., Pargas, F., & Eliason, R. G. (2014). Self-monitoring as an aggregate construct: Relationships with personality and values. *Personality and Individual Differences, 58*, 3–8.

Pornsakulvanich, V. (2008). Internet addiction, individual differences, and well-being among Thai students in a private university. *Association of Private Higher Education Institutions of Thailand Journal, 18*(2), 1–17.

Pornsakulvanich, V., & Dumrongsiri, N. (2009). Cultures and perceived values influencing mobile phone use and satisfaction. *University of Thai Chamber of Commerce Journal, 29*, 1–20.

Pornsakulvanich, V., & Dumrongsiri, N. (2012). Personality traits and demographic profile predicting social networking sites usage in Thailand. *Proceedings at Asian conference on media and mass communication* (pp. 50–60).

Pornsakulvanich, V., Haridakis, P. M., & Rubin, A. M. (2008). The influence of dispositions and Internet motivation on online communication satisfaction and relationship closeness. *Computers in Human Behavior, 24*(5), 2292–2310.

Ross, C., Orr, E. S., Sisic, M., Arseneault, J. M., Simmering, M. G., & Orr, R. R. (2009). Personality and motivations associated with Facebook use. *Computers in Human Behavior, 25*, 578–586.

Ryan, T., & Xenos, S. (2011). Who uses Facebook? An investigation into the relationship between the big five, shyness, narcissism, loneliness, and Facebook usage. *Computers in Human Behavior, 27*(5), 1658–1664.

Seidman, G. (2013). Self-presentation and belonging on Facebook: How personality influences social media use and motivations. *Computers in Human Behavior, 54*(3), 402–407.

Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology, 30*(4), 526–537.

Syndacast. (2015). *Online marketing Thailand: The state of social media*. Retrieved from http://syndacast.com/infographic-online-marketing-thailand-the-state-of-social-media/.

Tang, J. H., Chen, M. C., Yang, H. Y., Chung, T. Y., & Lee, Y. A. (2016). Personality traits, interpersonal relationships, online social support, and Facebook addiction. *Telematics & Informatics, 33*, 102–108.

The Nation. (2015). *Facebook: Thailand's most influential brand*. Retrieved from http://www.nationmultimedia.com/breakingnews/Facebook-Thailands-most-influential-brand-30264985.html.

Turnley, W. H., & Bolino, M. C. (2001). Achieving desired images while avoiding undesired images: Exploring the role of self-monitoring in impression management. *Journal of Applied Psychology, 86*(2), 351–360.

Valkenburg, P. M., & Peter, J. (2007). Online communication and adolescent well-being: Testing the stimulation versus the displacement hypothesis. *Journal of Computer-Mediated Communication, 12*(4), 1169–1182.

Vitak, J., Ellison, N. B., & Steinfield, C. (2011). The ties that bond: Re-examining the relationship between Facebook use and bonding social capital. *Proceedings of the 44th Hawaii international conference on systems science* (pp. 1530–1605). IEEE.

Weiser, E. B. (2001). The functions of Internet use and their social and psychological consequences. *CyberPsychology & Behavior, 4*(6), 723–743.

Young, K. S. (1998). Internet addiction: The emergence of a new clinical disorder. *CyberPsychology & Behavior, 1*(3), 237–244.

Young, K. S. (2009). Internet addiction: Diagnosis and treatment considerations. *Journal of Contemporary Psychotherapy, 39*(4), 241–246.