The Influence of personality traits on the Facebook Addiction

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Abstract

Many empirical studies indicate that SNS use has increased substantially over the last few years. People use SNSs for social purposes, mostly related to the maintenance of existing offline contacts. Such usage may have led to compulsive use of SNSs resulting in addictive behavior. This paper aims to explore factors affecting SNS addiction. Specifically, the study examined the role of personality traits in the Facebook usage among college students. Compared to the rest of world, daily log on the site has grown very quickly in South Korea. And college students constitute a vast majority of Facebook users in South Korea. Results from a survey of 235 college students revealed that extraversion and neuroticism positively predicted Facebook usage. Students who were high in extraversion were more likely to update their profiles, share photo and images with others and give feedback on other's posts. Similarly, those who were high in neuroticism were more likely to share photo and images with others and update their profiles. These findings support previous research. Furthermore, in terms of the effect of personality on SNS addiction, this study found that consciousness was negatively associated with Facebook addiction, while extraversion and neuroticism were positively associated with Facebook addiction. Based on these findings implications and directions for futures studies are discussed.

Keywords: Social Networking Site(SNS), Facebook, Addiction, Personality traits

1. Introduction

In a recent years, use of the social networking site(SNS) as a means of communication has grown and changed dramatically. SNSs, such as Facebook, Myspace, and Twitter provide online users with a virtual venue oriented toward interpersonal communication with friends, relatives, peers and strangers [1]. They are defined as "web-based services that allow individuals to: (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system [1]."

Since Facebook has been introduces in 2005, it is known as one of the most popular SNSs globaly. According to statistics provided by Facebook(2016), there were 1.59 billion active users on the site per month, and at least 1.4 billion of these users logged into Facebook every day [2]. In South Korea, 16 million monthly active users and 10 million of daily active users [3] and 74% of the total users falls under the age group of 20s and 30s [4]. Facebook has provided many benefits to their users, however, a heavy reliance on Facebook for social connection may have psychological implication such as addictive behavior. For instnace, some people become obsessed with it and are unable to control their use of it.

A recently published articles on SNS and addiction suggest that SNS are used mostly for maintenance of social connection. Such desire for staying connected is assumed to function as potential predictor, which might explain why some individuals use SNS excessively [5]. Researchers have linked Facebook use to specific motivations for using it. In fact, one study analyzing 24 studies examining the uses and gratifications of Facebook, and 9 studies of Facebook addiction concluded that the most popular reasons for using Facebook are for maintaining relationship, passing time, entertainment, and companionship and these motives may be associated to addiction behavior on Facebook that is habitual and excessive [6].

Addictive behaviors may also be related to specific individual characteristics. Previous studies suggest that personal traits play an important role in addictive behavior [7, 8]. The Big Five model explaining personality consists of five important dimensions that altogether provide a frawork for the study of individual difference [9]. Extraversion is defined as individuals who are sociale, cheerful and talkative; while agreeableness indicates a person whith trustful, honest, tolerant, and forgiving. In addition, conscientiousness implies a person is responsible, organized, and achievement-oriented. Neuroticism is related to uncontrol anger, low self-esteem and high anxiety. On the other hand, openness to experience represents imaginarity, creativity, willingness to try new things and adoption to different ideas and opinions [9].

According to recent studies, these personality traits influence compulsive consumption in technolgoy. For instance, individual's psychological traits such as shyness, introversion, neuroticism, poor self-control, a high degree of loneliness and a high degree of sadness are all correlated with addictive Internet use [10, 11, 12]. Since personality traits have been associated with problematic social media use [13], similar findings may be evident for SNS use. People with a high need for belongingness and those who are in higly extraverted and low conscientious were more addicted to SNS [14]. Litttle is known about the extent to which these peronality characteristics may be related to addictive behavior. Therefore, the aim of the present study is to examine the effect of personality tratis on addictive behavior on Facebook.

This researh used cocllege students as the sample, because this generation is perceived to be most technically savvy demographic group and college students are recognized as early adopters of the lastest technology and possess potential susceptibility to develop patterns of problematic use [15, 16]. Morevoer, some studies suggest that the excessive Facebook usage in the college life can lead to problems of attention distraction, spending less time studying, and lower academic performance [15]. Despite of various gratifications obtained from Facebook such as socialization, information-gathering, relaxation, and entertainment, researchers still know little about the negative consequences of SNS in the youth life. Do young people negelect daily responsibilites due to the use of SNS? Is their school performance be disturbed due to excessive usage of SNS? If so, what are the factors affecting excessive use of SNS? Given that the literature addressing the excessive behavior of SNS is scarce, these questions should be examined critically.

Meanwhile, recent research suggests that youth experienced addictive use of SNS [17]. College students had negative consequences on their school performance due to Facebook use. Recently, several studies found that college students experienced SNS addiction and several dimensuions of personal tratis are related to Facebook addiction. For example, neuroticism and extraversion are positively reltated to Facebook addiction [14, 16], while conscientiousness is negatively reated to Facebook addiction [6, 14].

Koc and Gulyagci(2013) argue that although recent studies suggest association between personality and addictive behavior of SNS, such research is still in its infancy and needs more evidence on the addictive usage of Facebook and its correlates [18]. Therefore, this study attempts to bridge the gap in prior research by examining effects of individuals' personality factors on Facebook addiction. The study would contribute to SNS literature by providing empirical evidence of the excessive usage of Facebook within the college sector and help to get more understanding of it.

Moreover, this study provides important insights into possiblity of different psersonality traits may facilitate the devlopment of addictive behavior of SNS. The findings will help marketing researchers better understand Facebook users. The measurements of the persoanl traits will beneficial in the screening of potentially adddictive SNS users, and aid in intervention when such users are found.

2. Theoretical Background and Research Questions

2.1 Personality differences in SNS behavior

The Big-Five personality model is one of generally accepted personality theories. It contains five basic personality traits as broad level: extraversion, neuroticism, openness to experiences, agreeableness, and conscientiousness. From the social behavior perspective, extraversion reflects an individual's tendency to be sociable and able to experience positive emotions. Neuroticism reflects an individual's tendency to experience psychological distress and high levels of the trait are associated with sensitivity to threat. Openness to Experience represents an individual's willingness to consider alternative approaches, be intellectually curious and enjoy artistic pursuits. Agreeableness represents aspect of interpersonal behavior, reflecting a tendency to be trusting, sympathetic and cooperative. Conscientiousness reflects the degree to which an individual is organized, diligent and scrupulous [19].

Several current studies have paid attention to the relationship between personality and online behavior and their results suggest that personal psychological traits play an important role in social media use. For instance, Amichai-Hamburger and Vinitzky(2010) found

extraverts are more likely to make comments on SNS, and that extraverts tend to update more their status [20]. It is presumably suggested that extraverts may see SNS as place to share information and opinions rather than alternative real interaction [21]. With the respect to Facebook usage, Moore and McElroy(2012) reported that 10% of their study's respondents with the highest score in extraversion had more than 484 friends on average [22]. This result confirmed that extroverted people have more friends and wide social network. Extraverts are more engaged in political issues through Facebook and sharing photos with others [23]. Consistent with this result, extraverts share more photos, longer videos and more status updates. They also get more comments and "likes" from friends [24].

People who are high in openness tend to have broad interests and are willing to experience something unusual. They are described as imaginative, autonomous, and nonconforming and intelligent [25]. There are studies reporting a positive relationship between openness to experience and the Facebook activities. People open to experiences are engaged more in online social interaction through Facebook and thus they use socializing functions more [26]. Individuals with high openness also have more Facebook friends and revealed more personal information on their Facebook than introverts [20]. On the other hand, Moore and McElory(2012) found that openness was not related to time spent, frequency of use, number of friends, indicating that it has no significant effect on Facebook usage [22].

Neuroticism is opposite of emotional statbility. It refers to difficulty managing stress and anxiety. Therefore, it is assumed that people who in high neroticism use the Internt to avoid loneliness and emotinal instability, furthermore, they depend on the Internet for social interaction. Correa, Hinsley, and Zuniga(2010) found that those with neurotic characteristics tend to prefer chatting and making friends online, as well as using news feeds and SNSs, and they are more proactive about using Facebook [19].

Amichai-Hamburger and Vinitzky(2010) found relationship between neuroticism and SNS use and suggest that neuroticism is positively related to updating user's status. It implies that people who are in high neuroticism are more updating their status on SNS as a means of self-expression and they prefer asynchronous forms of online communication [20]. Consistent with previous study Shen et al.(2015) found that individuals high in neuroticism are more likely to post more persoal information and interest and tend to write longer post [24].

Agreeableness refers to tendency to be sympathetic, kind, trusting, flexible, and forgiving. In general, agreeableness is assumed to influence social interaction. However, early study involving the Internet use found that agreeable individuals might not have need for establishing online connection [27]. Resent studies, on the other hand, suggest the association between agreeableness and SNS. For instance, Amichai-Hamburger and Vinitzky(2010) found that agreeableness is positively related to making comments on Facebook [20]. They should be more likely to post friendly and positive comments(e.g., "like") to other users profiles and photos.

In sum, these reviews indicate the association between personality traits and Facebook usage. However, the findings are controversial. The following research questions is proposed:

RQ1: How do personality traits predict Facebook activities?

2.2 Personality and SNS Addiction

Griffiths [8] has operationalized addictive behavior as any behavior that six core components of addiction such as salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse. He also argues that any behavior(e.g., social networking)

that fulfils these six criteria can be as an addiction.

For example, with respect to smart phone use, Lee et. al(2014) argue that excessive users show such signs as (1) preoccupation with the phone, (2) increasing amounts of time spent using the phone in order to achieve that same level of satisfaction (3) repeated unuccessful effort to control, or stop the use (4) feeling of restlessness when attempting to reduce the use (5) jeopardizing jobs, or career opportunities because of phone use; and (6) using the phone as a means of avoiding uncomfortable mood(e.g., a feeling of anxiety and depression) [28].

Andreassen and Pallesen [29] define SNS addiction as "being overly concerned about SNSs, to be driven by a strong motivation to log on to or use SNSs, and to devote so much time and effort to SNSs that it impairs other social activities, studies/job, interpersonal relationships, and/or psychological health and well-being"(p.4054).

According to Griffiths(2005) [8], the symptoms of SNS addiction include salience(e.g., full attention to the usage of SNSs in behavior, cognition, and emotion), tolerance(e.g., increasing the usage of SNSs to an excessive amount), withdrawal(e.g., experiencing displeasing physical and emotional symptoms when one's usage of SNSs is restricted or blocked), conflicts(e.g., interpersonal and psychological problems due to the usage of SNSs), and relapse(quickly returning to the overuse of SNSs after a period of abstinence).

Several studies support this definition. Compulsive and uncontrolled SNS-related behavior can be understood in an addiction perspective [14, 30, 31]. For instance, Kuss & Griffiths(2011) found that heavy SNS use resulted in a variety of negative consequences such as difficulties in real-life communities, decreasing academic performance, and relationship problems [5].

Researchers have paid attnetion to the realtionship between SNS use and specific individual characteristics. People scoring high on narcissism tend to be more active on social network sites, since SNS provides an opportunity to present oneself in a favorable way [32]. Other studies have examined associations between SNS addiction and personality [14, 33, 34] by applying five-factor model of personality which categorize five dimensions: extraversion(e.g., being outgoing, social), agreeableness(e.g., being sympathetic and warm), Conscientiousness(e.g., being organized and prompt), Neuroticism(e.g., being nervous and moody), and Openness to experience(e.g., being creative and curious).

Findings indicated that in addiction to SNS, addictive tendencies have been postively related to neuroticism [14]. It is assumed that SNS may be a way of seeking support for people in high neroticism. In addition, people with high scores on neuroticism have taken more time for social connection in their SNS communication compared to face-fo-face interaction [16, 19, 26]. Some previous studies insisted that extraversion was positively related to Internet use in general. With respect to SNS, similar findings have been reported; people in high extroversion use SNS more essesively [18, 19]. It is explained that extraverts use SNS for social purposes, while intravert use it for social compensation. Nontheless, each of them appears to be related to excessive use of SNS [5]. In addition, low conscientiousness scores significantly predicted addictive behaviors [6, 14]. People who score low on conscientiousness are assumed to use SNS as a means of procrastinating [19]. In line with this, recent research found that extraversion and neuroticism were positively and conscientiousness was negatively related to private SNS use in the work place [35].

Based on discussion above, the following research questions is proposed:

RQ2: How do personality traits predict addictive Facebook use?

3. Method

3.1 Sample and procedure

College students are selected as the target sample in this study. The respondents were drawn from undergraduate students enrolled in communication classes at a large university in South Korea. The self-administered survey was developed in the Korean language and was administered in April 2015. Participation in the study was voluntary. A total of 235 surveys were completed. The respondents' ages ranged from 18 to 30 years old, with an average age of 22.28. Among the respondents 38.7% were male (N=914) and 61.3% were female (N=144). In terms of education level, 12.8% (N=30) were first year students, 23.4% (N=55) were second year students, 28.5% (N=67) were third year students and 35.3% (N=83) were fourth year students.

3.2 Measures

Participants completed an online survey consisting of demographic questions and the following measure.

SNS behaviors: participants were required to recall their regular activities in Facebook and complete the questionnaire items such as (1) sharing photos and images, (2) giving feedback, (3) updating profiles, and (4) searching strangers.

Personality traits: participants were asked to complete personality scale selected from the Berkeley Personality Profile [16]. The scale consisted of the following five personality factors: agreeableness(e.g., I can understand the feelings of others), neuroticism(e.g. I am moody), extraversion(e.g., I am talkative), conscientiousness(e.g. I work meticulously), and openness(e.g., I am imaginative). Five items for each factor are used and each item was evaluated on a 5-point scale(1: strongly disagree, 5: strongly agree).

SNS addiction: To measure addictive behavior in SNS usage selected items were adapted from previous research [18]. Koc and Gulyagci(2013) developed Facebook Addiction Scale and it comprises 8 items related to the symptoms of cognitive and behavioral salience, conflict with other activities, euphoria, loss of control, withdrawal, and relapse and reinstatement. Items used in the study are as follows: "I have difficulties in focusing on my academic work due to my Facebook use", "the first thing on my mind when I get up is log into Facebook", "I lose sleep over spending more time on Facebook", "my Facebook use interferes with doing social activities", "I log into Facebook to make myself feel better when I am down", "My family or friends think that I spend too much time on Facebook", "I feel anxious if I cannot access to Facebook", and "I have attempted to spend less time on Facebook but have not succeeded". Each item was evaluated on a 5-point scale(1: strongly disagree, 5: strongly agree).

4. Results

4.1 Personality and SNS activity

To investigate the effects of personality traits on Facebook activites the regression analysis was conducted. The dependent variables are Facebook activites such as searching strangers, sharing photos & images, giving feedback, and updating profiles, whilie

independent variables are 5 personality traits. **Table 1** shows the regression results. According to the analysis, in the dimensions of Big Five personal traits, the extraverts tended to be more active on the Facebook: they update profiles more frequently(β=.172, p<.05), gave more feedback to others(β=.317, p<.01), and shared photos and images with others more frequently(β=.242, p<.05). In addition, the results showed that those who had higher scores in neroticism update profiles more frequently(β=.134, p<.05) and sharing photos and images with others(β=.148 p<.05).

Table 1. Effects of Five Personality factors on SNS activity

	Searching strangers		Sharing photo & images		Giving feedback		Updating profiles	
	β	p	β	p	β	p	β	p
Extraversion	.072	.453	.242*	.010	.317*	.001	.172*	.031
Openness	-.192	.023	.063	.442	-.006	.941	-.071	.395
Agreeableness	.119	.118	-.080	.281	.071	.335	.069	.360
Consciousness	.091	.254	.033	.677	-.074	.341	.053	.504
Neuroticism	.094	.165	.148*	.026	.063	.334	.134*	.046
R²	.042		.079		.098		.051	
F	2.024*		3.926**		5.001***		2.469*	

4.2 Personality and SNS addiction

To investigate the effects of personality traits on SNS addiction, the regression analysis was conducted. The dependent variables was Facebook addiction, while independent variabled included 5 persoanl traits. The analysis suggested that those who were high scores in consciousness were negatively associated with addictive usage of facebook(β=-.192, p<.05). On the other hand, neuroticism(β=.057, p<.001) and extraversion(β=.220 p<.001) were postively related to facebook addiction

Table 2. Effects of Five Personality factors on Addictive behavior

	Addictive behavior	
	β	p
Extraversion	.220*	.016
Openness	.087	.253
Agreeableness	.050	.487
Consciousness	-.192*	.017
Neuroticism	.057***	.000
R²	.131	
F	6.881***	

5. Conclusion and Discussion

Recently, as a new way of maintain social relationship SNS has been the first choice for many people all around the world. Reseach on SNS identified two major purposes of online social networking. One is to find out others with similar interest, ranging from romantic relationships to social networks [19]. Another major reason is to maintain relationship established offline. Such needs for being connected with others may result in addictive behavior in SNS.

Despite of growing body of research on SNS, the studies regarding factors affecting SNS addiction is still at its early stage. In line with this, the present study investigated the the role of personality traits in Facebook usage. Personality can be defined as individual's unique characteristics and one of the mostly accepted personality theories is the Big-Five model [9]. By applying Big-Five model the present study investigated the addictive usage of Facebook among college students in South Korea. College students are selected as the sample, because they are recognized as heavy users of Facebook. In a review of studies on SNS, Kuss and Griffiths(2011) reported that compared to the general population, teenagers and college students appeared to be the most primary users of SNSs [5]. In consistent with previous similar studies, it is found that majority of college students in the sample were Facebook members and its usage is popular in their life.

The first concern of the study was to examine the predictive relationship between the psychological traits including extraversion, openness, agreeableness, consciousness, neuroticism, and Facebook activities. The results show that extraversion was positively related to Facebook activities. College students with high extroversion reported more facebook activities such sharing photos with others, updating their profiles and giving feedback to others. This may possibly due to a desire for social interaction. The early research suggested that the relationship between extraversion and addictive tendencies could be explained by the fact that using SNSs satisfies the extraverts' need to socialize [16].

This study also found that college students with high neroticism scores predicted Facebook activities including sharing photos with others and updating their profiles. This findings support to previous studies indicating that those with neurotic characteristics tend to use news feeds and SNSs and prefer to chatting and making friends online, and they are more proactive Facebook users [16, 26, 34].

On the other hand, this study found that Facebook activites has no significant correlations to openness, consciousness, and agreeableness. Unlike this study's findings, according to previous studies, Facebook users may be more open [19, 26], they are less cautious [6], and those who are high introversion tend to disclosure more personal information on Facebook [33]. Such inconsistent findings suggest that it is still necessary for future studies to analyze relationships between individuals' characteristics and Facebook usage.

The second concern of the study was to explore whether the psychological traits could significantly predict Facebook addiction. The results show that those who are strongly extroverted and weakly conscientious were found to be more addictive on Facebook. Previous sutdy also indicated in their study that teenagers with high extroversion and low conscientiousness scores predicted addictive Facebook behavior [33]. Extroverst were seeking a sense of belongingness on SNSs, hense, appeared to be addicted to SNSs. On the other hand, conscientious people were well self-controlled and tended to carefully publish their statuses [36], thus, they were not likely to addicted to Facebook.

In conclusion, this study demonstrated a link between individuals's particular personal traits and Facebook use. Findings provide empirical evidence suggesting that Facebook seems to the most popular communication tool that may lead excessive and obsessive usage

in the youth life. Moreover, the study suggests that such usage of SNS depends on the user's personality factors such as extraversion and consciousness. This findings point to directions for future studies aimed at why distinct persoanlity traits influence SNS addiction. Examining why some people are addicted to Facebook and others are not may help us to gain understanding of interaction between personality and Facebook usages.

In terms of pratical implaction this study provides a guidline for achieving marketer's aims. As SNS has been used to reach potential consumers, understanding who spend a lot of time on Facebook and what they do on the site are essential for marketers to design marketing strategy. Given that students who are high in extraversion found to be more active users and addicted to the site, the study recommends that Facebook operators may develop specific applications for the demands of different persoanlity.

Several limitaions may have affected the finings of the present study. It should be noted that the study employed convenience sampling to recruit the participants from a university in South Korea. It is also noted that the study depended on self-report data and an overrepresentation of female participants. Therefore, the achieved results cannot be generalized to all university students.

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