"PHUBBING IS HAPPENING TO YOU"

EXAMINING PREDICTORS AND EFFECTS OF PHUBBING BEHAVIOR IN FRIENDSHIPS

by

JUHYUNG SUN

(Under the Direction of Jennifer Samp)

ABSTRACT

This thesis explores phubbing (snubbing someone in the middle of a face-to-face conversation by using smartphones instead of paying attention) in friendships. Specifically, it examines which individual factors (personality and psychological factors) drive friend phubbing and if friend phubbing leads to lower levels of friendship satisfaction. Also, this thesis investigates the mediating role of friend phubbing between proposed predictors and friendship satisfaction. Participants ($n = 472$) showed that depression and social anxiety were positively related to friend phubbing while agreeableness and neuroticism were negatively related to friend phubbing. Higher levels of friend phubbing resulted in decreased friendship satisfaction. The results showed that friend phubbing mediates the relationships between each of the proposed predictors (i.e., depression, social anxiety, agreeableness, and neuroticism) and friendship satisfaction. This thesis is the first to examine the dynamics of phubbing in friendships from a communication perspective.

INDEX WORDS: Smartphone, Phubbing, Depression, Social anxiety, Agreeableness, Neuroticism, Friendship satisfaction

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CHAPTER 1

INTRODUCTION

With the advent of communication technologies, smartphones have become pervasive in our daily life. A recent report showed that over two billion people around the world own a smartphone (Pew Research Center, 2018a) and about half of smartphone owners (54%) found that they "couldn't live without" their smartphones (Pew Research Center, 2015a). Moreover, a reliance on smartphones continues to increase as more features become available, especially among young adults aged between 18 and 29 (Pew Research Center, 2018b). The possible reason for this increase is that smartphones provide opportunities for continual connection with others (Chayko, 2008; Turkle 2011). Moreover, people initiate and maintain their social relationships with their smartphones by making calls, sending text messages, and interacting on social networks (Gibbs, Ellison, & Heino, 2006; Ling & Yttri, 2002). As a result, this advanced communication technology has changed how people spent their time, interact, and manage their social relationships. However, despite the obvious advantages, the use of smartphones in social settings might also lead to an unprecedented negative phenomenon: *phubbing*.

As many people have spent more time and relied heavily on their smartphones, more and more people are showing problematic behavior in using their smartphones, resulting in negative consequences concerning smartphone use (Bianchi & Phillips, 2005). In particular, *phubbing* which includes four aspects – (a) nomophobia (NP): reflects fear of mobile phone detachment; (b) interpersonal conflict (IC): concerns perceived conflicts caused by using smartphones during face-to-face interactions; (c) self-isolation (SI): indicates the use of smartphones to escape from

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social interactions and isolate themselves from others; and (d) problem acknowledgment (PA): reflects the perception degree of negative aspects of phubbing behavior (Chotpitayasunondh & Douglas (2018a) – is a newly emerging phenomenon.

The term is derived from two words: *phone* and *snubbing*. The word *phone* indicates mobile phones which access to the Internet and support a variety of functions similar to a computer and a multitude of other devices. The word *snubbing* stands for ignoring or neglecting, which in turn results in insulting interlocutors by not paying any attention to them. Taken together, *phubbing* refers to the act of snubbing someone in the middle of a face-to-face conversation by glancing at or using their smartphones instead of paying attention to a person directly in the interaction (Karadağ et al., 2015).

Specifically, *phubbing* may be any of the following behaviors of using a smartphone: staring at a phone in the middle of a conversation, checking a phone in pauses of conversation and keeping a phone close by during face-to-face conversation with someone. With regard to the term *phubbing*, there are two related referents: *phubber* and *phubbee*. A *phubber* is a person who phubs. On the contrary, a *phubbee* indicates a person who is being phubbed.

Recently, we can easily observe phubbing behavior in almost any social setting. Indeed, Chotpitayasunondh and Douglas (2016) reported that a majority (70%) of people phub others at least once per day and more than 78 percent of people are phubbed at least once per day. Despite the pervasiveness of phubbing in our daily life, people have overlooked the negative impact of this behavior. People still phub others in their social interactions although they have considered it as a disrespectful behavior to others by making them feel excluded and unimportant (Karadağ et al., 2015). Indeed, a majority of Americans (95%) think that it is inappropriate to use their smartphones in real-life social interactions such as during meetings and meal times. However,

89% of smartphone owners still use their smartphones during their most recent times with others (Pew Research Center, 2015b). Of course, people can use their smartphones specifically to avoid others around them. Nonetheless, this report suggests that individuals do not realize the frequency with which they phub others around them and more importantly, many individuals are unaware of how they show such behavior and that phubbing can have a negative impact to themselves and their relationships with others.

Phubbing behavior does not happen just in a specific type of interpersonal relationships. People are phubbing casual acquaintances as well as significant others. However, people are more likely to phub significant others such as a romantic partner, a close friend(s), and other family members than those who are less close such as a work supervisor, strangers, and acquaintances. Indeed, a recent study by Al-Saggaf and MacCulloch (2018) found that smartphone users phub their friends more frequently than they phub strangers.

Although phubbing appears most frequently in friendships, research so far has been conducted under the lens of marriage and other romantic relationships (e.g., Krasnova, Abramova, Notter, & Baumann, 2016; Roberts & David, 2016; Wang, Xie, Wang, Wang, & Lie, 2017). No one has examined why people phub more frequently in friendship or whether there might be certain personality traits and psychological factors that make people phub their friend(s). Therefore, the present study investigates phubbing behavior in a specific close relationship – friendship – to fully capture the phubbing behavior and its impact in different types of interpersonal relationships. The main reason that this study focuses on this type of relationship is that friendships are also significant relationships which influence our overall health and well-being (e.g., Chopik, 2017; Demir, Özen, Doğan, Bilyk, & Tyrell, 2011), and

phubbing occurs most frequently in friendships compared to other types of close relationships (Al-Saggaf & MacCulloch, 2018).

An expanding body of research has considered the related determinants and consequences of phubbing behavior. For instance, some studies identified possible predictors which lead to phubbing behavior. Among them, smartphone addiction, which refers to the loss of control over one's smartphone use or excessive and compulsive smartphone use, appears as the most significant predictor that increases phubbing (Chotpitayasunondh & Douglas, 2016; Karadağ et al., 2015). As for consequences of phubbing behavior, other studies found that it increases conflicts created by such behavior (Roberts & David, 2016), and threatens trust (Roberts & David, 2017), conversation quality (Abeele, Antheunis, & Schouten, 2016), relationship satisfaction (Chotpitayasunondh & Douglas, 2018b; Roberts & David, 2016; Wang et al., 2017), impression formation (Abeele et al., 2016), and engagement (Roberts & David, 2017).

Despite the growing body of literature, there are few studies examining the relationships of personality traits and psychological factors related to phubbing behavior. Additionally, no empirical study has demonstrated phubbing behavior as a mediator. In other words, both possible predictors and consequence of phubbing behavior have yet to be empirically investigated in a study. Therefore, the present study seeks to expand the findings by exploring the relationships between individual factors (i.e., personality traits and psychological factors) and phubbing behavior in friendship, which in turn influence friendship satisfaction.

Overview

The purpose of this study is to investigate: (a) the direct relationship between individual factors (i.e., personality traits and risk psychological factors) and friend phubbing, (b) the direct

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relationship between friend phubbing and friendship satisfaction, and (c) the mediating role of friend phubbing in the association between proposed predictors (i.e., personality traits and risk psychological factors) and friendship satisfaction. By addressing the aforementioned relationships, I expect that the results of the present study will provide a mechanism underlying the phubbing behavior, which will eventually contribute to deepening the understanding of such behavior.

This thesis is organized into five chapters beginning with an introduction in Chapter 1. In Chapter 2, a framework of problematic smartphone use proposed by Billieux, Maurage, Lopez-Fernandez, Kuss, and Griffiths (2015) is examined to inform my model of friend phubbing. This model describes the possible predictors of friend phubbing and then explores specific predictors by introducing the hypotheses related to the relationship between each possible predictors and friend phubbing. Second, I use the politeness theory (Brown & Levinson, 1987) to support why the present study focuses on friendships instead of different types of relationships. Afterward, the displacement theory proposed by Kraunt, Patterson, Lundmark, Kiesler, Mukopadhyay, and Scherlis (1998) is reviewed to examine the consequences of friend phubbing. In addition, I present a brief literature review on phubbing behavior to demonstrate whether such behavior can play a role as a mediator.

Chapter 3 describes the research methodology implemented to investigate the research hypotheses. It provides demographic information on participants and procedure for the data gathering process. Then, it is described with a review of the instruments used in this study. This chapter is then concluded by describing data analysis approach.

Chapter 4 reports the empirical results of this study. It begins with descriptive statistics followed by correlation test to investigate the relationships among proposed variables of the

present study. It then continues with structural equation modeling (SEM) to test the hypotheses and the proposed conceptual model of this study.

Lastly, Chapter 5 provides a review of the findings of the study. The findings of the present study then are interpreted and discussed based on the literature review. Prior to concluding the study, the chapter addresses the implications and limitations for future research.

CHAPTER 2

LITERATURE REVIEW

This chapter provides a review of the literature underlying this thesis. Different theories are presented to explain the relationships among possible predictors, consequences of phubbing behavior in friendships and further find a mediating role of phubbing behavior in friendships. First, a framework of problematic smartphone use by Billieux and colleagues (2015) is introduced. Then, literature with regard to possible predictors is presented. This is followed by a review of politeness theory (Brown & Levinson, 1987) and social displacement hypothesis (Kraut et al., 1998) along with consequences of friend phubbing. Based on the literature review, the mediating role of friend phubbing is discussed. Finally, the hypotheses and overview of the present study are presented.

Problematic Smartphone Use

To explore possible predictors of phubbing behavior, I adopt the view of "problematic mobile phone (or smartphone) use" proposed by Billieux and colleagues (2015). Phubbing behavior can be considered as problematic smartphone use. Indeed, Blachnio and Przepiorka (2018) argued that phubbing is an umbrella term which covers three pathways of problematic smartphone use (i.e., excessive reassurance seeking, impulsivity, and extraversion) in that both share many similar symptoms leading to potential negative consequences. Chotpitayasunondh and Douglas (2016) also stated that phubbing is one of the problematic behaviors that have negative impacts on those who phub and who are phubbed. Other studies further argued that

phubbing is closely related to problematic smartphone use in that both are regarded as inappropriate and disrespectful behavior in social interactions (Karadağ et al., 2015).

Billieux and colleagues (2015) proposed three pathways which lead to the problematic smartphone use including (a) excessive reassurance seeking, (b) impulsivity, and (c) extraversion. Since people use their smartphones in different ways depending on their various motivations, each of these pathways within the model is closely related to individual characteristics such as psychological and personality traits.

The first pathway, called the *excessive reassurance seeking*, describes individuals whose problematic smartphone use is driven by low self-esteem, emotional instability, insecure attachment, higher levels of neuroticism, depression, social anxiety, as well as general anxiety to obtain reassurance from others in affective relationships (e.g., romantic partners, family members, and friends). Consequently, these individuals have a tendency to show an addictive pattern of smartphone use.

The second pathway, called the *impulsive pathway*, describes individuals who are susceptible to show problematic smartphone use because they have poor impulse control and inability to regulate emotions. Specifically, impulsive smartphone exhibits characteristics of emotion-laden impulsivity, lack of premeditation/planning, low self-control, aggressive and psychopathic traits, antisocial personality, and ADHD symptoms. These impulsivity traits are closely related to three different patterns of use, namely addictive, antisocial, and/or risky patterns of smartphone use.

Finally, the third pathway, called the *extraversion pathway*, describes individuals whose problematic smartphone use is driven by high extraversion to keep communicating with others and to develop new relationships. These individuals are likely to have high levels of sensation

seeking, sensitivity and dependence to rewards. As a result, the extraversion pathway can lead to either antisocial or risky patterns of smartphone use. To conclude, Billieux and colleagues (2015) highlighted that one or more described factors and/or pathways can be applied in predicting problematic smartphone use.

Empirically, numerous studies have demonstrated the existence of each of these pathways in understanding problematic smartphone use. For example, several studies supported the first pathway of problematic smartphone use. They found that individuals who display problematic smartphone use are likely to express more depressive symptoms (Elhai, Dvorak, Levine, & Hall, 2017a; Ha, Chin, Park, Ryu, & Yu, 2008; Kim, Seo, & David, 2015; Smetaniuk, 2014), emotional instability (Smetaniuk, 2014), neuroticism (Butt & Phillips, 2008; Ehrenberg, Juckes, White, & Walsh, 2008; Takao, 2014), higher levels of anxiety (Elhai, Levine, Dvorak, & Hall, 2017b; Ha et al., 2008; Lee, Chang, Lin, & Cheng, 2014) and lower self-esteem (Bianchi & Phillips, 2005; Ehrenberg et al., 2008; Ha et al., 2008; Lee et al., 2014). With regard to the second pathway which is the impulsive pathway, some studies demonstrated that problematic smartphone use is closely associated with impulsiveness, (Khang, Kim, & Kim, 2013), aggressiveness (Lee et al., 2018) and ADHD symptoms (Kim, 2018; Seo, Kim, & David, 2015; Zheng et al., 2014). Other studies showed that problematic smartphone use is related to high extraversion (Bianchi & Phillips, 2005; Butt & Phillips, 2008; Ehrenberg et al., 2008; Smetaniuk, 2014; Takao, 2014), supporting the third pathway of problematic smartphone use.

Given the theoretical framework suggesting different individual characteristics and previous studies which found that personality constructs and psychological factors cause phubbing (Balta, Emirekin, Kicaburun, & Griffiths, 2018), it is theoretically plausible to regard phubbing behavior as problematic smartphone use. Accordingly, this study examines the

associations of these individual characteristics including personality traits and psychological predictors and phubbing behavior. In the following, hypotheses regarding the influences of each personality and psychological traits are developed by focusing on friendships because the relationship is significant for most individuals (Chopik, 2017) and they are more likely to phub when they are with their friends than when they are with other people (Al-Saggaf & MacCulloch, 2018).

Possible Predictors of Friend Phubbing

The influence of depression

Depression refers to a mood disorder that causes feelings of sadness, loss of interest or pleasure, emptiness, worthlessness, and low self-worth (Sue, Sue, Sue, & Sue, 2015). Increased depression results from lower levels of positive reinforcement (Lewinsohn, 1974) and leads to negative impacts on an individual's daily life and social interactions (Beck & Alford, 2009).

Many studies have demonstrated that problematic smartphone use is closely related to depression. Indeed, individuals who have depressive symptoms are more likely to exhibit problematic smartphone use due to a lack of self-regulation (e.g., Park, 2005; Thomée, Härenstam, & Hagberg, 2011). Relatedly, Kim and colleagues (2015) found that those who score high on depression tend to spend more time on communication activities through their smartphone than those who score low on depression because they expect smartphone would relieve their negative feelings. These researchers suggested that these people feel less risky to be rejected by others when they communicate with others via their smartphones.

With regard to phubbing behavior, some studies have demonstrated the relationship between depression and phubbing behavior. For example, Roberts and David (2016) investigated

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the relationships among phubbing, relationship satisfaction and depression in marriage and found that phubbing results in individuals experiencing a greater feeling of depression among romantic partners. Similarly, Roberts and David (2017) demonstrated that phubbing is associated with higher levels of depression. In another study regarding the impact of technology interference (known as *technoference*) such as receiving calls, text messages, or checking notifications in romantic relationships, McDaniel and Coyne (2016) found that smartphone use frequently interrupts interactions such as couple activities, conversations, and meal times with their partners. They also demonstrated that frequent technological interruptions such as using smartphones in social interactions (also known as phubbing) are significantly related to higher levels of depressive symptoms via relationship conflict over smartphone use.

Although there is no empirical evidence whether depression directly predicts phubbing behavior, given the relationship between depression and problematic smartphone use (Billieux et al., 2015) and the empirical previous studies discussed above, it is theoretically possible to assume that depression is associated with higher levels of phubbing in friendships in that depressed individuals tend to heavily rely on their smartphones in their social interactions. Therefore, I hypothesize that:

H_{1a}: Depression is positively associated with friend phubbing.

The influence of social anxiety

Social anxiety is the presence of intense fear or anxiety of being negatively evaluated or rejected in real or imagined social interactions with others, which is accompanied by feelings of inadequacy, inferiority, self-consciousness, and embarrassment (Schlenker & Leary, 1982). Specifically, Schlenker and Leary (1982) argued that individuals tend to experience feelings of

social anxiety: (a) when "people have inadequate or inappropriate social skills" (i.e., skills deficit approach; pp. 642), (b) when "people evaluate themselves more negatively" (i.e., cognitive self-evaluation model; pp. 643), and (c) when "neutral stimuli become paired with aversive social consequences" (i.e., classical conditioning model; pp. 643).

In social settings, individuals with higher traits of social anxiety are reluctant to spend time talking with others, manage superficial and broader topics than the specific, convey shorter stories and end conversations quickly (Depaulo, Epstein, & LeMay, 1990). Often, these individuals prefer mediated communication or online social interactions to face-to-face interactions because they believe their self-presentational efficacy is greater in computer-mediated communication than traditional interactions (i.e., face-to-face interactions) (Caplan, 2007).

Several studies have shown that those who are socially anxious tend to experience an increased level of problematic smartphone use. For example, Demirci, Akgönül, and Akpinar (2015) investigated the relationship between problematic smartphone use and social anxiety and found anxiety as a key determinant of problematic smartphone use. Relatedly, Enez Darcin, and colleagues (2016) revealed that anxious individuals tend to have a greater risk of smartphone addiction because they not only rely on mobile communication (e.g., texting) to avoid actual social interactions, but also exhibit better performances in mediated communication environments.

Although there is no empirical research examining whether social anxiety directly predicts phubbing behavior, it is plausible to assume that social anxiety is related to higher levels of phubbing behavior given the significant relationship between social anxiety and problematic

smartphone use (Billieux et al., 2015) and the previous studies aforementioned. Thus, I hypothesize that:

H_{1b}: Social anxiety is positively associated with friend phubbing.

The influence of personality traits

Why do people behave differently in the same situation? Personality traits have been widely used to answer this question because personality is considered as a stable feature that shows individual differences (Costa & McCrae, 1992). Among various personality constructs, I adopt the Big-Five personality traits which consist of extraversion, conscientiousness, agreeableness, neuroticism, and openness to experience in the present study. The reason to adopt the Big-Five is that it provides a better understanding of technology-related behaviors (McElroy, Hendrickson, Townsend, & Demarie, 2007).

Although there are many studies investigated the relationship between the Big-Five personality traits and problematic use of smartphones, the outcomes of the previous studies are inconsistent. Contrary to Billieux and colleagues' (2015) argument that neuroticism is significantly related to problematic smartphone use, an empirical study by Bianchi and Phillips (2005) showed that the relationship between problematic use of smartphone and neuroticism is not significant. The discrepancy in the results across studies could be due to the complex nature of personality traits. In addition, there are scant studies examined personality traits as potential predictors of phubbing behavior. To identify consistencies and inconsistencies of the reported findings and further clarify relationships of personality traits and phubbing behavior, this study explores key personality traits. Among different personality traits of the Big-Five, therefore, I propose that two of personality traits influence friend phubbing: *agreeableness* and *neuroticism*.

First, agreeableness refers to an individual's tendency to harmonize or get along with others in social interactions (Costa & McCrae, 1992). Agreeable individuals are described as being kind, sympathetic, well-mannered, considerate, cooperative, and trusting (McCrae & John, 1992). Unlike the rest of the other four Big-Five personality traits which are highly related to "self", agreeableness places more emphasis on relationships with "others" based on equality and honesty (Phillips, Butt, & Blaszczynski, 2006). In this regard, agreeableness can represent the most relevant trait in examining phubbing since such behavior occurs in the presence of others. Considering individuals with higher traits of agreeableness avoid harmful consequences (e.g., conflicts) to maintain social harmony with others (McCrae & John, 1992), it is reasonable to expect that agreeable people will focus more on their interlocutor instead of using their smartphones in social interactions.

Indeed, several studies have empirically demonstrated that agreeableness is significantly associated with problematic smartphone use. For example, Andreassen, Griffiths, Gjertsen, Krossbakken, Kvam, and Pallesen (2013) revealed that disagreeable individuals (i.e., low levels of agreeableness) are more likely to exhibit problematic smartphone use than those with higher scores on agreeableness. With regard to phubbing behavior, there is a study examining the relationship between agreeableness and phubbing behavior. For instance, a recent study by Fritz (2018) predicted that agreeableness can play a significant role in predicting phubbing behavior by proposing a new conceptual model of phubbing. This study demonstrated that increased agreeableness is directly associated with decreased phubbing behavior. Considering the previous studies, therefore, I hypothesize that:

H_{1c}: Agreeableness is negatively associated with friend phubbing.

Second, neuroticism is a tendency to experience emotional instability and maladjustment to social environments, which is accompanied by feelings of moodiness, nervousness, impulsiveness and worrying (McCrae & Costa, 1987). Neurotic individuals are emotional and react sensitively to various stimuli interpreting common situations as unpleasant and threatening (Anastasi & Urbina, 1997). While nonneurotic individuals locate themselves in traditional communications such as face-to-face interactions, neurotic individuals are prone to place greater importance on mediated communication such as the Internet and mobile phones when they consider "real me" (Amichai-Hamburger, Wainapel, & Fox, 2002).

A number of research studies have examined that neuroticism is an important personality factor related to problematic smartphone use. For example, Ehrenberg and colleagues (2008) found a significant relationship between neuroticism and problematic smartphone use tendencies among young adults and reported that individuals with higher traits of neuroticism tend to spend more time sending and receiving text messages. More recently, Roberts and colleagues (2015) revealed that those who score higher on neuroticism reported greater levels of smartphone addiction. These findings argued that neurotic individuals tend to show heavy smartphone dependency which eventually leads to a higher likelihood of problematic smartphone use since they use their smartphones as a means of dealing with their stress and recovering their negative feelings.

Considering the prediction of problematic smartphone use proposed by Billieux and colleagues (2015) and the majority of empirical previous studies, I assume that neuroticism also leads to higher phubbing. Therefore, it is hypothesized that:

H_{1d}: Neuroticism is positively associated with friend phubbing.

Why friendship? – Politeness theory

Friendship is conceptualized as a "voluntary interdependence between two persons over time, which is intended to facilitate socio-emotional goals of the participants, and may involve varying types and degree of companionship, intimacy, affection, and mutual assistance (Hays, 1988, pp.395)." That is, friendship is an affective relationship which is based on a stronger mutual tie between people. Relationships, especially friendships, play a critical role in individuals' lives in that the relationship influences our health, happiness, social and emotional support (Demir & Weitekamp, 2007).

Then, why I consider friendships in the present study? As mentioned earlier, most of the studies related to phubbing behavior have focused on romantic relationships (e.g., Krasnova et al., 2016; Roberts & David, 2016; Wang et al., 2017) in that romantic partners have higher expectations as expectancy violation theory suggested (Burgoon, 1978), particularly in terms of attentiveness to each other when they are spending time together (Miller-Ott & Kelly, 2015). Also, romantic partners tend to provide security and enduring emotional supports (Florian, Mikulincer, & Bucholtz, 1995). However, friendships play a central role too in that friends also serve emotional supports and friendships have a far greater impact on our overall health, happiness, and personal well-being than different types of relationships (Chopik, 2017; Demir et al., 2011). Above all, phubbing occurs more frequently in friendships than other relationships (Al-Saggaf & MacCulloch, 2018). Given the significance of friendships and the pervasiveness of phubbing behavior in friendships, it is necessary to understand how people use their smartphones in the presence of their friends.

Why does phubbing frequently occur in friendships? This question can be addressed through the lens of *politeness theory* (Brown & Levinson, 1987). As Goffman (1967) introduced,

politeness is particularly related to the central role of face in the interactions. He conceptualized that an individual, who is a social actor, shows linguistic, behavioral, and gestural performances to provide (also protect) his/her positive self-image. Relatedly, Brown and Levinson (1987) proposed that individuals have two different faces: (a) positive face - a desire for approval and connection with others, and (b) negative face - a desire for freedom and independence from imposition by others. These researchers further argued that there are three factors related to politeness: (a) the relative power, (b) the degree of imposition, and (c) the social distance between the speaker and the listener. In other word, people are likely to be polite (e.g., using more polite strategies such as using more polite languages) when they are with individuals who have a greater power than those who have equality or lower power, when requesting to do a big favor than a small favor, and when talking with unknown people than familiar individuals.

Consistent with the three aspects of politeness theory approach, the notion of *friendship* is based on a belief in balanced power (equality or fairness) and high social distance (familiarity) (Austin, 1980; Lim & Bowers, 1991). It suggests that individuals tend to be less polite which in turn leads to being less concerned about their self-images when they are with their friends. With regard to two different faces, Miller-Ott and Kelly (2017) demonstrated that the use of smartphones in the presence of friends violates positive faces conveying possible messages such as that a person who uses a smartphone is bored and that he does not the relationship seriously.

As such, when interactions occur in familiar or comfortable environments, individuals often feel that they do not have to present (or protect) their public self-images and do not worry about being perceived as impolite (Brown & Levinson, 1987). That is, not being attentive during face-to-face interaction does not influence in losing their faces in friendships. Indeed, based on

the politeness theory, Harrison, Bealing, and Salley (2015) suggested that people feel free to use their smartphones in the presence of their friend.

Despite the pervasiveness of phubbing behavior in friendship, friend phubbing and its association with friendship satisfaction are surprisingly sparse. Therefore, the present study examines friend phubbing and its impact on friendship satisfaction based on the politeness theory.

Social Displacement Hypothesis

I adopt the view of the *displacement hypothesis* to explain the detrimental effect of friend phubbing on friendship satisfaction. As originally posited, the social displacement hypothesis postulates that time spent on media such as smartphones would displace (or reduce) important activities with significant others since time is a limited resource (i.e., a zero-sum relationship) (Kraut et al., 1998). That is, when individuals spend more time on communication technologies, they spend less time on meaningful interactions with their close others (e.g., a romantic partner, family members, and close friends). Consequently, this argument asserts that despite increased communication opportunities via smartphones supported by social augmentation hypothesis, which posited that mediated communication allows people to expand their social networks permitting them to connect to others more frequently (Walther, 1996), the displacement has a negative impact on social interactions with their close others such as reducing social involvement and psychological well-being (Kraut et al., 1998; Nie, 2001; Valkenburg &Peter, 2007).

Empirically, several studies have supported the social displacement hypothesis. For example, Nie, Hillygus, and Erbring (2002) conducted a survey on the social impact of Internet use and found that excessive Internet use causes a negative impact on face-to-face interactions by

reducing time spent with family members and friends. More recently, Ahn and Shin (2013) found that recent communication technologies such as mobile devices displace face-to-face communications which eventually leads to feelings of disconnection, thereby damaging perceived quality and quantity of social relationships. These findings suggested that problematic technology use becomes intrusive in face-to-face interactions impairing relationship satisfaction and personal well-being.

Even the mere presence of a smartphone distracts and has negative consequences for social interactions. Indeed, Thornton, Faires, Robbins, and Rollins (2014) demonstrated that the presence of a smartphone serves as a distractor and then result in attentional and performance deficits, which ultimately leads to detrimental effects on social interactions with others. With regard to phubbing behavior, Halpern and Katz (2017) suggested a theoretical model in which constant media use such as frequency of text messaging is positively related to partner phubbing (*Pphubbing*) with increased conflicts and lack of intimacy, which ultimately reduces perceived relationship quality. Similarly, Roberts and David (2016) examined partner phubbing (*Pphubbing*) based on the displacement hypothesis and found that partner phubbing negatively impacts relationship satisfaction and an individual's overall life satisfaction.

As the social displacement hypothesis (Kraut et al., 1998) and the empirical results showed, it is possible to argue that the displacement hypothesis can be applied to explain phubbing behavior in friendships. Accordingly, I assume that phubbing behavior will lead to having a detrimental effect on social interactions, especially with friends. In the following, a hypothesis related to the consequences of friend phubbing is developed based on the displacement hypothesis.

Consequences of Friend Phubbing

Friendship satisfaction

Friendship satisfaction varies according to the degree to which a person perceives that his/her friends fulfill various needs and desires (McAdams, 1988). Friendship satisfaction is an important determinant of an individual's overall life satisfaction and social integration (Demir & Weitekamp, 2007). Friendship satisfaction has been considered as a strong indicator of relationship maintenance and the likelihood of relational closeness within social relationships because it reflects various characteristics – similarity in communication values, intimacy, commitment, and relational certainty (e.g., Guerrero, Anderson & Afifi, 2011; Rusbult & Buunk, 1993).

Contrary to relational satisfaction in romantic relationships, empirical research specifically examining a relationship between friendship satisfaction and problematic smartphone use including phubbing remains deficient. Only one study by Bae (2015), which focused on problematic smartphone use among Korean adolescents, found that high levels of problematic smartphone use lead to lower friendship satisfaction.

With regard to phubbing behavior, Miller-Ott and Kelly (2017) discussed the dilemma of smartphone use in the presence of friends and offered some important implications for phubbing behavior whether it threatens their face or not. However, this study did not investigate the impact of phubbing behavior on friendship satisfaction. Therefore, the present study suggests that the heightened engagement of phubbing behavior in friendship may diminish friendship satisfaction. I hypothesize that:

H₂: Friend phubbing is negatively associated with friendship satisfaction.

The Mediating Role of Friend Phubbing

Despite the growing attention of phubbing behavior, most existing studies have focused either on the antecedents or on the effects of phubbing behavior. In other words, very little is known about the mediating role of phubbing behavior which examines both possible predictors and consequences of phubbing behavior. As the theoretical assumptions and the empirical studies argued above, it is reasonable to expect that friend phubbing will mediate the relationships between proposed predictors and consequence. Therefore, the present study proposes a complex model in which risk psychological factors (i.e., depression and social anxiety), personality traits (i.e., agreeableness and neuroticism), friend phubbing and friendship satisfaction will be significantly associated and in particularly friend phubbing will mediate those proposed relationships. Accordingly, I hypothesize that:

H3a: Friend phubbing mediates the relationship between depression and friendship satisfaction.

H3b: Friend phubbing mediates the relationship between social anxiety and friendship satisfaction.

H3c: Friend phubbing mediates the relationship between agreeableness and friendship satisfaction.

H3d: Friend phubbing mediates the relationship between neuroticism and friendship satisfaction.

The Present Study

This study tests a complex model in which individual characteristics such as psychological factors (i.e., depression and social anxiety) and personality traits (i.e.,

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agreeableness and neuroticism) are independent variables, phubbing behavior in friendship (friend phubbing) is a mediator variable, and friendship satisfaction is the dependent variable. It was hypothesized that depression, social anxiety, and neuroticism will be positively associated with friend phubbing, whereas agreeableness will be negatively associated with friend phubbing. With regard to the indirect effect of friend phubbing among all the variables of this study, it was hypothesized that friend phubbing will mediate the relationships between (1) depression and friendship satisfaction; (2) social anxiety and friendship satisfaction; (3) agreeableness and friendship satisfaction; and (4) neuroticism and friendship satisfaction (see Figure 1).
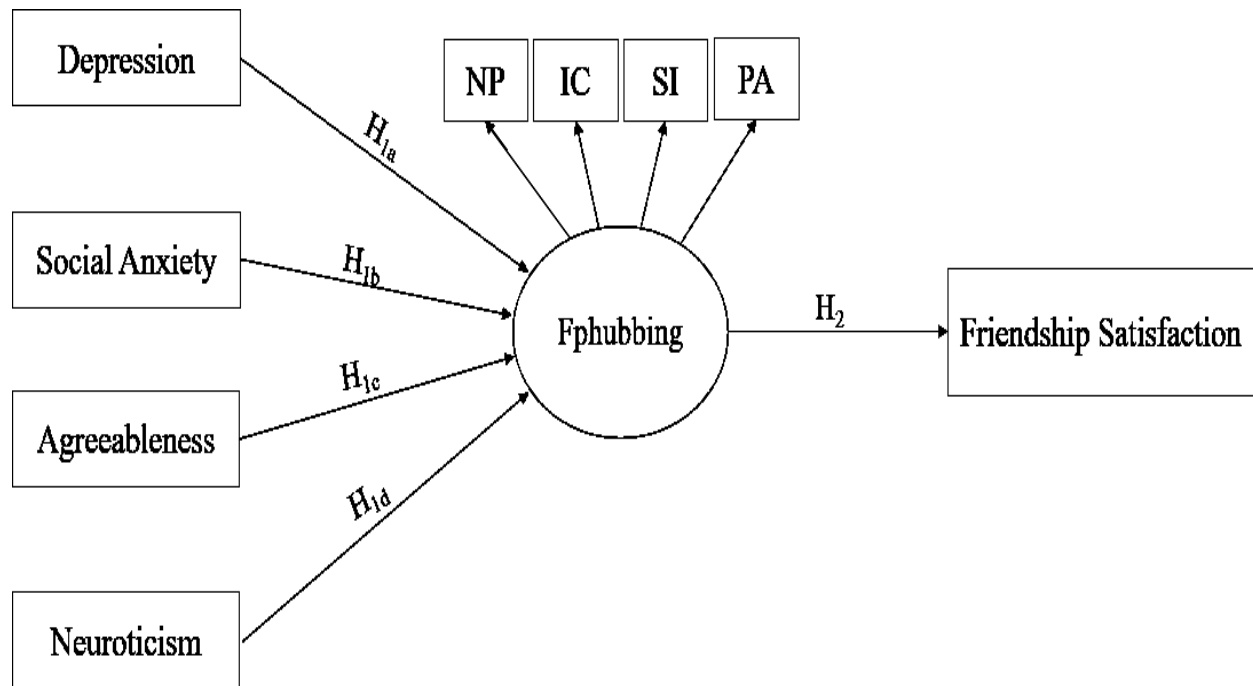
Figure 1. The hypothesized model for the study

Notes. Fphubbing: Friend phubbing, NP: Nomophobia, IC: Interpersonal Conflict, SI: Self-isolation, and PA: Problem Acknowledgment.

CHAPTER 3

METHOD

This chapter explains the methodology used to test the hypotheses and the hypothesized model provided in the second chapter. It begins by presenting demographic information of the participants whose participants were and how they were sampled. The procedure that was followed to complete an online survey is also included. Additionally, the instrument that was used for this study is described. Lastly, I discuss the method used to analyze the data for the preparation for statistical analyses.

Participants and procedure

First, all materials related to the present study were approved by university IRB. Then, participants were recruited from a research pool, accessible to undergraduate students enrolled in classes in the Department of Communication Studies at the University of Georgia in the United States. Students enrolled in COMM1100, COMM1500 or other upper levels of COMM courses participated in the survey on a voluntary basis. An email invitation was sent to these students with a consent form which included the purpose of the study, procedures, risks/discomforts, benefits, confidentiality, compensation and contact information of the researcher and a link to the survey questionnaire hosted on the *Qualtrics* (https://www.qualtrics.com), which is an online data collection website.

The online survey consisted of four sections (Appendix A). First, demographic information (e.g., gender, age, ethnicity, and current relationship status) was presented to define

the sample. Second, participants were asked to report time spent on smartphone use in a typical day and which functions/applications (e.g., messaging, SNS, calling, and etc.) they mostly used to understand duration and usage patterns of smartphone use. The next section included measurements examining friend phubbing, personality traits (i.e., agreeableness and neuroticism), psychological factors (i.e., depression and social anxiety) and friendship satisfaction. Because the present study mainly focused on friendship, participants were asked to think about their current friendships that meet up together or have contact within two weeks. Lastly, participants were asked to indicate their full name, course name, and their instructor's name to receive course credit.

As a result, a total of 519 students participated in the survey. Among 519 participants, 472 were valid ($n = 472$) for further statistical analysis because 3 did not complete the survey, 4 did not have their own smartphone and the rest (40 participants) were regarded as influential outliers which observed farthest from the centroid (create heteroscedasticity) indicating less than .05 on p-value (Hoyle, 1995).

Of the 472 participants, 299 were female (63.3%), 171 were male (36.2%), and 2 did not prefer to answer. The average age of the participants was 19.85 ranged between 18 and 28 years ($SD = 2.04$). A majority of participants were Caucasian/White ($n = 349$, 73.9%); 73 (15.5%) were Asian; 20 (4.2%) were Black/African American; 19 (4.0%) were Hispanic/Latino; 9 (1.9%) were Biracial or Multiracial; and 2 participants reported other ethnicities. Current relationship status was measured with three categories. More than half of the participants ($n = 283$) were single; 159 (33.7%) were in a relationship; and 30 (6.4%) reported that it is complicated.

Measures

Smartphone use. Participants were asked to indicate duration and usage patterns of

smartphone use by the following two questions (Haug et al., 2015): "What is your duration of

smartphone use in a typical day?" by choosing one of five options: (1) less than 10 minutes; (2)

11 – 60 minutes; (3) 1 – 2 hours; (4) 3 – 4 hours; and (5) more than 5 hours and "What

functions/application do you use most frequently on your smartphone in a typical day?" by

choosing three options among 11 options (1) text messaging; (2) social networking; (3) calling;

(4) gaming; (5) searching; (6) taking pictures/videos; (7) watching movies; (8) reading

news/checking weather; (9) listening to music; (10) using maps; and (11) other.

Friend Phubbing. Before measuring phubbing behavior, participants were asked to

answer the following question: "Do you know what the term *phubbing* means?" with "Yes" or

"No" to assess familiarity with the term phubbing. Then, friend phubbing of the participants was

assessed by using a modified version of the Generic Scale of Phubbing (GSP) which was

recently developed by Chotpitayasunondh and Douglas (2018a). Friend phubbing was measured

with four factors (i.e., nomophobia, interpersonal conflict, self-isolation, and problem

acknowledgment) as Chotpitayasunondh and Douglas (2018a) proposed by assessing

participants' intention or willingness to phub their friends during an interaction. Since the present

study focused on phubbing behavior in friendships, the referent was replaced from others to my

friend(s) who meet up together or contact them within two weeks. The modified GSP comprises

15 items on a 7-point Likert scale ranging from 1 (*never*) to 7 (*always*) with four factors:

Nomophobia (NP) (e.g., "I worry that I will miss something important if I do not check my

phone), Interpersonal Conflict (IC) (e.g., "I have conflicts with my friend(s) because I am using

my phone), Self-isolation (SI) (e.g., "I would rather pay attention to my phone than talk to my

friend(s)"), and Problem Acknowledgement (PA) (e.g., "I pay attention to my phone for longer

than I intend to do so).

In order to test how well this modified scale measure friend phubbing representing the

number of constructs required in the data and to assess the measurement validity, confirmatory

factor analysis (CFA) was used. As a result of CFA, it was observed that Item 3 (i.e., "I place my

phone where I can see it", see Appendix A) was unacceptable because of unsatisfied standardized

regression weights (<.30) and squared multiple correlations (<.10) (Schumacker& Lomax,

2004). Consequently, this item was removed from the analyses and the result showed that the

scale was valid for assessing four factors among the participants to measure phubbing behavior

in friendships displayed a good fit: χ^2 (71, $N = 472$) = 195.41, p <.001, χ^2/df = 2.75, CFI = .93,

NFI = .92, SRMR = .05, RMSEA = .06. The reliabilities of the subscales – Nomophobia ($M =$

3.63, SD = 1.23, Cronbach's α = .77), Interpersonal Conflict ($M = 1.62$, SD = .76, Cronbach's α

= .83), Self-isolation ($M = 1.63$, SD = .80, Cronbach's α = .78), and Problem Acknowledgement

($M = 3.63$, $SD = 1.27$, Cronbach's α = .72) – were also high.

Depression. The Center for Epidemiologic Studies Depression Scale (CES-D scale)

developed by Radloff (1977) was designed to measure levels of depression. The CES-D scale

includes 20 items (e.g., During the past week "I felt depressed" and "I had trouble keeping my

mind on what I was doing") on a 4-point Likert scale ranging from 1 (*Rarely or none of the time*

- less than 1 day) to 4 (*Most or all of the time -5-7 days*). To test the validity of this scale,

confirmatory factor analysis (CFA) was conducted. The result showed that Item 7 (i.e., "I felt

that everything I did was an effort", see Appendix A) should be removed because it did not meet

the criteria of the acceptance obtained lower standardized regression weights (<.30) and squared

multiple correlations (<.10) (Schumacker & Lomax, 2004). This item was removed from the

further analysis and then revealed that the scale was valid to measure participants' depression levels resulted in a satisfactory fit: χ^2 (141, $N = 472$) = 330.99, $p <.001$, $\chi^2/df = 2.35$, CFI = .94, NFI = .90, SRMR = .05, RMSEA = .05. Then, to compute the variable for depression, reverse items (i.e., item 4, 8, 12, and 16) were recoded so that individuals with scores tend to have greater feelings of depression ($M = 1.69$, $SD = .45$, Cronbach's $\alpha =.89$).

Social Anxiety. The Interaction Anxiousness Scale (IAS) developed by Leary (1983) was used to measure trait levels of social anxiety. The IAS includes 15 items (e.g., "I often feel nervous even in casual get-togethers" and "In general, I'm a shy person") on a 7-point Likert scale ranging from 1 (*Not at all characteristic of me*) and 7 (*Extremely characteristic of me*). To assess validity of this scale, confirmatory factor analysis (CFA) was conducted and showed that it was valid to assess the levels of social anxiety resulting in a satisfactory fit: χ^2 (84, $N = 472$) = 273.36, $p <.001$, $\chi^2/df = 3.25$, CFI = .93, NFI = .90, SRMR = .06, RMSEA = .07. Four items (i.e., item 3, 6, 10, and 15) were recoded and computed so that individuals with higher scores tend to have higher traits of anxiousness in social interactions ($M = 2.73$, $SD = .63$, Cronbach's $\alpha = .84$).

Personality Traits – Agreeableness and Neuroticism. The subscales of the Big Five Trait Taxonomy developed by John and Srivastava (1999) were designed to measure the Agreeableness and the Neuroticism of the participants. The Big Five Trait Taxonomy-agreeableness and neuroticism consist of 9 items (e.g., I see myself as someone who "is helpful and unselfish with others" and "has a forgiving nature") and 8 items (e.g., I see myself as someone who "can be tense" and "gets nervous easily") on a 5-point Likert scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). Prior to the computation of each personality trait, reverse items (agreeableness – item 1, 3, 6, and 8; neuroticism – item 2, 5, and 7) were recoded, respectively. To check the measurement, I conducted a confirmatory factor analysis (CFA). It

showed that each subscale was valid to measure participants' agreeableness and neuroticism, respectively displayed a satisfactory fit: χ^2 (24, $N = 472$) = 91.35, $p <.001$, $\chi^2/df = 3.81$, CFI = .93, NFI = .91, SRMR = .05, RMSEA = .07 for Agreeableness; and χ^2 (19, $N = 472$) = 73.89, $p <.001$, $\chi^2/df = 3.89$, CFI = .95, NFI = .94, SRMR = .04, RMSEA = .07 for Neuroticism. The reliabilities of the subscales – Agreeableness ($M = 3.95$, SD = .60, Cronbach's α = .79) and Neuroticism ($M = 2.80$, $SD = .77$, Cronbach's α = .83) were also high.

     Friendship Satisfaction. Friendship satisfaction was assessed using a revised version of the Relationship Assessment Scale (RAS) (Hendrick, 1988). Referents were replaced from partner to friend(s) and from relationship to friendship to investigate the participants' satisfaction in their current friendship. The modified RAS consists of 7 items (e.g., "How well does your friend(s) meet your needs?" and "In general, how satisfied are you with your current friendship?") on a 5-point Likert scale ranging from 1 (*Poorly/Unsatisfied*) to 5 (*Extremely well/Extremely satisfied*). Negatively worded items (i.e., item 4 and 7) were recoded and computed so that higher scores indicate high satisfaction in their current friendships.

     To test how well the modified scale measures friendship satisfaction and to check the measurement validity, confirmatory factor analysis (CFA) was applied. The results of the confirmatory factor analysis (CFA) revealed that Item 7 (i.e., "How many problems are there in your friendships?") had unacceptable standardized regression weights (<.30) and squared multiple correlations (<.10) (Schumacker& Lomax, 2004). Consequently, this item was removed from the analyses and the result showed that the scale was valid for assessing the friendship satisfaction of the participants resulted in satisfactory fit: χ^2 (9, $N = 472$) = 43.34, $p <.001$, $\chi^2/df = $ 4.82, CFI = .98, NFI = .97, SRMR = .03, RMSEA = .06. The reliability of this scale was also high ($M = 4.07$, $SD = .66$, Cronbach's α = .87).

Data Analysis

Data were analyzed using SPSS version 25.0 and AMOS version 25.0 software for Windows. In order to identify the relationships among proposed predictors (i.e., depression, social anxiety, agreeableness, and neuroticism), friend phubbing and friendship satisfaction, structural equation modeling (SEM) was employed. Before using structural equation models, frequency, descriptive statistics and correlation coefficients (Cronbach's alpha) were analyzed with SPSS. Then, a confirmatory factor analysis (CFA) was conducted to check the validity of each scale and examine the hypothesized model fit with the AMOS.

In terms of sample size, Kline (2005) recommended that the minimum sample size should be greater than 200 for path analysis or structural equation modeling (SEM). As Preacher and Hayes (2004) suggested, a bootstrapping procedure with 1000 bootstrap samples and a 95% bias-corrected confidence intervals (CI) was conducted to test the mediating effect of friend phubbing on the relationship between independent and dependent variables.

Employing maximum likelihood estimation, the following criteria were used to examine the overall measurement fit in the CFA and structural equation models (SEM) (Bentler & Bonnet, 1980; Hooper, Coughlan, & Mullen, 2008; Kline, 2005): (1) the chi-square (χ^2) statistic (non-significant, $\chi^2/df < .05$); (2) the comparative fit index (CFI, > .90); (3) the normed-fit index (NFI, > .90); (4) the standardized root mean square residual (SRMR, < .08); (5) the root mean square error of approximation (RMSEA, < .08).

CHAPTER 4

RESULTS

This chapter describes the empirical results of this study. It begins with descriptive statistics followed by correlation test to investigate the relationships among all variables of the present study. It then continues with structural equation models to test the hypotheses and the proposed conceptual model of this study.

Descriptive statistics

In terms of smartphone use, more than half of the participants (n = 250, 53.0%) indicated that they spent '3 – 4 hours' using their smartphones in a day; 133 (28.2%) spent '1 – 2 hours'; 80 (16.9%) spent 'more than 5 hours'; 9 (1.9%) spent '11 – 60 minutes' and no one reported 'less than 10 minutes' per day (M = 3.85, SD = .71). In addition, relevant to smartphone functions/applications (or apps), participants indicated that social networking, text messaging and listening to music as the most frequently used smartphone function/applications.

With regard to knowledge about the *phubbing* term, interestingly, most of the participants (94.7%) indicated that they do not know about the term phubbing (n = 447), while 25 (5.3%) reported that they know what the phubbing term means (see Table 1).

Table 1. *Demographic information of the participants (n = 472)*

	Frequency	Percent (%)
Total	n = 472	100%
Age	M = 19.85	SD = 2.04

Gender		
Female	299	63.3
Male	171	36.2
Prefer not to answer	2	0.4
Ethnics		
White or Caucasian	349	73.9
Asian	73	15.5
Black or African American	20	4.2
Hispanic or Latino	19	4.0
Biracial or Multiracial	9	1.9
Other	2	0.4
Relationship status		
Single	283	60.0
In a relationship	159	33.7
It's complicated	30	6.4
Smartphone ownership		
Yes	472	100.0
No	0	0.0
Duration of smartphone use in a typical day		
Less than 10 minutes	0	0.0
11-60 minutes	9	1.9
1- 2 hours	133	28.2
3 - 4 hours	250	53.0

More than 5 hours	80	16.9

The smartphone applications/functions used most frequently

Social networking	411	87.1
Text messaging	380	80.5
Listening to music	257	54.4
Searching	97	20.6
Calling	75	15.9
Watching movies	42	8.9
Gaming	32	6.8
News/Weather	12	2.5
Camera (Taking pictures/videos)	9	1.9
Other (Streaming; YouTube, Twitch, E-book)	9	1.9
Using a map	4	0.8

Know about the term *phubbing*

No	447	94.7
Yes	25	5.3

Testing for the Hypothesized Model

First, correlation analyses were run to examine the relationships among all variables of this study. In addition, multicollinearity within a set of independent variables was tested through variance inflation factor analysis (VIF). The result showed that the study variables were significantly correlated (Table 2). The outcomes of the VIF showed that collinearity statistics obtained VIF values of 1.543 (depression), 1.390 (social anxiety), 1.189 (agreeableness), and

1.923 (neuroticism), indicating that the VIF values are obtained ranged from 1 to 10 (i.e., VIF <

10 is acceptable) (Hair, Black, Banbin, & Anderson, 2010). It was concluded that there are no

multicollinearity symptoms between independent variables.

Table 2. *Mean, Standard Deviations, Cronbach's alphas, and Zero-order Pearson Correlations among the Study Variables (n = 472)*

	1	2	3	4	5	6
1. Friend phubbing	-					
2. Depression	.29**	-				
3. Social anxiety	.31**	.37**	-			
4. Agreeableness	-.22**	-.31**	-.15**	-		
5. Neuroticism	.25**	.58**	.52**	-.38**	-	
6. Friendship satisfaction	-.23**	-.46**	-.21**	.39**	-.27**	-
Mean (SD)	2.48	1.69	2.73	3.95	2.80	4.07
	(0.69)	(0.45)	(0.63)	(0.60)	(0.77)	(0.66)
Cronbach's Alpha	0.83	0.89	0.84	0.79	0.83	0.87

* $p < .05$. ** $p < .01$. *** $p < .001$

To test the hypothesized model as depicted in Figure 1 and relationships among the study variables, structural equation modeling (SEM) was conducted with 5 observed variables (i.e., depression, social anxiety, agreeableness, neuroticism, and friendship satisfaction) and 1 latent variable (i.e., friend phubbing). To be specific, each of the individual factors (i.e., personality traits and psychological factors) was regressed onto friend phubbing, and friend phubbing was regressed onto friendship satisfaction. Overall, the hypothesized model resulted in a good model fit: χ^2 (19, $N = 472$) = 87.26, $p < .001$, $\chi^2/df = 4.59$, CFI = .93, NFI = .92, SRMR = .05, RMSEA = .08.

Results of the Hypotheses

To be parsimonious, only the significant individual standardized path estimates and R^2 estimates (squared multiple correlations) for the endogenous variable were shown in Figure 2. As this study predicted (Figure 1), three of the formal hypotheses related to the predictors of friend phubbing were fully supported: (a) H_{1a} was supported; the path from depression to friend phubbing was significant and positive (.32, $p < .001$), (b) H_{1b} was supported; the path from social anxiety to friend phubbing was significant and positive (.24, $p < .001$), (c) H_{1c} was supported; the path from agreeableness to friend phubbing was significant and negative (-.27, $p < .001$), and (d) H_{1d} was not supported; the path from neuroticism to friend phubbing was significant but not positive (-.18, $p < .05$). Among the four predictors of friend phubbing, the results showed that the strongest determinant of friend phubbing is depression, followed by agreeableness, and social anxiety.

In regard to the direct relationship between friend phubbing and friendship satisfaction (H2), it was supported; the path from friend phubbing to friendship satisfaction was significant and negative (-.13, $p < .05$).

As predicted in this study, friend phubbing played a role as a mediator between proposed independent and dependent variables. Specifically, H3a was supported; the path from depression to friendship satisfaction through friend phubbing (indirect effect of friend phubbing) was significant (-.04, 95% CI [-.10, -.01]) were significant and negative. H3b was supported; the path from social anxiety to friendship satisfaction through friend phubbing was significant (-.03, 95% CI [-.07, -.01]). H3c was supported; the path from agreeableness to friendship satisfaction through friend phubbing (indirect effect of friend phubbing) was significant (.03, 95% CI [.01, .08]). H3d was supported; the path from neuroticism to friendship satisfaction through friend phubbing was significant (.02, 95% CI [.00, .07]).

To summarize, the results of this study are as follows: (a) depression was directly and indirectly associated with friendship satisfaction via friend phubbing; (b) social anxiety was indirectly associated with friendship satisfaction via friend phubbing; (c) agreeableness was directly and indirectly associated with friendship satisfaction via friend phubbing, and (d) neuroticism was indirectly associated with friendship satisfaction via friend phubbing.

In regard to R^2, a total of 24.7% variance in friend phubbing and 29.2% of the variance in friendship satisfaction were explained by all proposed variables.
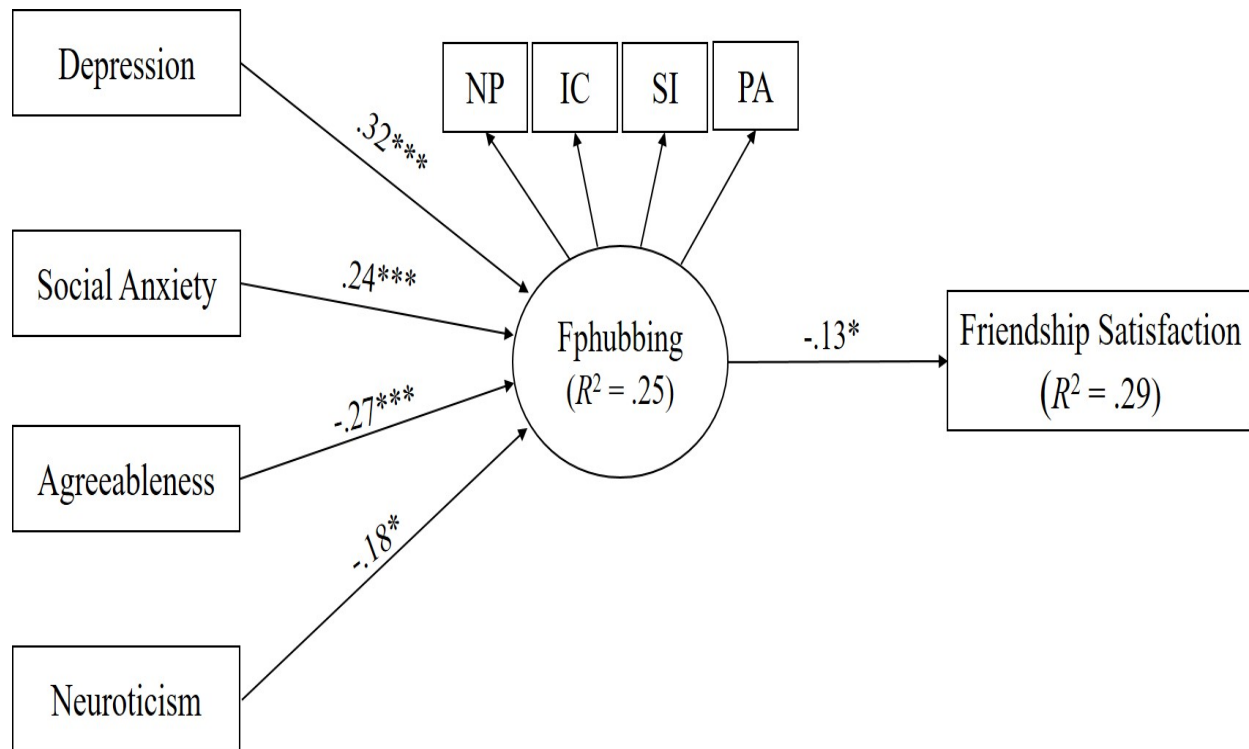
Figure 2. The results of structural equations modeling with the hypothesized model.

Notes. Fphubbing: Friend phubbing, NP: Nomophobia, IC: Interpersonal Conflict, SI: Self-isolation, and PA: Problem Acknowledgement.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3. *Summary of Hypothesis Testing Results*

	Path			Hypotheses	Estimate	Results
Predictors of Friend Phubbing						
H₁ₐ	Depression	→	Friend phubbing	Positive	.32***	Supported
H₁ᵦ	Social anxiety	→	Friend phubbing	Positive	.24***	Supported
H₁ᵧ	Agreeableness	→	Friend phubbing	Negative	-.27***	Supported
H₁ᵨ	Neuroticism	→	Friend phubbing	Positive	-.18*	Not supported
Consequence of Friend Phubbing						
H₂	Friend phubbing	→	Friendship satisfaction	Negative	-.13*	Supported
The Mediating Role of Friend Phubbing				*Indirect effect*		
H₃ₐ	Depression	→	Friendship satisfaction	Mediated	.-.04*	Supported
H₃ᵦ	Social anxiety	→	Friendship satisfaction	Mediated	-.03*	Supported
H₃ᵧ	Agreeableness	→	Friendship satisfaction	Mediated	.03*	Supported
H₃ᵨ	Neuroticism	→	Friendship satisfaction	Mediated	.02*	Supported

Note. * *p* < .05. ** *p* < .01. *** *p* < .001.

CHAPTER 5

DISCUSSION

This chapter interprets and discusses the results presented in the previous chapter (Chapter 4). The implications of this study are then presented. Finally, limitations and suggestions for future research are addressed followed by the conclusion.

Although the use of smartphones has permeated into a wide number of areas of our life and that phubbing frequently occurs in friendships, previous research primarily has examined phubbing in the context of romantic relationships so far. The primary purpose of this investigation was to uncover the mechanisms underlying phubbing behavior and its relationship with other proposed variables in friendships. Specifically, this study presented an integrated model that explains such associations by finding the significant (a) effects of depression, social anxiety, agreeableness on friend phubbing, (b) effect of friend phubbing on friendship satisfaction, and (c) mediating role of friend phubbing in the associations between each of proposed predictors (i.e., depression, social anxiety, agreeableness, and neuroticism) and friendship satisfaction.

To support the arguments and test the hypotheses, this study presented three theoretical approaches: problematic smartphone use model (Billieux et al., 2015), politeness theory (Brown & Levinson, 1987) and social displacement hypothesis (Kraut et al., 1998). Consequently, I found that four individual characteristics such as depression, social anxiety, agreeableness, and neuroticism are significantly linked with friend phubbing, and this ultimately leads to having a detrimental impact on friendship satisfaction. Further, the results revealed that friend phubbing

mediates such relationships (between each individual characteristic and friendship satisfaction). The results of structural equation models (SEM) in this study showed that all the hypotheses except H_{1d} were empirically supported and found that the hypothesized model of this study displays goodness-of-fit. The results of the present study are discussed in greater detail below with three main conclusions: (a) predictors of friend phubbing, (b) consequences of friend phubbing, and (c) the mediating role of friend phubbing.

Predictors of Friend Phubbing

An important contribution is that this study supports that phubbing behavior can be regarded as problematic smartphone use consistent with prior literature (e.g., Blachnio & Przepiorka, 2018; Chotpitayasunondh & Douglas, 2016). That is, the findings of this study provide evidence that the key predictors of problematic smartphone use advanced by the theoretical model by Billieux and colleagues (2015) also predict friend phubbing.

First, H_{1a} suggested that those with high levels of depression would have increased friend phubbing. The hypothesis was supported by showing a significant positive correlation between depression and friend phubbing. This is congruent with the problematic smartphone use approach (Billieux et al., 2015) as well as the previous studies (e.g., Kim et al., 2015; Park, 2005) that have argued that depressed individuals tend to have higher levels of problematic smartphone use. Kim and colleagues (2015) empirically demonstrated that individuals with higher traits of depression tend to show a heavy reliance on smartphone-mediated communication than face-to-face communication by suggesting that these people regard smartphones as a mean of alleviating their depression symptoms. Additionally, this result is in line with the recent study by Roberts and David (2016) who demonstrated that phubbing in

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romantic relationships is significantly related to higher levels of depression. However, it is important to note that previous studies related to phubbing and depression (e.g., Elhai et al., 2017b; McDaniel & Coyne, 2016; Robert & David, 2016; Roberts & David, 2017) were examined in romantic relationships and the causal direction of the relationship was unclear. Unlike the prior studies, the present study extends existing research by examining whether depression can directly predict friend phubbing. In addition, the findings of the present study confirmed that depression was found to be the most predominant predictor of friend phubbing (see Figure 2).

Second, H_{1b} advanced that social anxiety is positively associated with friend phubbing. This hypothesis was supported by showing a significant positive association. That is, anxious individuals are more likely to use their smartphones in the presence of their friends. This is consistent with the problematic smartphone use (Billieux et al., 2015) and the previous studies (e.g., Demirci et al., 2015; Elhai et al., 2017b) that have demonstrated social anxiety as a significant predictor of problematic smartphone use. For instance, Demirci and colleagues (2015) found that anxious college students tend to spend more time using their smartphones resulting in higher levels of problematic smartphone use. In addition, Elhai and colleagues (2017b) showed the positive relationship between social anxiety and problematic smartphone use suggesting that smartphone activities are less likely to provoke anxiety than face-to-face interactions for anxious individuals.

Similar to the outcomes of the depression (H_{1a}), the result of social anxiety (H_{1b}) also contributes to support the argument that it is reasonable to apply the previous research which has demonstrated the relationship between social anxiety and problematic smartphone use to friend phubbing.

Third, H_{1c} suggested that agreeableness is negatively associated with friend phubbing. The hypothesis was supported by showing a significant negative correlation between agreeableness and friend phubbing. In other words, disagreeable individuals are more likely to show a higher propensity to phub in the presence of their friends. This finding is supported by the previous studies (e.g., Andreassen et al., 2013; Fritz, 2018) that have shown the negative relationship between agreeableness and a variety of problematic smartphone use including smartphone addiction and phubbing. For example, Andreassen and colleagues (2013) revealed that agreeableness is negatively related to smartphone addiction due to a motivation to maintain positive interpersonal relationships and to avoid negative consequences with others (e.g., interpersonal conflicts) caused by behavior addictions. The result was also supported by Fritz's (2018) findings which demonstrated that increased agreeableness is directly related to decreased phubbing behavior.

In line with these studies, the result about the influence of agreeableness on friend phubbing suggests that disagreeable individuals may not care what others feel and think in using their smartphones in the presence of others. Consequently, individuals who score low on agreeableness (disagreeable individuals) may feel free to use their smartphones whenever they want even in inappropriate places. On the other hand, individuals with higher traits of agreeableness (agreeable individuals) may hold a high emphasis on social harmony striving to maintain interpersonal relationships and to have a strong motive to avoid interpersonal conflicts caused by using their smartphones. Thereby, agreeable people may be less likely to engage with phubbing behavior in friendships. These results further contribute to advance existing theoretical model of problematic smartphone use (Billiexu et al., 2015) by adding a new variable (i.e., disagreeableness) that offers another valid factor on the framework.

Finally, H_{1d} suggested that neuroticism is positively associated with friend phubbing. However, the findings of this study showed the opposite result. The hypothesis was not supported, indicating a significant but not positive correlation between neuroticism and friend phubbing. Despite the significant association between neuroticism and friend phubbing, it was negatively related. In other words, neurotic individuals are less likely to use their smartphones in the presence of their friends. Contrary to previous studies that have demonstrated that neurotic individuals tend to show problematic smartphone use (Billieux et al., 2015; Tang, Chen, Yang, Chung, & Lee, 2016), the results may seem to be unexpected, but there is a possible explanation. The difference in results may be due to how neurotic individuals regard a smartphone as an appealing device (e.g., Devaraj, Easley, & Crant, 2008; Bianchi & Phillips, 2005). For instance, Devaraj and colleagues (2008) argued neurotic individuals have negative beliefs on technological devices because the device itself is threatening and stressful. Another study (Bianchi & Phillips, 2005) also revealed that those who are neurotic believe that mobile phones have irritating features (e.g., ring tones). As these studies argued, individuals with higher traits of neuroticism are possibly less engaged in friend phubbing. The result of H_{1d}, further, suggests another coping strategy for neurotic individuals in using smartphones. Future research is needed to examine the association between neuroticism and friend phubbing to explain why neurotic people are less engaged in phubbing behavior during their interactions with their friends.

Consequences of Friend Phubbing

A second important contribution is that the present study provides a model of the process by which friend phubbing impacts friendship satisfaction. H_2 suggested that friend phubbing is negatively associated with friendship satisfaction. As expected, this hypothesis was supported by

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showing a significant negative correlation between friend phubbing and friend satisfaction (see Figure 2). In other words, the level of friend phubbing is associated with the level of friendship satisfaction. This finding is in line with the politeness theory (Brown & Levinson, 1987) in that people feel free to behave in using their smartphones regardless of their public self-images when they are in comfortable surroundings and the social displacement hypothesis (Kraut et al., 1998) which states that time spent using smartphones displaces significant conversations with friends. In addition, the same results were obtained in previous studies (e.g., Bae, 2015; Przybylski & Weinstein, 2012). For example, Przybylski and Weinstein (2012) designed two different experiments (e.g., present condition and absence condition of a mobile phone) and demonstrated that the mere presence of a mobile phone has negative impacts on relational quality and perceived closeness. More recently, Bae (2015) found that problematic smartphone use has a detrimental impact on friendship satisfaction.

The finding of friend phubbing on friendship satisfaction suggests that smartphone-related behavior in the presence of friends may distract their casual or meaningful conversations, resulting in lower levels of friendship satisfaction. Although this study demonstrated that friend phubbing decreased friendship satisfaction, future research further needs to confirm this result reported here to offer some insight into how friend phubbing influences friendship satisfaction.

The Mediating Role of Friend Phubbing

Another contribution of this study concerns the mediating role of friend phubbing between each individual characteristics and friendship satisfaction. First, H_{3a} suggested that friend phubbing mediates the relationship between depression and friendship satisfaction. The hypothesis was supported by showing a significant mediator of friend phubbing between

depression and friendship satisfaction. The result of H_{3a} revealed that depression increases friend phubbing, which in turn is negatively related to friendship satisfaction. This result, along with the results from H_{1a} and H_2 discussed above, is consistent with those of previous studies. For example, Fincham, Beach, Harold, and Osborne (1997) found that individuals who have higher levels of depression tend to less satisfy their marital relationships although the causal direction of the association is unclear. Also, Cramer (2004) showed that there is a direct relationship between depression and relationship satisfaction in romantic relationships. Therefore, the result of H_{3a} suggests the impact of depression on friend phubbing.

H_{3b} suggested that phubbing mediates the relationship between social anxiety and friendship satisfaction. The hypothesis was supported by showing that social anxiety is indirectly associated with friendship satisfaction through friend phubbing. This result revealed an indirect effect only of friend phubbing. That is, social anxiety was positively related to friend phubbing and in turn, friend phubbing was negatively related to friend satisfaction while the direct effect from social anxiety and friendship satisfaction was not significant.

It is somewhat surprising that social anxiety did not play a significant role in decreasing friendship satisfaction. Nevertheless, this result of H_{3b} can be explained by the fact that the relationship between social anxiety and friendship satisfaction still remains to be elucidated (Rodebaugh, Lim, Shumaker, Levinson, & Thompson, 2015). Also, as La Greca and Lopez (1998) found, the association between social anxiety and friendship satisfaction can vary depending on gender and age. These studies suggest that inconsistent findings of the association make the current result difficult to interpret. Therefore, more research is needed to enhance our understanding of such relationship whether friend phubbing play a role in the association between social anxiety and friendship satisfaction.

As another mediation result, H3c suggested that friend phubbing mediates the relationship between agreeableness and friendship satisfaction. This hypothesis was supported by showing a significant mediator of friend phubbing between agreeableness and friendship satisfaction. The result revealed that agreeableness decreases friend phubbing, which in turn is positively related to friendship satisfaction. This result, along with the results from H1c and H2 discussed above, is in line with prior studies. For example, White, Hendrick, and Hendrick (2004) demonstrated that agreeableness is positively related to and predictive of relationship satisfaction. More recently, Malouff, Thorsteinsson, Schutte, Bhullar, and Rooke (2010) found that agreeable individuals are more likely to satisfy their marital relationships. Thus, the result of H3c suggests the impact of agreeableness on friend phubbing.

Finally, H3d suggested that friend phubbing mediates the relationship between neuroticism and friendship satisfaction. The hypothesis was supported by showing that neuroticism is indirectly associated with friendship satisfaction through friend phubbing. In other words, neuroticism was negatively related to friend phubbing and in turn, friend phubbing was negatively related to friend satisfaction while the direct effect from neuroticism and friend satisfaction was not significant. Theoretically, neuroticism is significantly (and negatively) associated with relationship satisfaction assuming that neurotic individuals report being less satisfied in their relationships (e.g., White et al., 2004). However, similar to social anxiety, the effect of neuroticism on relationship satisfaction has been unclear and inconsistent (e.g., Wilson, Harris, & Vazire, 2015).

The differences in results for the relationship between neuroticism and relationship satisfaction may be due to the duration of a relationship (e.g., how long such a relationship has been maintained). For example, Karney and Bradbury (1997) found that neuroticism is

significantly related to relationship satisfaction only at the beginning of a relationship and no effects are observed in time. It suggests that neuroticism may not play a significant role in predicting friendship satisfaction because the relationship is based on a long-standing relationship taking time to develop and maintain. Since this study asked participants to think about their existing friendships not initiating friendships, it is possible that neuroticism was not significantly associated with friendship satisfaction. Additionally, the differences in results may be explained that neurotic individuals only care about themselves whereas agreeable individuals emphasize the others which is closely related to perceived relationship satisfaction (Hirschmüller, Egloff, Schmukle, Nestler, & Back, 2015).

Considering phubbing occurs in the presence of the "others", it is possible that neurotic people who care only about the "self" was not significantly related to decreased friendship satisfaction. Moreover, friendships may be less influenced by high neuroticism in that these individuals tend to express their neuroticism to their romantic partners more often than to their friends (Slatcher & Vazire, 2009). Therefore, further studies are required to examine the association between neuroticism and friendship satisfaction to enhance our understanding of whether an individual's characteristics such as neuroticism can support a causal conclusion that neuroticism results in decreased friendship satisfaction.

Limitations and Future Research

To my knowledge, this study is the first report to examine the dynamics of phubbing behavior in friendships from a communication perspective. Yet, there are several limitations that should be acknowledged. First of all, this study was a cross-sectional survey which is limited to draw conclusions about causality. Although this study built on the theoretical frameworks and

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earlier studies, it is hard to generalize the current findings and the causal relationships because of its correlational nature. Therefore, future research should adopt a longitudinal design considering either a shorter or longer length of time to reflect all patterns of an individual's characteristics, friend phubbing, and friendship satisfaction because different findings may be found for data collected over different time intervals.

Second, a sample was limited to college students at one university. I believe that the data is appropriate for the smartphone-related study because college students are a major group of smartphone users. In addition, young adults are more likely to spend more time using their smartphones than older generations. However, phubbing can be seen in different age groups. In the future, therefore, it is necessary to collect data from a wide range of ages.

Third, the data were collected from only one country which does not represent all other cultural and social factors. The generalizability of the findings was limited. Therefore, future studies should target a more representative sample to generalize the findings of this study. In addition, these results did not consider demographic differences to the hypothesized model. The relationships of this study may be different (e.g., less significant) depending on the participants' age, gender, and background. Therefore, it is necessary to examine demographic differences in phubbing behavior in friendships. It would bring new insights into phubbing behavior.

Fourth, this study is based on the self-report data, which may not accurately reflect participants' phubbing behavior. Considering such behavior can occur unconsciously and people can unaware that such behavior will have negative impacts on themselves and others, self-reported information regarding phubbing behavior may be different from actual phubbing behavior as well as other variables in the present study. Thus, future studies could use an objective measure of the participants' phubbing behavior such as experimental studies in natural

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settings. It may help to reflect actual levels of phubbing behavior and overcome the disadvantages of self-reported data, thereby providing a more comprehensive picture of the nature of phubbing behavior.

In this study, 25% of the friend phubbing and 29% of the friendship satisfaction were explained by the proposed variables. In this regard, future studies should consider unexplained variables or possible different factors such as other psychological, personality traits and cultural variables. In addition, the interpretation of the findings was limited because there was a lack of research related to phubbing, and the proposed variables, especially independent variables, were not mutually exclusive.

Lastly, the present study confined its context to phubbers' perspective to understanding which individual characteristics lead to friend phubbing by examining the relationships between each individual difference and friend phubbing. Since such behavior also has a negative impact to co-present person who is a victim of phubbing behavior, it is worth considering both actor (phubber) and actor-partner (phubbee) effect of phubbing to gain further insights into phubbing behavior.

Despite these limitations, these findings of the present study may have some important implications in that it obtained a comprehensive picture of phubbing behavior in friendships.

Conclusion

This study identified that specific characteristics of an individual such as personality traits and psychological factors are significant predictors of friend phubbing. Specifically, people who have higher traits of depression or social anxiety were more likely to phub their friends

while individuals who have lower traits of agreeableness and neuroticism were more likely to use their smartphones in the presence of their friends.

The findings of this study also showed that friend phubbing has a detrimental impact on friendship satisfaction. More interestingly, the mediation analysis revealed that friend phubbing appears to mediate the proposed relationships between each possible predictor of friend phubbing and friendships satisfaction: (a) friend phubbing mediated the relationship between depression and friendship satisfaction; (b) friend phubbing mediated the relationship between social anxiety and friendship satisfaction; (c) friend phubbing mediated the relationship between agreeableness and friendship satisfaction; and (d) friend phubbing mediated the relationship between neuroticism and friendship satisfaction.

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APPENDIX A

THESIS MEASUREMENT QUESTIONNAIRE

PART 1. DEMOGRAPHICS

1. What is your gender?

> (1) Female

> (2) Male

> (3) Transgender

> (4) Other (please specify) _____

> (5) Prefer not to answer

2. What is your ethnic background? (ethnic origin)

> (1) White or Caucasian

> (2) Hispanic or Latino

> (3) Black or African American

> (4) Native American or American Indian

> (5) Asian

> (6) Biracial or Multiracial

> (7) Other (please specify) _____

3. How old are you? _____

4. I am …

> (1) an undergraduate student

> (2) a graduate student

> (3) not in school

5. Relationship Status

(1) Single

(2) In a relationship

(3) It's complicated

6. Do you have your own smartphone?

(1) No

(2) Yes

PART 2. DURATION AND PATTERNS OF SMARTPHONE USE

1. Duration of smartphone use in a typical day.

      (1) less than 10 minutes

      (2) 11-60 minutes

      (3) 1- 2 hours

      (4) 3 - 4 hours

      (5) more than 5 hours

2. What functions/applications on your smartphone do you use most frequently in a typical day?
      (Choose three options that you use most frequently)

      (1) Text messaging (e.g., iMessage, WhatsApp, Kakao Talk, etc.)

      (2) Social networking (e.g., Instagram, Facebook, Twitter, etc.)

      (3) Calling

      (4) Gaming

      (5) Searching (e.g., Google, Naver, etc.)

      (6) Camera (e.g., taking pictures/videos)

      (7) News/Weather

      (8) Listening to music (e.g., iTunes, Spotify, Melon, etc.)

      (9) Watching movies (e.g., Netflix)

      (10) Using map (e.g., Google map)

      (11) Others _____

PART 3. THE TERM PHUBBING

1. Do you know what the term *phubbing* means?

      (1) No

      (2) Yes

PART 4. PHUBBING BEHAVIOR – Revised Generic Scale of Phubbing (GSP)

Please read each item carefully and indicate how often each of the statements below is descriptive of you.

Please think about their current friendships: meet up together or contact them within two weeks

1 = Never
2 = Rarely
3 = Occasionally
4 = Sometimes
5 = Frequently
6 = Usually
7 = Always

_____ 1. I feel anxious if my phone is not nearby.

_____ 2. I cannot stand leaving my phone alone.

_____ 3. I place my phone where I can see it.

_____ 4. I worry that I will miss something important if I do not check my phone.

_____ 5. I have conflicts with my friend(s) because I am using my phone.

_____ 6. My friend(s) tells me that I interact with my phone too much.

_____ 7. I get irritated if my friend(s) asks me to get off my phone and talk to them.

_____ 8. I use my phone even though I know it irritates my friend(s).

_____ 9. I would rather pay attention to my phone than talk to my friend(s).

_____ 10. I feel content when I am paying attention to my phone instead of my friend(s).

_____ 11. I feel good when I stop focusing on my friend(s) and pay attention to my phone instead.

_____ 12. I get rid of stress by ignoring my friend(s) and paying attention to my phone instead.

_____ 13. I pay attention to my phone for longer than I intend to do so.

_____ 14. I know that I must miss opportunities to talk to my friend(s) because I am using my phone.

_____ 15. I find myself thinking "just a few more minutes" when I am using my phone

PART 5. DEPRESSION – Center for Epidemiologic Studies Depression Scale (CES-D)

Below is a list of the ways you might have felt or behaved. Please indicate how often you have felt this way during the <u>past week</u>.

1 = Rarely or none of the time (less than 1 day)
2 = Some or a little of the time (1-2 days)
3 = Occasionally or a moderate amount of the time (3-4 days)
4 = Most or all of the time (5-7 days)

_____ 1. I was bothered by thing that usually don't bother me.

_____ 2. I did not feel like eating; my appetite was poor.

_____ 3. I felt that I could not shake off the blues even with help from my family or friends.

_____ 4. I felt that I was just as good as other people. (R)

_____ 5. I had trouble keeping my mind on what I was doing.

_____ 6. I felt depressed.

_____ 7. I felt that everything I did was an effort.

_____ 8. I felt hopeful about the future. (R)

_____ 9. I thought my life had been a failure.

_____ 10. I felt fearful.

_____ 11. My sleep was restless.

_____ 12. I was happy. (R)

_____ 13. I talked less than usual

_____ 14. I felt lonely.

_____ 15. People were unfriendly

_____ 16. I enjoyed life. (R)

_____ 17. I had crying spells.

_____ 18. I felt sad.

_____ 19. I felt that people disliked me.

_____ 20. I could not get "going."

PART 6. SOCIAL ANXIETY - The Interaction Anxiousness Scale (IAS)

Please read each item carefully and indicate how often each of the statements below is descriptive of you.

1 = <u>Not at all</u> characteristic of me
2 = <u>Slightly</u> characteristic of me
3 = <u>Moderately</u> characteristic of me
4 = <u>Very</u> characteristic of me
5 = <u>Extremely</u> characteristic of me

_____ 1. I often feel nervous even in casual get-togethers.

_____ 2. I usually feel comfortable when I'm in a group of people I don't know.

_____ 3. I am usually at ease when speaking to a member of the other sex. (R)

_____ 4. I get nervous when I must talk to a teacher or a boss.

_____ 5. Parties often make me feel anxious and uncomfortable.

_____ 6. I am probably less shy in social interactions than most people. (R)

_____ 7. I sometimes feel tense when talking to people of my own sex if I don't know them very well.

_____ 8. I would be nervous if I was being interviewed for a job.

_____ 9. I wish I had more confidence in social situations.

_____ 10. I seldom feel anxious in social situations. (R)

_____ 11. In general, I am a shy person.

_____ 12. I often feel nervous when talking to an attractive member of the opposite sex.

_____ 13. I often feel nervous when calling someone I don't know very well on the phone.

_____ 14. I get nervous when I speak to someone in a position of authority.

_____ 15. I usually feel relaxed around other people, even people who are quite different from me. (R)

PART 7. AGREEABLENESS – SUBSCALE OF THE BIG FIVE TRAIT TAXONOMY

Here are a number of characteristics that may or may not apply to you. Please read each item carefully and indicate how often each of the statements below is descriptive of you.

1 = Strongly disagree
2 = Somewhat disagree
3 = Neither agree nor disagree
4 = Somewhat agree
5 = Strongly agree

I see Myself as Someone Who…

_____ 1. Tends to find fault with others. (R)

_____ 2. Is helpful and unselfish with others.

_____ 3. Starts quarrels with others. (R)

_____ 4. Has a forgiving nature.

_____ 5. Is generally trusting.

_____ 6. Can be cold and aloof. (R)

_____ 7. Is considerate and kind to almost everyone.

_____ 8. Is sometimes rude to others. (R)

_____ 9. Likes to cooperate with others.

PART 8. NEUROTICISM – SUBSCALE OF THE BIG FIVE TRAIT TAXONOMY

Here are a number of characteristics that may or may not apply to you. Please read each item carefully and indicate how often each of the statements below is descriptive of you.

1 = Strongly disagree
2 = Somewhat disagree
3 = Neither agree nor disagree
4 = Somewhat agree
5 = Strongly agree

I see Myself as Someone Who…

_____ 1. Is depressed, blue.

_____ 2. Is relaxed, handles stress well. (R)

_____ 3. Can be tense.

_____ 4. Worries a lot.

_____ 5. Is emotionally stable, not easily upset. (R)

_____ 6. Can be moody.

_____ 7. Remains calm in tense situations. (R)

_____ 8. Gets nervous easily.

PART 9. RELATIONSHIP SATISFACTION – Revised Relationship Assessment Scale (RAS)

Please read each item carefully and decide to what extent it is characteristic of your feelings and behavior.

Please think about their current friendships: meet up together or contact them within two weeks

1 = Poorly/Unsatisfied
2 = Not that well/Not very satisfied
3 = About average
4 = Well/Satisfied
5 = Extremely well/Extremely satisfied

_____ 1. How well does your friend(s) meet your needs?

_____ 2. In general, how satisfied are you with your friendships?

_____ 3. How good are your friendships compared to most?

_____ 4. How often do you wish you hadn't gotten into the friendships? (R)

_____ 5. To what extent have your friendships met your original expectations?

_____ 6. How much do you love/like your friend(s)?

_____7. How many problems are there in your friendships? (R)

PART 10. RESEARCH POOL & EXTRA CREDIT PARTICIPANTS

Please provide the following information in order to get CREDIT for participation (only for UGA students)

Your Name (First and Last name) _____

The course for which you want course research credit by completing this survey:
Course Number (e.g., COMM 1500) _____

Name of Professor or Instructor (First and Last name) _____