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Excessive use of mobile social networking sites: Negative consequences on individuals

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ABSTRACT

While pervasive technologies, such as mobile social networking sites (SNS), can contribute to increased enjoyment and convenience, their pervasive nature can also result in excessive use and consequently may arise several negative outcomes. We applied cognitive behavioral model and social cognitive theory to explain the negative consequences related to family, personal and professional life of excessive use of mobile SNS. The research model was empirically tested with 490 mobile SNS users. Our findings significantly contribute to the domain of "dark side of information technology" by theoretically and empirically investigating the negative outcomes of excessive use, and further examining their inter-relationships.

1. Introduction

Mobile phone technology, as one important example of pervasive information technology (IT), is being used almost anytime and anywhere without any physical locational constraints. With the fast and easy accessibility to applications on mobile technology, social networking sites (SNS) suppliers have introduced mobile applications. The most popular SNS, Facebook, currently has 1.44 billion monthly active users and 874 million mobile users[1] (Sep 2015). More than half of Facebook users access their accounts through their mobile devices[2] (Salehan & Negahban, 2013), which enable them to check their news feed and upload new information while working, vacationing, or dining with friends and families. Especially, the features of mobile SNSs allure some users to regularly check up their SNS accounts, resulting in excessive use of SNSs, and eventually experiencing negative consequences.

Although mobile SNSs increase the enjoyment and convenience of users by allowing them to access their SNSs flexibly, the dark side of these technologies should draw the attention in the IS academia. In the research domain, technology adoption has been prevalent for many years, however, studies on the dark side of information technology use have not appeared in the literature until recently (Tarafdar, Gupta, & Turel, 2015). A review of prior literature on technology addiction reveals that scholars have adopted various terms and definitions which are often inconsistent to address problematic IT use (PIU) or technology addiction, varying from study to study, depending on the focus of the study in question (Turel, Serenko, & Giles, 2011). Many studies tend to focus on exploring the nature, dimensions, and measurement of technology addiction (Turel & Serenko, 2012; Turel, Serenko, & Bontis, 2011). The cognitive and behavioral interconnects of this phenomenon has been relatively neglected in the prior literature, especially in the perspective of negative consequences and in the context of mobile devices. The increasingly important role of mobile devices in the lives of users motivates this research to enrich the existing literature on the problematic use of mobile SNSs.

The negative consequences of excessive SNS use on mobile devices are largely underexplored. Previous studies have analyzed the problematic use of mobile devices from psychiatric, psychological, and social-psychological perspectives. Some studies have focused on the demographics and personality traits of mobile phone users

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[1] http://www.statisticbrain.com/facebook-statistics/.
[2] http://www.socialbakers.com/blog/554-facebook-hits-488-million-mobile-users-infographic.

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0747-5632/

(Bianchi & Phillips, 2005; Ha, Chin, Park, Ryu, & Yu, 2008; Reid & Reid, 2007), the diagnosis and treatment of technology addiction (Beranuy, Oberst, Carbonell, & Chamarro, 2009), and have addressed the dimensions and measurement instruments of problematic use of mobile devices (Kardefelt-Winther, 2014). However, theory-guided empirical studies on exploring the negative outcomes of excessive mobile SNSs uses are relatively rare (Haagsma, Caplan, Peters, & Pieterse, 2013). Although some research used cognitive-behavioral model to examine problematic IT use (Caplan, 2010; Haagsma et al., 2013), these studies only focus on one general negative outcome without deeper exploration. Their measurement of negative outcomes adopted 3 items with a general description. As users can access the Internet anytime and anywhere through their mobile devices, the widespread use of SNSs on these devices may exacerbate the social, work and personal conflicts that are associated with PIU. Furthermore, these conflicts may ultimately increase the stress caused by the mobile technology. More specifically, it could be called as technostress, which is generally defined as the experience of stress when using technologies (Ayyagari, Grover, & Purvis, 2011; Ragu-Nathan, Tarafdar, Ragu-Nathan, & Tu, 2008).

In the light of this, we focus on excessive use of mobile SNSs and its negative consequences, asking the following research questions:

(1) What are the negative consequences of excessive use of mobile SNSs for users?
(2) How does the excessive use of mobile SNSs lead to technostress?

Particularly, we attempt to disentangle the complex consequences previously embedded in a general negative outcome into three inter-relating conflict dimensions to better capture the negative influences, while at the same time integrating the construct of technostress as a consequence in the model for a better conceptualization of the negative outcomes involved.

Drawing from social cognitive theory within a cognitive behavioral framework, we develop and empirically test a theoretical model exploring the negative consequences of excessive SNSs use ultimately leading to technostress on the individuals. This technotress is mediated by three interrelating conflict dimensions (viz, personal, family, work). While we have chosen mobile SNSs as the research context of this study, we did not focus on any specific SNS applications. As most of the popular mobile SNSs have similar functions, the context of this study refers to general and popular SNSs on mobiles. This will enable a good level of generalizability of this study.

2. Theoretical foundation

According to (Caplan, 2010), cognitive-behavioral theory (Davis, 2001) suggests that both cognitive and behavioral processes are involved in the production of negative outcomes associated with Internet usage. The theory proposes that PIU manifests both cognitive and behavioral symptoms (Haagsma et al., 2013). These factors can ultimately result in several negative outcomes in personal, professional, and social life as caused by IT use.

2.1. Distal contributory causes and proximal sufficient causes

In terms of etiology, distal cause refers to those factors that are somewhat removed from the symptoms yet significant to the symptom development. Contributory cause refers to those factors that contribute to the development of symptoms yet are not enough to cause the symptoms themselves. In the cognitive behavioral model, distal contributory cause refers to basic psychopathology, the exposure of new technology and the experience of Internet, and conditioned response or situational cues. All these factors reinforce the development of PIU symptoms and contribute to the maintenance of the associated symptoms.

In the etiological chain that results in a set of symptoms, some causes lie toward the end of the chain (proximal), whereas others lie near the beginning of the chain, which is distant from the symptoms (known as distal cause) (Abramson, Metalsky, & Alloy, 1989). Sufficient cause refers to the factor whose presence or occurrence guarantees the occurrence of the symptoms. Thus, proximal sufficient causes are dominant to the development of PIU symptoms. The most central factor in cognitive behavioral model is maladaptive cognition, which is a proximal sufficient cause that is sufficient to cause the symptoms.

2.2. Framework of PIU

In the cognitive behavioral model, both cognitive and behavioral symptoms are combined to explain the nature of development of PIU. The model proposed by Davis (2001) is focused on a vicious cycle of cognitive distortions. According to the cognitive behavioral model, IT experience acts a distal contributory factor in the development of PIU, and cognitive symptom (maladaptive cogitation) acts as a proximal sufficient factor (as shown in Fig. 1).

In the current study, we use excessive use, a necessary but not sufficient condition to experience negative outcomes, as one major reason that causes maladaptive cognitions (cognitive preoccupation). We based this assumption on the social cognitive theory. In particular, we do not explain the addictive level of the problematic use of technology, as we only focus on how excessive use is related to negative consequences. This study simplifies the cognitive behavioral model to examine the process of how the use of a sequential process involving excessive use, cognitive preoccupation, conflicts and technostrain develops addiction, noting that the definition of addiction is rather vague and has not reached a broad consensus in the extant literature and the relationship between the symptoms of addiction is yet unclear. In other words, this study presents a snapshot of the development of PIU. This study chose the phase that either pre-addicted or addicted individuals would experience. Fig. 2 shows the process.

3. Hypotheses development

Rooted in prior literature, the theoretical research model is proposed and the fundamental relationships among the key constructs are identified. Particularly, the behavioral and cognitive processes of problematic use with mobile SNSs are examined. The

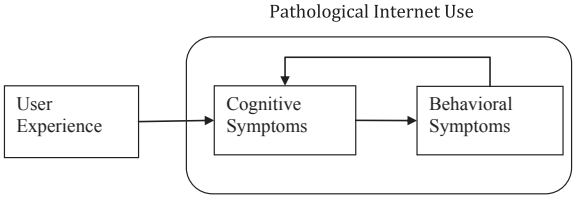

Fig. 1. The cognitive behavioral model for PIU.

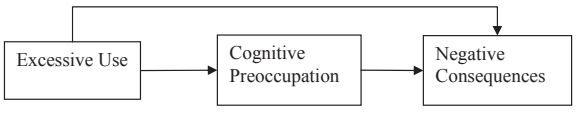

Fig. 2. Sequential process.