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### Full length article

## Avoidance or boredom: Negative mental health outcomes associated with use of Information and Communication Technologies depend on users' motivations

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#### A R T I C L E I N F O

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#### ABSTRACT

Previous research shows that high Information and Communication Technology (ICT) use is associated with higher levels of anxiety, depression, and overall psychological distress; however, there are few relevant studies on this topic. The current study was conducted to explore the relationship between Internet and mobile phone use and mental health. In Study 1, participants were given questionnaires to assess their manner of mobile phone and Internet use and their levels of depression and anxiety. There were strong positive relationships between lower mental health and problematic ICT use, especially when people turned to ICTs to avoid negative experiences or feelings. However, when participants used ICTs merely to escape boredom, no link was found between ICT use and mental health problems. Study 2 was completed to observe how students utilize their mobile phones to cope or escape from feelings related to an anxiety-inducing situation. Results indicated that the mobile phone may offer a small "security blanket" effect, lowering the initial negative reaction to stress, although the pattern of stress over the course of the experiment was the same for participants in all groups. Our findings suggest that long term utilization of ICTs as an emotional coping strategy may have a negative influence on mental health and/or exacerbate mental health predispositions.

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#### 1. Introduction

In today's technology-saturated world, it is typical to see people with their devices in hand everywhere they go: at bus stops, on the street, in classrooms and movie theaters, on dates, at parties, during family gatherings, etc. And more often than not, people are not speaking into their mobile phones, but are rather focused down at them – texting, browsing the Internet, or playing games. Literally millions of applications or "apps" – interactive programs with various functions that can be downloaded onto phones – have been created to keep individuals occupied in any situation, and often lure people into spending hours of their day focused on screens as small as their palms: typing, reading, or playing. Considering how prevalent these devices are and how much of our attention we funnel into their screens, it is important to have a comprehensive understanding of how they affect people socially and psychologically, and

to discuss the influences they might have on us in the long run.

1.1. Mobile phones and psychological distress

#### 1.1.1. Anxiety

Research shows that high engagement with the mobile phone and the Internet is correlated with higher levels of anxiety, especially when that engagement is text-based instead of call-based. According to a study by Park and colleagues (Park, Hwang, & Huh, 2010) in Korea, individuals who were addicted to their mobile phones had higher rates of social anxiety. Upon exploring the reasons the adolescents engaged in texting, researchers found that participants felt more comfortable texting than having real life interactions (Park et al., 2010). A study done by Reid and Reid (2007) in the United Kingdom affirmed this relationship between anxiety and texting. They found that whereas lonely individuals preferred voice calls over texting, anxious participants preferred texting over voice calls. This may be, as Park and colleagues' study (2010) suggested, because the one-dimensional nature of texting is less cognitively and emotionally tolling than the more engaged behavior of voice-calling, thereby appearing more attractive to





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anxious individuals. Another study by Tamyra Pierce (2009) in California showed that there is a positive relationship between social anxiety and talking with others online and via text messaging.

Although it may be argued that the anxiety measured in these studies is the reason for the high mobile phone/Internet use in the first place and not a consequence thereof, high engagement with ICTs may exacerbate predispositions to anxiety, leading to the deepening of a kind of downward spiral. This may be because text-based communication such as the kind facilitated by mobile phones is a tolling process in itself often characterized by ambiguity and the misunderstandings and anxiety that accompany efforts to decipher it (Murdock, 2013; Thomée, Dellve, Härenstam, & Hagberg, 2010). Also, the substitution of face-to-face interaction for mediated communication means sacrificing opportunities for multi-layered social interactions, the practice of which could lead to improved socializing abilities, higher confidence, feelings of competence, and eventually decreased anxiety in social situations.

#### 1.1.2. Depression

Another potential consequence of excessive mobile phone use is depression. Sanchez-Martinez and Otero (2009) found that intensive mobile phone use among Spanish adolescents was associated with depression, along with other behaviors such as smoking tobacco and excessive alcohol consumption (Sanchez-Martinez & Otero, 2009). Another study conducted by Thomée and colleagues in Sweden (Thomée, Harenstam, & Hagberg, 2011) controlled for other potential contributors to unhealthy psychological functioning such as relationship status, education level, and present occupation and still found that mobile phone use showed a significant relationship with depression, sleep disturbances, and current stress. In a Spanish study on the subject, Beranuy and colleagues (Beranuy, Oberst, Carbonell, & Chamarro, 2009) found a correlation between maladaptive Internet use and mental distress, and between maladaptive mobile phone use and mental distress.

Once again, it is possible that the relationship is reverse and that individuals with depression use mobile phones more intensively to tap into their social networks for help with coping, but research shows that stress combined with high texting leads to lower emotional wellbeing (Murdock, 2013) and that the frequency of mobile phone use has almost no association with perceived access to social support for men and no association for women (Thomée et al., 2011).

#### 1.1.3. Escapism

Another trend observed in research is people reporting that they use mobile phones as a means of escape. Reid and Reid's study in the United Kingdom (2007) reported that anxious participants used texting as a diversion when they were bored or when they wanted to avoid some other activity. In a recent study with Indian university students (Nehra, Kate, Grover, Khenra, & Basu, 2012) 43% of participants agreed the mobile phone provides an escape from problems, and 70% agreed that the mobile phone helped them overcome bad moods such as feelings of inferiority, helplessness, guilt, anxiety, depression, etc. (Nehra et al., 2012). Another study on the gratifications sought by people who text showed that the second most common reason for texting (out of five) was for Relaxation/Escape (Grellhesl & Punyanunt-Carter, 2012). These findings about the utilization of phones for escape can also be supported by observation. In a variety of cultures and settings around the world, it is commonplace to observe people in uncomfortable or "awkward" situations turn to their mobile phones as a way to disengage or distract themselves from what is going on in real time around them, a behavioral pattern which can also be replicated during times of more intense distress.

This behavior falls into the category of *avoidance coping* which research has shown is a generally unhealthy way to handle problems, especially over the course of time. Individuals who engage in avoidance coping experience more stress and symptoms of depression later on in their lives (Holahan, Moos, Holahan, Brennan, & Schutte, 2005; Seiffge-Krenke & Klessinger, 2000), are more likely to experience burnout in stressful work contexts (Leiter, 1991), and tend to have lower self-esteem than those who do not engage in avoidance coping (Chapman & Mullis, 1999; Mitchell & Hodson, 1983).

#### 1.1.4. The current study

With the aforementioned research and findings as a foundation, the current studies will further expand the literature on this subject by exploring the relationship between maladaptive mobile phone and Internet use – use that is not purely functional but rather involves prioritizing the ICTs over other activities or in vivo social interactions, being emotionally attached to ICTs, and seeking comfort in them - with psychological problems such as anxiety and depression in a sample of US college students. Because research has suggested that ICT devices could also be utilized for escape from negative emotional experiences or situations (Demirci, Akgonul, & Akpinar, 2015; Grellhesl & Punyanunt-Carter, 2012; Nehra et al., 2012) and it has been shown that avoidance coping is associated with decreased mental health (Chapman & Mullis, 1999; Holahan et al., 2005; Leiter, 1991; Mitchell & Hodson, 1983; Seiffge-Krenke & Klessinger, 2000), the current studies tested the hypothesis that using the mobile phone and/or Internet as a tool for this form of emotional escapism is associated with higher depression and anxiety.

Importantly, the questionnaires chosen for the purposes of measuring maladaptive Internet and mobile phone use (the CERM, CERI, and IAT discussed in the following section) allowed us to disentangle two possible forms of escapism: escapism from normal boredom (the kind arising during periods of time that lack stimulating activities) and escapism from negative emotional situations (i.e., a specific form of avoidance coping). We predicted that the latter, but not the former, form of escapism would be related to mental health issues as avoidance coping has shown to have negative psychological consequences, whereas the former manner of use falls in the category of distraction from a lack of stimulation or a desire for entertainment, which have not been associated with psychopathology.

Two related studies were conducted. The first study utilized questionnaires on the manner of mobile phone use (CERM) and Internet use (CERI and IAT) as well as the degree of anxiety (MASQ-A) and depression (MASQ – D) in order to observe if there were any relationships between these measures in our sample of college students, and with a focus on items pertaining to escapism in particular. The second study was a follow-up to the first, expanding on the correlational results by using an experimental design to observe in a real setting how college students rely on their mobile phones during an experience of heightened anxiety.

#### 2. Study 1 – Questionnaire study

#### 2.1. Methods

#### 2.1.1. Participants

The participants for the study were initially 375 undergraduate University of Illinois at Urbana-Champaign students enrolled in Psychology courses. 57 were dropped from the analysis due to incomplete questionnaire responses. The remaining 318 participants were 157 males and 161 females. All participants signed up for the study voluntarily via the Subject Pool website (SONA). They Download English Version:

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