



# I need my smartphone: A hierarchical model of personality and cell-phone addiction



James A. Roberts<sup>a,\*</sup>, Chris Pullig<sup>a,1</sup>, Chris Manolis<sup>b,2</sup>

<sup>a</sup> Baylor University, Hankamer School of Business, Marketing Department, Waco, TX 76798-8007, United States

<sup>b</sup> Xavier University, Williams College of Business, Department of Marketing, 1002 Francis Xavier Way, Cincinnati, OH 45207-1214, United States

## ARTICLE INFO

### Article history:

Received 30 May 2014

Received in revised form 23 January 2015

Accepted 27 January 2015

Available online 12 February 2015

### Keywords:

Personality

Impulsiveness

Cell phone addiction

Technology

## ABSTRACT

Using a comprehensive personality model, this study is the first to examine the relationship between a full range of personality traits and cell phone addiction. 346 college students completed an online survey that asked respondents to complete measures of the Big-Five personality traits and measures of materialism and need for arousal, Barratt's (1959) impulsiveness scale, and a four-item measure of cell phone addiction. Data were analyzed using structural equation modeling. Couched in Mowen's (2000) 3M Hierarchical Model of Personality, the elemental traits of emotional instability and materialism were positively associated while introversion was negatively associated with cell phone addiction. The central trait of attention impulsiveness exhibited a direct and positive association with cell phone addiction. A significant negative relationship between conscientiousness and all three dimensions of Barratt's impulsiveness scale (central trait) was found. Several additional relationships between the elemental traits of Mowen's personality hierarchy and the three dimensions of impulsiveness (central trait) also were uncovered. Study implications and future research directions are discussed.

© 2015 Elsevier Ltd. All rights reserved.

## 1. Introduction

Media use has become so much a part of young adults' lives that many do not realize their level of dependence and/or addiction to their cell phones (Roberts, YaYa, & Manolis, 2014). A survey of over 1649 college students found that they spend 97 min a day texting, 118 min searching the Internet, 41 min on Facebook, 49 min e-mailing, and 51 min talking on their cell phone (Junco & Cotten, 2012).

This heavy investment of time interacting with a cell phone may be related to college students' academic performance. Junco and Cotten (2012) found that using technology while studying was inversely associated with GPA. Lepp, Barkley, and Karpinski (2014) also found a negative relationship between college students' cell phone use and GPA. Excessive cell phone use can also negatively affect job performance and one's relationships with family, friends, classmates, and instructors (Takao, Takahashi, & Kitamura, 2009). Roberts et al. (2014) concluded that cell phone addiction undermines scholastic achievement as students use their

cell phones to 'remove' themselves from classroom activities, cheat, and disrupt their studies.

### 1.1. Study goals

With the growing amount of time people spend with technology, especially the cell phone, the paucity of research in the area of cell phone addiction is somewhat surprising. Few studies to date have investigated a full range of personality traits and their association with cell phone addiction. Given the proposed similarities across substance and behavioral addictions such as loss of control over one's behavior and the conflict created by such behavior (Griffiths, 1995, 2012), it is likely that certain personality traits may be more strongly associated with cell phone addiction (c.f., Bianchi & Phillips, 2005; Butt & Phillips, 2008; Ehrenberg, Jukes, White, & Walsh, 2008). Since no single set of personality characteristics explains all addictions, research which focuses on specific behavioral addictions is necessary. In this research, Mowen's 3M Hierarchical Model of Personality (Mowen, 2000) was used to better understand the role of personality in cell phone use and/or addiction.

### 1.2. A hierarchical personality model of cell phone addiction

Mowen's model utilized a hierarchical approach to personality to provide a cogent and defensible model of how personality traits

\* Corresponding author. Tel.: +1 254 710 4952; fax: +1 254 710 1068.

E-mail addresses: [jim\\_roberts@baylor.edu](mailto:jim_roberts@baylor.edu) (J.A. Roberts), [chris\\_pullig@baylor.edu](mailto:chris_pullig@baylor.edu) (C. Pullig), [manolis@xavier.edu](mailto:manolis@xavier.edu) (C. Manolis).

<sup>1</sup> Tel.: +1 254 710 4769; fax: +1 254 710 1068.

<sup>2</sup> Tel.: +1 513 745 2046.

influence behavior. The 3M's hierarchical approach is based upon the earlier work of Allport (1961), Buss (1989), Lastovicka (1982) and others who argue that personality traits exist within a hierarchy varying in their degree of concreteness. At the most concrete level of the hierarchy lie Surface traits – behavioral tendencies that investigators wish to explain or predict. The next level of personality traits is labeled Central traits. In the present study, the personality factor of impulsiveness is considered a Central trait. A Central trait may fully or partially mediate the effects of the more abstract Elemental traits (e.g., Five-Factor Model), or may have no impact on how these Elemental traits influence Surface traits (behavior). Mowen used the Five-Factor Model of personality as the starting point for his hierarchical model adding material and physical needs and need for arousal to accommodate his vision of the most basic (Elemental) personality traits of his hierarchy.

Specifically, this research investigated the relationship between Mowen's Elemental traits (personality characteristics) and cell phone addiction. Modeled as a Central trait in Mowen's hierarchy, impulsiveness was also investigated with respect to cell phone addiction as this trait has been shown to potentially play an important role in both substance and behavioral addictions (Roberts & Pirog, 2012). Placing impulsiveness as a central personality trait in Mowen's hierarchy of personality will shed light on how (and if) the basic building blocks of personality (elemental traits) are associated with a technology related addiction. This proposed relationship may be direct or channeled through impulsiveness.

### 1.3. Cell phone addiction and personality traits

We propose that seven of Mowen's (2000) elemental (i.e., personality) traits influence cell phone addiction: agreeability, extraversion, need for arousal, emotional instability, neuroticism, materialism, and conscientiousness. Next, we review the rationale supporting the association between these personality characteristics and cell phone addiction.

#### 1.3.1. Agreeability

Agreeability can best be understood as a person's need to be considerate of others and their well-being. Agreeable individuals are concerned with interpersonal relationships based on honesty and equality (Phillips, Butt, & Blasczynski, 2006). Research by Phillips et al. (2006) found that agreeability is associated with the use of cell phones to play games. In a sample of 112 adults, those low on agreeableness were found to be more likely to play games on their mobile phones compared with those high on agreeableness. Costa and McCrae (1992) described those low on agreeability as self-centered and selfish. The authors added that individuals who are low on agreeableness are also more anti-social and predisposed to misuse their cell phones compared with those high on agreeableness.

A survey of 200 college students found that students who are low, versus high on agreeableness, spent more time using instant messaging (IM) and were more likely to report stronger IM addictive tendencies (Ehrenberg et al., 2008). Research by Butt and Phillips (2008) largely supported this finding: with those low on agreeability more likely to use text messaging compared with more agreeable respondents. More recently, Andreassen et al. (2013) found agreeableness to be negatively associated with cell phone addiction in college students.

#### 1.3.2. Extraversion

Extraversion is related to an individual's propensity to be outgoing in social situations. Extraverts are often self-centered and are open to sharing and leading conversations in social situations. Extraverts are generally impulsive, enjoy excitement, and crave social interaction. As noted by Bianchi and Phillips (2005), the trait

of extraversion is linked to addictive behavior. An extravert, the authors asserted, tends to be under-aroused and likely to seek-out stimulation. Results of their survey of 195 members of several college campuses and the general public suggested that those high in extraversion are more likely to overuse their cell phones.

Several other studies also found support for the extraversion-problematic cell phone use link. Andreassen et al. (2013) found, in a sample of 218 university students, that more extraverted students were more likely to be addicted to their cell phones than their less extraverted counterparts. Love and Kewley (2003) found that cell phone user attitudes toward the use of cell phones in public places are partially driven by levels of extraversion. Extraverts were more likely to carry their cell phone with them at all times and to be less bothered by others when using their cell phone in public places. A survey of 196 Austrian college students found that extraverts are more likely to report problematic mobile phone use compared with students low on the extraversion trait.

#### 1.3.3. Need for arousal

Those high in need for arousal are chronically seeking to increase their stimulation and excitement levels. Past research suggests that Zuckerman's (1979) sensation seeking construct, which is very similar to need for arousal, is linked to a variety of behaviors resembling addictive tendencies such as illicit drug use. An important dimension of Zuckerman's sensation seeking construct is susceptibility to boredom. Much of cell phone use can be seen as an attempt to stave off boredom. Research by Leung (2008), found that, in a large sample of teens and young adults, cell phone addiction was positively associated with both sensation seeking and leisure boredom.

#### 1.3.4. Emotional instability

Emotional instability entails moody and temperamental behavior. Neurotic behavior also is characterized by moodiness, anxiety, and worrying. Neurotics are highly emotional and exhibit strong emotional responses to a variety of stimuli. Bianchi and Phillips (2005) noted that neuroticism is linked to a number of excessive behaviors and drug addiction. The neurotic or emotionally unstable person may use their cell phone as a means of coping with stress and anxiety. A number of research studies have found that stress/anxiety are related to problematic cell phone use (Beranuy, Oberst, Carbonell, & Chamarro, 2009; Ha, Chin, Park, Ryu, & Yu, 2008; Jenaro, Flores, Gomez-Vela, Gonzalez-Gil, & Caballo, 2007; *Psychiatric Dispatches*, 2008; Reid & Reid, 2007). A survey of 196 college students found that chronic stress and low emotional stability are significantly associated with problematic mobile phone use (Augner & Hacker, 2012).

#### 1.3.5. Materialism

Materialism is best understood as the value an individual places on worldly possessions and the importance those possessions play in his daily life (Belk, 1985), or, as described by Mowen (2000), as a need to collect and possess material objects. Given the central role cell phones play in the social lives of college students and young adults, it is expected that cell phones are important status symbols for young adults (Roberts & Pirog, 2012). Highly materialistic consumers place a greater value on products consumed in public. The ubiquitous nature of cell phones makes them an important tool in creating a social identity for young adults.

Clearly, iPhones have a certain panache and have sparked loyal brand communities (Wu & Sukoco, 2010). Apple technology users are portrayed in advertising as laid-back hipsters versus the more conservative and up-tight PC users. It is evident that the use and display of one's cell phone extends well beyond its utilitarian value. Of particular interest to the present study is a recent survey conducted by Roberts and Pirog (2012). Conducting an online

Download English Version:

<https://daneshyari.com/en/article/890244>

Download Persian Version:

<https://daneshyari.com/article/890244>

[Daneshyari.com](https://daneshyari.com)