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The relationship of problematic internet use with dissociation among South Korean internet users

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ABSTRACT

This study examined patterns of problematic internet use (PIU) among South Korean internet users to investigate the association between PIU and dissociative experiences. Five hundred and eight participants between 20 and 49 years old were recruited through an online panel survey. Using logistic regression analysis with PIU as the dependent variable, we observed that the participants with PIU were more likely to have alcohol-related behaviors or problems, higher levels of perceived stress, and dissociative experiences. Participants' scores on the Korean version of the Dissociative Experiences Scale were positively correlated with the severity of PIU. Individuals with PIU and dissociation had more severe PIU and more severe mental-health problems than those with PIU but without dissociation. These findings suggest that treatment programs for persons with PIU should focus on helping them tolerate negative affect and increase their level of awareness to prevent the occurrence of dissociative experiences.

1. Introduction

The past decades have seen exponential growth in the use of the internet. According to a Korean government survey, 82.3% of Korean families own computers and 82.1% of computer-owning families use the internet (Lim et al., 2013). In line with the skyrocketing use of the internet, excessive or problematic use of the internet has been a topic of discussion in the academic literature. It is thought that problematic internet use (PIU) involves the inability to control one's own use of the internet, leading to negative consequences (e.g., failing in school, decreased productivity), marked distress, and/or functional impairment (Shapira et al., 2003).

There is ongoing debate about how to classify PIU. In 1996, Kimberly Young presented the first case report with Internet addiction by modeling on the DSM-IV definition for substance dependence (Young, 1996). In 1998, Young revised her proposal of diagnostic sets for Internet addiction based on the DSM-IV criteria for pathological gambling. Young proposed Internet addiction as a broad term covering a wide range of behaviors and impulse control problems, such as cybersexual addiction, cyberrelationship addiction, Internet associated compulsions, and computer addiction (Young, 1998). The recently released DSM-5 includes tentative criteria for PIU, but has limited them to problematic internet gaming, under the diagnostic category of internet gaming disorder (American Psychiatric Association, 2013b).

Shapira et al., (2003) insisted that the diagnosis of Internet addiction was not appropriate due to the lack of empirical evidence supporting its construct validity as an “addiction”. These investigators insisted that Young's proposal was too narrow to detect the population of problematic Internet users. They suggested that instead of addiction the best classification for excessive Internet use is as an impulse control disorder. They proposed the less controversial term, “problematic internet use,” by defining it as: (a) maladaptive preoccupation with Internet use, experienced as irresistible use for periods of time longer than intended; (b) significant distress or impairment resulting from the behavior, and (c) non-solely present during hypomanic or manic symptoms

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(Shapira et al., 2003).

Dorland's Illustrated Medical Dictionary (1994), defines dissociation as "a defect of mental integration in which one or more groups of mental processes become separated off from normal consciousness and, thus separated, function as a unitary whole." The American Psychiatric Association also defined dissociation as a "disruption of and/or discontinuity in normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control and behavior." (American Psychiatric Association, 2013a, p. 291). Dissociative symptoms may intersect with different psychiatric disorders (Horen et al., 1995) and dissociative states have been reported as core features in groups of pathological gamblers and alcoholics (Karadag et al., 2005; Molde et al., 2009). However, Grant and Kim (2003) could not find such a link with pathological gamblers. Najavits et al., (2011) reported mixed results about the relationship between pathological gambling, posttraumatic stress disorder, and dissociation.

Ross et al. (1990, 1991) argued that dissociative experiences are not necessarily pathological; they might be common in the general population and become pathological when they cause marked distress and interfere with functioning. Jacobs, (1988) has suggested that dissociative symptoms among addicts resemble detachment states accompanying the acting-out phase in impulse control disorders.

The importance of dissociation in the psychopathology of addiction has been confirmed (Craparo et al., 2014; Jacobs, 1988; Karadag et al., 2005). Somer (2003) found that levels of dissociation negatively contributed to the prediction of abstinence. Craparo et al., (2014) reported that addictive behaviors have a dissociative nature that allows individuals to manage negative and unregulated emotions. They suggested that dissociation is a predictor of addiction. Although professionals have not agreed on a standardized definition of PIU, it is generally recognized as a category of behavioral addiction (Griffiths, 1997; Young, 1996). With regard to PIU phenomenology, Griffiths (1996) has insisted that it is similar to impulse control/addictive disorders, which are characterized by changes in the hierarchy of the salience of the activity, mood modification, tolerance, withdrawal, conflict, and relapse. Greenfield (1999) proposed several variables that make the internet compelling for users: intense intimacy, disinhibition, loss of boundaries, timelessness, and feelings of loss of control. He suggested that at least the first four variables are phenomenologically related to states of detachment. In a study by te Wildt et al., (2007), internet-dependent participants scored significantly higher on the Dissociative Experiences Scale than did the non-internet-dependent participants. Griffiths (2003) reported that internet usage could elicit feelings of dissociation and immersion, including losing track of time, feeling like someone else, blacking out, and being in a trancelike state. These dissociative symptoms may become clinically relevant in internet-dependent individuals even if they are present in non-internet-dependent participants (De Berardis et al., 2009). Bernardi and Pallanti (2009) reported that dissociative symptoms were related to the severity and effects of PIU, and suggested that detachment was a key feature of PIU. They found that a sense of detachment was a distinct characteristic of dissociative experiences, which may progress to a pathological state (e.g., depersonalization disorder), or to a non-pathological state when associated with fatigue or mild intoxication.

Canan et al., (2012) found that excessive internet use was associated with higher levels of dissociative symptoms among Turkish college students. We believe that these findings should be replicated with Korean students. However, no study to date has analyzed the relationship of dissociation with the clinical characteristics of PIU among Korean internet users. The current study examined characteristics of the patterns of PIU among South Korean internet users to investigate the relationship between PIU and dissociative symptoms. We hypothesized that dissociation would be positively associated with a higher severity of PIU and mental health problems.

2. Methods

2.1. Participants

Random sampling of 508 participants was performed using proportionate allocation in accordance with their gender and age distributions in South Korea. Participants aged 20–49 years were recruited through an online research service (Focus Company Co. Ltd. Seoul, Korea). This cross-sectional study was performed from June to August 2013. As the data were collected from dedicated internet users, we conducted the study using an online panel survey. The research service operates its own independent consumer panel site (www.focuscompany.co.kr/fc02_01_05), in which 75,000 or more respondents are registered. They respond to survey at least one time within the past six months, when they received an invitation email to participate a survey.

Email invitations to complete our online survey were sent to a random sample of potential respondents in the company's panel. Of the 8977 internet users who received the invitation email, 508 contacted the survey webpage. Participants completed a self-administered questionnaire about their perceptions of their current levels of stress, alcohol use, tobacco use, depression, dissociative experiences, and internet use. This study was approved by National Center for Mental Health Institutional Review Board (NCMH 2013-4), and was conducted in adherence with the hospital's ethical policies.

2.2. Measures

2.2.1. The Korean version of the Young Internet Addiction Test (YIA)

The Young Internet Addiction Test (YIA), developed by Kimberly Young, is used worldwide as a reliable and valid measure of addictive use of the internet (Young, 1998). It was used to measure PIU in this study. The YIA consists of twenty questions that use a 5-point Likert-type scale. A score of 50 points or higher on the Korean version indicates that a respondent's internet use is a source of significant problems (Park et al., 2013). The Korean version of the scale has been reported to have high internal consistency, with a Cronbach's alpha coefficient of 0.921, and evidence of validity (Gyeong et al., 2012); for this study, the Cronbach's alpha coefficient was 0.958.

2.2.2. The Korean version of the Dissociative Experiences Scale (DES-K)

The Dissociative Experiences Scale (DES), a 28-item self-report instrument, was developed by Bernstein and Putnam (1986). It has adequate test-retest reliability, good split-half reliability, and good clinical validity. The scale can be completed in 10 min and scored in less than 5 min. It is easy to understand, and the questions are framed in an unbiased manner that does not stigmatize the respondent for positive responses. The respondent clicks on a line, which is anchored at 0% on the left and 100% on the right, to show how often they have a particular experience. The overall DES score is obtained by summing the answers to the 28 items and then dividing the sum by 28; the result yields an overall score ranging from 0 to 100. Scores higher than 20 on the Korean version indicate the presence of a dissociative disorder. The Korean version of the overall scale has good psychometric properties, including its validity and reliability, with a Cronbach's alpha coefficient of 0.94 (Park et al., 1995); the Cronbach's alpha of DES-K for this study was 0.906.

2.2.3. The Korean version of the Alcohol Use Disorder Identification Test (AUDIT)

The World Health Organization (WHO) developed the AUDIT, a simple and brief screening instrument, to identify excessive drinking as the cause of a presenting illness. It also provides a framework for intervention to help hazardous drinkers reduce or cease alcohol consumption, and thereby avoid the harmful consequences of excessive drinking. The optimal cutoff point for the Korean version of the AUDIT is 12, and the sensitivity and specificity using this threshold are 0.84 and 0.86, respectively (Lee et al., 2000); the Cronbach's alpha coefficient for the AUDIT in this study was 0.904. When screening for hazardous drinking, the suggested AUDIT cut-off scores, based on the frequency and amount of drinking alcohol, are 11 for men and 8 for women (Joe et al., 2009).

2.2.4. Questions related to tobacco use

Tobacco use was assessed using two questions: "Do you smoke cigarettes? " and "On a typical day, how many cigarettes do you smoke? " We derived these questions from previous studies (Lee et al., 2008; Shaffer et al., 1999). Given that it is rare to find the use of other forms of nicotine products in South Korea, we did not ask participants whether they used other nicotine products (Lee et al., 2008).