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Psychiatric Symptoms and Problematic Internet Use among Turkish University Students

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Abstract

This study aims to investigate the psychiatric symptoms with relation to problematic internet use among university students. The data is collected from 555 university students (male=214, female=341). Online Cognition Scale (OCS), Brief Symptom Inventory (BSI), Demographic and General Information Form which contain internet using behaviors were used for data collection. Student t-test and chi-square tests were used for statistical analyses. As a result of the analysis, there were 140 students with PIU and 142 students without PIU. Sixty-one female students (43.6%) and 79 male students (56.4%) were in PIU group. Only male students have significantly higher level of diminished impulse control than female students ($t=2.432$ $p<0.016$). Also, a significant association was found between PIU and Positive Symptoms Distress Index (PSDI). There were differences in terms of the means of OCS and subscales of OCS; social comfort, loneliness/depression, distraction and diminished impulse control between with and without PIU groups. Additionally, there were differences in terms of the means of total BSI and subscales of BSI; anxiety, depression, low self-esteem, somatization and hostility between with and without PIU groups. The study results indicate that having psychiatric symptoms is an indicator of high level of PIU in university students, earlier intervention of psychiatric symptoms will prevent the problematic internet use.

Keywords: problematic Internet use; psychiatric sypmtoms; university students;

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1. Introduction

The use of internet rapidly increased and took a part in contemporary society. Most individuals use the Internet without negative consequences and benefit from use. As internet access has become widespread, so have the reports of its misuse increased. It causes problems in people's lives in negative ways and also damage psychosocial and physical health of people. Excessive or inappropriate use of internet has been an important matter in the literature (Sung, Shin & Cho, 2014).

Problematic Internet use (PIU), described as excessive or compulsive, along with preoccupation with and loss of control over the internet use. It means that various adverse consequences of spending too much time on the internet, such as neglecting social activities, relationships, health and work or school duties, and altering sleep and eating habits in a detrimental way (Spada, 2014). PIU has been paralleled by emerging growth of internet use. In European studies, prevalence of PIU %0.7-%18.3 although in Turkey, %1.0-%12.0 (Bozkurt, Coskun, Ayaydin, Adak & Zoroglu, 2013; Weinstein & Lejoyeux, 2010).

According to Kandell (1998), internet addiction is psychological a dependence, but it is not recognized as a psychiatric disorder. PIU has been found to be generally comorbid along with other psychiatric disorders among adolescents and young adults. High rates of psychiatric comorbidity, particularly behavioral, anxiety and mood disorders were found in young subjects with internet addiction in one study (Bozkurt, Coskun, Ayaydin, Adak & Zoroglu, 2013). Study results indicate that along with PIU there were problem drinking, gambling-related problems, dysthymic disorder, bipolar affective disorder (type I and II), social anxiety symptoms, depression symptoms, ADHD, problem gambling, anorexia nervosa, suicidal ideation, PTSD, higher perceived stress scores. (Derbyshire et al., 2013; Park, Hong, Park, Ha & Yoo, 2012; Spada, 2014; Weinstein & Lejoyeux, 2010). There are other problems like compulsive buying, intermittent explosive disorder, less frequent exercise and compulsive sexual behavior. Also, carpal tunnel syndrome, dry eyes, and headaches, poor academic performance, altered sleep patterns are physical problems which are related with excessive Internet use (Derbyshire et al., 2013). Because of this, problematic Internet use is becoming a significant public health issue that requires urgent attention (Bener & Bhugra 2013).

Although, studies indicate relation with PIU and comorbid psychiatric disorders, there is limited study indicate relation with PIU and psychiatric symptoms in university students. Therefore, the aim of the present study is investigating the psychiatric symptoms with relation to PIU among university students. Relation of PIU and the factors of the computer use were not investigated in this study.

2. Methods

2.1. Subjects

This study is a survey research conducted with students studying at Faculty of Education, Art and Engineering at Gazi University in Ankara. A total of 555 participants (female=61.4%, male= 38.6%) participated in the study. The mean age of the sample was 20.79 ±1.73 with a range from 18 to 26 years.

2.2. Instruments

The Sociodemographic and General Information Form: The form was developed by the researcher to gather information, as a self-rating form. It involved questions about participants' sociodemographic status and their computer experiences.

Online Cognition Scale (OCS): It was developed by Davis, Flett, & Besser, (2002) and adapted to the Turkish population by Ozcan and Buzlu (2005). This scale evaluates the PIU and particularly focused on

cognitions rather than behaviors. The OCS consists of 36-item questionnaire and seven-point Likert scale. The OCS has four subscales: Social comfort, loneliness/depression, diminished impulse control, and distraction. As the scores of the scale of the students rise, their PIU behaviors increase. In the current study, high internal consistency was found (a = 0.86-0.97)

Brief Sympton Inventory (BSI): The patients' psychiatric symptoms and their intensity were assessed using the BSI (Derogatis and Melisaratos 1983). It was adapted to Turkish university students by Sahin and Durak (1994). The BSI consists of 53-item questionnaire and self-report Likert-type screening tool. It is comprised five different symptom dimensions adaptation study in Turkish study. A score was computed as a combination of the number of symptoms and their severity, thus measuring overall psychological distress level. Cronbach's alpha was 0.96 for whole scale in this study.

2.3. Procedures

Questionnaires were distributed to the participants by lecturers while they were in attendance of a required course. The lecturers were instructed about introduction of the questionnaire forms.

2.4. Analysis

Before performing analysis, OCS was divided into two; as lower and higher group by using the frequency of upper and lower score. Positive Symptoms Distress Index (PSDI) was calculated with the sum of all item values divided by the positive symptoms total. The Global Severity Index, which is a score computed as a combination of the number of symptoms and their severity, thus measuring overall psychological distress level. Student t-test and chi-square tests were used for statistical analyses with SPSS 20.0 statistical software program.

3. Results

There were 140 students with PIU and 142 students without PIU. Sixty-one female students (43.6%) and 79 male students (56.4%) were in PIU group. Independent samples t-test was conducted to determine the difference between the means of PIU according to gender. Results indicated that only subscale male students have significantly higher levels of diminished impulse control than female students (t=2.432 p<0.016). As a result of chi-squared analysis reveals that PIU and PSDI are significantly associated (Table 1).

Table 1. Relationship between PSDI and PIU

	PIU	Without PIU	χ^2	p
Negative Symptoms				
Distress Index	63(37.5%)	105 (62.5%)		
PSDI	77(67.5%)	37 (32.5%)	24.522	0.000
Total	140 (49.6%)	142(50.4%)		

When the PIU group and without PIU group were compared, there were significant differences in terms of the means of OCS and subscales of OCS; social comfort, loneliness/depression, distraction and diminished impulse control (t = -25.175, p < 0.000; t = –21.122, p < 0.000; t = –21.686 p< 0.000; t = –25.341, p < 0.000; t = –22.213, p < 0.000; respectively). Also, there were statistically significant differences in terms of the means of total BSI and subscales of BSI; anxiety, depression, low self-esteem, somatization and hostility between with and without PIU groups (t = 5.985, p < 0.000; t = 5.514, p < 0.000; t = 5.164, p< 0.000; t = 6.518, p < 0.000; t = 3.549, p < 0.000; t = 5.394, p < 0.000; respectively).

4. Discussion

The results of this study may have important implications to identify predictors of PIU among university students. Although level of social comfort, loneliness/depression and distraction did not differentiate in males and females with PIU and without PIU, males use higher level of diminished impulse control than females. Whereas the other study result indicates that males scored higher on the OCS and its subscales compared to females. On the other hand females have better control of the Internet use. Conscientiousness had a significant effect on diminished impulse control (Durak, & Durak, 2014). Additionally, PI user who connected Internet experienced more social comfort, loneliness, depression, low level of impulse control and attention than without PI user (Derbyshire et al., 2013). Association between PIU and positive symptoms distress was found in this study. Higher numbers of symptoms are related with excessive use of Internet vice versa. Students with high level of PIU have psychiatric symptoms; anxiety, depression, low self-esteem, somatization and hostility. Anxious and depressive people may use internet to cope with anxious and depressive feelings. Previous studies also report except somatization and hostility, consistent findings with PIU is associated with depression, suicidal ideation, anxiety disorder, behavioral disorder, and attention-deficit hyperactivity disorder, impulse control, and substance use disorders. (Bozkurt et al., 2013; Park, Hong, Park, Ha, & Yoo**,** 2015; Shaw & Black, 2008; Yung, Eickhoff, Davis, Klam, & Doan, 2015). However this study particularly investigated psychiatric symptoms and not psychiatric disorders. Christakis, Moreno, Jelenhick, Myaing & Zhou (2011) studied with college students about PIU.

Overall, 4% of students scored in the occasionally problematic or addicted range on the Internet Addiction Test and 12% had moderate to severe depression. Students with moderate to severe depression were about 24 times more likely than their peers to show PIU. Some people are at greater risk than others. Greater frequency of internet use is associated with a range of psychosocial problems (less frequent exercise, greater depression symptoms and higher Perceived Stress) in young adults (Derbyshire et al., 2013). Alexithymia, dissociative experiences, low self-esteem, and impulse dysregulation were given as-risk factors for PIU (Weinstein & Lejoyeux, 2010). Subjects with withdrawn, somatic, immature, and thought problems exhibited withdrawn behaviors in socializing with others in the real world and would rather spend more time on the internet. It also showed that subjects with thought, attention, and delinquent behavioral problems had a tendency to neglect their work in favour of spending time on the internet (Sung, Shin & Cho, 2014).

The results of this study indicate that PIU is related with different psychological factors. This is important since it is becoming a significant public health issue that requires urgent attention which requires earlier intervention and prevention. Intervention must be education for adolescents to prevent, internet-derived problems (Bener, & Bhugra 2013; Yang et.al., 2014). On the other hand, preventive efforts should increase self-efficacy efforts, problem solving skills, coping with emotions especially impulse control, and social interactions.

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