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# Self-control Management and Internet Addiction

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ABSTRACT

The purpose of this research is to examine the relationship of self-control/management and Internet addiction. Participants were 309 university students who completed a questionnaire package that included the Online Cognition Scale and the Self-control and Self-management Scale. The relationships between self-control/management and Internet addiction were examined using correlation analysis and multiple regression analysis. According to results Internet addiction were predicted negatively by self-monitoring, self-evaluating, and self-reinforcing. Results were discussed in the light of literature

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Keywords:
Self-control, Self-management, Internet addiction, multiple regression analysis

## Introduction

Self-control has been described as the willful and intentional mechanisms by which humans may alter their own behavior, resist temptation, change their moods, and act in ways to achieve personal goals; it is the process of overriding natural, habitual, or learned responses by altering behavior, thoughts, or emotions (Baumeister & Vohs, 2003). Self-control involves a number of internal and external interactions including goals, plans, intentions, self-monitoring and self-evaluation, feedback, and corrective behavior (Barone, Maddux, & Snyder, 1998). While Tangney, Stuewig, Brown, Reyes and Zorbas (2004) described this construct as a more automatic, flexible system that responds smoothly to changing environmental demands, Metcalfe and Mischel, (1999) defined self-control as the ability to inhibit impulsive responses that undo one's commitment; a commitment being akin to a goal or long-term objective. This definition is preferred to the previous examples as it makes specific the contrast between the immediate with long term, thus recognizing time as a key component of self-control (Fujita, Trope, Liberman, & Levin-Sagi, 2006). Self-management, more often called self-control, includes the existence of two or more response alternatives; different consequences for the alternatives; and, usually, the maintenance of self-controlling actions by longer-term external consequences (Thoresen & Mahoney, 1974). In similar, self-control involves the regulation of behaviors, thoughts, and emotions, as well as modifying or inhibiting socially undesirable tendencies (Baumeister, Heatherton, & Tice, 1994; Finkenauer, Engels, & Baumeister, 2005; Muraven & Baumeister, 2000). It is a voluntary, conscious, effortful, and self-generated attempt to engage in an initially low probability behavior rather than one that is more immediately reinforcing (Kanfer & Gaclick, 1991). These two constructs differ in that self-control specifically addresses conscious processes while self-management tends to refer to both unconscious and conscious processes (Vohs & Baumeister, 2004). Self-control and self-management are important skills to make less painful several emotional and behavioral problems and to motivate perseverance and achievement (Mezo, 2009). Previous research has found self-control and self-management is associated positively with positive affect and negatively with depression, anxiety, and negative affect. Similarly self-control has been found to relate negatively with depression (Pyszczynski, Holt,

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& Greenberg, 1987; Wenzlaff, Wegner, & Roper, 1988; Muraven, Tice, & Baumeister, 1998), ruminative thoughts (Martin & Tesser, 1989), and aggression (Baumeister, 1997; Tice & Baumeister, 1993; Zillman, 1993).

**Internet Addiction**

Over the last decade, the importance of research on Internet addiction has grown (Bayraktar & Gun, 2007; Huang, Wang, Qian, Zhong, & Tao, 2007). A wide range of terms have been utilized mutually interchangeably for internet addiction such as internet dependents (Kubey, Lavin, & Barrows, 2001; Yuen & Lavin, 2004), problematic internet users (Davis, Flett, & Besser, 2002; Shapira et al., 2003), or pathological internet users (Davis, 2001; Lin & Tsai, 2002; Morahan-Martin, 1999; Morahan-Martin & Schumacher, 2000). Internet addiction has been defined by symptoms of loss of control, intolerance, withdrawal, impairment of function, reduced decision-making ability (Ko, Yen, Chen, Chen, & Yen, 2005), substance experience (Ko et al., 2006; Yen, Yen et al., 2007), psychomotor agitation, anxiety, craving (Ferraro, Caci, D'Amico, & Di Blasi, 2007), hostility (Yen, Ko, Yen, Wu, & Yang, 2007), and constant online surfing despite negative effects on social and psychological welfare. Studies demonstrated the positive associations of Internet addiction with declines in the size of social circle, depression (Yen, Ko et al., 2007; Young & Rogers, 1998), loneliness (Kraut et al., 1998; Nalwa & Anand, 2003; Whang, Lee, & Chang, 2003), lower self-esteem and life satisfaction (Ko et al., 2005), poor mental health (Yang, 2001; Young & Rogers, 1998), subjective vitality (Akın, 2012), and subjective happiness (Akın, 2012).

**The present study**

The aim of the present study is to examine the relationships between Internet addiction and self-control/self-management. Based on the relationships of Internet addiction (e.g. Ferraro et al., 2007; Ko et al., 2005; Kraut et al., 1998; Nalwa & Anand, 2003; Yang, 2001; Young & Rogers, 1998) and self-control/self-management (Mezo, 2009; Pyszczynski, Holt, & Greenberg, 1987; Wenzlaff, Wegner, & Roper, 1988; Martin & Tesser, 1989; Baumeister, 1997; Tice & Baumeister, 1993; Zillman, 1993), we hypothesized that Internet addiction would be associated negatively with self-control/self-management.

## Method

**Participants**

Participants were 309 university students enrolled in various undergraduate programs at the Sakarya University, Turkey. One hundred and fifty one of the participants (49%) were males and one hundred and fifty eight (51%) were females. A large majority of the students (93%) were between 18 and 27 years of age (20.47 ± 1.02).

**Measures**

The Turkish version of the Self-control and Self-management Scale (SCMS, Mezo, 2009) was used to measure self-control and self-management. Participants rate their agreement with 16 statements using a Likert scale from 0 (''very undescriptive of me'') to 5 (''very descriptive of me''). SCMS consists of three sub-scales; self-monitoring (six items, e.g., "When I work toward something, it gets all my attention"), self-evaluating (five items, e.g., "When I set important goals for myself, I usually do not achieve them"), and self-reinforcing (five items, e.g., "I congratulate myself when I make some progress"). Turkish adaptation of this scale had been done by Akın, Demirci, and Çardak (2012). Results of confirmatory factor analysis indicated that the three-dimensional model was well fit ($x^2$= 182.11, df= 98, RMSEA= .046, NFI= .94, CFI= .97, IFI= .97, GFI= .95, SRMR= .046). The Cronbach alpha internal consistency reliability coefficients of the adapted Turkish form were .80 for overall scale, and .78, .78, and .72 for three subscales, respectively.

Internet addiction was measured using Turkish version of the Online Cognition Scale (OCS, Davis, Flett, & Besser, 2002; Ozcan & Buzlu, 2005). This scale contains 36 items on a 7-point Likert-type scale (1=strongly disagree to 7=strongly agree). It has four sub-dimensions: Diminished impulse control (10 items), loneliness/depression (6 items), social comfort (13 items), and distraction (7 items). A sum of all scores yields a total score that ranges from 36 to 252; higher scores indicate higher Internet addiction level. Internet-related diminished impulse control involves obsessive cognitions about the internet and an inability to reduce internet use despite the desire to do so. The loneliness/depression involves feelings of worthlessness and depressive cognitions related to the internet. The social comfort involves feelings of safety and security

in being a part of that social network, despite the fact that it is a virtual network. The distraction involves using the internet as an activity of avoidance. The Cronbach alpha internal consistency coefficients of the adapted Turkish form were .79 for diminished impulse control, .60 for loneliness/depression, .84 for social comfort, .73 for distraction, and .91 for entire scale. For test-retest reliability the scale was administered to 148 undergraduate students twice in four weeks. The Pearson correlation coefficients were .89, .76, .87, .85, and .90, respectively (Ozcan & Buzlu, 2005).

**Procedure and Data Analysis**

Convenience sampling was used in the selection of participants. Convenience sampling is a non-probability sampling technique in which participants are selected because of their convenient accessibility and proximity to the researcher (Bryman, 2004). For this reason, the results of this study did not make inferences from the population which led to a decrease in external validity. Participants voluntarily participated and were free to fill out the questionnaires without pressure. Completion of the questionnaires was anonymous and there was a guarantee of confidentiality. The instruments were administered to the students in groups in the classrooms. The measures were counterbalanced in administration. Prior to administration of measures, all participants were told about purposes of the study.

Three hundred and thirty-six students participated in the study. However, 27 students were excluded from the study because 17 of them did not respond to the instruments as required and 10 were found to produce extreme scores. Therefore, the data obtained from 309 students were statistically analyzed. In this research, Pearson correlation coefficient and multiple regression analysis were utilized to determine the relationships between Internet addiction and self-control/management. These analyses were carried out via SPSS 11.5.

**Table 1.** Descriptive statistics and inter-correlations of the variables

| Variables | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Self-monitoring | 1.00 | | | |
| 2. Self-evaluating | .26** | 1.00 | | |
| 3. Self-reinforcing | .38** | .12** | 1.00 | |
| 4. Internet addiction | -.32** | -.19** | -.24** | 1.00 |
| Mean | 22,05 | 16,21 | 18,60 | 85,43 |
| Standard deviation | 5,13 | 4,95 | 4,61 | 35,20 |
| Cronbach's α | .85 | .83 | .87 | .79 |

**p<.01

**Multiple Regression Analysis**

A stepwise multiple regression analysis has applied to determine which dimensions of self-control/management were the best predictors of Internet addiction. Table 2 showed the results of multiple regression analysis where the independent variables were dimensions of self-control/management and the dependent variable was Internet addiction.

**Table 2.** Summary of stepwise multiple regression analysis for variable predicting internet addiction

| Variables | *B* | *Standard Error of B* | *β* | *t* |
|---|---|---|---|---|
| Step 1 | | | | |
| Self-monitoring | -.22 | .37 | -.32 | -5.933* |
| Step 2 | | | | |
| Self-monitoring | -.20 | .38 | -.29 | -5.211* |
| Self-evaluating | -.82 | .40 | -.12 | -2.058 |
| Step 3 | | | | |
| Self-monitoring | -1.63 | .41 | -.24 | -4.016* |
| Self-evaluating | -.79 | .39 | -.11 | -2.013* |
| Self-reinforcing | -1.07 | .44 | -.14 | -2.435* |

**p<.01

Self-monitoring entered the equation first, accounting for 22% of the variance in predicting Internet addiction. Self-evaluation entered on the second step accounting for an additional 5% variance. Self-reinforcement entered on the third step accounting for an additional 8% variance. The last regression models

involved self-monitoring, self-evaluation, and self-reinforcement as predictors of Internet addiction and accounted for 35% of the variance in Internet addiction. The standardized beta coefficients indicated the relative influence of the variables in last model with self-monitoring ($\beta$= -.24, p<.01), self-evaluation ($\beta$= -.11, p<.05), and self-reinforcement ($\beta$= -.14, p<.05) all significantly influencing Internet addiction and self-monitoring was strongest predictor of Internet addiction.

## Discussion

The aim of this study was to investigate the relationships between self-control/self-management and Internet addiction. Findings have demonstrated that there are relationships among these variables. As hypothesized, self-control and self-management predicted Internet addiction negatively. Recent studies demonstrated that Internet addiction related positively to some psychological maladaptive variables such as decrease in social interactions, depression, loneliness and lower self-esteem (Ko et al., 2005; Kraut et al., 1998), loneliness (Kraut et al., 1998; Nalwa & Anand, 2003; Whang, Lee, & Chang, 2003), life satisfaction (Ko et al., 2005), poor mental health (Yang, 2001; Young & Rogers, 1998), subjective vitality (Akın, 2012), and subjective happiness (Akın, 2012). In contrary, studies have found that self-control and self-management was associated negatively with some psychological maladaptive variables such as anxiety, negative affect (Mezo, 2009), depression (Mezo, 2009; Pyszczynski, Holt, & Greenberg, 1987; Wenzlaff, Wegner, & Roper, 1988), ruminative thoughts (Martin & Tesser, 1989), and aggression (Baumeister, 1997; Tice & Baumeister, 1993; Zillman, 1993). Therefore, it appears that if individuals can enhance their self-control and self-management level, it is possible to ameliorate Internet addiction. Consistent with these results in this study self-control and self-management was found negatively related to Internet addiction.

Although the results of the present study are interesting and have implications for interventions that could reduce Internet addiction, limitations of the study may be acknowledged. First, participants were university students and replication of this study for targeting other student populations should be made in order to generate a more solid relationship among the constructs examined in this study, because generalization of the results is somewhat limited. Second, as correlational statistics were utilized, no definitive statements can be made about causality. Third, the data reported here for Internet addiction and self-control and self-management are limited to self-reported data.

In conclusion, this investigation shows that Internet addiction affects self-control and self-management directly. Students high in Internet addiction are more likely to be low in self-control and self-management. Therefore, the current findings increase our understanding of the relationships between self-control and self-management and Internet addiction. We hope that our results may help educational agencies to design suitable Internet addiction prevention programs geared toward the college population.

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