

Summary

Internet Addiction and Related Psycho-Social Variables: An Analysis Regarding Alexithymia

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The prevalence of Internet usage increases as the relevant technologies improve and the content of that virtual world enriches rapidly. This modern atmosphere that surrounds the life in various domains such as communication, amusement, work, or education inevitably affects the individuals and their lives. Harmful dependence of some people reported on the Internet (Beard & Wolf, 2001) is a type of that effect. Shaw and Black (2008) suggest that there is a consensus about the possible negative consequences of the Internet among researchers although more studies must be conducted to understand the risk factors better.

Caplan (2003, 2005) proposes a social skill account of the problematic Internet use suggesting that individuals with social skill deficits prefer online social interaction instead of face-to-face communication which in turn may foster compulsive use of the Internet that can be resulted in negative outcomes. Research findings suggesting an association between Internet addiction and inter-personal uses of the Internet (Batıgün & Hasta, 2010; Caplan, 2003; Chou & Hsiao, 2000) are crucial in this context. Preference for online inter-personal interaction is proposed for individuals who have low self-esteem (Fioravanti, Dettore, & Casale, 2012) and perceived social support (McKenna, Green, & Gleason, 2002); who report higher loneliness (Durkee et al., 2012) and alexithymia (Kandri et al., 2014). Associations of these psycho-social variables with Internet addiction are established up today separately for self-esteem (De Berardis et al., 2009), social support (Gününç & Doğan, 2013), loneliness (Batıgün & Hasta, 2010), and alexithymia (Craparo, 2011). We evaluated possible connections of self-esteem, loneliness, social support, and alexithymia with social skill as a commonality of these psycho-social variables and aimed to examine the associations of these variables with Internet addiction in this study. This is the first attempt to investigate the associations of self-esteem, loneliness, social support, and alexithymia

together with Internet addiction in the same study according to the knowledge of the authors of the present study. Additionally, it is important to note that testing the association of alexithymia with Internet addiction after controlling for the effects of all other study variables is the major aim of the present study due to the increased role that has begun to be attributed to alexithymia recently as a risk factor for pathogenesis and maintenance of the Internet addiction (De Berardis et al., 2009). The sample of the study is composed of university students since high prevalence of Internet use is reported for this group by Turkish Statistical Institute.

Alexithymia; that is defined with properties such as difficulty in identifying and describing feelings, constricted imaginal processes, or external-oriented cognitive style (Taylor, Bagby, & Parker, 1991) has begun to be recently researched in relation to the Internet-related problems. The reported relations of alexithymia with substance use (El Rasheed, 2001) or hypersexual behavior (Reid et al., 2008) had probably inspired the interested researchers and similar relations of alexithymia with Internet use problems were also found in the relevant studies (Craparo, 2011; Dalbudak et al., 2013). This relation between alexithymia and Internet-related problems may partially be explained by a preference for online socialization since individuals who have high alexithymia properties are reported to have more inter-personal problems (Besharat, 2010; Vanheule et al., 2007) and lower social support (Fukunishi et al., 1999; Tsai et al., 2009). Thus, those individuals may be trying to avoid their difficulties that they have in face-to-face relations.

Self-esteem in relation to the Internet addiction is another important variable of the present study. Various research findings suggest an association between low self-esteem and increased Internet-related problems (e.g., De Berardis et al., 2009; Kim & Davis, 2009). It is proposed that some people may feel more comfortable

in online interactions (Bonetti, Campbell, & Gilmore, 2010) and it is also discussed that computer mediated relations may be preferable for those individuals who have low self-esteem (Fioravanti, Dettore, & Casale, 2012). In addition to the low self-esteem; loneliness and low social support are other psycho-social variables that seem to be important associates of the Internet-related problems. Although the direction of the relationship is debatable (Morahan-Martin, 1999; van den Eijnden et al., 2008), findings of the various studies support the relation between increased loneliness and increased Internet-related problems (e.g., Batıgün & Hasta, 2010; Kim, LaRose, & Peng, 2009). Caplan (2003) proposes that loneliness may be a factor for preference of online socialization that in turn leads to the problematic use of the Internet. On the other hand; research results proposing low social support as an associate of increased Internet-related problems (Gününç & Doğan, 2013; Yeh et al., 2008) are in line with the view (Davis, 2001) that considers the limited social context of the individuals as a causal pathway to the pathological Internet use.

It is hypothesized for the present study that increased Internet addiction scores will be associated with lower self-esteem and social support; and higher loneliness and alexithymia scores together with increased time devoted to the Internet use. In line with this first set of hypotheses of the study, group comparison analyses are planned to test the second set of hypotheses. Two groups composed of participants who have either high or low Internet Addiction Test scores are predicted. It is hypothesized that the participants who have relatively higher addiction scores will have lower self-esteem and social support; and higher loneliness and alexithymia in addition to the longer Internet using duration. In the third step of the study analyses, it is expected that psycho-social variables of the study will be associated with Internet addiction scores of the participants after controlling for the effects of gender and time devoted to the Internet use. Self-esteem, loneliness, and social support as a group and alexithymia individually will be entered into the regression equation in the second and third steps respectively. It is hypothesized that alexithymia will still be associated with Internet addiction after controlling for the effect of all study variables.

Method

Participants

The sample of the present study was composed of 381 university students selected through convenience sampling, in Istanbul. Two hundred and four participants (53.5%) were females whereas 177 of them (46.5%) were males. The mean age of the participants was 21.91 ($SD = 2.29$). Most of the participants (55.4%) reported

that they were living with their families as residential information.

Materials

The following measures in relation to the findings of this study which are presented here were used:

Personal Information Form. This form was consisted of questions about demographical variables such as age, gender, or residential information of the participants. Moreover, Internet using behaviors of the participants such as devoted time to Internet-related affairs, preferred Internet activities or connection type data were also gathered by this form.

Internet Addiction Test (IAT). IAT developed by Young (1998b) is composed of 20 items to assess the negative consequences of the Internet use on a 5-point Likert scale. The increased scores on the IAT indicate higher Internet addiction. Its various versions in different languages such as Chinese (Chang & Law, 2008) or English (Widyanto & McMurrin, 2004) are widely used in different cultures to assess Internet use related problems. The Turkish version of the test that was adapted by Bayraktar (2001) revealed .91 internal reliability coefficient and was used in various studies including samples of Turkish university students (e.g., Alaçam, 2012; Batıgün & Kılıç, 2011).

Multidimensional Scale of Perceived Social Support (MSPSS). MSPSS developed by Zimet and his colleagues (1988) is composed of 12 items to assess the perceived social support of individuals on sources of family, friends, and significant others on a 7-point Likert scale. In addition to these 3 dimensions, total scale score is also computed for MSPSS. The increased scores on the scale indicate higher social support perception for the participants. The Turkish version of the MSPSS had satisfactory internal reliability coefficient (.89) for the whole scale (Eker, Arkar, & Yaldız, 2001).

Rosenberg Self-Esteem Scale (R-SES). R-SES was developed by Rosenberg (1965). First 10 items of the scale rated on a 4-point Likert scale that were developed to assess self-esteem were utilized for the purposes of the present study. Increases in scores of these items indicate higher self-esteem. Satisfactory internal reliability values such as .87 (Çelik, 2004) or .89 (Koçak, 2010) were reported for these first 10 items of the scale.

20-item Toronto Alexithymia Scale (TAS-20). TAS-20 is composed of 20 items that are rated on a 5-point Likert scale to assess difficulties in identifying and describing feelings together with externally-oriented thinking (Bagby, Parker, & Taylor, 1994; Bagby, Taylor, & Parker, 1994). Total scale score is also used for TAS-20 in addition to the scores of these 3 dimensions. The increased scores in the scale indicate higher alexithymia characteristics. Internal reliability value of .78 for the

whole scale was reported according to the results of the adaptation study of TAS-20 into Turkish (Güleç et al., 2009).

UCLA Loneliness Scale (UCLA). UCLA was developed by Russel and colleagues (1980) to assess loneliness of the individuals on a 4 point Likert scale. The scale is composed of 20 items and higher scores on the scale indicate increased loneliness for the participants. The adaptation study of the UCLA into Turkish by Demir (1989) revealed satisfactory internal reliability value of .96 for the scale.

Procedure

The instrument set was administered to the participants between March 1 and April 12 2012. Participants signed a written informed consent form including the information that participation was voluntary and withdrawal at any time of the study was possible. It was observed that completion time of the instrument set was between 15 and 20 minutes. All statistical analyses were conducted with SPSS 16 Program.

Results

Internet involvement was rather high within the sample of the study. Approximately half of the sample (49.3%) reported that they used Internet for 3 hours or more in a day whereas the rest of the sample (50.7) reported that their daily using time was less than 3 hours. Information searching, e-mailing, and face-book participation were more common Internet activities among the participants of the study.

It is possible to summarize the results of the present study in 3 sections. First, correlational analyses were conducted to examine the relations between the Internet addiction and the other variables of the study. Internet addiction scores of the participants were correlated with the study variables as expected in the beginning of the research. Specifically as addiction scores increased; devoted time to Internet, loneliness, and alexithymia scores of the participants increased, whereas self-esteem and social support scores of the participants decreased. Secondly, group comparisons were carried out to compare the scores of the study variables on the basis of the participants' Internet addiction scores as another analysis of the present study. The first group was composed of participants who scored half standard deviation below the mean of the IAT scores of the sample whereas the second group was composed of participants who scored half standard deviation above the mean of the IAT scores of the sample. The first group as the low IAT scoring group had significantly lower devoted time to Internet, loneliness, alexithymia; and higher self-esteem, social support scores as compared to the second group as the

high IAT scoring group according to the results of the independent samples t-tests analyses as expected in the beginning of the study. Thirdly, a hierarchical multiple regression analysis was performed to determine the additional contributions of the psycho-social study variables to predict Internet addiction scores of the participants above and beyond the variables of gender and devoted time to Internet. Thus, gender and devoted time to Internet variables were entered into the equation in the first step preceding self-esteem, loneliness, and social support variables that were entered into the equation in the second step and alexithymia that was entered into the equation in the third step. According to the results of the analysis; increased devoted time to Internet, low self-esteem, high loneliness, and high alexithymia were associated with increased Internet addiction. When all variables were in the equation after step 3, the R^2 value of .28 (adjusted $R^2 = .27$) indicated that more than quarter of the variability in Internet addiction was explained by the mentioned variables of the present study. Alexithymia predicted positively and significantly Internet addiction scores of the participants entering into the regression analysis in the third step. This variable incremented the explained variance of IAT scores almost as much as the group of variables of self-esteem, loneliness, and social support that were regressed in the second step of the analysis.

Discussion

In the beginning of the study, it was aimed to investigate the associations of self-esteem, loneliness, social support, and alexithymia with Internet addiction and to discuss the results in the context of inter-personal relationships. The scores of all of these variables were found to be related to the Internet addiction scores of the participants. As addiction scores increased, loneliness and alexithymia scores of the participants increased whereas their self-esteem and social support scores decreased as expected in the beginning of the study. Considering Caplan's (2003, 2005) social skill account of the problematic Internet use; self-esteem, social support, loneliness, and alexithymia as connected variables to social skill may be suggested as associates of online social interaction preference in the pathway of problematic Internet use. The individuals with low self-esteem, social support and high loneliness and/or alexithymia may be trying to avoid the troubles and responsibilities of face-to-face communication in which they are insufficient and may be concealing themselves in the world of the Internet at the expense of possible addiction problems. Clinical assessment of inter-personal communication skills of individuals who have Internet-related problems and relevant psycho-social support to improve these skills

may decrease online socialization requirement of some individuals. Future research including face-to-face communication skills of the participants in addition to present study variables will be essential both to support and to enrich the discussion presented here.

Separate discussion for alexithymia among the other psycho-social variables of the present study worth mentioning in relation to the Internet addiction since examination of this relation was the major purpose of the present study. Alexithymia seems to be one of the most robust associates of Internet addiction together with time devoted to Internet using when the correlational coefficients among the variables are examined. Moreover, it also predicted positively and significantly Internet addiction scores of the participants entering into the regression analysis in the third step and incrementing the explained variance of IAT scores almost as much as the group of variables of self-esteem, loneliness, and social support that were regressed in the second step of the analysis. Individuals who have high alexithymia characteristics may be avoiding their problems during their Internet usage as coping difficulties with stress were reported in relation to alexithymia in the literature (Zimmermann et al., 2005). Additionally, research findings that indicate associations of alexithymia with low social support (Fukunishi et al., 1999), inter-personal problems (Vanheule et al., 2010), emotion-oriented coping (Besharat, 2010) suggest that these individuals who have high alexithymia characteristics may be avoiding “real” life, social relations, dependent problems and responsibilities; and escaping into the attractiveness of the “virtual” life. It seems crucial to assess alexithymic properties of the individuals in clinical settings who have Internet-related problems. Those individuals with high alexithymic properties may

improve in face-to-face relations by the help of psychosocial treatments especially targeting their difficulties in identifying and describing feeling. Thus, their need to escape into the virtual life may diminish. A recent study which showed that decrease in alexithymic properties was associated with decrease in inter-personal problems (Ogrodniczuk et al., 2012) partially supports the present discussion. However, future research including social adaptation and online activities of the participants in addition to the variables of the present study are required to support the discussion presented here.

It is also important to note that the devoted time to Internet using seemed as one of the robust associates of Internet addiction together with alexithymia among the other variables of the present study. It is not difficult to guess incremented importance of Internet using time in relation to addiction in near future when rapid improvements in technology that facilitate access to the Internet are considered.

The findings of this research must be understood considering the limitations of the present study. First of all, participants selected by convenience sampling from single university students limit the generalizability of the findings. Secondly, the results of the comparative analyses of the groups of participants who score low and high on IAT are relative to the grouping criteria of the IAT cut-off scores determined by the authors of the present study. Different grouping criterion in different samples can vary related findings. Thirdly, cross-sectional nature of the present study’s data limits the discussion of the causal relationships between the psycho-social variables and the Internet addiction. Longitudinal studies are required to discuss the directions of the relations between these variables.