University Students' Problematic Internet Use and Communication Skills according to the Internet Use Purposes

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Abstract

This study was carried out to investigate whether the levels of university students' problematic internet use and of perceived communication skills differ with respect to their basic internet use purposes. The participants were 411 university students [215 of whom were females (52.30%) and 196 of whom were males (47.70%)]. In the study, the Problematic Internet Use Scale and the Communication Skills Evaluation Scale were applied. The analysis of the data was carried out via multivariate analysis of variance. The findings revealed that university students' perceived communication skill levels did not differ with respect to their main internet use purposes but that the levels of their problematic internet use did. In this respect, it was found that in terms of basic inter-net use purpose, the problematic internet use levels of the university students who "use the internet for enter-tainment purposes" and of those who "use the internet to establish social relationships with unfamiliar people" were significantly higher than that of those who "use the internet to obtain information." This result points out that the use of the internet for entertainment and social interaction constitutes an important risk factor for the emergence of the problematic internet use symptoms.

Key Words

Problematic Internet Use, Internet Addiction, Communication Skill, University Student.

The internet, thanks to a number of opportunities it provides, facilitates, diversifies, enriches and de-velops human life. Despite the contributions of the internet to human life, it also brings the problems and these problems rise day after day. Therefore, like other technological tools, problematic human behavior regarding the internet use has also started to accompany the opportunities and facilities pro-vided by the internet. Such negative behaviors of the internet users tend to increase in future due to the increases in the variety of its use, its duration, and to the decrease in user age. Recently, the inter-net use has increased rapidly and this increase has a potential for leading to pathological/problematic internet use or the internet addiction (Chou, Con-dron, & Belland, 2005; Nalwa & Anand, 2003)

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Problematic internet use or the internet addiction is used to describe the over-use of the internet and the effects of the problems it creates. In addition to these two concepts, various concepts such as the internet dependency, pathological internet use, the internet addiction disorder can also be used to de-pict the internet related behaviors (Beard & Wolf, 2001; Chou et al., 2005; Young, 1998). Because of this variety in the internet related concepts, termi-nology in the literature is a problem (Chou et al., 2005). In fact, ongoing discussions about whether the internet addiction takes place in forthcoming the Diagnostic and Statistical Manual of Mental Disorders (DSM) versions continue (Dowling & Quirk, 2008). In this framework, the preference for the concepts of problematic, excessive or mala-daptive internet use is more appropriate because of the associated meanings (Beard, 2002; Beard & Wolf, 2001). Problematic internet use is meant to be an inability to control the internet use that causes to distress and dysfunctionalities in daily life (Shapira, Goldsmith, KeekJr, Khosla, & McElroy, 2000). In this respect, problematic internet use is

described as one type of impulse control disorder (Schmitz, 2005; Shapira et al., 2000; Shapira et al., 2003; Young, 1998, 2004).

In literature, a great deal of research on problematic internet use shows that overuse of the internet and problematic/pathological internet use or the internet addiction have a significant relationship with such factors as loneliness (Ceyhan & Ceyhan, 2008; Erdoğan, 2008; Keser Özcan & Buzlu, 2007; Moody, 2001; Nalwa & Anand, 2003, Whang, Lee, & Chang, 2003), low self-esteem (Niemz, Griffiths, & Banyard, 2005; Wu & Cheng, 2007; Yang & Tung, 2007), depression (Ceyhan & Ceyhan, 2008; Keser Özcan & Buzlu, 2007; Yang & Tung, 2007; Yen, Ko, Yen, Wu, & Yang, 2007; Whang et al., 2003; Young & Rogers, 1998), the symptoms of antisocial tendencies and external control (A. A. Ceyhan & E. Ceyhan, 2007), psychological symptoms (Ceyhan, 2008), shyness (Chak & Leung, 2004), social disinhibition (Niemz et al., 2005), low social support (Keser Özcan & Buzlu, 2007; Wu & Cheng, 2007) and pleasure with the internet (Aslanbay, 2006). These research results demonstrate that problematic internet use is not independent of individuals' various psychosocial characteristics. Furthermore, some personal and psychosocial characteristics are likely to play a determinant role in inclining individuals' basic internet use purposes. Individuals use the internet for various purposes. The internet use has generally motives such as communication, entertainment, and information gathering (Shaw & Gant, 2002). Pathological users were more likely to use the internet for more reasons such as recreation, non-real-life social contacts, and emotional support (Morahan-Martin & Schumacher, 2000). Considering these internet use purposes, individuals generally use the internet to obtain information, entertain themselves, establish communication with acquaintances or with relatives, and establish social relationships with unfamiliar people. The probability of the emergence of individuals' problematic internet use behavior or the potential of their addiction to the internet changes depending on their internet use purposes (Meerkerk, Van Den Eijden, & Garretsen, 2006). The internet addiction is considered to be a complex phenomenon including a number of different types of behavior and possibly different types of addiction (Niemz et al., 2005). Similarly, it is stated that the internet itself does not cause addiction and that specific uses of the internet play an important role for the development of pathological internet use (Young, 1998).

In literature, there are studies concerned with the

basic internet use purposes. The results of these studies revealed that the problematic internet users/internet addicts use the two-way communication functions of the internet predominantly (Young, 1998); that they spend most of their time in the synchronous communication environment (Leung, 2004); and that they have an explicit tendency towards interactive uses (Thatcher & Goolam, 2005). At the same time, research findings are consistent with the view that the internet itself does not cause addiction and that certain specific uses of the internet, especially its interactive functions, contribute to the development of pathological internet use (Chou et al., 2005). When these research findings are taken into consideration, it is seen that the internet use purpose alone acts as a significant determiner in distinguishing unhealthy internet users or those who have problematic internet use behaviors from healthy individuals in terms of the internet use. In addition, it was found that the problematic internet users use the internet mostly for entertainment, social activities, and interactive virtual games. Therefore, when examining the internet addiction, the content of the internet use should also be taken into account (Hall & Parsons, 2001). Hence, the present study investigates the relationship between the internet use purposes of university students, who are young adults, and their problematic internet use behavior.

The use of the internet has increased in recent years especially among youth (Johansson & Götestam, 2004). Therefore, university students are prone to the development of the internet addiction or problematic internet use (Anderson, 2001; Kim, 2007; Nalwa & Anand, 2003). The reason is that university students use the internet as a part of their education or of their courses (Kim, 2007; Nalwa & Anand, 2003) and can access to the internet easily at university campuses (Anderson, 2001; Kim, 2007). Moreover, the psychological and environmental factors in university students' lives lead to the establishment of an environment in which the internet addiction may significantly influence them (Hall & Parsons, 2001) because university students are likely to encounter with a variety of difficulties or problems in their academic lives. The effort to cope with such difficulties and to satisfy the needs can play an important role in students' life quality and their mental health. According to Erikson's psychosocial development theory, university students or young adults are in a developmental period ruled over by conflict of intimacy versus isolation. For a healthy personality develop-

ment, young adults are required to overcome this developmental conflict by building skills in establishing close relationships with others. Therefore, the period of young adulthood which also includes university years is a period in which adolescence developmental tasks are consolidated, i.e., identity is formed and close relationships are established (Kılıçcı, 1989). Young adults who do not establish intimate relationship or avoid intimate relationships due to anxiety to lose his/her identity may have a sense of isolation (Öztürk, 1994). In this respect, developmental tasks such as identity formation and the establishment of close relationships may constitute two basic stress factors for university students. These stress factors can cause individuals to show problematic internet behavior in an environment in which they can easily access to the internet (Hall & Parsons, 2001). The youth described as the internet addicts are less likely to overcome the developmental crisis (Huang, 2004). In order to avoid problems such as the problematic internet use accompanied by the developmental problems, university students should achieve their developmental tasks and be able to deal with various difficulties in life. Thus, it is quite important for university students to have effective communication skills that will help to establish good relationships with others.

Young adults, like every individual, are in need of effective communication skills to establish effective interpersonal relationships with others. Effective interpersonal relationships are based on communication and that failure to establish a healthy communication results in various problems like loneliness (Korkut, 1996). For example, while some young individuals do not experience problems when meeting new people or developing new relationships, others have difficulty in establishing close relationships because they are weak in terms of social skills (Anderson, 2001). Therefore, the establishment of effective communication requires some interrelated skills (Korkut, 1999). Effective communication skills refer to effective-listening and responding behaviors that facilitate relationships among people (Korkut, 1996, 2005). These communication skills are acquired through experiences in life (Korkut, 1996) and should be taught to children and youth starting from early ages (Korkut, 1999). Research findings indicate that perceived communication skills of individuals who want to be with others are higher than that of those who prefer loneliness (Korkut, 1999) because personal, social, and general adjustment levels of the youth perceiving themselves to have effective

communication skills are higher as well (Ceyhan, 2006) . In line with these explanations and research findings, it can be stated that having effective communication skills could be considered as a fundamental factor for identity development and the establishment of close relationships which are developmental tasks of young adults. In this respect, ineffective communication skills of young adults may cause various problems in their lives and constitute an important risk factor for the internet use behavior and its content.

Consequently, the fact that researchers investigate various characteristics of young adults - such as communication skills – in terms of the internet use purposes will result in significant contributions to the understanding of the results caused by their internet use behavior and to the understanding of the reasons for their behavior or for the pathology underlying their behavior. This study aims at determining whether university students' problematic internet use behavior and their levels of communication skills as they perceived differ significantly with respect to their basic internet use purposes.

Method

Participants

The present study employed a total of 411 university students attending to various academic programs at Anadolu University. The research data group included 215 female (52.30%) and 196 male (47.70%) students. Among all the participants, 170 (41.30%) were freshmen, 60 (14.60%) were sophomores, 114 (27.70%) were juniors and 61 (14.80%) were seniors. Of all the participants, six (1.40%) students did not respond to the data booklet.

Measures

The Problematic Internet Use Scale (PIUS): The PIUS was developed by Ceyhan, Ceyhan, and Gürcan (2007) with the premise that the intensity of the internet use could change in a range from normal to pathological state. The scale consists of 33 items and produces scores between 33 and 165. The higher scores mean unhealthy internet use of individuals and demonstrate that their lives are negatively influenced and that they could have a tendency towards such pathology as internet addiction (Ceyhan et. al., 2007).

The factor analysis results of the scale revealed that the scale was made up of three subscales such as negative results of the internet, social benefit/social

comfort and overuse. These three factors together explained 48.96% of the total variance. The correlation between the scale and the Davis's Online Cognitive Scale-Turkish adaptation (Keser Ozcan, & Buzlu, 2005) was found as 0.61. The internal consistency coefficient of the PIUS (α) was found as 0.94. The item total-score reliability coefficients ranged between 0.31 and 0.70 ($p<.001$). The test-retest correlation of the scale was computed as 0.81 ($p<.001$) (Ceyhan et al., 2007).

The Communication Skills Assessment Scale (CSAS): The CSAS was developed by Korkut (1996) for the purpose of determining how individuals' communication skills are evaluated. CSAS, a five-item Likert-type scale, is made up of 25 positive statements that cover evaluations regarding communication skills. The total score to be obtained from the scale ranges between 25 and 125. The higher scores show that the individual has positive evaluations regarding his or her own communication skills. The validity and reliability studies of the scale conducted by Korkut (1999) revealed that the validity coefficients of CSAS with the Empathic Tendency Scale were .48 for adults and .52 for university students. As for the reliability studies of the CSAS, it was found that the internal consistency coefficients of the scale were .75 for adults, and .86 for university students. The retest reliability coefficient of the scale was calculated as 0.78 (Korkut, 1999).

Information Questionnaire: In the study, an information questionnaire was developed to obtain demographic information about participants and their internet use behavior. The questionnaire included questions related to such information as gender and grades and their basic internet use purposes (e.g., What is your basic internet use purpose? Obtaining information, entertainment, establishing social relationships with unfamiliar people, and establishing communication with acquaintances and relatives).

Procedure

A total of 439 students participated in the study. However, the statistical analyses were carried out for 411 students since 11 students did not respond to the data collection instruments as required and the scores of 17 students were extreme values. For the analyses of the research data, multivariate analysis of variance (MANOVA) was applied.

Findings

The present study investigated whether university students' problematic internet use behavior and their levels of communication skills they perceived differ with respect to their basic internet use purposes. By this aim, first, Mahalanobis distance values were calculated to see whether there were extreme values regarding the variables found in the analysis, and the extreme values that spoil the multivariate normality ($X^2=5.99, sd=2$) were determined. As a result, the data obtained from 17 students were found to be at extremes and thus were not included in analysis.

Following this, in order to determine whether the means of the groups formed according to basic internet use purpose differed significantly, MANOVA was run. For this purpose, the equivalence of covariance matrices was examined, and the test results were found to meet the assumption for equivalence of covariance (Box's M=9.09, F=0.99, $p=.44$). At the same time, the assumption for equivalence of variance between groups was also met (Levene's Test results: for PIUS F=2.07, $p=.10$ and for CSAS F=0.74, $p=.53$). In addition, Wilks' Lambda test results revealed that university students' levels of problematic internet use or the levels of their communication skills they perceived differed significantly with respect to their basic internet use purposes ($\Lambda=.92$, F=5.86, $p=.001$).

Since the statistics of MANOVA were significant, the tests of between-subjects effects were taken into consideration. For these analyses, Benforroni correction was used to reduce the likelihood of making a Type I error and thus, the adjusted alpha level was determined as .025. The results of the analysis demonstrated that university students' levels of problematic internet use differed significantly with respect to their basic internet use purposes [F(3,407)=11.58, $p=.001$]. In addition, university students' levels of communication skills they perceived did not differ significantly in terms of their basic internet use purposes [F(3,407)=.56, $p=.64$]. Following this, the source of the difference regarding the university students' levels of problematic internet use with respect to their basic internet use purposes was examined via post hoc multiple comparison tests. To control for a Type I error risk in the multiple comparisons, Benforroni-adjusted alpha level was determined as .004.

The results of the analysis revealed that among the paired comparisons, only the means for "using the internet to obtain information", "using the internet for entertainment" and "using the internet

to establish social relationships with unfamiliar people" differed significantly (p<.001). Therefore, it was found that the university students' levels of problematic internet use for the basic purpose of obtaining information were significantly lower than that of those who used the internet primarily to establish social relationships with unfamiliar people and those who used the internet primarily for entertainment. As for the other paired comparisons, no significant difference was found.

Discussion

Research findings indicate that university students' levels of problematic internet use differ significantly with respect to their basic reasons for the internet use, but did not differ significantly in terms of their communication skills. In this respect, when their basic internet use purposes were examined with respect to the problematic internet use, it was seen that the levels of problematic internet use behavior of university students who used the internet to entertain themselves and to establish social relationships with unfamiliar people was higher than that of those who used the internet primarily to obtain information. This result shows that the possibility of the development of problematic internet use behavior may change with respect to the internet use purpose (Meerkerk et. al., 2006) and that the basic internet use purpose could be an important determiner of the emergence of problematic internet use behavior. In addition, research findings support the view that the internet itself does not cause addiction - according to various other research results - and that its specific uses, especially its interactive functions, contribute to the development of pathological internet use, though (Chou et. al., 2005).

In literature, there are a number of studies demonstrating the relationship between the problematic internet use or internet addiction and the internet use purposes. When the findings of these studies (Boies, Cooper, & Osborne, 2004; A. A. Ceyhan, 2007; E. Ceyhan, 2007; E. Ceyhan & A. A. Ceyhan, 2007; Ceyhan, Ceyhan, & Kurtyılmaz., 2009; Chak & Leung, 2004; Leung, 2004; Keser Özcan & Buzlu, 2007; Kesici & Şahin, 2009; Meerkerk et. al., 2006; Morahan-Martin & Schumacher, 2003; Yang & Tung, 2007; Young, 1998) are taken into consideration, it is seen that the internet use purpose acts as a significant determiner in distinguishing unhealthy/problematic internet users from healthy users in terms of their internet use, and the internet users who do not have problematic internet use behavior prefer to use the internet primarily to obtain information, while problematic internet users tend to use the internet more for entertainment, social activities, and interactive virtual games. This result is consistent with the findings of the present study and clearly emphasizes the fact that the use of the internet primarily for entertainment and for social interaction could constitute an important risk factor for the development of problematic internet use symptoms.

There might be various reasons why university students are using the internet to entertain themselves and to establish social relationships with unfamiliar people show more symptoms of problematic internet use behavior than that of those who use the internet primarily for the purpose of obtaining information. Various factors such as accessing to the internet easily, following the renovations without experiencing any difficulty, having enough spare time for out-of-class activities, and using the computer technology for educational activities create an environment for university students in which they spend more time using the internet and thus end up with overuse of the internet. When - as required by the developmental period they are in - university students in such an environment experience multi-dimensional problems such as accommodation, nutrition, finance, educational life, and relationships with friends, they could choose to use the internet as a way of escape. In this way, the internet may become a tool for students to avoid or escape from problems, to entertain themselves and to share and freely spend time getting acquainted with new people. For example, some students may now and then consider the internet as an environment in which they can relax by forgetting their problems rather than trying to overcome them. Thus, the internet addiction provides a virtual content that helps escape from difficulties or problematic situations or personal challenges. In this respect, the internet addicts use the computer less as a tool to gather information but more as a psychological escape from coping with problems in life (Young, 2004).

Research results demonstrate that individuals addicted to the internet experience financial and interpersonal problems as well as problems in the issues of family, school, and health (Yang & Tung, 2007) and that they show more effort to escape from the realities of life than those who are not the internet addicts (Whang et al., 2003). Therefore, students prefer to use the internet for its functions of entertainment and of getting acquaintance with new people. In this way, they feel more satisfied yet

may get exposed to the negative results of the over-use of the internet. Furthermore, it may become a very important problem for some university students to use their spare time better in their daily lives. If young adults cannot easily adapt to the environment, do not feel themselves as a part of a group or join that group, or do not have the necessary skills or opportunities to participate in various socio-cultural and sports activities, then they may tend to overuse the internet. In this context, internet may become an indispensable tool for fun and sharing instead of a tool for obtaining information for youth. For instance, it is stated that the majority of chat users are youth, and spend most of their times by making chat with friends from the internet, which affects their attitudes toward real life dramatically (Simkova & Cincera, 2004).

When the research results are taken into consideration in terms of psychosocial development, it is a fact that university students are in a process of forming or strengthening their identities and developing close relationships with others as young adults spend more time on interactive activities on the internet. Especially young adults who have been unable to overcome the identity disorder during their adolescence are likely to use the internet to do identity experiments just as adolescents do. The reason is that young adults, without worrying about losing their identities, are in need of developing close relationships with their environment. The internet could be the most riskless environment to meet such a need. The internet, with its certain opportunities, could become an environment in which individuals can freely take actions without feeling anxious about being humiliated, criticized, or judged and without giving any harm to their identity, feelings, and thoughts. In addition, even if the young receive various threats or negative critics or evaluations, they may experience satisfactory relationships via the internet since such an environment includes no face-to-face relationships and helps them hide their real identities. As a result, although the internet, which gives a new dimension to social interaction, was designed basically to carry our research, search for information, communicate with others and facilitate business applications, it may become a principal focus of life and a temptation difficult to resist (Nalwa & Anand, 2003). Thus, the youth may use the internet mostly for sharing, seeking for relationships and for satisfying themselves in the virtual environment rather than obtaining information, which is the basic function of the internet. This way of using the internet is likely to result in the development of

problematic internet use symptoms. It is believed that in the rapidly changing world, various ways of satisfying one's own needs have occurred (Kılıçcı, 1989).

Research findings revealed that the problematic internet use differs with respect to the internet use purposes yet does not differ in terms of the perceived communication skills. This finding is somewhat surprising because the communication process plays an important role in young adults' lives for establishing close relationships for the management of one developmental task of psychosocial development process. Due to the developmental environment they are in, young adults are in constant interaction with their immediate environment such as their friends, families, and teachers. The way of establishing communication in their relationships especially with the opposite sex is quite important. Therefore, the inefficiencies of young adults in communication skills will make it difficult for them to establish close relationships with their environment. Then, it will also be difficult to develop and maintain relationships with friends as well as love-affairs with the opposite sex. Thus, the youth with ineffective communication skills are more likely to prefer virtual rather than face-to-face relationships due to the opportunities provided by the internet, to spend enough time on internet activities to avoid their inefficiencies in communication skills, and to express themselves different from whom they normally are. For example, if a person has difficulty in establishing romantic relations due to shyness or the lack of self-confidence, interactions via chat rooms or e-mail on the internet will provide an excellent environment though not as rich and romantic as face-to-face communication (Niemz et. al., 2005). In line with this view, it could be predicted that adults with ineffective communication skills will prefer to use the internet due to its interactional and social content. As a support to this prediction, the shyness level of the internet addicts was found higher in face-to-face relationships than in interpersonal online relationships, while there was no significant difference in online or face-to-face interactions for individuals who were not addicted to the internet (Yuen & Lavin, 2004). Furthermore, it was reported that individuals lacking self-presentation skills prefer especially online social interaction to face-to-face relationships and that such a preference for online social interaction increases compulsive internet use that leads to negative results (Caplan, 2005).

The use of the internet for its social function plays a fundamental role in the internet addiction behavior (Li & Chung, 2006). According to research findings, the shyness levels of the internet addicts are higher in face-to-face relationships than in interpersonal online relationships (Yuen & Lavin, 2004). These findings are consistent with the explanations provided by the cognitive behavioral model regarding problematic internet use (Davis, 2001). However, the present research findings do not seem to be parallel to those reported in related literature or support the cognitive behavioral model. Naturally, there could be various reasons why the present study has revealed such research findings.

First of all, several personality factors rather than the communication skills of the young adults might have played a significant role in the findings. Therefore, the students' levels of communication skills in their internet use do not seem to act as a factor. Regardless of their communication skills, individuals can easily take part in the activities provided by the internet. Thus, their inefficiencies in communication skills may not be an obstacle for them because students can behave in whatever way they want and can show any behavior that they may not show in face-to-face relationships. Thus, in line with the findings reported in the related literature, it could be thought that the factor that determines the content of the internet use could basically be the needs of individuals and their personality traits. For example, loneliness could be an important factor that leads to the internet addiction, yet the opposite could also be true. In addition, there could be various reasons for loneliness, and one of these reasons might be individuals' inefficiencies in communication skills. Therefore, it could be thought that inefficiency in communication skills may not determine the content of the internet use alone yet may have an effect on the content of the internet use together with certain personality traits. The present research findings might have occurred as a reflection of this. Hence, when examining the factors leading to the internet use and the differences in the internet use purposes, considering the level of the communication skills of the young and their personality traits together will help explain the cause of the present finding. Another reason why no significant relationship was found between the basic internet use purposes and communication skills could be the instruments used in the present study. In the study, the university students' communication skills were measured by the use of a self-report scale based on their own perceptions. This situation might have caused the students to evaluate themselves in different ways since they might have considered their behavior on the internet. The reason is that individuals who establish virtual relationships via the internet rather than face-to-face relationships and who are satisfied with the former are likely to perceive and evaluate their communication skills in different ways. This might have influenced the present research findings.

The research findings could be taken into consideration for future studies and for services to be given regarding the problematic internet use. In addition, the present study has some limitations. One limitation of the present study is that the basic internet use purpose was revealed through a close-ended question based on the students' perceptions. Moreover, the evaluations regarding the students' communication skills were obtained via a self-report scale based on their perceptions. Therefore, it is not possible to make causal deductions based on the research results. Thus, the replication of the study with different groups and methods would clarify the present research findings. Besides, in the present study, due to the limited number of the students using the internet to entertain themselves and to establish social relationships with unfamiliar people, no comparison was made with respect to the gender of the students. In fact, such a comparison will provide an opportunity to examine the relationship between communication skills and the problematic internet use and the internet use purpose with respect to the gender of the participants. It is expected that future studies will provide insights in this study area. Therefore, the findings of the present study should be taken into account considering the limitations stated. To conclude, it is seen that the use of the internet for the basic purpose of entertaining oneself and of establishing social relationships with unfamiliar people has a significant relationship with the problematic internet use symptoms.

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