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## An analysis of university students' internet use in relation to loneliness and social self-efficacy

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### Abstract

The aim of this study is to examine the relationship between university students' internet use and loneliness and social self-efficacy. The sample of the study consists of 507 university students (F=227; M=280). To determine students' degree of internet use, Young's (1998) 'Internet addiction Scale', which was adapted to Turkish by Bayraktar (2001) was used; to determine the degree of loneliness 'UCLA Loneliness Scale' was used; and to determine the degree of social self-efficacy, Smith-Betz's (2000) 'Social Self-efficacy Perception Scale', which was adapted to Turkish by Palancı (2002) was used. The results of the analysis suggest that there is a meaningful relationship between internet use and loneliness scores, whereas no relationship was observed with social self-efficacy scores. On the other hand, it has been found that students with a higher score on internet use have a higher degree of loneliness when compared to students who have moderate and low degree of internet use.

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In recent years, internet has become to be the most widely used and effective technological development. Internet refers to the communication system that allows computers all over the world to interact through a connection (Altun, 2005). In the world, there are around 420 million internet users, around 110 million computers with internet connection, about 35 million domain names and 25 million websites. In Turkey, there are around 2 million internet subscribers, about 4 million users, 27 thousands domain names and about 15 thousand web sites. In Turkey, 3% of all homes have computers. In Switzerland, this percentage is 35, in Denmark and Norway 27% and in Netherlands 20% (Turkish IT Council, 2010).

An increasing number of studies suggest that the mindless and blind usage of the internet, especially by children and teenagers, has some harmful effects which lead to some physical, social and psychological problems, affect developmental tasks in a negative way and cause addiction (Whang, Lee, Chang, 2003). It is being claimed that the excessive usage of internet has a negative influence on expressing oneself, setting up social relations and other skills needed for individual development (Bayraktar, 2001; Morgan and Cotten, 2003; Sanders, Field, Diego

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and Kaplan, 2000). Studies in this area show that there is a relationship between the excessive usage of internet and loneliness and depression; (Nalwa and Anand, 2003; Engelberg and Sjöberg, 2004; Morahan-Martin and Schumacher, 1997) along with gradually worsening friend and family relations (Sanders, Field, Diego, & Kaplan 2000).

Internet usage, which seems to have an impact on many psychological structures is expected to influence the individual's belief about their social self-efficacy, too. Bandura (1997) defines social self-efficacy as "the individual's self belief about their skills in interpersonal interaction situations". Social efficacy helps individuals to demonstrate their skills of social impulsivity, high performance in general social relations, participation in groups or activities, friendly attitude, and sharing with people (Conolly, 1989) by making individuals perceive themselves as successful in social relations (Bandura, 1977). Studies on social efficacy show that the degree of social efficacy is related to self image, increase in the perception of social acceptance and general self-esteem (Connolly, 1989); self-respect (Blake and Rust, 2000); depression (Jenkins, Goodness and Buhrmester, 2002); academic success (Bandura, Barbaranelli, Caprara and Pastorelli, 1999); problem-solving skills (Corcoran and Mallinckrodt, 2000); and stress and skills related to dealing with stress (Matsushima and Shiomi, 2003).

Even though the use of internet has positive effects on interpersonal communication, it is considered to cause harm to interpersonal relationships by preventing face to face interaction, as it is used and done alone. Thus, individuals who cannot establish social relations in real life will gradually get lonelier. Loneliness can be defined as the reaction to the lack of necessary social relations or despite social relations, the lack of warmth, intimacy and emotions (Weiss, 1973). Peplau and Perlman (1982), suggest that there are three main common points in the definition of loneliness:

- Loneliness is the result of an individual's limited social relations.
- Loneliness is a subjective experience and varies based on the perception of the individual. It can occur when alone or within a crowd.
- The experience of loneliness is not a pleasant situation, it disturbs.

As Young (1997) states, depressive people who fear social isolation and are in intensive need of acceptance use the internet to overcome difficulties of interpersonal relations in real life. However, in creating and strengthening social self-efficacy, the presence of social models and its resemblance to the person are very important (Bandura, 1994). Thus, it is expected that there is a relationship between internet use and social self-efficacy and loneliness. The aim of this study is to examine whether university students' loneliness and social self-efficacy changes based on their level of internet-use.

## **2. Method**

### *2.1. Subject sample*

The subject sample consists of 507 students (F: 227; M: 280) enrolled at the different faculties of Mersin University.

### *2.2. Data Collection Instrument*

*2.2.1. Social Self-efficacy Perception Scale:* The scale which was developed by Smith-Betz (2000) and adapted to Turkish by Palancı (2002) aims to elicit university students' and teenagers' self-efficacy perception based on a broad sociability definition. The scale is a 5-Point Likert Type scale, in which high scores refer to high social self-efficacy perception. In the scale' adaptation to Turkish, the internal consistency coefficient has been found to be .89. Test-

retest method has demonstrated that the reliability coefficient of the scale is .68. According to the analysis of the data collected in this study, the internal consistency coefficient of the scale is .92. In the validity analysis, Control Perception Scale (Özbay-Palancı, 1999) and Social Anxiety Scale (Özbay-Palancı, 2001) were used. As in the original scale, a negative correlation has been found with the Social Anxiety Scale ( $r = -.59$ ). Positive correlation ( $r=.40$ ) was observed with Control Perception, which is accordance with theoretical basis used to define self-efficacy.

**2.2.2. UCLA Loneliness Scale:** To determine teenagers' loneliness degree, the UCLA (University of California Los Angeles) Loneliness Scale developed by Russell, Peplau and Ferguson (1978) and revised by Russell, Peplau and Cutrona (1980) was used. The validity analysis of the original scale, as done for the Beck depression Scale, refers to a validity coefficient of .67. The internal consistency coefficient of the scale is .96, the reliability calculated by administering the test twice in two months has been found to be .73 (Russell, Peplau ve Curona, 1980). The Scale has been adapted to Turkish by Yaparel (1984) and Demir (1989). The validity method is based on Beck Depression Inventory and criteria, the correlation coefficient being .82. Reliability analysis has been done through test-retest technique. The reliability coefficient is .94. The highest score possible on the scale is 80, whereas the lowest score is 20. The higher the score on the scale, the higher the degree of loneliness (Erözkan, 2009).

**2.2.3. Internet Addiction Scale:** The Internet Addiction Scale is a six point Likert-type scale which was developed by Young (1998) and adapted to Turkish by Bayraktar (2001) aims at eliciting internet addiction in teenagers. Participants who receive a score above 80 are labeled as "Pathological Internet User". The ones with scores between 50-79 are labeled as "Limited Symptom Users", the ones with scores less than 50 are labeled as "Users Without Symptoms". Bayraktar (2001), in his study found the Cronbach alpha coefficient to be .91, and the Spearman-Brown value to be .87. In addition, in the score regression analysis, the model has been found to be statistically meaningful ( $f(11,29)= 26.15, p<.01$ ).

### 2.3. Data Analysis

To determine the relationship between students' internet use and loneliness and social self-efficacy, Pearson product-moment coefficient was calculated; to determine whether loneliness and social self-efficacy vary based on the level of internet use, One-way variance (ANOVA) was conducted. To identify the source for the difference between groups, Tukey HSD test was run. According to the average ( $\bar{X}= 42.53$ ) and standard deviation ( $ss=14.65$ ) of the scores the sample group received in the calculations of internet addiction level, "z score" has been found and dependent value calculated.

## 3. Findings

When the relationship between students' internet use and loneliness and social self-efficacy are examined, the correlation coefficient  $r= .24$  ( $p<.001$ ) based on students' internet use scores ( $\bar{X}=42.53$ ;  $ss=14.65$ ;  $n= 500$ ) and loneliness ( $\bar{X}=54.32$ ,  $ss=6.53$ ;  $n=500$ ) refers to a statistically significant relationship; whereas no statistically significant relation ( $r=-.062$ ,  $p>.05$ ) has been found between internet use and social self-efficacy scores ( $\bar{X}=85.42$ ;  $ss=18.81$ ;  $n=500$ ). This shows that while loneliness increases with the degree of internet use, social self-efficacy is not affected.

Besides, the variance analysis conducted with students' internet use levels and the score averages they received in the loneliness scale shows that there is a significant difference between students' loneliness and low, average and high internet use ( $F_{(2-497)}= 19.56, p<.01$ ). However, no meaningful difference has been observed between internet use and social self-efficacy ( $F_{(2-497)}= .370, p>.05$ ).

In order to identify the source for the difference in students' internet use and their average scores on loneliness, the Tukey HSD test was conducted. Findings suggest that students with high internet use levels have a higher degree of loneliness when compared to the ones with low (I-J= 4.3114; p .000) and average (I-J= 4.5461; p .000) internet use. No meaningful difference has been observed between loneliness and internet use when students with average and low internet use scores are compared (I-J= -.23470; p .944).

#### 4. Discussion

Internet provides people who have weak interpersonal interaction in real life with the dynamic social support groups they are in need of. By hiding oneself or changing personal information, one can get into contact with someone whom s/he has never seen before. They can share things in the cyber world which they do not share with their closest friends (Young, 1997). There is no guarantee that the social support established through internet is going to continue in real interpersonal interactions. Thus, as Young (1996) also states, social isolation, family problems, increase in divorce rates, failure in relationships are among the results of pathologic internet use. As a result, the ones who use internet to an excessive addiction degree maintain their satisfaction in their relations, yet socialization in real life might be severely harmed.

The results of this study show that the higher the use of internet by university students, the more lonely they feel. There are many studies which demonstrate that excessive use internet use leads to loneliness (Morahan- Martin, 1997; Nalwa and Anand, 2003; Engelberg and Sjöberg, 2004; Keser- Özcan and Buzlu, 2005). Ceyhan & Ceyhan (2008) found that in explaining loneliness, problematic internet use is a significant variable. Studies with teenagers show that internet addiction (excessive use) makes teenagers interact less with their peers, and their peer-relations are negatively affected (Harman, Hansen, Cochran and Lindsey, 2005). Besides, there are studies which demonstrate that teenagers who use the internet in excessive way suffer from peer-relations (Sanders, Field, Diego & Kaplan, 2000; Wang, Lee & Chang, 2003), have difficulties making close friends (Mesch, 2001), are isolated socially (Nalwa & Anand, 2003), have limited social skills and their relations with peers are affected (Harman, Hansen, Cochran & Lindsey, 2005). This supports the findings of this study, too. However, there is also evidence that internet use does not cause loneliness (Shaw & Gant, 2002; Eldeklioglu, 2008). Another finding of this study is that the degree of internet use does not affect social self-efficacy. In this respect, no studies have been found in the literature on the topic. It can be seen that teenagers' excessive use of internet leads to difficulties in establishing relations with peers and makes the individual lonelier. Consequently, psychological counselors working at schools should focus on groups counseling sessions geared towards developing interpersonal relations. Additionally, peer-training can help in terms of reliable internet use.

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