The role of self-esteem in Internet addiction: a comparison between Turkish, Polish and Ukrainian samples

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ABSTRACT – Background and Objectives: Internet use, which has become extremely important and essential in everyday life, often leads to problematic use. The main aim of our study was to answer the question of whether self-esteem is a predictor of Internet addiction.

Methods: The participants were 1,011 people from three countries: Turkey (N = 320), Poland (N = 350), and Ukraine (N = 341). Young’s Internet Addiction Test and Rosenberg’s Self-Esteem Scale were used.

Results: Results provide evidence that self-esteem is a predictor of Internet addiction and that this pattern is found across cultures.

Conclusions: People who approach themselves with heavy self-criticism and evaluate themselves as unworthy are more prone to Internet addiction. More research is also needed to provide a better understanding of the Internet addiction phenomenon and its relation to self-esteem, personality, and culture.

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Introduction

Internet use has become extremely important and essential in everyday life. Advancements in technologies make Internet use easier. Despite the omnipresence of Internet, making a distinction between Internet use and Internet addiction (IA) is necessary to understand this phenomenon. The concept of Internet addiction was first defined in terms of DSM-IV addiction criteria, which includes tolerance to using more, being anxious when not using, craving to use, and major functional impairments such as problems in relationships. The inability to limit Internet use as well as using the Internet in order to avoid everyday problems or to stimulate oneself are also identified as part of this concept. After being defined as an addiction, Internet addiction was identified as similar to impulse control disorders, which include failure to resist using the Internet and yielding to an urge. Its common features with pathological gambling have also been mentioned in the literature. On the other hand, in spite of the fact that Internet addiction is recognized as a serious health problem in some countries, such as South Korea, it was not classified as a diagnostic disorder in DSM-5, which might be due to the need for further research in the field and to the inconsistency in its definition. In this regard, further studies on Internet use are so valuable and important for describing its features, such as resistance to change in psychotherapy.

In the Internet addiction literature, time spent online is a variable that has been discussed extensively. For instance, a positive correlation was found between Facebook usage and Facebook addiction in a study of Taiwanese university students. Similarly, the higher is the tendency to continue online relationships, the higher is the probability of developing Facebook addiction. Internet access availability is also emphasized as an important factor behind Internet addiction.

In addition to time spent online, the role of personality has been explored in the Facebook addiction literature. Personality traits play a considerable role in human behavior. Desires, motivations, values, and needs are affected by personality as well. The associations between personality traits and Internet addiction have been examined extensively. However, the effect of self-esteem and the Big Five personality traits are examined in a relatively small number of studies. Lower self-esteem has been found to correlate significantly with Internet addiction and Facebook addiction. It has also been highlighted that Facebook applications that facilitate connections between individuals might affect self-esteem. However, in that particular study, the correlation between self-esteem and Facebook usage was not significant. Thus, there is no consensus about the role of self-esteem.

Culture shapes individuals’ behavior, and so there are cultural differences regarding Internet use. For instance, while Chinese students demonstrate self-reliance in using the Internet, British students use it for academic purposes. In another study, Chinese students reported more positive attitudes towards Internet use than British students. Therefore, understanding cultural differences is crucial for describing the phenomenon of Internet addiction, which is on rise in various cultures. The effect of culture on Internet addiction is still not clear.

Most studies concerning Internet addiction have only been carried out in one culture using a limited number of variables. Also, using representative samples is recommended to assess the addiction problem in a coherent way. Cross-cultural studies on Internet addiction and its relationships with personality traits have only examined a small
number of personality traits, such as neuroticism or self-esteem. The aim of the present study is to examine self-esteem in a sample of Turkish, Polish, and Ukrainian university students as well as to explore the roles of two other variables: daily Internet use and Internet use in years.

Methods

Participants and Procedure

The sample consisted of 1,011 participants (including 681 women, which was 67% of the sample), ranging in age from 13 to 56 years, with a mean age of 21.48 (SD = 4.76). They volunteered to participate in the study without any financial reward. The Turkish sample consisted of 320 participants aged 17-37 years, with a mean age of 21.94 (SD = 3.63); 66% were female. The Polish subsample consisted of 350 participants aged 13-38 years, with a mean age of 20.87 (SD = 2.87); 67% of them were female. The Ukrainian subsample was composed of 341 participants (66.9% female); their age ranged from 14 to 56 years, with a mean of 21.70 (SD = 6.77).

Instruments

The participants were recruited using the snowball procedure. The link to the questionnaires was sent to Facebook users with a request to spread the message among their Facebook friends. The participants fulfilled two criteria: they were Internet as well as Facebook users. They received no remuneration. We used the Turkish, Polish, and Ukrainian versions all of the scales.

Young’s Internet Addiction Test consists of 20 items (e.g., How often do you become defensive or secretive when anyone asks you what you do on-line? How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?). In the case of the Turkish adaptation of the IAT, psychometric properties were tested before the present study using data collected from 208 Turkish university students. Its internal consistency was .92 and item–total correlations ranged from .35 to .62. In Poland, we used the version adapted by Hawi, Błachnio, and Przepiórka17. In the Ukrainian sample, an unpublished version was administered to the participants. The IAT is a valid cosmopolitan one-factor instrument for measuring Internet addiction. Each item was rated on the following Likert scale: not applicable, rarely, occasionally, frequently, often, and always. Cronbach’s α was .91 for Turkey, .93 for Poland, and .85 for Ukraine.

To measure self-esteem, we administered Rosenberg’s Self-Esteem Scale (SES) as adapted into Polish18 and into Turkish19. In the Ukrainian sample, an unpublished version was used. The Rosenberg Self-Esteem Scale consists of 10 items with a four-point Likert scale and provides an overall evaluation of a person’s self-esteem (e.g., I feel that I have a number of good qualities). It’s Cronbach’s α was 0.84 for Turkey, 0.80 for Poland, and 0.78 for Ukraine.

Results

The descriptive statistics (means and standard deviations of the variables: self-esteem, Internet addiction, daily Internet use, and Internet use in years) for the Turkish, Polish, and Ukrainian samples are presented in Table 1. The mean Internet addiction scores were as follows: $M = 1.30$ (SD = 0.81) for Turkey, $M = 1.71$ (SD = 0.94) for Poland and $M = 2.29$ (SD = 0.59) for Ukraine.
Correlations between the variables are presented in Table 2. The longer was the daily Internet use time, the higher were the scores obtained in the Internet Addiction Test in the three countries. In the Ukrainian sample, the longer was the Internet use time in years, the higher were the scores in the Internet Addiction Test. Moreover, in each of the three samples, Internet addiction was negatively related to self-esteem. People with low levels of self-esteem scored higher in the Internet Addiction Test. Moreover, participants with a high level of Internet addiction used the Internet intensively every day (Pearson’s $r$ was $r = 0.36$ for Turkey, $r = 0.21$ for Poland, and $r = 0.13$ for Ukraine).

Cut-off scores were utilized for distinguishing addicted and non-addicted people in each country: scores from 0 to 30 – normal users; 31 to 49 – mild users; 50 to 79 – moderate users; 80 to 100 – severe users (Table 3). The number of normal users by country was as follows: $N = 210$ (65.5%) in Turkey, $N = 139$ (39.7%) in Poland and $N = 23$ (6.7%) in Ukraine. There were $N = 22$ (6.8%) moderate and intensive users in Turkey, $N = 53$ (15.1%) such users in Poland, and $N = 110$ (32.3%) in Ukraine. The highest percentage of people with risky Internet use habits or Internet addiction and the lowest percentage of people using the Internet in a normal way was found in Ukraine ($\chi^2 = 258.541$, $p < 0.001$).

Table 4 provides information on the results of regression analyses for Internet addiction. Hierarchical multiple regression analyses were performed to assess the impact of gender and self-esteem on Internet addiction.

Gender was entered in the first step and self-esteem in the second. Examination revealed that gender had significant positive beta weights ($\beta = 0.15$, $p = 0.007$) only in the Turkish sample, while self-esteem had significant negative beta weights in all the countries (Turkey: $\beta = -0.16$, $p = 0.004$; Poland: $\beta = -0.17$, $p = 0.002$; Ukraine: $\beta = -0.12$, $p = 0.033$).

**Discussion**

The main aim of the current study was to answer the question of whether self-esteem is a predictor of Internet addiction among people from three countries – Turkey, Poland, and Ukraine. Additionally, the role of gender was examined. These countries differ from each other in terms of the Internet penetration index: Turkey scored 46%, Poland 67%, and Ukraine 37% (see http://www.internetlivestats.com/internet-users-by-country/).

As regards gender differences, being male seems to be a predictor of Internet addiction only in Turkey. Similarly, in previous Turk-
ish studies males scored higher on Internet addiction than females\textsuperscript{20,21}. This pattern was also confirmed in Chinese research\textsuperscript{22}.

The study showed that self-esteem can be a predictor of Internet addiction. A previous study pointed out that meaning in life and self-esteem can serve as buffers to IA among people with a high level of impulsivity\textsuperscript{23}. People with a low level of self-esteem more often have a problem with excessive Internet use. People with a low level of self-esteem might refer to Internet use as an attempt to improve their self-esteem. However, in one of their studies, Sariyska \textit{et al.}\textsuperscript{24} tested the relationship between personality, self-esteem, and Internet addiction in four countries. They found that damaged self-esteem can be a predictor of Internet addiction, but this result was obtained only in three countries: Bulgaria, Germany, and Colombia. It is consistent with previous research, for instance\textsuperscript{25,26}. Also, there were negative associations between Internet dependency and self-esteem in Chinese\textsuperscript{22} or Iranian samples\textsuperscript{27}. It can still be questioned whether this pattern is universal and independent of culture.

Certain limitations have to be acknowledged in the current study. Foremost among them is the small number of countries represented in the sample. For a better explanation of this issue, more countries should be included. For a better portrait of the addicted person, more psychological variables should be examined in future research.

In conclusion, the level of self-esteem can be a good predictor of Internet addiction. People who evaluate themselves with heavy self-criticism and regard themselves as unworthy are more prone to Internet addiction. More research is also needed to provide a better understanding of the Internet addiction phenomenon and its relation to self-esteem, personality, and culture. As shown pre-
viously, a combination of psychological and pharmacological approaches is recommended for effective treatment\textsuperscript{28}. The presented investigations increase our knowledge and can be applied in assessment and therapy.

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