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Attachment and family functioning in patients with Internet addiction

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ABSTRACT

Objective: Although the Internet is used effectively in many areas of life, some users experience problems because of over-use due to a lack of control. The diagnostic criteria for Internet addiction include disruptions in family relationships, but adequate data on the attachment styles and family functioning associated with this condition are limited. This study aimed to investigate the attachment styles and family functioning of patients with Internet addiction.
Method: The sample included 30 male patients consecutively admitted to the Bakırköy Mental Health and Research Hospital Internet Addiction Outpatient Clinic, who were diagnosed in clinical interviews as having Internet addiction according to Young's (1998) criteria. Thirty healthy males who were matched with the experimental group in terms of sociodemographic characteristics were included as control subjects. Both groups provided sociodemographic data and completed the Beck Depression Inventory (BDI), the Experiences in Close Relationships Questionnaire-r (ECR-r) and the Family Assessment Device (FAD).
Results: Patients with Internet addiction had higher BDI scores ($P<.001$) and higher attachment anxiety subscores on ECR-r ($P<.001$) compared with those in the control group. Patients with Internet addiction evaluated their family functioning as more negative and reported problems in every aspect addressed by the FAD. Scores on the FAD behaviour control, affective responsiveness, and problem-solving subscales ($P<.05$) and on the FAD communication, roles, and general functioning subscales ($P<.001$) were significantly higher in the patient compared with the control group.
Conclusion: Patients with Internet addiction have more anxious attachment styles as well as prominent disruptions in family functioning. Thus, it may be important to evaluate the attachment styles and family functioning of patients with Internet addiction. Indeed, comprehensive treatment approaches including other family members may make important contributions to treatment success.

1. Introduction

People throughout the world have found the Internet to be a fast and easy was to gather information and to interact. However, some people lose control over their Internet-related behaviour, leading to difficulties in their daily lives and family relationships [1,2]. Such uncontrolled behaviour has been described as "Internet addiction" or "problematic Internet use", and this problem has been suggested to constitute a behavioural addiction [3,4]. Internet addiction has been defined as excessive preoccupation with the Internet, recurring thoughts about limiting and controlling use of the Internet, inability to eliminate cravings for Internet access, continued use of the Internet despite impaired functioning in various domains, spending increasingly more time on the Internet, and experiencing longings and cravings for the Internet even when it is unavailable [5].

Internet addiction disrupts family functioning by leading to problems in users' daily lives and relationships with family members [2,6,7]. Disturbed family functioning also renders individuals vulnerable to Internet addiction [8,9]. Yen et al. found that unhealthy family functioning and family conflict were related to Internet addiction in a large young sample [8]. Park et al. warned that domestic violence and unhealthy communication may enhance Internet addiction in young individuals and suggested that programs to prevent addiction should include patients' families [9].

Like other non-chemical addictions such as those involving gambling, sex, and shopping, the primary features of Internet addiction include preoccupation, emotional lability, tolerance, withdrawal, interpersonal conflict, and engagement in repetitive behaviours [10]. Several studies have found a relationship between insecure attachment styles and alcohol/drug addiction [11–13]. A recent study about the relationship between Internet addiction and attachment styles [14] found an association between anxious and avoidant styles and Internet addiction. This study aimed to investigate the family functioning and attachment styles of patients with Internet addiction.

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2. Methods

2.1. Subjects

This study included 30 males consecutively admitted to the Bakirkoy Mental and Neurological Diseases Hospital Internet Addiction Outpatient Clinic. Patients were diagnosed with Internet addiction by experienced clinicians according to Young's (1998) criteria. Patients under the age of 18 and those with severe mental or physical illnesses, comorbid schizophrenia, schizophrenia-like psychotic disorders, or bipolar affective disorder were excluded from the study. All patients included in the sample were capable of completing the self-report scales, and they all provided written informed consent. Control group was constituted with the people who had applied to our study announcement. We gave them the information of the study. After a psychiatric interview; 30 healthy males without any psychiatric disorder who have similar sociodemographic characteristics and who met the inclusion criteria of our study were included as the control group. They used internet for academic purposes and for work. They didn't have problematic Internet use for such internet facilities (e.g., gaming, sex). We obtained approval to conduct the study from the Hospital's ethics committee prior to the initiation of the research.

2.2. Instruments

2.2.1. Sociodemographic data

The investigators developed a form to obtain sociodemographic data from the subjects in keeping with the objectives of the study.

2.2.2. Internet Addiction Test (IAT)

This instrument uses a 20-item Likert-type scale scored from 1 to 5 [5]. One item was removed from the scale because it reduced the reliability in a Turkish validation study. The internal consistency reliability Chronbach's *alpha* was 0.89 [15].

2.2.3. Beck Depression Inventory (BDI)

This is a 21-item scale measuring the emotional, cognitive, somatic, and motivational symptoms of depression. Each item is scored on a scale from 1 to 3, and total scores are calculated by summing the scores on all items [16]. The cut-off score was set at 17 in a Turkish validity and reliability study. The internal consistency reliability Chronbach's *alpha* was 0.80 [17].

2.2.4. Experiences in Close Relationships-Revised (ECR-r)

This measure uses a 36-item Likert-type scale scored from 1 to 7, and it was adapted for Turkish samples by Selcuk et al. (2005). It was designed to assess individual differences in attachment-related anxiety (i.e., the extent to which people are insecure vs. secure about the availability and responsiveness of romantic partners) and attachment-related avoidance (i.e., the extent to which people are uncomfortable being close to others vs. securely depending on others). The ECR-r includes items that are coded in reverse (4, 8, 16, 17, 18, 20, 21, 22, 24, 26, 30, 32, 34 and 36). The mean of odd-numbered items reflects the anxiety score, and that of even-numbered items reflects the avoidance score [18,19].

2.2.5. Family Assessment Device (FAD)

The FAD, developed by Epstein, identifies the areas in which families can and cannot function. It consists of 60 questions organised into seven subscales: problem solving, communication, roles, affective responsiveness, affective involvement, behavioural control, and general functioning. Mean scale scores of 2 and above indicate impaired functioning. The Turkish adaptation study was conducted by Bulut (1990) [20,21].

2.3. Statistical analyses

SPSS 16 for Windows was used for all statistical analyses. Normal distribution of the data was evaluated with the Kolmogorov–Smirnov distribution test. *chi*-Square analyses were used in tests of categorical differences. Independent-sample *t* tests and analysis of variance were used to compare quantitative variables that were normally distributed. Mann–Whitney *U* tests and Kruskal–Wallis tests were used to compare quantitative variables that were not normally distributed. Relationships among scales were analysed using Person correlation analysis when data were distributed normally and Spearman correlation analysis when data were not distributed normally. In all tables, numeric variables are presented as medians (25–75%), and categorical variables are presented in terms of both numbers of observations and percentages (%). Significance levels were set at $P<.05$ and $P<.001$.

3. Results

The mean age of the patient group was 21.6 (18–20) years. The daily duration of Internet use was 7.5 (7–9) hours in the patient group and 2.7 ± 1.5 hours in the control group. The patient group contained 3 (10%) individuals who had completed 8 years of education, 25 (83.3%) with 12 years of education, and 2 (6.7%) with more than 12 years of education. The patient group included 27 (90%) single people, 2 (6.7%) married individuals and 1 (3.3%) who was divorced. In terms of employment status, 6 (20%) people in the patient group were unemployed, 20 (66.7%) were students, and 4 (13.3%) were employed. In the patient group, 10 (33.3%) entered treatment on their own initiative, whereas 20 (66.7%) were encouraged to get treatment by their relatives. One (3.3%) patient lived alone, and 29 (96.7%) lived with their families. Six patients' parents (20%) had divorced, and the parents of 24 (80%) had not. Two patients (6.7%) had a family history of Internet addiction, and 28 (93.3%) did not. The patient and control groups did not differ significantly in terms of age, level of education, or occupational status ($P>.05$).

A one-way analysis of variance on occupational status and the FAD behaviour control subscale revealed that those who were unemployed showed less behavioural control than did the students [$F(1–27)=5.35$, $P=.011$].

The results of Student's *t*-tests revealed significantly higher scores on the FAD affective involvement subscale among patients who sought treatment voluntarily than among those who were convinced by relatives to seek treatment ($P=.031$, $t=-2.284$, $df=26.685$). Additionally, patients with divorced parents scored significantly higher on the FAD affective responsiveness subscale than did other patients ($P<.001$, $t=4.651$, $df=24.758$). Moreover, patients with a history of self-injurious behaviour scored significantly higher on the FAD communication subscale ($P=.03$, $t=-3.197$, $df=28$) and the BDI ($P=.01$, $t=-2.746$, $df=28$) than did other patients.

Comparison of the scores of measurements between groups was shown in table 1. Relationship between BDI and FAD scores in the patient group was shown in Table 2.

No significant correlation was found between FAD subscales and the ECR-r anxious dimension in the patient group ($P>.05$).

We found a moderate ($r=0.560$) positive correlation ($P=.001$) between the FAD behaviour control subscale and the ECR-r avoidant dimension and a weak to moderate ($r=.467$) positive correlation ($P=.009$) between the FAD communication subscale and the ECR-r avoidant dimension in the patient group. No significant correlation was found between other FAD subscales and the ECR-r avoidant dimension in the patient group ($P>.05$) (Table 3).

The duration of Internet use was not significantly correlated with the IAT, FAD, and ECR-r scores in the patient group ($P>.05$).