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Extended Abstract

The Role of Attachment Styles, Peer Relations, and Affections in Predicting Internet Addiction *

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Abstract

The role of attachment styles, peer relations and affections in predicting Internet addiction is scrutinized in this study. It has been conducted with a total of 2,440 volunteer adolescents, out of which 1,588 are females and 852 are males, all between 14 and 19 years old and attending various high schools in Elazığ's city center. In this study, the short form of the young Internet addiction test, the Relationship Scale Questionnaire, the Friendship Qualities Scale, and the Positive and Negative Affect Scale were used as data collection tools. Collected data were analyzed through correlational, multiple, and stepwise regression analyses. Study findings demonstrate that the independent variables of attachment styles, peer relations, and affections explain approximately 19% of Internet addiction. Furthermore, Internet addiction among adolescents was observed to be predominantly predicted by the variables of negative affection, conflict, and secure attachment. Attachment styles, peer relations, and affections were determined to predict Internet addiction, and the contribution of affections in this prediction is striking. The results are discussed within the framework of the literature, and recommendations have been given for future studies and applications.

Keywords

Attachment styles • Peer relations • Affection • Internet addiction • Adolescent

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Adolescence is considered as a crucial period with regards to attachment (Bartholomew & Horowitz, 1991), peer relations (Bukowski & Sippola, 2005), affection (Steiner & Hall, 2015), and behavioral-chemical addictions (Donohue, Urgelles, & Fayeghi, 2013; Griffiths, 2005). Adolescent attachment styles not only critically affect adolescence but also future developmental periods. Adolescent attachment styles are a phenomena considered with respect to the past, present, and future (Bartholomew & Horowitz, 1991). Along with past experiences during adolescence, social interactions and communication are also important indicators of what kind of attachment style the adolescent will develop. Peers constitute a crucial dimension of the interactions and communications in adolescence. In other words, an adolescent primarily is influenced by peer groups. Peer relationships during adolescence reach a more important point than all of an adolescent's other relationships (Demir, Baran, & Ulusoy, 2005). Insecure attachments (Cooper, Shaver, & Colins, 1998; Laible, 2007) and negative peer relationships (Dykas, Ziv, & Cassidy, 2008) during adolescence are said to generate negative affection. During this period, affections are critically affected not only by attachment styles and peer relationships but also by the developments and changes that take place during adolescence. Hence, adolescence is considered as an unsteady period with regards to affections. Outbursts of anger, emotional instability, and excessive emotions are specific features of adolescence (Steiner & Hall, 2015). Adolescence is also considered as a critical period for risky behaviors. Risk-taking and excitement-seeking behaviors increase during adolescence. These increase an adolescent's tendency towards addiction (Donohue et al., 2013; Griffiths, 2005). Internet addiction is considered as a common behavioral addiction during adolescence (Blinka et al., 2015). Internet addiction is a common problem due to the fact that it's not prohibited, the advantage-disadvantage balance is based on purpose of use, and it's easily accessible (Griffiths, 2005; Young, 2010).

Internet became a significant part of daily life due to the possibilities it offers, such as information sharing, communication, and research (Yellowlees & Marks, 2007). On the other hand, as a result of excessive Internet use, users have been identified as becoming isolated with an increase in their depression symptoms, a decline in social relationships, and a heightened risk of Internet addiction (Kraut et al., 1998; Nalwa & Anand, 2003; Savcı, 2016; Savcı & Aysan, 2016; Weinstein & Lejoyeux, 2010; Whang, Lee, & Chang, 2003). Thus, along with the benefits of the Internet, excessive use of the Internet has been stressed as triggering certain psychosocial problems as well (İkiz, Savcı, Asıcı, & Yörük, 2015). Internet addiction can be defined as a disorder characterized by excessive Internet use resulting in serious disorders in psychosocial functions, inability to satiate the desire to use the Internet, and withdrawal symptoms such as extremely nervous and aggressive behavior (Arisoy, 2009; Kalaitzaki & Birtchnell, 2014). Internet addiction, due to its destructive and exhaustive effects, has directed researchers to study the results of Internet addiction and its related risk

factors. Internet addiction is influenced by several factors. However, only the effects of attachment styles, peer relations, and affections on Internet addiction are examined within the scope of this study. In the literature, attachment styles, peer relations, and affections are considered as critical factors that affect Internet addiction. [Shin, Kim, and Jang \(2011\)](#) emphasized attachment styles; [Zhu, Zhang, Yu, and Bao \(2015\)](#), peer relations; and [Odabaşoğlu, Öztürk, Genç, and Pektaş \(2007\)](#), affections that affect Internet addiction.

[Bowlby \(1973\)](#) explained attachment as the intense affectionate ties that an individual develops towards people who are significant to them. [Bartholomew and Horowitz \(1991\)](#) proposed a four-item model based on secure, dismissive, fearful, and preoccupied attachment. Individuals with secure attachment have positive cognitive schemes towards themselves and others, while individuals with fearful attachment have negative cognitive schemes towards themselves and others. Individuals with preoccupied attachment have negative cognitive schemes towards themselves while having positive cognitive schemes towards others, and individuals with dismissive attachment have positive cognitive schemes towards themselves and negative cognitive schemes towards others ([Bartholomew & Horowitz, 1991](#)). Studies have identified a negative relationship between Internet addiction and secure attachment, as well as a positive relationship between Internet addiction and non-secure attachment (dismissive, fearful, and preoccupied; [Lin, Ko, & Wu, 2011](#); [Morsünbül, 2014a](#); [Shin et al., 2011](#); [Şenormancı, Şenormancı, Güçlü, & Konkan, 2014](#)). Individuals who feel uncomfortable and insecure in interpersonal relationships and interactions tend to use online environments to communicate ([Papacharissi & Rubin, 2000](#)). [Greenfield \(1999\)](#) stated that individuals with low perceptions of self-efficacy who display shy, fearful, and anxious behaviors use online environs more frequently. Moreover, online environs minimize the threats such as shyness, fear, and anxiety that real social settings cause. Thus, individuals with these problems use Internet environments quite frequently in interpersonal relationships ([Lee & Stapinski, 2012](#); [Shepherd & Edelman, 2005](#)). People also have the opportunity to hide their real personality and disguise themselves as who they want to be. This leads people who perceive themselves as unsuccessful in interpersonal relationships to spend excessive time in online environments ([Caplan, 2007](#)).

[Morsünbül \(2014b\)](#) emphasized that Internet addiction in adolescents is related to identity styles. According to [Morsünbül \(2014b\)](#), individuals process information about identity areas and feedback about their own identities through online environs. Similarly, [Israelashvili, Kim, and Bukobza \(2012\)](#) explained the relationship between adolescent Internet usage and identity styles through the fact that as opportunities to go online increase, adolescents tend to investigate their identities through online environs. Internet usage in adolescents increases each day in order to avoid actual

social relationships, conceal actual identities, do research on identity styles, and get feedback about one's own identity style. However, excessive Internet use, which can harm functionality, can also cause Internet addiction (Yen et al., 2012).

Quality peer relations among adolescents play a significant role in developing social skills and self-efficacy (Ingersoll, 1989), reducing risky behavior (Engels & ter Bogt, 2001), providing and sustaining emotional adaptability (Dykas et al., 2008), and reducing the risk of Internet addiction risk (Kim & Chong, 2005). In other words, one can argue that adolescents with quality peer relations have increased social skills, self-efficacy, and social and emotional adaptability, as well as a decrease in Internet addiction and risky behaviors. Milani, Osualdella, and Di Blasio (2009) stressed that having poor interpersonal relations is a risk factor for Internet addiction. In fact, Amichai-Hamburger and Ben-Artzi (2003) stated that lonely individuals are a risk group for Internet addiction. The Internet is used by adolescents primarily to communicate and interact with peers or peer groups. This indicates that Internet addiction in adolescents contributes to peer relations (Gross, 2004). However, Rehm (2003) emphasized that constantly meeting social needs through online environs causes social deviance. Similarly, Kearney (2012) underlined that the Internet facilitates communication, yet fails to contribute to significant interpersonal relationships. According to Kearney (2012), online communication lacks certain presumptions of actual interpersonal relationships. Thus, online environs prevent entering into a significant or sustainable relationship. Zhu et al. (2015) emphasized that negative peer relationships increase the risk of addiction to Internet games. Excessive peer deviance increases addiction to Internet games in adolescents. Peers' deviant behaviors, such as fighting, skipping school, theft, smoking, and drinking, increase the risk of addiction to computer games (Zhu et al., 2015). Thus, one can suggest that adolescents who have friends with risky and problematic behaviors are in a high-risk group for addiction to Internet games. Zorbaz and Dost (2014) stated that adolescents who lack peer relationships tend to use the Internet excessively while fulfilling their social needs.

During adolescence when emotional change and development is rapid, emotions play a critical role in an adolescent's life. In fact, affection intensity and disorders increase significantly in this period (Steiner & Hall, 2015). Affects are scrutinized into two categories, positive and negative affections. Positive affection (affects such as activeness, enthusiasm, and vigilance) and negative affection (affects such as sadness, fear, guilt, and anger) are used in diagnosing disorders such as psychological problems, depression, and anxiety (Chorpita & Daleiden, 2002; Clark & Watson 1991; Watson, Clark, & Tellegen, 1988). Furthermore, individuals with negative affection have been determined to demonstrate more Internet-addiction symptoms while individuals with positive affection show less (Kraut et al., 2002; Vidyachathoth,

Kumar, & Pai, 2014). Adolescents use the Internet to cope with depressive symptoms and decrease psychological unease (Tsai & Lin, 2003). However, Yen et al. (2008) stated that adolescents use the Internet as a tool in coping with emotional problems. Two out of the eight items Young (1998) suggested for diagnosing Internet addiction are related to the effects of negative emotions on Internet usage. Young (1998) stated “using the Internet to avoid problems or to withdraw from negative emotions (i.e., despair, guilt, collapse, anxiety)” and “experiencing uneasiness, collapse, or anger when Internet usage decreases or is totally cut” (as cited in Şenormancı, Konkan, & Sungur, 2010) are the two criteria in diagnosing Internet addiction. Thus, one can conclude that emotions and Internet addiction mutually affect each other.

A review of the literature reveals no studies that have scrutinized the role played by attachment styles, peer relations, and affects on predicting Internet addiction. Assessing risk factors for Internet addiction based on order of significance is considered contributable to research on preventing and defending against Internet addiction. Thus, the present study will shed light on which structures should be prioritized for intervention in studies on prevention of and protection from Internet addiction. Therefore, it is the objective of this study to examine the contributions of attachment styles, peer relations, and affects in predicting Internet addiction. Hence, attachment styles, peer relations, and affections during adolescence are considered to be crucial factors in adolescents’ development. Therefore, the extent to which these factors affect Internet addiction is very crucial. Attachment styles, peer relations, and affections are significant indicators of an adolescent’s social and emotional development. Detecting which indicator among these constitutes a risk factor for Internet addiction will provide new perspectives for precautions against Internet addiction. This study aims at examining the contributions of attachment styles, peer relationships, and affections on predicting Internet addiction.

Method

Study Group

This study was conducted with 2,701 students attending 12 different high schools in Elazığ’s city center. Excluded from the study were 261 students who stated they never used the Internet. Therefore, analyses were conducted on the data obtained from 2,440 students who utilize the Internet every day. The participating students are between 14 and 19 years old; 65.1% are female ($n = 1588$), and 34.9% are male ($n = 852$). Of the students, 43.1% (1,051) use the Internet less than one hour, 38.8% (947) use it between 1-3 hours, 10.9% (265) use it between 4-6 hours, and 7.3% (177) use it 7 hours or more every day.

Data Collection Tools

Young Internet Addiction Test-Short Form (YIAT-SF). The YIAT-SF, developed by Young (1998) and adapted as a short form by Pawlikowski, Altstötter-Gleich, and Brand (2013), is a 5-point Likert-type scale containing 12 items. The Turkish adaptation of YIAT-SF was conducted by Kutlu, Savcı, Demir, and Aysan (2016) for both adolescents and university students. As a result of exploratory factor analysis (EFA), the scale was determined to consist of only one factor for both university students and adolescents. The single-factor structure of the scale was tested with confirmatory factor analysis (CFA). CFA fit-index values were identified to demonstrate good fit for both university students ($\chi^2 = 144.930$, $df = 52$, $RMSEA = .072$, $RMR = .70$, $GFI = .93$, $AGFI = .90$, $CFI = .95$, $IFI = .91$) and adolescents ($\chi^2 = 141.934$, $df = 51$, $RMSEA = .080$, $GFI = .90$, $CFI = .90$, $IFI = .90$). The Cronbach alpha reliability coefficient was .91 for university students and .86 for adolescents. YIAT-SF test-retest reliability was found as .93 for university students and .86 for adolescents. High scale scores reflect high Internet addiction. There are no reverse scored items in the scale.

Relationship Scale Questionnaire (RSQ). To measure the attachment styles of adolescents, RSQ, developed by Griffin and Bartholomew (1994) and adapted to Turkish by Sümer and Güngör (1999) as a 7-point Likert-type scale with 17 items, was utilized. RSQ can be used both as four continuous styles and categories based on the objective and the analysis' hypotheses. EFA demonstrated that RSQ contains four factors: secure, dismissive, fearful, and preoccupied. Reliability coefficients of the scale for all dimensions vary between .54 and .78 as determined by the test-retest method. Internal consistency coefficients for the RSQ range between .27 and .61.

Friendship Qualities Scale (FQS). Developed by Bukowski, Hoza, and Boivin (1994) and adapted to Turkish by Atik, Çoban, Çok, Doğan, and Karaman (2014), FQS contains 22 items and five sub-dimensions. The 5-factor structure of the scale was scrutinized using CFA. CFA results show that the 5-factor peer-relations model has good goodness-of-fit values ($\chi^2/df = 669.12/199$, $p = .00$, $RMSEA = .063$, $CFI = .97$, $GFI = .88$, $NNFI = .96$). The scale's Cronbach Alpha internal-consistency coefficient for the companionship sub-dimension is .66, .66 for the conflict sub-dimension, .86 for the help sub-dimension, .71 for the security sub-dimension, and .83 for the closeness sub-dimension; the internal consistency coefficient for the whole scale has been identified as .85. Four items were reverse coded in the scale. High scores reflect high levels in the related sub-dimension and low scores reflect low levels.

Positive and Negative Affect Scale. The Positive and Negative Affect Scale, developed by Watson et al. (1988) and adapted to Turkish by Gençöz (2000), includes

two sub-dimensions for measuring an individual's positive and negative emotions. The scale contains 20 items that identify 10 positive and 10 negative affects. The internal consistency coefficient for the positive affect sub-dimension of the scale is .83 and .86 for the negative affect sub-dimension of the scale. Scores that can be received from the scale's sub-dimensions vary between 10 and 50. High scores obtained from the positive affection subscale indicate a high level of positive affect, whereas high scores obtained from the negative affection subscale indicate a high level of negative affect.

Data Collection

The measurement tools used in the study were implemented in the students' classrooms by the researcher with the permission of Elazığ Provincial Directorate of National Education. Study data were collected from students studying in the high schools (Science High School, Anatolian High School, Vocational and Technical High School, Religious Vocational High School, Social Sciences High School, Sports High School, and Fine Arts High School) in Elazığ during the 2015-2016 academic year. Approval from the ethics committee was not received for this study, but the study was conducted according to the Helsinki Declaration. The implementation was carried out in each classroom by the researchers, who read the Informed Volunteer Content Form.

In this respect, information about the study purpose, implementation method, confidentiality, and voluntary principles was given in the classroom setting. Data were collected from adolescents who chose to participate in the study after these explanations. The implementation took 35-40 minutes. The data sets were examined after the implementation; incomplete, imprecise, and incorrect data were eliminated from the study and the analyses were conducted on the remaining data.

Statistical Analysis

The study data were examined before the analyses with respect to single and multiple normality. With this respect, the skewness and kurtosis coefficients, in addition to multicollinearity, were examined. Based on the analyses the skewness and kurtosis values related to the dependent and independent variables were observed to be between the accepted range (between -1 and +1). Whether or not a multicollinearity problem existed in the data set was examined by taking the correlation values of the dependent and independent variables into consideration. The binary correlations between the dependent variable and independent variables did not cause a multicollinearity problem (all binary correlations are $r < .90$). A multicollinearity problem occurs when the correlation between variables is greater than .90 (Çokluk, Şekercioğlu, & Büyüköztürk, 2012). Finally, the VIF and tolerance

values of the independent variables were not observed to cause any multicollinearity problem. The VIF value for each independent variable was observed to be below 10 and the tolerance value above .10. In this respect, it is evident that multicollinearity has occurred (Çokluk et al., 2012). When all these values are taken into consideration, the single and multiple normality premises of the study data are evidently met without any multicollinearity problems. For this reason, study data were analyzed through parametric statistical methods.

The relationships between the dependent variable and the independent variables were initially examined using the Pearson product-moment correlation coefficient. Then the effect of each independent variable on the dependent variable was examined through multiple-regression analysis. Finally, the predictive powers of the independent variables, which were observed to have significant effects on the dependent variable, were examined through stepwise regression analysis. A value of $p < .01$ was found at every stage of this study.

Findings

In this section, binary correlations between the dependent variable and independent variables are given first, then the multiple regression analysis results related to the effects of each dependent variable on the dependent variable are given. Finally, the stepwise regression analysis results related to the predictive power of each independent variable, which are observed to have significant effect on the dependent variable, are given. In the stepwise regression analysis, the independent variables were put in order according to their effect size from the multiple regression analysis and included in the process. Internet addiction correlated positively with preoccupied attachment ($r = .16$), dismissive attachment ($r = .14$), fearful attachment ($r = .06$), companionship ($r = .09$), conflict ($r = .25$), and negative affection ($r = .32$), and correlated negatively with secure attachment ($r = -.13$), security ($r = -.06$), closeness ($r = -.08$), help ($r = -.10$), and positive affection ($r = -.11$). Multiple regression analysis was applied to examine how individual contributions of the secure, dismissive, fearful, and preoccupied attachments of adolescents; their peer relations, including companionship, conflict, security, help, and closeness; and their affects, including negative and positive emotions predict Internet addiction.

The independent variables in the model were observed to significantly predict Internet addiction ($R = .43$, $R^2 = .19$, $p < .01$). t -Test results related to the significance of regression coefficients demonstrated that the most significant contribution in predicting Internet addiction belonged to negative affection, followed by the variables of companionship, conflict, dismissive attachment, secure attachment, preoccupied attachment, positive affection, closeness, and help, respectively. On the other hand,

the variables of fearful attachment and security were observed to not contribute to the model significantly. Independent variables which were observed to have significant predictor effects on the dependent variable in the multiple regression analysis were included in the stepwise regression analysis by being put in order from the greatest to least effect. Thus, negative affection was included in the analysis, first followed by the variables of companionship, conflict, dismissive attachment, secure attachment, preoccupied attachment, positive affection, closeness, and help.

The R^2 values given for the negative affection independent variable explain 10% of the total variance, $F(1, 2,438) = 273.97, p < .01$. By adding the independent variable of companionship to the second phase of analysis, the total explained variance increased to 11%, $F(2, 2,437) = 150.22, p < .01$. When the independent variable of conflict was added in the third phase, it increased to 14%, $F(3, 2,436) = 129.85, p < .01$. By adding the independent variable of dismissive attachment in the fourth phase, the total explained variance increased to 15%, $F(4, 2,435) = 103.55, p < .01$. When adding the independent variable of secure attachment in the fifth phase, it increased to 16%, $F(5, 2,434) = 90.88, p < .01$. With the addition of the independent variable of preoccupied attachment in the sixth phase, it increased to 17%, $F(6, 2,433) = 81.07, p < .01$. When the independent variable of positive affection was added in the seventh phase, total explained variance increased to 18%, $F(7, 2,432) = 74.03, p < .01$. With the addition of the independent variable of closeness in the eighth phase, it increased to 19%, $F(8, 2,431) = 69.05, p < .01$. When adding the independent variable of help in the final phase, the total variance explained increased to 19% $F(9, 2,430) = 62.29, p < .01$, with a .002 increase in R^2 . Furthermore, the most significant predictive contribution came from negative affection, followed by conflict, secure attachment, closeness, companionship, preoccupied attachment, positive affection, dismissive attachment, and help, respectively.

Study findings indicate that some correlational and regression values were statistically significant, though they had relatively low values. This was thought to be due to the wide sample size. Correlational and regression values are responsive to sample size. However, it would be misleading to explain study findings based only on sample size. Study data were randomly divided by two, than four, so as to determine to what extent the data are affected by sample size. The binary correlation between the dependent variable and the independent variables was analyzed using the Pearson product-moment correlation analysis in both stages. According to the analysis, the majority of correlations resulting from the data being divided in half (1,220 data) and into fourths (610 data) were observed to be higher than the correlation observed from the overall data (2,400 data). When these analyses are considered as a whole, it is evident that the correlation values between the dependent variable and independent variables were not significantly affected by the sample size.

Results, Discussion, and Recommendations

In the present study conducted to investigate the contribution of attachment styles, peer relations, and affects for predicting Internet addiction, attachment styles, peer relations, and affects were observed to have significant predictive effects on Internet addiction. Stepwise regression analysis was conducted to determine which independent variable had a more significant predictive effect on Internet addiction, and analysis results showed that the most significant contribution came from negative affection, followed by the independent variables of conflict, secure attachment, closeness, companionship, preoccupied attachment, positive affection, dismissive attachment, and help, respectively. Study findings demonstrate that secure attachment, positive affection, closeness, and help negatively predict Internet addiction; negative affection, companionship, conflict, dismissive attachment, and preoccupied attachment positively predict it.

The most significant contribution in predicting Internet addiction came from negative affection, which predicted Internet addiction positively. Mood disorders/substance addiction is one of the dual pathologies with the most prevalent comorbidity. In other words, mood disorders like depression and anxiety are considered to be a significant criterion in diagnosing addiction (Brooner, King, Kidorf, Schmidt, & Bigelow, 1997; Torrens & Rossi, 2015). In fact, studies have demonstrated that Internet addiction meets the criteria of a mood disorder (Black, Belsare, & Schlosser, 1999). In a different study, one of three Internet-addicted individuals was determined to complain of depression (Odabaşoğlu et al., 2007). Researchers stress that Internet addicts use the Internet as an escape from negative affections (Morahan-Martin, 2005, 2008; Wang, 2001; Yang & Tung, 2007). Related findings in the present study are consistent with certain research results (Kraut et al., 2002; Vidyachathoth et al., 2014).

Emotions are closely related to Internet usage habits and Internet addiction. However, mood disorders are considered to pose a risk for Internet addiction. Ybarra, Alexander, and Mitchell (2005) stated that when compared with adolescents who have no symptoms of depression, adolescents with depressive symptoms are more apt to talk with strangers in online environs, communicating and expressing oneself through the Internet there. Morahan-Martin and Schumacher (2000) referred to the Internet as the Prozac (an antidepressant containing fluoxetine) of social communication for pathological users. Individuals with pathological Internet-usage tendencies use the Internet to meet new people and gain emotional support. In other words, pathological users satisfy their emotional needs through online settings. This leads to individuals with pathological Internet-usage tendencies to have more fun and spend more time on the Internet than individuals with normal Internet-usage tendencies (Morahan-Martin & Schumacher, 2000).

Findings from the current study show that adolescents' attachment styles provide significant contributions in predicting Internet addiction. Secure attachment predicts Internet addiction in the negative direction and has been determined to be the third most significant predictor of Internet addiction. Non-secure attachment (dismissive attachment and preoccupied attachment) predicts Internet addiction in the positive direction. Securely attached adolescents have a high sense of control and can resist stressful conditions. In other words, securely attached adolescents are aware that their experiences are under their control (Bartholomew & Horowitz, 1991). Furthermore, securely attached adolescents are observed to have advantages in social skills over adolescents who are not securely attached (Laible, 2007). When securely attached adolescents need help, they ask help from their families or friends. Thus, one can argue that securely attached adolescents act with more functional coping strategies (Morsünbül & Çok, 2011). On the other hand, non-securely attached adolescents are oriented towards risky behaviors in crisis situations, as opposed to functional coping strategies (Cooper et al., 1998). Adolescents without secure attachment have broken social relationships and low-level social skills (Laible, 2007). Furthermore, adolescents without secure attachment are identified as having low levels of perceived self-control (Tangney, Baumeister, & Boone, 2004). Thus, individuals with low social skills who are inclined towards risk-taking behavior, prone to using non-functional coping strategies, and have low levels of perceived self-control have a higher risk of Internet addiction (Cao, Su, Liu, & Gao, 2007; Engelberg & Sjöberg, 2004; Ko, Yen, Liu, Huang, & Yen, 2009; Milani et al., 2009). Related findings in the present study are consistent with some research results (Lin et al., 2011; Morsünbül, 2014a; Shin et al., 2011; Şenormancı et al., 2014). Thus, it is possible to explain the effects of attachment styles on Internet addiction through social skills, risk behaviors, coping strategies and self-control.

Another finding of the present study demonstrates that peer relations in adolescents provide a significant contribution for predicting Internet addiction. Based on the findings, the Friendship Qualities Scale's sub-dimension of companionship predicted Internet addiction positively. Another sub-dimension of this scale, conflict, predicted Internet addiction positively and was the second most significant predictor of Internet addiction after negative affection. The sub-scales of closeness and help predicted Internet addiction negatively.

Contrary to expectations, this study found that as the Internet addiction level in an adolescent increases, the level of companionship with peers increases as well. Gross (2004) determined that adolescents mostly use the Internet to chat with their close friends, and this fact contributes to the companionship of adolescents with their peers. In other words, adolescents use the Internet to communicate with their peers. The Internet, which provides multifunctional communication possibilities, has become

a tool that reinforces adolescent companionship with their peers (Subrahmanyam & Lin, 2007). On the other hand, Ceyhan and Ceyhan (2014) identified that, as an adolescent's time spent using the Internet increases, problematic Internet use levels also increase. In fact, excessive Internet use is considered as one of the criteria of Internet addiction.

Griffiths (1998) considers interpersonal conflicts as a criterion for Internet addiction. In fact, the findings of the present study point in the same direction. When considering that affinity and help predict Internet addiction negatively, Chen, Li, and Long (2007) stressed that Internet addiction prevalence is high in students with a low perception of social support. The presence of individuals that people can trust, who they believe value them and who pay attention, corresponds to social support (Batıgün & Kılıç, 2011). Thus, one would expect that social support, which includes structures such as affinity and help, should have a negative relationship with Internet addiction.

The present study is limited to adolescents attending high schools in Elazığ's city center. The effects of attachment style, peer relations, and affects on Internet addiction were scrutinized in the study. Thus, different studies could examine the effects of different variables on Internet addiction. The study was conducted with self-reporting type scales and certain limitations on the use of such scales have been reported in the literature (Dağ, 2005). In this study, correlation and regression values between the dependent variable and independent variables were observed to be low as well as statistically significant. These values may have been affected by the sample size. Thus, a big sample size may be considered as a limitation. In the following stages, the predictive powers of socio-demographic variables such as age, gender, daily Internet-use duration, and purpose of Internet use should be examined over Internet addiction.

Based on the study findings:

- The effects of negative emotions on Internet addiction are significant. Thus, it is considered that psychological counseling services given at schools should focus on activities that would improve adolescents' skills at organizing emotions and coping with negative affection.
- Insecure attachment styles for adolescents constitute a risk for Internet addiction. Thus, the effects of attachment in adolescence on risky and problematic behaviors should be taken into consideration.
- Adolescents should be motivated towards real social settings that would develop peer relations. Although there are results in the literature that the Internet develops and improves peer relations, it should be kept in mind that the Internet is a virtual world.

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