# A Descriptive Study on Vocational College Students' Internet Addiction and Various Satisfaction Conditions[1]

Tolga ERDOGAN[2], Osman Gazi YILDIRIM[3], Harun CIGDEM[4]

**Abstract:** The recent developments in information technologies have influenced many aspects of our lives. While internet has facilitated our lives in various areas, it has concurrently raised some unfavorable issues like excessive use and preoccupation. Especially youngsters and university students are vulnerable to adverse effects of excessive internet use. Excessive use of the Internet causes them to neglect other areas of their lives, to fail in school and work, and to increase their dissatisfaction with life as a result of isolation and loneliness. For this reason, internet addiction is a problem that deserves further analysis, especially because of the damage to the younger generations. The purpose of this study is to compare internet addiction levels of students based on their satisfaction status and to analyze the relationship between students' internet addiction and life satisfaction. The participants comprised 404 post-secondary students enrolling at a vocational college. "Internet Addiction Test" and "the Life Satisfaction Scale" were used as data collection tools. Descriptive (mean, percentage) and inferential statistics (independent samples t test, correlation and regression) were utilized for data analysis. The results showed that internet addiction scores of the students who were satisfied or not satisfied with their schools; family relations and social life have changed significantly. In addition, a weak but significant relationship was found between internet addiction and life satisfaction.

**Keywords:** Internet addiction, life satisfaction, school satisfaction, vocational college.

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## Meslek Yüksekokulu Öğrencilerinin İnternet Bağımlılıkları ile Çeşitli Memnuniyet Durumları Üzerine Tanımlayıcı Bir Çalışma

**Öz:** Bilgi teknolojilerindeki gelişmeler hayatımızın birçok yönünü etkilemiştir. İnternet yaşamlarımızı kolaylaştırırken, internetin aşırı kullanımı bazı olumsuz sorunları da beraberinde getirmektedir. İnternetin aşırı kullanımı özellikle gençlerin ve üniversite öğrencilerinin hayatlarının diğer alanlarını ihmal etmelerine, okulda ve işte başarısız olmalarına, yalnız kalmalarına ve yalnızlığın bir sonucu olarak yaşamdan duyulan memnuniyetsizliklerinin artmasına neden olmaktadır. Bu nedenden ötürü internet bağımlılığı, özellikle genç nesillere vereceği zararlar nedeniyle üzerinde araştırma yapılması gereken bir sorundur. Bu çalışmanın amacı, öğrencilerin internet bağımlılık düzeylerini çeşitli memnuniyet durumlarına göre karşılaştırmak ve öğrencilerin internet bağımlılıkları ile yaşam doyumları arasındaki ilişkiyi incelemektir. Çalışmanın katılımcılarını bir meslek yüksekokulunda öğrenim gören 404 öğrenci oluşturmaktadır. Veri toplama aracı olarak "İnternet Bağımlılığı Testi" ile "Yaşam Memnuniyeti Ölçeği" kullanılmıştır. Veri analizi için tanımlayıcı istatistikler (ortalama, yüzde) ve çıkarımsal istatistikler (bağımsız örneklem t testi, korelasyon ve regresyon) kullanılmıştır. Sonuçlar, öğrencilerin internet bağımlılık puanlarının okullarından, aile ilişkilerinden ve sosyal yaşamlarından memnun olma veya olmamalarına bağlı olarak anlamlı derecede değiştiğini ortaya koymuştur. Ayrıca internet bağımlılığı ile yaşam doyumu arasında zayıf ancak anlamlı bir ilişki bulunmuştur.

**Anahtar Kelimeler:** İnternet bağımlılığı, yaşam doyumu, okul memnuniyeti, meslek yüksekokulu.

# Introduction

In the last decade, the Internet has facilitated our lives by making information available everywhere and in any format and creating faster and cheaper communication opportunities with different people around the world. On the other hand, it has also caused a growing number of people to spend excessive amount of time using it. Since internet is in the center of people's lives now, problematic internet use is a growing social problem already being debated worldwide (Armstrong, Phillips & Sailing, 2000; Niemz, Griffiths & Banyard, 2005). Additionally, Office for National Statistics (2013) and a number of research report that

Internet usage is especially problematic in higher education, particularly for the 16-24 and 25-34 year old age groups (Anderson, 2001; Morahan-Martin & Schumacher, 2000; Niemz et al., 2005). This behavior has been discussed in various research including ''Internet addiction'' (Bai, Lin & Chen, 2001; Young, 1998), ''pathological Internet use'' (Davis, 2001; Young & Case, 2004), ''problematic Internet use'' (Davis, Flett, & Besser, 2002; Kaltiala-Heino, Lintonen & Rimpela, 2004), and "Internet dependency" (Wang, 2001). Internet Addiction (IA) is considered the most favored conceptual definition to problematic internet use (Beard & Wolf, 2001; Griffiths, 2000; Pratarelli, Browne & Johnson, 1999; Young, 1996, 1998).

IA is described as the Internet technologies' unmanaged and devastating usage (Beard & Wolf, 2001). According to Kim and Davis (2009), IA requires the use of internet be irresistible and it interferes with other major aspects of life (school, work, and relationships etc.). According to Kandell (1998, p.11) IA requires a ''psychological dependence on the Internet, and is characterized by (1) an increasing investment of resources on Internet-related activities, (2) unpleasant feelings (e.g. anxiety, depression, emptiness) when offline, (3) an increasing tolerance to the effects of being online, and (4) denial of the problematic behaviors''. IA can be thought as a behavioral addiction like other impulse control disorders, such as gambling (Young, 1996, 1998; Young & Rogers, 1998) and people who conform to these symptomatic standards are held to experience "social, psychological, and occupational impairment" resulting from their Internet use, such as "poor grade performance among students, discord among couples, and reduced work performance among employees" (Young & Rogers, 1998, p. 25).In addition, attempts to control this excessive internet use generally fail. Considering the reasons of excessive internet use, Griffiths (2000) states that compulsive use of Internet is closely correlated with a person's coping style with problems and deficiencies in his/her own life. He identifies the reason for internet addiction as feeling better because heavy users feel free and they take different roles and social identities they desire. As a result, they feel satisfied with this dependent relationship (Young, 1998; Aydın & Sarı, 2011).

IA also has undesirable effects. According to Cash, Rae, Steel and Winkler (2012), IA devastates lives by creating physiological, psychological and social problems. Various studies have revealed that spending so much time on the Internet leads individuals to lose their sleep (Anderson, 2001; Nalwa & Anand, 2003), and have problems in their social relationships (Bozoglan, Demirer, & Sahin, 2013; Lin & Tsai, 2002; Kraut et al., 1998; Lin & Tsai, 2002; Young, 1998). Pertaining to students, research shows that students who use the Internet excessively prefer online activities to sleep (Anderson, 2001). Furthermore, students even skip classes or exams due to excessive internet use (Chou, 2001; Tsai & Lin, 2003). Other studies also show that dislike for school, depression, anxiety, alienation from peers, unsatisfactory family atmosphere and shyness are highly associated with internet addiction (Huang & Leung, 2009; Liu, 2007; Wang et al., 2011).

In literature, there are several studies investigating relationship between internet addiction and certain variables such as loneliness, life satisfaction, depression, social support etc. Research indicated a relationship between loneliness and compulsive Internet use (Erdoğan, 2008; Morahan-Martin & Schumacher, 2000). According to Caplan (2003), lonely individuals may develop a desire to communicate with people online which can lead to internet dependency (Caplan, 2003). Similarly, Hardie & Tee (2007) and Koc (2011) asserted a positive relationship between loneliness and problematic internet use. Previous research also indicated contradictory results related to social support and internet addiction. Some studies claimed a significant relationship between two variables (Kormas, Critselis, Janikian, Kafetzis & Tsitsika, 2011; Yeh, Ko, Wu & Cheng, 2008); while in some studies no relationship was found (Miller, 2008). Negative relationship between internet addiction and family satisfaction was also indicated by previous research (Li, Garland & Howard, 2014; Telef, 2016).

Besides loneliness, social support and family satisfaction, previous research also examined relationship between internet addiction and school and monthly income satisfaction. According to Telef (2016) school satisfaction is an important predictor of Internet addiction. Regarding the students' income level, research showed that high monthly or weekly income increases Internet addiction (Işık & Ergün, 2018; Xu et al., 2014).

While studies linking IA to psychiatric disorders such as depression are of significant relevance, the analysis of IA in relation to life satisfaction is of important interest too. Although the association between subjective well-being and IA has been studied, there are only a few studies in literature focusing on the relationship between general life satisfaction and IA. For this reason, research of the relationship between IA and life satisfaction assures consideration. Research conducted by Bozoglan et al. (2013) found that self-esteem and life satisfaction were strongest predictors of IA. Similarly Pawlikowski, Nader, Burger, Stieger & Brand, 2014 found that people with higher Internet usage had lower life satisfaction. In another study, Cao, Sun, Wan, Hao & Tao (2011) did a research on the relationship between IA and life satisfaction with a large sample size (n>15000) and showed that higher IA scores were related with lower general life satisfaction scores.

In this study, we aimed to investigate effects of satisfaction status (monthly income satisfaction, social life satisfaction, life satisfaction etc.) on IA levels of students as this status play significant role in problematic internet use according to literature. We also investigated possible relationship between IA of students and their life satisfaction. I t is expected that the output of this research will benefit students, parents, teachers and school administrators as it will show which factors influence the development of Internet addiction. By the help of this information, protection of students from this addiction can be achieved. In addition, this study will also add to the available academic literature which has inconsistent results related to factors affecting internet addiction.

# Method

## Research Design

This study was conducted using a descriptive research design which included comparison of group of students for certain satisfaction status and identification of relationship between internet addiction and life satisfaction.

## Participants

The participants of the study were 404 post-secondary students enrolling at a vocational college in Balıkesir, Turkey. Because of the research context, all participants were

male and living on the college campus which makes our research a unique study and at the same time exerts a limitation. Convenience sampling was used in this research. Each participant was informed about the purpose of the study in general and confidentiality was assured. The participants filled out the online questionnaire on voluntary basis. The participants' age ranged from 17 to 20. The students were studying at the departments of Business Administration (n=87), Computer Technologies (n=27), Automotive Technologies (n=121) and Electronics and Communication Technologies (n=169).

**Data Collection Tools**

The data were collected through an online questionnaire consisting of three sections: (a) a personal information form, (b) the Internet Addiction Test (Young, 1998) and (c) Life Satisfaction Scale (Diener, Emmons, Larsen & Griffin, 1985).

*Personal Information Form*

Personal information form was prepared by researchers of current study and comprised questions related to participants' age, department, and satisfaction status with their monthly income, family relationship, health condition, social life and school. In addition, the form was used to obtain students' information related to whether they have a girlfriend or not. Using the personal information form, all students were asked to self-identify as being either satisfied or dissatisfied with their monthly income, family relationship, health condition, social life and school by a "yes" or "no" answer to the questions like: "Are you satisfied with your social life?" or "Are you satisfied with your family?". The answers for each question were used to divide students into groups and compare these groups with regard to internet addiction.

*Internet Addiction Test (IAT)*

IAT developed by Young (1998) covers the degree to which use of internet disrupts everyday life (work, sleep, relationships, etc.) and was adapted to Turkish by Kaya, Delen and Young (2015). The Turkish version comprises 20 items on a 5-point Likert type scale ranging from 1 = less intense behavior to 5 = most intense behavior. Minimum and maximum score for the scale is 20 and 80, respectively. According to Young (1998), a score of 20–39

points mean an average internet user who has complete control over his/her internet usage; a score of 40 and above implies frequent problems because of Internet usage; and a score of 70 and above shows that the Internet is causing severe problems on person's life. The scale is composed of 4 subscales: Mood, Relationship, Responsibilities and Duration. According to Kaya et al. (2015), *mood* relates to unwanted bad feelings due to uncontrollable internet use, *relationship* describes online communication habits, *responsibilities* explains how excessive internet use hinders daily life and performance, and *duration* pertains to time management behaviors. As for the reliability of the measurement, Cronbach's alpha coefficient was calculated in this study. The internal reliability score of the scale was 0.90. Cronbach's alpha coefficient for the subscales ranged from 0.66 to 0.84. All the values revealed reasonable levels of reliability.

### *Life Satisfaction Scale (LSS)*

Vocational college students' life satisfaction was measured by using the five-item Life Satisfaction Scale (Diener et al., 1985). Response categories ranged from 1 (strongly disagree) to 7 (strongly agree). Examples of items are "The conditions of my life are excellent." and "If I could live my life over, I would change almost nothing." It was adapted to Turkish by Köker (1991). Minimum and maximum scores for the scale are 5 and 35, respectively. The higher the scores received from the scale, the higher the level of satisfaction is. The internal consistency coefficient for the whole scale was found to be 0.82.

### Data Analysis

All statistical analyses were conducted using SPSS version 22. Each participant's responses to the scale/test items were scored according to the scoring principles of the IAT and LSS. Overall IAT scores were dichotomized into a binary variable coded as "average user" (0 to 39) and "problematic user" (40 to 100) (Jelenchick, Becker & Moreno, 2012). Before the main analyses, the data concerning vocational college students' satisfaction status variables (i.e. social life satisfaction, monthly income satisfaction etc.), IA and life satisfaction were interpreted considering descriptive analysis. Then a preliminary analysis was done by using t-test to see the impacts of participants' satisfaction status on their internet addiction test scores.. In order to see the relationship and correlation between constructs of IA and

satisfaction with life, Pearson correlation coefficients and linear regression analyses were run. The significance level was set at .05 in all analyses.

# Results and Findings

### Descriptive Results

According to descriptive statistics analysis, 80.7% (n=326) of students were satisfied with their monthly income, 98.8% (n=399) of students were satisfied with their family relationship, 93.8% (n=379) of students were satisfied with their health condition, 65.6% (n=265) of students were satisfied with their social life, 72.8% (n=294) of students were satisfied with their school life and finally it was found that 63.6% (n=257) of students did not have a girlfriend. In addition to aforementioned results, the mean IAT score was found as 39.2±12.2. The 58.2% (n=235) of students were categorized as "average internet users" (IAT overall score <40) while remaining participants (n=169, 41.8%) were categorized as "problematic internet users" (IAT overall score ≥40). The mean LS score was found as 23.9±6.4.

### Comparative Analyses

Multiple independent-samples t-tests were conducted to analyze effects of monthly income satisfaction, family relationship satisfaction, health condition satisfaction, social life satisfaction, school satisfaction and having a girlfriend status on IAT scores of students. According to test results, IAT scores of students differed significantly by family relationship satisfaction ($t_{402}$=-2.94, $p$=0.003); social life satisfaction ($t_{402}$=-2.18, $p$=0.030) and school satisfaction ($t_{402}$=--4.94, $p$=0.000) conditions. On the other hand, IAT scores of students did not differ significantly by monthly income satisfaction, health condition satisfaction and having girlfriend conditions. In addition to aforementioned results, a t-test was utilized in order to compare life satisfaction scores of "average internet users" and "problematic internet users". Result of the test showed that there was a significant difference (t=402, $p$=0.00) in life satisfaction scores for average internet users (M=24.9, SD=6.3) and problematic internet users (M=22.6, SD=6.41).

## Correlations

Pearson correlation test was conducted to determine the strength of relationship between total IAT scores and LS scores of students. Test results showed a very weak and negative significant correlation (r = -0.294; p< 0.05). In addition, correlations between factors of IA and participants' life satisfaction were examined. The findings are given in Table 1.

**Table 1.** Pearson correlations between internet addiction factors and life satisfaction

| Factors | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| 1. Mood | .532* | .640* | .658* | -.279* |
| 2. Relationship | | 372* | .457* | -.155* |
| 3. Responsibilities | | | .673* | -.148* |
| 4. Duration | | | | -.193* |
| 5. Life Satisfaction | | | | |

*Correlation is significant at the 0.01 level (2-tailed).

As observed in Table 1, participants' satisfaction with life had significantly negative relationships with all factors of IA. These findings could mean that as the participants' IA level tends to decrease; their satisfaction with life increases.

## Predictors of Participants' Life Satisfaction

In order to investigate the associations between factors of AI and life satisfaction regression analysis was conducted. The results are given in Table 2.

**Table 2.** Regression results predicting life satisfaction from mood, relationship, responsibilities, duration

| Variables | B | SE | β | t | p |
|---|---|---|---|---|---|
| Mood | -2,747 | .728 | -.292 | -3.775 | .000* |
| Relationship | -.037 | .475 | -.005 | -.078 | .938 |
| Responsibilities | .667 | .673 | .074 | .991 | .322 |
| Duration | -,408 | .642 | -.049 | -.636 | .525 |

*Significant of p<0.01.

As shown in Table 2, regression analysis results indicated that life satisfaction was predicted only by "mood" factor of IA, R2=.081, F(4,349) =7.670, p<.005). The findings could

mean that it is hard to explain participants' satisfaction with life through relationship, responsibilities and duration factors of IA as they did not seem to be significant predictors of the life satisfaction of vocational college students. However, mood factor of IA happened to significantly contribute to participants' life satisfaction, as it appeared the most important predictor in the current study.

## Discussion and Conclusion

The main purpose of this study was to examine which factors influence the development of Internet addiction and relationship between internet addiction and life satisfaction. Considering internet user types of students, it was found that more than half of the students were average internet users (58.2%) while remaining students were problematic internet users (41.2%). In the literature, it is observed that Internet addiction rates vary in terms of country, sample groups and utilized measurement tools. For example, Wartberg et al. (2016) reported Internet addiction rate in teenagers living in Germany to be 4.8%, Işık & Ergün (2018) reported rate of students who show limited symptoms to be at 25.8% and Jelenchick et al. (2012) reported rate of problematic internet users to be 12%.In current study, rate of problematic internet users was found to be 41.2%, which was relatively higher compared to previous studies. This inconsistency may be caused by the investigated study group or the measurement tool utilized.

In this study, it was found that students' satisfaction with their school, family relations and social life significantly affected their internet addiction score, while their monthly income, health status and whether they have girlfriend or not did not affect their internet addiction score. In other words, it was found that the internet addiction scores of the students who were satisfied and not satisfied with their schools; family relations and social life changed significantly. This result is compatible with results of Telef's (2016) research which found that family and school satisfaction had a negative relationship with Internet addiction. In addition, results are similar with Li et al.(2014) which claimed a negative relationship between Internet addiction and family satisfaction. Considering the social life

satisfaction, current study has similar results with Kormas et al. (2011) and Yeh et al. (2008) which claimed a negative relationship between Internet addiction and social support.

Considering the relationship between internet addiction and life satisfaction, a weak but significant correlation was found in the current study. This result is in concordance with results of Bozoglan et al. (2013), Cao et al. (2011) and Pawlikowski et al. (2014). In the current study, the correlation analyses between the factors of Internet addiction and life satisfaction reveal that life satisfaction significantly and negatively correlates with mood, relationship, responsibilities and duration factors. This finding is consistent with the related literature (Bozoglan et al., 2013) putting forward that Internet addiction affects life satisfaction in a negative way and, overall, people addicted to the Internet are less happy or have less life satisfaction and well-being. The result of regression analysis revealed that only mood factor of Internet Addiction was the strongest significant predictor of participants' satisfaction with life. In this regard, participants with higher levels of mood tend to be less satisfied with life.

Our study has some limitations. First, the participant sample of this study only included vocational college school students in Balıkesir and was not selected randomly. Thus, replication studies on diverse samples are needed for generalizations. Second, all participants' gender was male. In particular, it would be useful to conduct similar studies using different populations since the level of Internet addiction and Internet usage motivation may differ according to gender. Third, scale data were based on self-reports. In future studies, the use of multiple methods of assessment would contribute to findings of current research. Forth, Internet user types were (i.e. average internet user, problematic internet user etc.) limited to findings of Internet Addiction Test (Young, 1998); other scales may reveal different results. In future studies, it is advised to utilize different measurement tools and compare result with current study.

# Kaynakça

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