

# Predictiveness of Identity Status, Main Internet Use Purposes and Gender on University Students' the Problematic Internet Use

*Esra CEYHAN\**

## **Abstract**

This study aims at revealing the relationships between the problematic Internet use of university students and their identity status, main Internet use purposes, and gender. A total of 464 university students participated in the study, and the research data were collected through the Problematic Internet Use Scale, the Extended Objective Measure of Ego Identity Status, and the Information Questionnaire. The results of the analyses carried out with hierarchical regression analysis revealed that the most important predictor of the problematic Internet use was the use of the Internet for the purpose of “establishing social relationships with unfamiliar people.” In addition, it was found that the problematic Internet use was significantly predicted by “identity moratorium status”, “identity achievement status” (negatively), the Internet use for “entertainment” purposes, and the Internet use for the purpose of “establishing relationships with friends and relatives”, respectively. These findings show that, in general, the Internet use purpose and the identity status are important determiners in problematic Internet use. For this reason, taking the Internet motives of individuals and their identity status into account contributes to guidance and counseling services for the prevention of unhealthy Internet use and future researches.

## **Key Words**

The Internet, The Internet Addiction, Problematic Internet Use, Identity Status, University Student.

*\*Correspondence:* Assoc. Prof. Esra Ceyhan, Anadolu University, Faculty of Education, Division of Guidance and Psychological Counseling, 26470 Eskişehir/Turkey.  
E-mail: eceyhan@anadolu.edu.tr

Kuram ve Uygulamada Eğitim Bilimleri / Educational Sciences: Theory & Practice  
10 (3) • Summer 2010 • 1343-1355

The use of computers and the Internet is gradually increasing in all levels of the society and in all age groups in Turkey as it is throughout the world. Especially, the highest rate of computer and the Internet usage was observed between the ages of 14 and 24 (Türkiye İstatistik Kurumu [TÜİK], 2007, 2008). Therefore, it can be stated that the use of computers and the Internet is also quite common among university students. The psychological and environmental factors in the lives of university students are likely to cause them to become addicted to the Internet (Hall & Parsons, 2001), and thus the Internet has become an addiction of choice for a number of students (Hall & Parsons, 2001; Kandell, 1998). Moreover, since the Internet allows university students to connect quickly and efficiently and to be at many places at the same time, it acts as an important mediator for the qualitative and quantitative development of social life of university students (Douglas et al., 2008). Therefore, it could be stated that university students are more inclined to the Internet addiction (Kandell, 1998, Nalwa & Anand, 2003, Niemz, Griffiths & Banyard, 2005) and constitute the most risky population (Young, 2004).

When the developmental characteristics of university students are taken into consideration, it is seen that identity is a very important concept. Especially during late adolescence which coincides with the university years (18-21 years of age), identity development is completed (Erikson, 1968). Hence, the biggest gains in terms of identity formation occur during university years because university environment provides diversity of experiences for the identity development of individuals (Waterman, 1982 cited in Ward III, 2000). Marcia (2002) stated that identity diffusion and identity achievement in late adolescence can be better understood by means of identity status and identified four different identity statuses. These identity statuses are identity moratorium, identity foreclosed, identity diffusion and identity achievement. These identity statuses indicate the stage of adolescents in identity development process (Steinberg, 2007).

The fact that university students are in a period of searching and experimenting their identity constitutes the basis of a number of studies on the role of the Internet in identity formation (Valkenburg & Peter, 2008). In these studies, it is emphasized that since the Internet enables individuals to conceal their identity and present themselves in any identity they wish, individuals can do identity experiments in the Internet environment (Gross, 2004; Kennedy, 2006; Valkenburg & Peter, 2008; Valken-

burg, Schouten & Peter, 2005). Therefore, identity development process has become an inevitable source of the Internet use (Mullis, Mullis & Cornille, 2007). At the same time, the Internet also provides individuals with opportunities to interact with a number of people and experiment various identities. Such an interaction provides these individuals with rich feedback about their identities. Therefore, these opportunities can accelerate identity development. On the other hand, individuals can constantly show their "ideal" identities in the Internet environment. In general, this situation is likely to cause individual identity evaluations of adolescents to become unrealistically exaggerated. In addition, the Internet increases social connectedness and may cause individuals to become overexposed to various relationships and thoughts that damage the identity formation of individuals. Furthermore, constant use of fake identity patterns may hurt individuals psychologically (Kennedy, 2006; Valkenburg & Peter, 2008; Ward III, 2000). Therefore, adolescents may start to regard the Internet as a tool that helps them avoid their real-life responsibilities and their real identities as well as may tend to submit themselves to the virtual world (Huang, 2006; Yang & Tung, 2007). This situation could lead to the problematic/pathological use of the Internet.

Since the problematic Internet use is a syndrome that comprises cognitive and behavioral symptoms leading to negative consequences in terms of social, academic, professional, financial and physical aspects (Caplan, 2002, 2003; Davis, 2001; Morahan-Martin & Schumacker, 2003; Young, 1998), lots of studies have been conducted to investigate the relationship with problematic internet use. When the research results regarding the problematic internet use are taken into general consideration, it is seen that gender and the Internet use purpose are the basic factors. In general, the Internet is used to establish communication, to entertain oneself and to get information (Shaw & Gant, 2002). On the other hand, in terms of problematic Internet use, the Internet use for communication purposes is handled in two dimensions: establishing virtual communication with new people/communicating with familiar people (Morahan-Martin & Schumacher, 2000). Research shows that gender (men) (Choi, 2001; Çakır-Balta & Horzum, 2008; DiNicola, 2004; Everhard, 2000; Li & Chung, 2006; Morahan-Martin & Schumacher, 2000; Scherer, 1997; Weitzman, 2000) and the Internet use for entertainment and social interaction such as establishing social relationships with new people, shopping, downloading movies

and songs, and playing online games are important predictors of the problematic Internet use (Ceyhan & Ceyhan, 2007; Choi, 2001; Kim & Davis, 2009; Li & Chung, 2006; Morahan-Martin & Schumacher, 2000; Oğuz, Zayim, Özel & Saka, 2008; Weitzman, 2000). It was also found out that use of the Internet for searching for information (Chak & Leung, 2004; Whang, Lee & Chang, 2003; Young, 1998) and establishing communication with the family and friends was not a predictor of the problematic Internet use (Kim & Davis, 2009).

When the relationships of the Internet addiction (online chat and games) with establishing intimate relationships and developing identity among university students were examined, it was seen for individuals addicted to online chat and games that there were weak symptoms for identity achievement and strong symptoms for identity diffusion (Huang, 2006). In another study, the relationships between identity statuses and pathological Internet use were investigated. The results revealed that university students with the identity moratorium status had more symptoms of pathological Internet use than the university students with the identity foreclosed status (Matsuba, 2006). In addition, it was found out that university students with the identity moratorium status and with the identity diffusion status had a higher level of the problematic Internet use than the university students with other identity statuses (Ward III, 2000). These studies limited in number show that the developmental need of university students for identity formation is an important reason for problematic Internet use.

Although some studies about understanding the Internet usage of university students has been carried out in Turkey (Atıcı & Dikici, 2003; Balcı & Ayhan, 2007; Oral, 2004) and the problematic Internet use (Ceyhan, 2007; Ceyhan & Ceyhan, 2007; Çakır-Balta & Horzum, 2008; Gönül, 2002; Oğuz, et al., 2008; Öztürk, Odabaşoğlu, Eraslan, Genç & Kalyoncu, 2007), there is little research about the relationship between the Internet use and identity development. Therefore, there is a need for further research that reveals the relationship between the problematic Internet use and identity development. This study tries to meet the needs mentioned aims at revealing the relationships between the problematic Internet use of university students and their identity status, their main Internet use purposes and their gender. In line with this purpose, the present study seeks an answer to the question of *“Do the identity statuses of university students, their basic Internet use purposes and their gender are significant predictors of their level of the problematic Internet use?”*

## Method

### Participants

The study group of the present research includes a total of 464 university students attending various undergraduate programs at Anadolu University in the academic year of 2007-2008. Among these students, 238 of them (%51.30) were females, and 226 of them (%48.70) were males. In terms of their class grades, 183 of all the students (%39.40) were freshmen; 68 students (%14.70) were second-graders; 130 students (%28.00) were third-graders; and 77 students (%16.60) were seniors; on the other hand, 6 students did not state their class grades. In addition, the cumulative Grand Point Averages of the students was 2.55 ( $s = 0.53$ ) ranging between 0.98 and 3.77.

For the collection of the research data, the Problematic Internet Use Scale (PIUS) was administered to measure the problematic Internet use levels of the individuals; the Extended Objective Measure of Ego Identity Status (EOM-EIS-2) to measure the identity status levels of individuals; and the Information Questionnaire was used to obtain personal information and information about the Internet use.

### Measures

**The problematic Internet Use Scale (PIUS):** The PIUS was developed by Ceyhan, Ceyhan and Gürcan (2007) to measure the problematic Internet use levels of university students. The scale includes 33 items responded through five-point rating. The scores to be obtained from the scale range from 33 to 165. The higher scores obtained from the scale refer to unhealthy Internet use of individuals and thus show that they are influenced negatively and that they may have a tendency towards pathology like the Internet addiction (Ceyhan, Ceyhan and Gürcan, 2007).

**The Extended Objective Measure of Ego Identity Status (EOM-EIS-2):** The EOM-EIS-2 was developed by Bennion and Adams to measure the identity development levels of individuals. The Turkish adaptation studies of the scale were carried out by Oskay (1998). The EOM-EIS-2 is made up of 64 likert-type items. From the scale, the sub-scales of Identity Achievement, Identity Moratorium, Identity Foreclosed and Identity Diffusion can be obtained. Thus, from each of the four sub-scales that reveal the identity statuses, scores ranging from 16 to 96 can be obtained (Oskay, 1998). The higher scores to be ob-

tained from each sub-scale mean increase in the identity status levels of identity achievement, identity moratorium, identity foreclosed and identity diffusion. In this study, the total scores obtained from the four sub-scales independently from the two areas that constitute the scale were taken into consideration.

**Information Questionnaire:** The questionnaire was developed for the present study. The questionnaire includes questions to obtain personal information about university students participating in the study such as their gender and class-grades and to obtain information about their basic Internet use purposes (What is the basic purpose of your using the Internet?: obtaining information, establishing communication with friends and relatives, entertainment, and establishing social relationships with unfamiliar people).

### Procedure

The research data were collected in April and May in 2008. A total of 464 students participated in the study. However, because the scores of three students were extreme values, the statistical analyses were run on the scores of 461 students. The analyses of the research data were conducted with linear multiple hierarchical regression analysis. In the study, because the variables of gender and basic Internet use purpose considered as predictive variables were categorical variables, they were first transformed into dummy variables and then included in the analysis (Field, 2005). In the study, the significance level was taken as .05.

### Results

The present study investigated whether the identity statuses of university students, basic Internet use purposes, and gender are significant predictors of the problematic Internet use levels. For this purpose, the research data were analyzed through multiple hierarchical regression analysis, and the variables of basic Internet use purposes (obtaining information, establishing communication with friends and relatives, entertainment, and establishing social relationships with unfamiliar people) [Model 1], identity status levels (Identity Achievement, Identity Moratorium, Identity Foreclosed and Identity Diffusion) [Model 2], and gender [Model 3], which were all predictive variables, were included in the analysis as three blocks, respectively. The results of the linear multiple hierarchical

regression analysis revealed that the identity diffusion status, the identity foreclosed status and the gender did not significantly contribute to the regression model. By excluding these variables from the model, the analyses were conducted again. As a result, it was found out that the variables of The Internet use for such purposes as “establishing communication with friends and relatives”, “entertainment” and “establishing social relationships with unfamiliar people” all significantly explained 8.7% of the total variance. It was also revealed that the “identity achievement” status and the “identity moratorium” status both contributed to this total variance with an increase of 6.2%. Thus, it was seen that these variables significantly explained 14.9% of the total variance regarding problematic Internet use. When the predictive variables were examined according to the standardized regression coefficients ( $\beta$ ), it was seen that the Internet use for the purpose of “establishing social relationships with unfamiliar people” was the most important predictor and was the variable that best explained problematic Internet use. This variable was, in order of importance, followed by “identity moratorium”, “identity achievement”, “entertainment” and “establishing communication with friends and relatives”. In addition, the results of the regression analysis revealed that the “identity foreclosed” status, the “identity diffusion” status, and gender did not significantly predict problematic Internet use.

Consequently, the basic Internet use purpose and identity status were found to be important factors in problematic Internet use, yet gender was not an important factor in the problematic Internet use. When considered in terms of the basic Internet use purpose, the basic purpose of “establishing social relationships with unfamiliar people” was the most important predictor, and so was “entertainment”. In addition, when the basic purpose of “obtaining information” was taken as reference, it was found out that all the Internet users, especially healthy users, had higher levels of the problematic Internet use for all other the Internet use purposes. It was also revealed that identity status was an important factor in the problematic Internet use and that the problematic Internet use had a significant relationship with the identity achievement status (negatively) and the identity moratorium status. When the direction of this relationship was examined, it was seen that as the identity achievement level increased, the problematic Internet use level significantly decreased ( $\beta = -.16$ ) and that as the identity moratorium level increased, the problematic Internet use level significantly increased ( $\beta = .19$ ) as well.

## Discussion

The findings of the study revealed that the Internet use purposes are important for the problematic Internet use of university students. It was also found out that the Internet use for the purpose of “establishing social relationships with unfamiliar people” was the basic predictor of problematic Internet use. In addition, the Internet use for “entertainment” purposes and its use for the purpose of “establishing communication with friends and relatives” were predictive variables, yet the Internet use for the purpose of “obtaining information” had no relationship with problematic Internet use. This finding is consistent with the findings of previous studies which concluded that the use of the Internet for social interaction is a risk factor for the development of the problematic Internet use (Caplan, 2002; Ceyhan, 2007; Chak & Leung, 2004; Choi, 2001; Li & Chung, 2006; Oğuz, et al., 2008; Ward, 2001; Young, 1998). Similarly, the present research findings are also supported by the findings of other studies which concluded that the use of the Internet to entertain, to relax, and to spend good time has a relationship with the problematic Internet use (Ceyhan & Ceyhan, 2007; Choi, 2001; Morahan-Martin & Schumacher, 2000; Weitzman, 2000) and that the Internet users for the purpose of “obtaining information” are healthy users (Chak & Leung, 2004; Whang, Lee & Chang, 2003; Young, 1998). Therefore, the present research findings suggest that the Internet use for the purpose of establishing social relationships and its use for entertainment purposes are important factors in problematic Internet use. In this respect, when the developmental task of some university students such as identity formation and that of other university students such as establishing intimate relationships are taken into consideration, it could be stated that the opportunity provided by the Internet to establish social relationships rapidly with a number of people at a time causes the Internet to be intensely used for the purpose of establishing social interactions. This situation is likely to put university students into a risk group in terms of problematic Internet use. On the other hand, the use of the Internet for entertainment purposes such as playing games, relaxing and spending good time could lead to problematic Internet use. Thus, as a result of overuse of the Internet in an uncontrollable manner, it will be inevitable for an individual to experience impairments in various areas of life, especially in the area of psychosocial development. The present research findings show that identity statuses of university

students constitute an important factor for their problematic Internet use. In the study, it was found out that the problematic Internet use has a negative relationship with the “identity achievement status” and a positive relationship with the “identity moratorium status”. This finding is consistent with the findings of studies which report that identity statuses are important factors in the problematic Internet use (Huang, 2006; Matsuba, 2006; Ward III, 2000). When the research findings are taken into consideration, it could be stated that university students with the identity moratorium status are more inclined to experiences related to the problematic Internet use and that those with the identity achievement status are healthy Internet users. Individuals with the identity moratorium status examine and test their options in order to take a decision (Oskey, 1998). For this reason, the Internet allows university students with the identity moratorium status to do identity experiments. In addition, since the Internet gives the opportunity to interact with a number of people during their identity experiments, it provides quite valuable feedback, which could allow university students with the identity moratorium status to use the Internet intensely. On the other hand, as online relationships help avoid anxiety that exists in face-to-face relationships and as they allow anonymity, individuals can play the role of any personality and either gender they want and thus will have the chance to try different personality and relationship types. However, it could be stated that individuals’ constant use of fake identities may hinder the formation of a stable identity; that the Internet use may go from healthy use towards problematic use; and that as a result, it could threaten one’s mental health.

In the study, it was revealed that there is no relationship between the problematic Internet use of students and their gender. This finding is similar to previous research findings that the problematic Internet use does not change with respect to gender (Hall & Parsons, 2001; Leung, 2004). On the other hand, this finding is not consistent with the findings of other studies which report that boys are more problematic Internet users than girls (Choi, 2001; Çakır-Balta & Horzum, 2008; DiNicola, 2004; Everhard, 2000; Li & Chung, 2006; Morahan-Martin & Schumacher, 2000; Scherer, 1997; Weitzman, 2000). The differences in the problematic Internet use of individuals in terms of their gender could be explained with boys and girls’ developmental tasks of identity formation and of establishment of intimate relationships. For university

students who experience difficulty in carrying out these developmental tasks, the Internet could be rescuer. Since the Internet provides university students with an appropriate and comfortable environment in which they can do experiments on deciding what they want to be, it has become an inevitable tool for the young. On the other hand, young individuals who continuously experience failure as a result of their identity experiments are likely to consider the Internet as a tool that helps them suspend these attempts for a while or help them avoid their real identities; also, they may start to take part in activities like games, gambling, and shopping in the virtual world of the Internet.

The overall results of the present study point out that the basic Internet use purpose is quite important in the problematic Internet use and that the Internet use for other purposes (especially “establishing social relationships with unfamiliar people” and “entertainment”, respectively) except for “obtaining information” may increase the level of the problematic Internet use and may constitute an important risk for the Internet addiction. In addition, having an “identity achievement” status is likely to decrease the level of problematic Internet use, yet having an “identity moratorium” status may increase the level of problematic Internet use. Therefore, there is a great need for giving effective and comprehensive student personnel services in universities which allow identity moratorium efforts to depend on social and intimate relationships in real sense; for avoiding the reasons and needs that lead to the problematic Internet use of university students; and for helping students develop identity achievement who try to become an adult between their adolescence and adulthood. On the other hand, it is important to encourage university students from their early days at university to take part in rich, social and cultural activities rather than wasting time on the Internet. In this way, not only the social skills and social environment of students will develop, but also they will have the opportunity to develop identity achievement by knowing themselves better through different activities. The findings of the present study provide important results in terms of understanding the nature of problematic Internet use, yet the findings should be evaluated within the scope of the limitations of the study and supported by future studies.

## References/Kaynakça

- Atıcı, B. ve Dikici, A. (2003). İnternet kafelere giden bireylerin öğrenim düzeyleri ile interneti kullanım amaçları arasındaki ilişki (Elazığ örneği) [Çevrimiçi sürüm]. *Fırat Üniversitesi Sosyal Bilimler Dergisi*, 13(2), 129-146.
- Balcı, Ş. ve Ayhan, B. (2007). Üniversite öğrencilerinin internet kullanım ve doyumları üzerine bir saha araştırması. *Selçuk İletişim*, 5 (1), 174-197. Ulakbim veritabanından 11 Eylül 2009 tarihinde edinilmiştir.
- Caplan, S. E. (2002). Problematic internet use and psychosocial well-being: Development of a theory-based cognitive-behavioral measurement instrument. *Computers in Human Behavior*, 18, 553-575.
- Caplan, S. E. (2003). Preference for online social interaction. A theory of problematic internet use and psychosocial well-being. *Communication Research*, 30 (6), 625-648.
- Ceyhan, E. (2007). University students' problematic internet use in terms of reasons for internet use. *Proceedings of 6th WSEAS International Conference on Education and Educational Technology (EDU'07)*, Italy, (pp. 25-29). Venice: WSEAS Press.
- Ceyhan, E., & Ceyhan, A. A. (2007). An investigation of problematic Internet usage behaviors on Turkish university students. *Proceedings of 7. International Educational Technology Conference Volume: II* (p. 115-120). North Cyprus: Near East University.
- Ceyhan, E., Ceyhan, A. A. ve Gürcan, A. (2007). Problemlı İnternet Kullanımı Ölçeği'nin geçerlik ve güvenilirlik çalışmaları. *Kuram ve Uygulamada Eğitim Bilimleri Dergisi*, 7, 387-416.
- Chak, K., & Leung, L. (2004). Shyness and locus of control as predictors of internet addiction and internet use. *Cyberpsychology & Behavior*, 7 (5), 559-570.
- Choi, Y. J. (2001). *Investigating Koreans' internet use patterns and motivations and exploring vulnerability of internet dependency*. Unpublished doctoral dissertation, ProQuest Dissertations and Theses veritabanından ulaşılabilir. (UMI No. 3021006).
- Çakır-Balta, Ö. ve Horzum, M. B. (2008). Web tabanlı öğretim ortamındaki öğrencilerin internet bağımlılığını etkileyen faktörler. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi*, 41 (1), 187-205. <http://dergiler.ankara.edu.tr/dergiler/40/154/1149.pdf> adresinden 11 Eylül 2009 tarihinde edinilmiştir.
- Davis, R. A. (2001). A cognitive-behavioral model of pathological internet use. *Computers in Human Behavior*, 17(2), 187-195.
- DiNicola, M. D. (2004). *Pathological internet use among college students: The prevalence of pathological internet use and its correlates*. Unpublished doctoral dissertation, ProQuest Dissertations and Theses veritabanından ulaşılabilir. (UMI No. 3133723).
- Douglas, A. C., Mills, J. E., Niang, M., Stepchenkova, S., Byun, S., Ruffini C., et al. (2008). Internet addiction: Meta-synthesis of qualitative research for the decade 1996-2006. *Computers in Human Behavior*, 24, 3027-3044.
- Erikson, E. H. (1968). *Identity: Youth and crisis*. NY: Norton
- Everhard, R. A. (2000). *Characteristics of pathological internet users: An examination of on-line gamers*. Unpublished doctoral dissertation, ProQuest Dissertations and Theses veritabanından ulaşılabilir. (UMI No. 9988074).
- Field, A. (2005). *Discovering statistics using SPSS* (2th ed.). London: Sage.

- Gönül, A. S. (2002). Patolojik internet kullanımı (İnternet bağımlılığı/Kötüye kullanım). *Yeni Symposium*, 40 (3), 105-110.
- Gross, E. F. (2004) Adolescent internet use: What we expect, what teens report. *Journal of Applied Developmental Psychology*, 25 (6), 633-649.
- Hall, A. S., & Parsons, J. (2001). Internet addiction: College student case study using best practices in cognitive behavior therapy. *Journal of Mental Health Counseling*, 23 (4), 312-327.
- Huang, Y. R. (2006). Identity and intimacy crisis and their relationship to internet dependence among college students. *Cyberpsychology & Behavior*, 9 (5), 571-576.
- Kandell, J. J. (1998). Internet addiction on campus: The vulnerability of college students. *Cyberpsychology & Behavior*, 1, 11-17.
- Kennedy, H. (2006). Beyond anonymity, or future directions for internet identity research. *New Media & Society*, 8 (6), 859-876.
- Kim, H. K., & Davis, K. E. (2009). Toward a comprehensive theory of problematic internet use: Evaluating the role of self-esteem, anxiety, flow, and the self-rated importance of internet activities. *Computers in Human Behavior*, 25, 490-500.
- Leung, L. (2004). Net-generation attributes and seductive properties of the internet as predictors of online activities and internet addiction. *Cyberpsychology & Behavior*, 7 (3), 333-348.
- Li, S. M. & Chung, T. M. (2006). Internet function and Internet addictive behavior. *Computers in Human Behavior*, 22 (6), 1067-1071.
- Marcia, J. E. (2002). Adolescence, identity, and the Bernardone Family. *Identity: An International Journal of Theory and Research*, 2 (3), 199-209.
- Matsuba, M. K. (2006). Searching for self and relationships online. *Cyberpsychology & Behavior*, 9(3), 275-284.
- Morahan-Martin, J., & Schumacher, P. (2000). Incidence and correlates of pathological internet use among college students. *Computers in Human Behavior*, 16 (1), 13-29.
- Morahan-Martin, J., & Schumacher, P. (2003). Loneliness and social uses of the internet. *Computers in Human Behavior* 19(6), 659-671.
- Mullis, R. L., Mullis, A. K., & Cornille, T. A. (2007). Relationships between identity formation and computer use among black and white adult females. *Computers in Human Behavior*, 23 (1), 415-423.
- Nalwa, K., & Anand, A. P. (2003). Internet addiction in students: A cause of concern. *Cyberpsychology & Behavior*, 6 (6), 653-656.
- Niemz, K., Griffiths, M., & Banyard, P. (2005). Prevalence of pathological internet use among university students and correlations with self-esteem, the general health questionnaire (GHQ), and disinhibition. *Cyberpsychology & Behavior*, 8 (6), 562-570.
- Oğuz, B., Zayim, N., Özel, D. ve Saka, O. (2008). Tıp öğrencilerinin internette bilişsel durumları. *Akademik Bilişim 2008 Konferansında sunulan bildiri*, Çanakkale Onsekiz Mart Üniversitesi, Çanakkale. [http://ab.org.tr/ab08/kitap /Bildiriler/120,1\\_90\\_AB08.pdf](http://ab.org.tr/ab08/kitap/Bildiriler/120,1_90_AB08.pdf) adresinden 10 Eylül 2009 tarihinde edinilmiştir.

- Oral, B. (2004). Öğretmen adaylarının internet kullanma durumları. *Elektronik Sosyal Bilimler Dergisi*, 3 (10), 1-10. Ulakbim veritabanından 11 Eylül 2009 tarihinde edinilmiştir.
- Oskay, G. (1998). Genişletilmiş Objektif EGO Kimlik Statüsü Ölçeğinin (Extended Objective Measure of EGO Identity Status)-EOM-EIS'in Türkçeye uyarlaması-Geçerlik ve güvenilirlik çalışmaları. *Psikolojik Danışma ve Rehberlik Dergisi*, 2 (9), 17-24.
- Öztürk, Ö., Odabaşıoğlu, G., Eraslan, D., Genç, Y. ve Kalyoncu, Ö. A. (2007). İnternet bağımlılığı: Kliniği ve tedavisi. *Bağımlılık Dergisi*, 8, 36-41.
- Scherer, K. (1997). College life online: healty and unhealthy internet use. *Journal of College Student Development*, 38, 655-664.
- Shaw, L. H., & Gant, L. M. (2002). Users divided? Exploring the gender gap in internet use. *CyberPsychology & Behavior*, 5 (6), 517-527.
- Steinberg, L. (2007). *Ergenlik* (F. Çok, Yay. haz.). Ankara: İmge.
- Türkiye İstatistik Kurumu [TÜİK] (2007). *Hanehalkı bilişim teknolojileri kullanımı araştırması*. <http://www.tuik.gov.tr/> PreHaberBultenleri.do?ind=605 adresinden 6 Şubat 2008 tarihinde edinilmiştir.
- Türkiye İstatistik Kurumu (2008). *Hanehalkı bilişim teknolojileri kullanımı araştırması*. <http://www.tuik.gov.tr/> PreHaberBultenleri.do?ind=605 adresinden 9 Mayıs 2009 tarihinde edinilmiştir.
- Valkenburg, P. M., Schouten A. P., & Peter, J. (2005). Adolescents' identity experiments on the internet. *New Media & Society*, 7 (3), 383-402.
- Valkenburg, P. M., & Peter, J. (2008). Adolescents' identity experiments on the internet. Consequences for social competence and self-concept unity. *Communication Research*, 35 (2), 208-231.
- Ward III, D. L. (2000). *The relationship between psychosocial adjustment, identity formation, and problematic internet use*. Unpublished doctoral dissertation, ProQuest Dissertations and Theses veritabanından ulaşılabilir. (UMI No. 9977896).
- Weitzman, G. D. (2000). *Family and individual functioning and computer/ internet addiction*. Unpublished doctoral dissertation, ProQuest Dissertations and Theses veritabanından ulaşılabilir. (UMI No. 9989051).
- Whang, L. S. M., Lee, S., & Chang, G. (2003). Internet over-users' psychological profiles: A behavior sampling analysis on internet addiction. *Cyberpsychology & Behavior*, 6 (2), 143-150.
- Yang, S. C., & Tung, C. J. (2007). Comparison of internet addicts and non-addicts in Taiwanese high school. *Computers in Human Behavior*, 23 (1), 79-96.
- Young, K. S. (1998). Internet addiction: The emergence of a new clinical disorder. *Cyberpsychology & Behavior*, 1 (3), 237-244.
- Young, K. S. (2004). Internet addiction: a new clinical phenomenon and its consequences. *American Behavioral Scientist*, 48, 402-415.