

Predicting Psychological Well-Being through Problematic Internet Usage and Selected Demographic Variables in University Students¹

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Abstract

This study was carried out to investigate university students' psychological well-being in terms of various variables. The predictive role of problematic internet use, internet use purposes, daily internet usage time, the most frequently time period of internet usage and gender in psychological well-being was examined. Participants of the study were 1927 students attending to the various faculties of Anadolu University. The data were collected by Psychological Well-being Scale, Problematic Internet Use Scale, and Personal Information Form. The data were analyzed using descriptive statistics, correlation and stepwise regression. As a result of stepwise regression analysis, it was found that problematic internet use, gender, the most frequently time period of internet usage and the purpose of internet use are significant predictors of psychological well-being. In the discussion section, explanations related to the findings and suggestions for future research were provided.

1. Introduction

Since the 2000s, with the expansion of the field of positive psychology, research on concepts related to the positive aspect of human nature has become widespread. It can be said that one of these concepts is psychological well-being. In its most general form, psychological well-being is a concept related to the individual's awareness of life goals and the development and

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maintenance of productive interpersonal relationships (Ryff & Keyes, 1995). However, psychological well-being has a structure consisting of different dimensions (Ryff, 1989a). Ryff (1989a) developed a Psychological Well-Being Model consisting of six dimensions. These dimensions consist of self-acceptance, personal growth, autonomy, positive relations, purpose in life and environmental mastery. In this context, it can be said that psychological well-being is an inclusive concept in terms of positive mental health. According to Ryff (1989b), as the satisfaction obtained from these six dimensions increases, the psychological well-being of individuals will also increase. For a better understanding of the concept of psychological well-being, these six dimensions will be explained one by one and briefly.

Autonomy includes free will, independence and the presence of internal resources under behaviours (Ryff, 1989b). Individuals with a high level of autonomy have the ability to regulate their own behaviour, to live without dependence, to make their own decisions without taking anyone's opinion, not to feel the need for approval, and not to feel the obligation to think and behave in accordance with the traditions imposed by the social structure (Ryff & Essex, 1991).

According to Ryff & Keyes (1995, p.720), environmental mastery is "the ability to create or select an environment that is appropriate to the mental state of the individual". Individuals with high environmental mastery are individuals who can create or choose their environment according to their own needs, manage their environment, are aware of the opportunities in their environment and can benefit from these environmental opportunities.

According to Ryff and Essex (1991), in order for individuals to be at the highest level in terms of positive psychological functioning, they should continue to recognise their potential for personal growth. Individuals with a high level of personal growth are open and willing to new experiences to continue their development. In addition, individuals with a high level of personal growth are aware of themselves and their potential and spend time and effort to develop their potential.

Ryff (1989b) defines having positive relations as establishing open, sincere and trustworthy relationships with others. Individuals who have a high level of establishing positive relationships with others are individuals who trust people, are satisfied with their relationships, want the happiness of others, can empathise, respect themselves and others, feel comfortable around others, and are expressive and caring in their relationships.

It can be said that the dimension of purpose in life is a concept related to the individual's discovery of the meaning of life. According to Ryff (1989a), individuals who think that their lives have a purpose feel that their lives are full of meaning and worth living. According to Ryff and Singer (2008), individuals with a high level of purpose in life, direct their lives according to this purpose, they think that the present and past experiences have a meaning.

Self-acceptance, in general terms, refers to individuals having a positive attitude towards themselves. Ryff (1989b) states that the concept of self-acceptance is at the centre of positive psychological functioning. Individuals with high self-acceptance level are aware of their positive and negative, strong and weak aspects and accept these aspects in a positive way. In addition, individuals have positive feelings about their experiences. On the other hand, individuals with low self-acceptance level are uncomfortable with some of their personality traits, want to be a different individual than they are, have difficulties in accepting their past experiences and experience dissatisfaction with themselves.

Ryff's (1989b) Psychological Well-Being Model is based on clinical psychology, psychological health and lifelong development theories. Synthesizing these theories, Ryff states that the concept of psychological well-being has a six-dimensional structure by basing the concept of psychological well-being on a comprehensive theoretical basis based on the combination points of the theories.

In the literature of psychological health, various studies examining individuals' psychological well-being can be observed. It can be stated that internet usage has become highly prevalent in today's society. Therefore, there is curiosity about whether there is a relationship between internet usage and individuals' psychological well-being.

The first researchers who examined the effects of the Internet on human life stated that the Internet use has positive contributions to human life (Huang, 2004; Shaw & Gant, 2002). However, in recent years, as a result of the fact that individuals can use the Internet for a wide variety of purposes, there have been discussions on the possible harms of the Internet on human nature (Sakarya, 2010). In recent years, it is stated that the rapid spread of internet use and the increase in internet usage areas day by day have brought along some negative situations related to human life (Çağır, 2010).

It is stated that while some individuals can limit their internet use to the amount they need, some individuals cannot adjust this amount and

experience social, family, academic and professional problems in their daily lives due to excessive use of the internet. In this framework, it can be said that how the individual uses the internet has an important place in determining how the internet will affect human life. In this context, it can be said that there are two types of internet use: healthy and unhealthy internet use.

In the literature, there are some terms that explain the negative effects of internet use on human nature such as internet addiction, pathological internet use, excessive internet use and problematic internet use. Although there are various differences among the definitions that point to unhealthy use of the internet, these definitions have some common points. It can be said that the common points of the above-mentioned terms pointing to the unhealthy use of the Internet are the following: individuals use the Internet more than necessary, this excessive Internet use negatively affects the individual's daily life, and if they want to reduce their problematic Internet use behavior, they are unable to do so.

For this study, problematic internet use is preferred as a concept indicating unhealthy use of the internet. Problematic internet use generally refers to the discomfort and functional impairment experienced by the individual due to the inability to control internet use. It can be said that individuals who use the Internet problematically may disrupt their daily lives, decrease their social and family relationships and may have difficulty in finding a solution to problematic use of the Internet despite being aware of it.

Individuals with high levels of problematic internet use have high levels of depression, anxiety, stress and loneliness (Panicker & Sachdev, 2014). However, individuals with low levels of problematic internet use have high levels of self-esteem (Widyanto & Griffiths, 2011), subjective well-being (Stead & Bibby, 2017) and happiness (Yılmaz & Karaoglan Yılmaz, 2022).

One of the most common groups using the Internet is university students (Ceyhan, Ceyhan, & Gürcan, 2007). It can be said that the internet has become a part of the daily lives of university students with the widespread use of internet usage areas and increasing access to the internet for university students. It is known that university students are in a very critical life period in terms of psycho-social development. It can be stated that there are a number of factors that may cause problematic internet use in university students (Ceyhan, 2011). Additionally problematic internet use in university students can negatively affect their academic life, social life, friendship relations, family ties, daily work and health (Esen, 2010). It is wondered whether the internet use of university students, who are in a very risky period in terms of psycho-social development, has an effect on their

psychological well-being. In this context, this study examined the predictive role of internet use behaviors such as duration of internet use, daily period of internet use, purpose of internet use and problematic internet use on psychological well-being of university students.

2. Method

In this section, the method used in the research is given. In this context, information of the research model, participants, data collection tools and procedure are given.

2.1. Research Model

In this study, which examines the psychological well-being of university students in terms of gender, internet usage purpose, daily internet usage duration, the period when the internet is used most frequently used in a day and problematic internet use variables; the relational survey model, one of the general survey models, was used.

2.2. Participants

The study group of the research consists of a total of 1927 students studying at various faculties of Anadolu University in 2012-2013 academic year. Of the participants included in the analysis, 57.4% (1106) of the study group were female and 42.6% (821) were male. The grade levels of the participants are as follows; 472 (24.53%) freshmen, 481 (24.96%) sophomores, 501 (25.98%) juniors and 473 (24.53%) seniors.

2.3. Data Collection Tools

2.3.1. Psychological Well-Being Scale

The scale developed by Ryff (1989a) was adapted into Turkish by Akın (2009). The scale consists of 84 items with 6 dimensions each consisting of 14 items were obtained. Increasing scores on the scale indicate a higher level of Psychological well-being for individuals. Exploratory factor analysis, conducted to establish the construct validity of the scale, revealed a six-dimensional structure as in original form. Also total scores are obtained from the scale as in the original scale. The six-dimensional structure of the scale accounts for 68% of the total variance, with factor loadings of the items ranging from .30 to .94. Confirmatory factor analysis results also indicate the adequacy of the goodness-of-fit indices for scale (GFI = .93, CFI = .98, NFI = .97; IFI = .98, RFI = .97, RMSEA = .07, SRMR = .01). Cronbach's alpha coefficients for all sub-dimensions of the scale ranged

from .87 to .96 and the test-retest reliability coefficient was ranged from .78 to .97. As a result of the analyses conducted in this research, the Cronbach's alpha coefficient for the scale was determined to be .93.

2.3.2. Problematic Internet Use Scale

The scale developed by Ceyhan, Ceyhan & Gürcan (2007) consists of 33 items in total. Factorial structure of the data collected from 1658 university students revealed three factors. All factors consisting of 33 items accounted for the 48.96% of the total variance. A total score can be obtained from the scale. It was found that the scale was able to discriminate problematic internet use with respect to the time spent on the internet and individuals' perception of themselves as the internet addicts. It is reported that the correlation between the scale and the Davis's Online Cognitive Scale-Turkish adaptation (Keser Özcan & Buzlu, 2005) was found as .61. internal consistency coefficient of the scale (α) was found to be 0.94. Item total correlations ranged between 0.31 and 0.70. Test-re-test reliability coefficient was found to be 0.81 and split half reliability coefficient was found to be 0.83. As a result of the analyses conducted in this research, the Cronbach's alpha coefficient for the scale was determined to be .93.

2.3.3. Personal Information Form

The personal information form prepared by the researcher consists of a total of seven questions. The participants were asked to mark their gender, field of study, type of accommodation, the time intervals they use the internet most frequently, the place where they connect to the internet most frequently and the purpose of their internet use on one of the options grouped in the personal information form. In addition, the participants were asked to write how many hours they use the Internet on average in a typical day in the space provided in the personal information form.

2.4. Procedure

The data were collected face to face from students who volunteered to participate in the study. Before the data set was distributed to the students, the researcher first introduced himself in each class and then gave information about the purpose and importance of the research and how to fill out the scale set. In addition, the researcher verbally informed the students in each class that the identity information of the students was not needed, that no individual assessment would be made and that the information collected would be kept confidential by the researcher.

The data obtained from 2085 students participating in the study were analyzed graphically and 62 extreme values deviating from the normal distribution were excluded from the data group. In addition, the data of 96 students who were found to have filled out the scale incompletely or incorrectly after the scale application studies were completed were excluded from the evaluation. After this process, the analyzes related to the first purpose were carried out on 1927 data. The analysis of the data collected within the scope of the research was carried out with the “SPSS 15.0 for Windows” package program.

In order to determine the daily internet usage time of university students, students were asked how many hours they use the internet in a typical day and a blank space was left for their answers. Although there are different results regarding the duration of daily internet use in problematic internet use studies it is generally seen that individuals who use the internet for 5 hours or more are problematic internet users (Mythily, Qiu, & Winslow, 2008; Tekinarslan & Güreç, 2011; Yıldız, 2010). In this study, two groups were formed as “up to 5 hours” and “5 hours and over” to determine whether there is a differentiation between students’ psychological well-being and daily internet usage time.

Determining the main purposes of university students’ use of the Internet, four main purposes were identified. These main purposes are communication, personal benefit, entertainment and information. Considering that students may have difficulty in choosing the main purpose of internet use, the main purposes of using the internet were expressed in different expressions in the personal information form, and then the expressions representing the same basic purpose of use were grouped under the main purposes of use.

The purposes of internet use in the personal information form are as follows: “to follow the news”, “to meet or communicate with relatives”, “to play games of chance”, “to make online transactions such as shopping, banking, etc.”, “to earn money”, “to play games”, “to do academic/educational research”, “to meet new people”, “to watch/listen to movies, series, videos, songs, etc.”. Among these internet usage purpose statements, “To meet or communicate with acquaintances” and “To meet new people” are grouped as “Communication”; “To make online transactions such as shopping, banking, etc.” and “To earn money” are grouped as “Personal Benefit”; “To play games of chance”, “To play games” and “To watch/listen to movies, TV series, videos, songs, etc.” are grouped as “Entertainment”; and finally “To follow the agenda” and “To do research on academic/education” are grouped as “Information seeking” purposes.

In order to determine the time periods in which the Internet is used most frequently, students were asked in the personal information form which time intervals they use the Internet most frequently. The time intervals in the personal information form are as follows: “08.00-16.00”, “16.00-00.00”, “00.00-08.00”. Among these time periods, “08.00-16.00” was named as worktime use, “16.00-00.00” as daytime use and “00.00-08.00” as nighttime use.

Whether the variables of problematic internet use, gender, purpose of internet use, duration of internet use and the time interval when the internet is used most frequently are significant predictors of university students’ psychological well-being was examined by stepwise regression analysis. The variables included in the regression analysis should be continuous variables (Büyüköztürk, 2002). Therefore, the discontinuous variables of gender, purpose of internet use, and the time interval in which the internet is used most frequently were recoded as dummy variables to convert them into continuous variables and then included in the regression analysis.

Before proceeding to the stepwise regression analysis, Pearson Product Moment correlation coefficient was used to determine the relationship between university students’ psychological well-being and problematic internet use, internet usage purpose, internet usage duration and the time period in which the internet is used most frequently. According to the correlation table, variables that were not related to psychological well-being were not included in the regression in the stepwise regression analysis. The significance value was taken as .05 for all statistical analyses.

3. Findings

Stepwise regression analysis was applied to the data to test whether university students’ psychological well-being is predicted by the variables of problematic internet use, purpose of internet use, gender, the time period in which the internet is most frequently used and daily internet use duration.

Pearson Product Moment correlation coefficients were calculated to examine the relationship between variables before stepwise regression analysis. Correlation coefficients and descriptive statistics showing the relationship between variables are given in Table 1.

Table 1 Pearson Product Moment Correlation Coefficients Between Variables

Variables	1	2	3	4	5	6
1- Psychological Well-being	-					
2- Problematic Internet Use	-.39**	-				
3- Time Period of Internet Use	-.13*	-.19**	-			
4- Gender	.12**	-.15**	.05	-		
5- Internet Usage Purpose	-.09**	.13**	-.16**	-.86**	-	
6- Daily Internet Usage Duration	-.02	.32**	-.27**	-.13**	.10*	-

Not: * $p < .05$, ** $p < .01$, Gender; 0 =Male, 1 =Female, Internet Usage Purpose; 0=Information seeking, 1 = Others, Time Period of Internet Use; 0 =Nighttime, 1=Others.

As seen in Table 1, there are significant relationships between psychological well-being and the variables of problematic internet use ($r = -.39, p < .01$), time period of internet use ($r = -.13, p < .05$), gender ($r = .12, p < .01$) and internet usage purpose ($r = -.09, p < .01$).

According to this result, while there was a significant positive relationship between psychological well-being and gender, there was a negative relationship between psychological well-being and problematic internet use, psychological well-being and time period of internet use and lastly psychological well-being and purpose of internet use. On the other hand, it was determined that there was no significant relationship between psychological well-being and daily internet usage duration.

In the stepwise regression analysis, the variables of problematic internet use, time period of internet use, gender and internet usage purpose were entered. However, as can be seen from the results of the correlation analysis in Table 1, daily internet usage duration was not included because it did not show a significant correlation with psychological well-being.

Considering the correlation relationships between university students' psychological well-being and the independent variables in Table 1, the results of the stepwise regression analysis regarding the prediction of psychological well-being by problematic internet use, time period of internet use, gender and purpose of internet use variables are given in Table 2.

Table 2. Stepwise Regression Analysis Results Regarding Problematic Internet Use, Gender, Internet Usage Purpose and Time Period of Internet Use as Predictors of Psychological Well-Being

Model	Variables	<i>B</i>	<i>SH_B</i>	<i>β</i>	<i>T</i>	<i>p</i>	<i>R</i> ²	<i>ΔR</i> ²	<i>F</i>
1. Model	Problematic Internet Use	-.860	.047	-.386	-18.34	.00	.149	.149	336.52
2. Model	Problematic Internet Use	-.838	.047	-.376	-17.72	.00	.153	.004	174.05
	Gender	5.767	1.82	.067	3.16	.02			
3. Model	Problematic Internet Use	-.845	.047	-.379	-17.844	.00	.155	.002	117.73
	Gender	5.810	1.82	.068	3.189	.01			
	Time Period of Internet Use	5.895	2.79	.044	2.115	.04			
4. Model	Problematic Internet Use	-.830	.05	-.372	-17.366	.00	.157	.002	89.65
	Gender	6.239	1.83	.073	3.408	.01			
	Time Period of Internet Use	6.136	2.79	.046	2.201	.03			
	Internet Usage Purpose	-4.577	2.11	-.046	-2.173	.03			

Considering the explanatory power of the model in Table 2, it was found that the variables of problematic internet use, gender, time period of internet use and internet usage purpose together explained 16% of the total variance ($R^2=.16$, $p<.05$). According to the results of stepwise regression analysis, problematic internet use is more important predictor of psychological well-being than other variables and explains 14.9% of the total variance ($\Delta R^2=.149$). Problematic internet use was found to predict psychological well-being negatively. In this context, it can be said that psychological well-being score will decrease with the increase in problematic internet use. Also model 4 shows that problematic internet use ($\beta= -.37$, $p<.05$), gender ($\beta= .07$, $p<.05$), time period of internet use ($\beta= .05$, $p<.05$), and internet usage purpose ($\beta= -.05$, $p<.05$) significantly predict psychological well-being.

4. Discussion

In this research, it was examined whether university students' problematic internet use, internet usage purpose, the time period of internet usage, daily internet usage duration and gender are predictors of students' psychological

well-being. According to the results in order of explanatory power problematic internet use, gender, time period of internet use and internet usage purpose were found to be significant predictors of psychological well-being.

According to this result, it can be said that as problematic internet use increases in university students, their psychological well-being decreases. When the studies (Stead & Bibby, 2017; Widyanto & Griffiths, 2011; Yılmaz & Karaođlan-Yılmaz, 2022) examining the relationship between the concepts related to psychological well-being and problematic internet use in the literature are examined, it is seen that there is a negative relationship between psychological well-being and problematic internet use. In this framework, it is seen that this research finding is consistent with previous studies. It can be said that excessive and dysfunctional use of the internet negatively affects individuals' daily and academic lives as a factor affecting the negative relationship between psychological well-being and problematic internet use.

Following problematic internet use, gender was found to be a significant predictor of psychological well-being. Gender, which is a categorical variable, was coded as an dummy variable and included in the regression analysis. In this context, it can be said that female university students have higher levels of psychological well-being than males. However, it is seen that there is not a complete consistency among the findings in the literature in terms of psychological well-being according to gender. In order to reach a comprehensive conclusion on whether gender is a predictor of psychological well-being, more research is needed both in different and similar life stages.

Another predictor of psychological well-being was found to be the time period in which university students use the Internet most frequently in a day. Time period of internet use, which is a categorical variable, was included in the regression analysis as an dummy variable. In this context, the most frequent use of the Internet at night was taken as the reference variable and the most frequent use of the Internet during worktime and daytime hours was included in the analysis. In this framework, it was found that the most frequent use of the Internet at nighttime was a positive predictor of psychological well-being, while the most frequent use of the Internet during the worktime and during the daytime was a negative predictor of psychological well-being. In other studies (Ceyhan, 2008; Kim & colleagues, 2010; Sevindik, 2011), it has been found that individuals who use the Internet most frequently at night have significantly higher levels of problematic Internet use than individuals who use the Internet during the daytime. Considering the previous studies' findings of a negative relationship between psychological well-being and

problematic internet use, it is seen that the finding that individuals who use the internet most frequently at night time have higher psychological well-being than individuals who use the internet at day times of the day in this study is contradictory. For this reason, it can be said that more detailed research is needed to examine the relationship between the two concepts in order to more clearly reveal the relationship between the time period in which the internet is most frequently used and psychological well-being.

Another significant predictor of psychological well-being was found to be the main purpose of internet use of university students. Internet usage purpose, which is a categorical variable, was coded as an dummy variable and included in the regression analysis. It was found that the use of the Internet to information seeking, which was considered as a reference variable, was a positive predictor of students' psychological well-being. It is seen that the use of the Internet for entertainment and communication purposes such as playing games, chatting, meeting new people, and establishing social relationships with unknown people (Ceyhan, 2008; Meerkerk, Van Den Eijnden, & Garretsen, 2006) positively predicts problematic Internet use, while the use of the Internet for information seeking, researching, scanning resources, and doing homework (Ceyhan, 2008; Tekinarslan & Güreç, 2011) negatively predicts problematic Internet use. According to these findings, it can be said that the finding that the use of the Internet to information seeking is a positive predictor of psychological well-being is in line with previous research.

In conclusion, this study examined the relationship between university students' internet use behaviors and their psychological well-being, which is an important factor for their psychological health. Among the variables included to the study, the variable with the highest explanatory power for psychological well-being was found to be problematic internet use. Other studies (Horwood & Anglim, 2019; Sharma & Sharma, 2018) have also found that problematic internet use is a negative predictor of psychological well-being. In this context, it can be considered that there is a common opinion regarding the existence of a negative relationship between problematic internet use and psychological well-being.

4.1. Suggestions

Based on the results of this study, some suggestions can be made for future research:

- Further research can be conducted to examine whether university students' psychological well-being differs significantly according to

their daily internet usage time. In addition, descriptive studies can be conducted to determine how much time university students allocate daily for which internet usage purpose and to determine the positive and negative effects of this tendency on university youth.

- It can be suggested that the purposes of internet use should be taken into consideration in future studies while examining the relationship between the time period in which university students use the internet most frequently and psychological well-being.
- Since access to the internet has become very easy with the widespread use of smartphones, the relationship between smartphone use and psychological well-being of university students can be examined.
- it can be said that access to the internet has become easier with the widespread use of smartphones. In this respect, the relationship between smartphone use and psychological well-being of university students can be examined.
- Based on the findings of this study, it can be said that problematic internet use is a risk factor for university students' psychological well-being. For this reason, psycho-educational group programs can be prepared for university students who are problematic internet users to cope with their problematic internet use.

References

- Akın, A. (2009). *Akılci duygusal davranışçı terapi (SDDT) odaklı grupla psikolojik danışmanın psikolojik iyi olma ve öz-duyarlık üzerindeki etkisi*. [Unpublished doctoral dissertation]. Sakarya University, Sakarya.
- Büyüköztürk, Ş. (2002). *Sosyal bilimler için veri analizi el kitabı*. Ankara: Pegem Yayınları.
- Ceyhan, A. A. (2008). Predictors of problematic internet use on Turkish university students, *CyberPsychology & Behavior*, 11(3), 363-366.
- Ceyhan, A. A. (2011). İnternet kullanma temel nedenlerine göre üniversite öğrencilerinin problemleri internet kullanımı ve algıladıkları iletişim beceri düzeyleri. *Kuram ve Uygulamada Eğitim Bilimleri*, 11(1), 59-77.
- Ceyhan E., Ceyhan A. A. & Gürcan, A. (2007). Problemleri internet kullanımı ölçeğinin geçerlik ve güvenirlik çalışmaları. *Kuram ve Uygulamada Eğitim Bilimleri Dergisi*, 7, 387-416.
- Çağır, G. (2010). *Lise ve üniversite öğrencilerinin problemleri internet kullanım düzeyleri ile algılanan esenlik balleri ve yalnızlık düzeyleri arasındaki ilişki*. [Unpublished master dissertation]. Balıkesir University, Balıkesir.
- Esen, E. (2010). *Ergenlerde internet bağımlılığını yordayan psiko-sosyal değişkenlerin incelenmesi*. [Unpublished master dissertation]. Dokuz Eylül University, İzmir.
- Horwood, S., & Anglim, J. (2019). Problematic smartphone usage and subjective and psychological well-being. *Computers in Human Behavior*, 97, 44-50.
- Huang, A. S. C. (2004). *The bright and dark side of cyberspace: the paradoxical media affects of internet use on gratifications, addiction, social and psychological well-being among taiwan's net-generation*. [Unpublished doctoral dissertation]. Southern Illinois University, Illinois.
- Keser-Özcan, N. & Buzlu S. (2007). Internet use and its relation with the psychosocial situation for a sample of university students. *Cyberpsychology and Behaviour*, 10, 6-9.
- Kim, J. H., Lau, C. H., Cheuk, K.K., Kan, P., Hui, H. L. C. & Griffiths, S. M. (2010). Brief report: predictors of heavy internet use and associations with health-promoting and health risk behaviors among hong kong university students. *Journal of Adolescence*, 33, 215-220.
- Meerkerk, G. J., Van Den Eijnden, R. J. J. M. ve Garretsen, H. F. L. (2006). Predicting compulsive internet use: it's all about sex! *Cyberpsychology & Behavior*, 9(1), 95-103.
- Mythily, S., Qiu, S. & Winslow, M. (2008). Prevalence and correlates of excessive internet use among youth in singapore, *Annals of the Academy of Medicine Singapore*, 37(1), 9-14.

- Panicker, J., & Sachdev, R. (2014). Relations among loneliness, depression, anxiety, stress and problematic internet use. *International Journal of Research in Applied, Natural and Social Sciences*, 2(9), 1-10.
- Ryff, C. D. (1989a). Happiness is everything or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069-1081.
- Ryff, C. D. (1989b). In the eye of the beholder: views of psychological well-being among middle-aged and older adults. *Psychology and Aging*, 4(2), 195-210.
- Ryff, C. D. & Essex, M. J. (1991). The interpretation of life experience and well-being: The sample case of relocation. *Psychology and Aging*, 7, 507-517.
- Ryff, C. D. & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*. 69(4), 719-727.
- Ryff, C. D. & Singer, H. B. (2008). Know thyself and become what you are: a eudaimonic approach to psychological well-being. *Journal of Happiness Studies*, 9, 13-39.
- Sakarya, D. (2010). *Ankara üniversitesinde lisans programlarında eğitim almakta olan erkek öğrencilerde internet kullanım örüntüleri üzerine epidemiyolojik bir çalışma*. (Unpublished medical specialisation dissertation). Ankara University, Ankara.
- Sevindik, F. (2011). *Fırat üniversitesi öğrencilerinde problemlı internet kullanımı ve sađlıklı yaşam biçimi davranıřlarının belirlenmesi*. [Unpublished doctoral dissertation]. İnönü University, Malatya.
- Sharma, A., & Sharma, R. (2018). Internet addiction and psychological well-being among college students: A cross-sectional study from Central India. *Journal of Family Medicine and Primary Care*, 7(1), 147.
- Shaw, L. H. ve Gant, L. M. (2002). In defense of the internet: the relationship between internet communication and depression, loneliness, self-esteem, and perceived social support. *CyberPsychology & Behavior*, 5(2), 157-171.
- Stead, H., & Bibby, P. A. (2017). Personality, fear of missing out and problematic internet use and their relationship to subjective well-being. *Computers in Human Behavior*, 76, 534-540.
- Tekinarslan, E. ve Gürer, M. D. (2011). Problematic Internet use among Turkish university students: a multidimensional investigation based on demographics and internet activities. *International Journal of Human Sciences*, 8(1), 1028-1051
- Widyanto, L., & Griffiths, M. (2011). An empirical study of problematic Internet use and self-esteem. *International Journal of Cyber Behavior, Psychology and Learning (IJCBL)*, 1(1), 13-24.

- Yıldız, İ. (2010). *Lise öğrencilerinde problemli internet kullanımı ile sağlıklı yaşam biçimi davranışları arasındaki ilişki*. [Unpublished master dissertation].. Cumhuriyet University, Sivas.
- Yılmaz, R., Karaoglan Yılmaz, F. Problematic Internet use in Adults: The Role of Happiness, Psychological Resilience, Dispositional Hope, and Self-control and Self-management. *J Rat-Emo Cognitive-Behav Ther* 41, 727–745 (2023).