

Investigating the Relationship between Self-Confidence, Psychological Resilience and Problematic Internet Use

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Abstract: The purpose of this study is to investigate the relationship between self-confidence, psychological resilience and problematic internet use among students studying at sports science faculties of universities. The sample of the research consists of 312 students, 150 of whom are male and 162 of whom are female, aged between 18 and 23. Self-Confidence Scale, Psychological Resistance Scale and Chinese Internet Addiction Scale were used to obtain the data. Structural Equation Modeling (SEM), one of the quantitative data analysis techniques, was preferred in the data analysis process. In this study, the measurement model was first tested and verified, then the structural model was tested and verified. It was determined that fit index values of both measurement and structural model fit well. Accordingly, a positive relationship between self-confidence and psychological resilience among sports science students, and a negative significant relationship between psychological resilience and problematic internet use was found.

Keywords: Self-Confidence, Psychological Resistance, Problematic Internet Use

1. Introduction

The internet, which is used for many purposes, such as education, entertainment, and communication, has become an indivisible part of our daily living. Although the internet offers many advantages, its excessive use has also brought several adverse effects (Karaca 2019; Taş 2018; Wang, Zhou, Lu, Wu, Deng, & Hong, 2011). Excessive use of the internet has specific criteria, such as problematic use, making money online, and adverse effects on one's life. While problematic internet use (PIU) includes some benefits, such as avoiding problems or regulating mood, it has adverse effects on social relationships and mental and physical health. People with PIU can display challenging behaviors, low self-esteem, and anxiety in case of limited or no internet access (Ahmed & Santos, 2019). In addition, PIU causes disorders in sleep patterns, academic performance, working life, physical activities, muscle, and skeletal system. It is also associated with concepts, such as depression, anxiety, and loneliness (Dong, Lu, Zhou, & Zhao, 2011; Elhai, Dvorak, Levine, & Hall, 2017; Fayazi & Hasani, 2017; Ha et al., 2007; Selfhout, Branje, Delsing, ter Bogt, & Meeus, 2009; Young, 2004; Kubey, Lavin & Barrows, 2001; Döner, 2018).

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PIU is associated with various risk factors, which cause increased vulnerability to the development of problems related to internet use and protective factors reducing the occurrence of PIU. In this context, risk factors include sociodemographic variables (being male or young or having high family income), internet use variables (using social and gaming applications and time spent online), psychosocial factors (shyness, impulsivity, loneliness, and neuroticism), and comorbid symptoms (depression, anxiety, etc.) (Brand et al., 2014; Li et al., 2015; Kuss, & Lopez-Fernandez, 2016; Morsünbül, 2014; Öztürk, & Özmen, 2011). On the other hand, protective factors can be listed as psychological resilience (Nam et al., 2018; Robertson, Yan, & Rapoza, 2018), secure attachment (Morsünbül, 2014), a mother's attachment to the child and ability to provide appropriate support to her child (Floros & Siomos, 2013).

Among these protective factors, psychological resilience is described as a person's ability to recover the self after negative adverse experiences, intense difficulty or trauma and/or flexible and healthy adaptability after stressful experiences and a dynamic process (Luthar, Cicchetti, & Becker, 2000; Strand, Reich, & Zautra, 2009).

Psychologically resistant individuals have three properties. First, resilient persons are deeply committed to life; that is, they tend to be interested fully in their daily activities. Furthermore, resilient persons believe that change is reasonable rather than slowness, and they like to struggle. In this regard, barriers to life offer chance to enhance one's talent and self-acquaintance. In the end, psychological resilience requires a person to be able to ensure control over living conditions. These components initiate the faith and autonomy of the person to affect its fate directly (Kobasa, Maddi, & Kahn, 1982).

It is well-known that psychologically resilient persons approach stressful situations more positively. Such persons consider stressful situations not as threats to well-being but as occasions for growth and development. They also use more proactive management strategies, and therefore they counter stressful life events more effectively. They recover themselves after stressful experiences faster and more effectively (Maddi, & Kobasa, 1984).

Psychological resilience is essential and associated with mental health in older ages as a constituent of healthy psychosocial adjustment (Wagnild & Young, 1993; Nygren et al., 2005). Rutter (1987) stated that resistant individuals have self-sufficiency, self-respect, and problem-solving skills. Individuals with personal competence, accepting self and life, curiosity, self-discipline, self-esteem, controlling the environment, intellectual functioning, self-perception, and self-confidence are defined as resilient (Wagnild & Young, 1993; Beardslee, 1989; Masten, 1999).

Self-confidence is one of the fundamental elements of psychological life and an inevitable emotional necessity (McKay, & Fanning, 2006, p.1). Self-confidence is defined as "courage, bravery"; it also includes the firm belief in one's own abilities. Self-confidence is a concept that is a state of mind as well as bears a physical side (Hambly, 2001). Feltz (1988) defines self-confidence as "one's belief to perform a certain activity successfully, rather than a general characteristic, and one's trust in its own judgment, ability, power, and decisions." Self-confidence is one of the most significant determinants of behavior, and a concept related to situations, such as one's having positive thoughts about itself, belief to control itself and events around, loving itself, thinking that it is sufficient, being aware of its values, being in peace with itself, knowing itself, and accepting itself as is (Eldeleklioğlu, 2004).

Many studies have concluded that self-confidence is one of the preservative factors related to psychological resistance (Garmezy, 1987; Kohler, 1993; Masten, & Coastworth, 1998; Henderson, & Milstein, 2003; Karairmak, 2006). Accordingly, a positive relationship between psychological resistance and self-confidence has been found; psychological resistance is boosted as self-confidence increases (Ertekin-Pınar, Yıldırım, & Sayın, 2018) whereas there is a negative relationship between psychological resistance and PIU (Chakraborti, Ray, Islam, & Mallick, 2016; Li et al., 2010). Resilience plays a key role in protecting even the young with PIU from online risks. It also diminishes adverse psychological effects related with both online risk exposure and PIU (Wisniewski, et al., 2015). The initial point of our research is the lack of a psychological resistance study, which explains the factors that ensure success in severe conditions, self-confidence, and PIU are discussed together in the literature although these three concepts are well-known to be associated with each other. In this context, the present study seeks reasonable answers to the following questions: “Is there a significant relationship between self-confidence and psychological resilience? If so, is self-confidence a significant predictor of psychological resilience?”; “Is there a significant relationship between psychological resistance and PIU? If so, is psychological resilience a significant predictor of PIU?”

2. Method

2.1 Participants

The sample of the study consisted of 312 students, male of whom 150 (48%), 162 (51%) females, who were enrolled at the Faculty of Sports Sciences. The participants were aged 18-23 years and selected using convenience sampling method.

2.2 Instruments

2.2.1 Self-Confidence Scale (SCS)

The SCS was developed by Akın (2007). It is a five-point Likert-type scale (1=never, 5=always) consisting of 33 items within 2 sub-scales: intrinsic self-confidence and extrinsic self-confidence. 165 and 33 are the highest and the lowest scores that can be obtained on the SCS, respectively. Higher scores obtained on the scale means a higher level of self-confidence. The respondent's self-confidence level can be inferred by dividing the total score on the scale by the number of items. While the points lower than 2.5 on the scale show low-level self-confidence, the points between 2.5 and 3.5 mean moderate-level self-confidence, and the points higher than 3.5 mean high-level self-confidence. In the reliability study, for the total scale, the internal consistency coefficients of the SCS were found to be .83, .83 for the intrinsic self-confidence sub-scale, and .85 for the extrinsic self-confidence sub-scale. Finally, for the total scale, the test-retest reliability coefficients were found to be .94, .97 for the intrinsic self-confidence sub-scale, and .87 for the extrinsic self-confidence sub-scale. In our study, Cronbach's alpha coefficient of the sub-scales of SCS is .91 and .92, with .94 for the total.

2.2.2 Adolescent Psychological Resilience Scale (APRS)

The APRS, developed by Bulut, Doğan, & Altundağ (2013), is a 4-point Likert-type (1= Not at all like me, 4= very much like me) scale consisting of 29 items within six sub-scales: family support, peer support, school support, adjustment, sense of struggle, and empathy. The highest and the lowest scores that can be

obtained on the APRS are 116 and 29, respectively. The high score obtained from each sub-scale shows that the respondent has relevant psychological resistance. The scale also gives the total adolescent psychological resistance score. Higher scores mean higher levels of adolescent psychological resilience. In the reliability study, both the Cronbach's Alpha internal consistency coefficient and the test-retest reliability coefficient of APRS were found to be .87. As a result of the analysis carried out in this research, it was found that the sub-scales of the APRS Cronbach's alpha coefficient ranged between .71 and .88, with .82 for the total.

2.2.3 Chinese Internet Addiction Scale (CIAS)

The CIAS was developed by Chen, Weng, Su, Wu, & Yang (2003) to measure PIU. The four-point Likert-type scale is composed of a total of 26 items (1-not at all like me, 4-very much like me) within five sub-scales: symptoms of compulsive use, withdrawal, tolerance, and problems in interpersonal relationships and health/time management. The total score is the sum of all answered items and ranges between 26-104. The higher the scores, the more likely PIU is present. The CIAS was adapted into Turkish by Ceyhan, Boysan, & Kadak (2018), and Cronbach's Alpha internal consistency coefficients of the total CIAS and its five sub-scales ranged between .76 and .94, while its test-retest reliability coefficients were found to be between .96 and .98. In consequence of the analyses carried out within the scope of this study, it was found that the Cronbach's Alpha internal consistency coefficient of the sub-scales of the ranged between .78 and .86, while it was .94 for the total scale.

2.2.4 Personal Information Form

With the form prepared, information regarding the gender, age, division, and grade level of the individuals participating in the study was obtained.

2.3 Statistical Analysis

After descriptive statistics were given and correlation analyses were carried out among the relevant variables, the Structural Equation Modeling (SEM) was performed. An SEM is a multivariate statistical method based on the definition of observable and unobservable variables in a causal and relational model based on a specific theory (Byrne, 2010). In the present study, the SEM was conducted in two stages according to the recommendations of Kline (2015) and Anderson and Gerbing (1988). First off, the confirmatory measurement model was tested followed by the test of the hypothetical structural model. The relationships between observed variables and the structure(s), which is assumed to be measured through observed variables, were tested in the measurement model (Wetson & Gore, 2006). Not only can all variables be tested in a measurement model, but also the measurement models for the variables can be tested in a single model (Şimşek, 2007). All variables were tested separately in the model adopted in the study. In the second stage of SEM, the structural model generated in line with theoretical inferences was tested. In this model, paths drawn from latent variables to observed variables show causal relationships among the variables, and the significances of the paths and the model's goodness of fit are examined (Schumacher & Lomax, 2004). In this study, chi-square/degrees of freedom, IFI, CFI, NFI, GFI, AGFI, RMSEA, and SRMR were used as values of the goodness of fit. Acceptable goodness of fit indices of the values in question were ≤ 5 for χ^2/SD ; $\geq .90$ for CFI, NFI, and IFI; $\geq .85$ for GFI and AGFI; $\leq .08$ for

RMSEA and SRMR (Hu & Bentler, 1999; Marcoulides & Schumacher, 2001; Schermelleh-Engel & Moosbrugger, 2003; Schumacher & Lomax, 2004).

3. Results

3.1 Descriptive Statistics and Correlation

Before the descriptive statistics were calculated, whether the data obtained from the scales showed normal distribution was examined using skewness and kurtosis. Accordingly, the skewness value of SCS is $-.59$, the kurtosis value is $-.35$; the skewness value of APRS is $-.38$ and the kurtosis value is $-.53$; it was determined that the skewness value of CIAS is $.73$ and the kurtosis value is $-.18$. The values obtained show that there is no significant problem in the distribution of the data obtained from the scales (George, & Mallery, 2010; Finney, & DiStefano, 2006; Huck, 2012). The results of the correlation analysis with the descriptive statistics for the variables are shown in Table 1.

Table 1: Descriptive Statistics and Correlation Analyses

	Correlation			Descriptive Statistics		
	1	2	3	Mean (SD)	Skewness	Kurtosis
1. SCS	-			132.02 (21.51)	-.59	-.35
2. APRS	.61**	-		87.29 (12.23)	-.38	-.53
3. CIAS		-.24**	-	45.50 (13.73)	.73	-.18

Note. ** $p < 0.01$

A positive and significant relationship between the SCS and APRS ($r = .61, p < .01$). On the other hand, a negative and significant relationship between the APRS and CIAS has been found ($r = -.25, p < .01$).

3.2 Structural Equation Modeling

3.2.1 Measurement Model

The measurement model expressed the relevant indicators of latent variables or their relationship with the measured variables. Before testing the structural model, it was suggested to test the measurement model (Anderson & Gerbing, 1988). Three latent variables were used in the structural equation model testing: self-confidence (measured by the SCS), psychological resilience (measured by the APRS) and PIU (measured by the CIAS). There was a total of thirteen observed variables that make up these latent variables. Self-confidence latent variable intrinsic self-confidence and extrinsic self-confidence; psychological resilience latent variable family support, peer support, school support, adjustment, sense of struggle, and empathy; PIU latent variable symptoms of compulsive use, withdrawal, tolerance, and problems in interpersonal relationships and health/time management. It was determined that all the road coefficients were significant and factor loadings varied between $.32$ and $.93$. The measurement model appeared to be well fitted; ($\chi^2 = 167.85, \chi^2 / df = 2.75, IFI = 0.97, CFI = 0.97, GFI = 0.92, NFI = 0.95, AGFI = 0.89, SRMR = .068, RMSEA = .075, 90\% \text{ CI for RMSEA} = .076-.010$).

3.2.2 Structural Model

In the second stage of SEM, the structural model developed to determine the relationship between self-confidence, PIU and psychological resilience was tested in adolescents. Fit index values of this model were: $\chi^2=167.30$, $\chi^2/df=2.69$, $IFI=0.97$, $CFI=0.97$, $GFI=0.92$, $NFI=0.95$, $AGFI=0.89$, $SRMR=.070$; It has been determined as $RMSEA=.074$, 90 % CI for $RMSEA = .061-0.87$ and shown that the structural model has a good fit. There is a positive and significant relationship between psychological resilience and self-confidence, self-confidence predicts psychological resilience ($\beta = .74$; $p < 0.05$); a negative and significant relationship between psychological resilience and PIU, and psychological resilience predicted PIU have been found ($\beta = -.26$; $p < 0.05$). When the determinant coefficients (R^2) in the validated model were examined, 54% of the variability in psychological resilience was explained by self-confidence variable; 6% of PIU was explained by psychological resilience variable ($p < 0.05$).

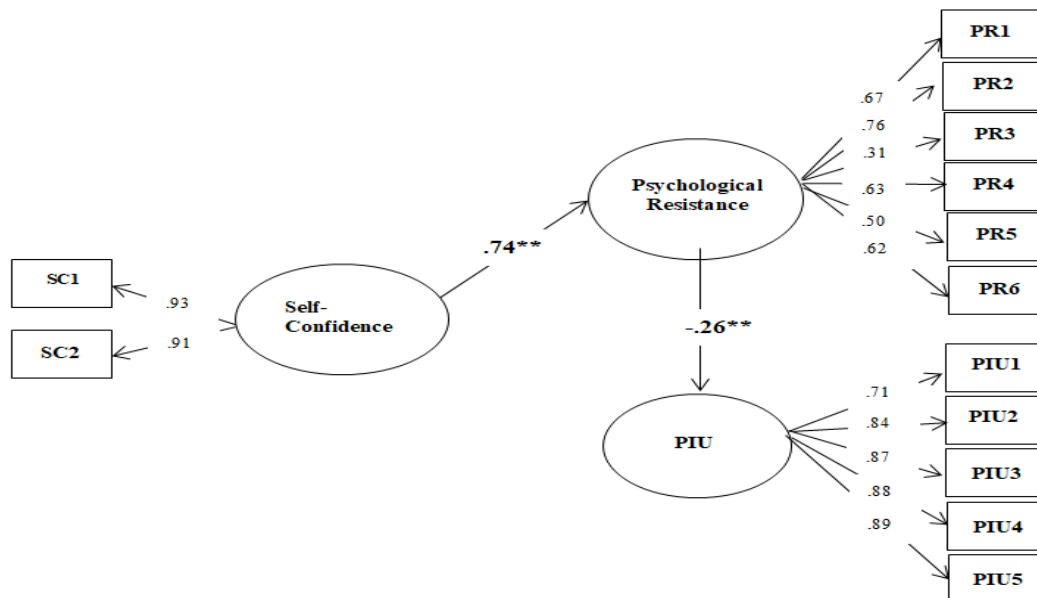


Figure 1: Standardized Values for Structural Model

Note. $**p < .01$; *SC1* intrinsic self-confidence, *SC2* extrinsic self-confidence, *PR1* family support, *PR2* peer support, *PR3* school support, *PR4* adjustment, *PR5* sense of struggle, *PR6* empathy, *PIU1* compulsive use, *PIU2* withdrawal, *PIU3* tolerance, *PIU4* time management problems, *PIU5* interpersonal, and health issues.

4. Discussion

According to the results obtained from the structural model, there is a causal relationship between students of the Faculty of Sport Sciences, self-confidence, psychological resistance and PIU. In this respect, it was found that there is a positive and significant relationship between self-confidence and psychological resistance, and a negative and significant relationship between psychological resistance and PIU. Accordingly, it can be said that university students with high self-confidence have high psychological resistance and students with low psychological resistance have high problematic internet usage.

Below, the results of the model confirmed in the research are discussed in detail. Firstly, the procedure of psychological resilience of self-confidence was discussed. This result is supportive of the related literature. Studies conducted by Beardslee (1989), Masten (1999) and Karataş, & Savi-Çakar (2011) it was found that individuals with high self-esteem have high psychological resilience. It has been stated by Rutter (1985) that individuals with high self-confidence develop more successful coping methods. In many studies, it has been stated that self-confidence is one of the protective factors related to psychological soundness. (Garmezy, 1987; Kohler, 1993; Masten & Coastworth, 1998; Henderson & Milstein, 2003; Kararmak, 2006). A work-based training program was implemented for 14 nurses and midwives by McDonald, Jackson, Wilkes, and Vickers (2012), aiming to develop, strengthen and maintain personal resilience. Intervention here, participants reported that their relationship of self-confidence has increased. Another result derived from this study is that there is a negative relationship between psychological resilience and PIU. It is seen that this result is consistent with the literature. Psychological resilience is a predictor of internet addiction and there is a negative relationship between them (Sert-Ağır, 2018; Zhou, Zhang, Liu, & Wang, 2017). It has been found that there is a negative relationship between psychological resilience and social media addiction among university students, and psychological resilience is a significant precursor of social media addiction (Bilgin, & Taş, 2018). In a study where 87 participants diagnosed with internet game disorder, low endurance was found to be associated with higher risk of internet game disorder (Yen, Lin, Chou, Liu, & Ko, 2019). It has been determined that there is a negative relationship between Facebook addiction and psychological resilience (Soysal, 2016). The higher the level of endurance of the participants, the lower the level of internet addiction. The same relationship has been found in online gaming addiction, but not in Facebook addiction (Robertson, Yan, & Rapoza, 2018). It has a partial mediating effect in the relationship between endurance, smartphone addiction and depression (Hyejung, & Eunsuk, 2017). Internet addiction mediated the relationship between psychological resilience and depressive symptoms (Mak, Jeong, Lee, & Lee, 2018). Resilient youth are less likely to lose their ways in the virtual world of the internet, as they have a more positive perception and more internal resources to effectively overcome negative situations (Kim, Choi, & Kim, 2007).

The research has some limitations. First, SEM was used in the study, which could get strong results from quantitative methods. However, due to the nature of the quantitative method and the cross-sectional nature of the sample, the cause-effect link should be considered, and caution should be taken. Although YEM is mentioned about the psychological resilience of self-confidence and psychological resilience predicting problematic internet use, supportive additional studies such as longitudinal and experimental studies are needed to fully reveal this causal sequence. The second limitation of this study is that only the students studying at the Faculty of Sport Sciences were selected as the working group. In terms of generalizability of the findings, it is necessary to repeat the research on the samples to be taken from the students studying in different departments and with professional groups other than the students.

The findings of this study provide important knowledge about the relationship between self-confidence, psychological resilience and PIU among individuals studying in sports sciences faculty. It is considered that it will be beneficial to apply activities that increase the level of self-confidence and psychological resilience and decrease PIU in guidance applications or lesson programs starting from primary education. The level of psychological resilience can be increased by increasing the sense of self-confidence. Increasing resilience and developing programs for this purpose can help prevent PIU.

References

- Ahmed, S., & Santos, M. G. (2019). Cyber mania secondary to Internet addiction: A brief review on co-occurrence of behavioral addiction and bipolar disorder-dual diagnosis. *Eurasian Journal of Medicine and Oncology*, 3(4), 296-299.
- Akın, A. (2007). The development and psychometric characteristics of the self-confidence scale. *Abant İzzet Baysal University Journal of Faculty of Education*, 2 (7), 165-175.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411.
- Beardslee, W.R. (1989). The Role of Self-Understanding in resilient individuals: The development of a perspective. *American Journal of Orthopsychiatry*, 59(2), 266-278.
- Bilgin, O., & Taş, İ. (2018). Effects of perceived social support and psychological resilience on social media addiction among university students. *Universal Journal of Educational Research*, 6(4), 751-758.
- Brand, M., Laier, C., & Young, K.S. (2014). Internet addiction: Coping styles, expectancies, and treatment implications. *Frontiers Psychology*, 5, 1256, 10.3389/fpsyg.2014.01256
- Bulut, S., Doğan, U., & Altundağ, Y. (2013). Adolescent psychological resilience scale: Validity and reliability study. *Contemporary Psychology, Suvremena Psihologija*, 16(1), 21-32.
- Byrne, B. M. (2010). *Structural equation modeling with amos*. New York: Routledge.
- Chakraborti, A., Ray, P., Islam, M.U., & Mallick, A.K. (2016). Medical undergraduates and pathological internet use: Interplay of stressful life events and resilience. *J Health Spec*, 4, 56-63.
- Chen, S. H., Weng, L. C., Su, Y. J., Wu, H. M., & Yang, P. F. (2003). Development of Chinese Internet Addiction Scale and its psychometric study. *Chinese Journal of Psychology*, 45, 279-94.
- Dong, G., Lu, Q., Zhou, H., & Zhao, X. (2011). Precursor or sequela: Pathological disorders in people with Internet addiction disorder. *PloS One*, 6(2), e14703.
- Döner, M. (2018). The evaluation of relationship between loneliness and hopelessness levels and Internet addiction levels of private high school students. Unpublished Master's Dissertation. Istanbul Gelisim University, Turkey.
- Eldeleklioğlu, J. (2004). Self-confidence development in children. *Gazi University Journal of Education*, 24(2), 111-121.
- Elhai, J. D., Dvorak, R. D., Levine, J. C., & Hall, B. J. (2017). Problematic smartphone use: A conceptual overview and systematic review of relations with anxiety and depression psychopathology. *Journal of affective disorders*, 207, 251-259.
- Ertekin-Pınar, Ş., Yıldırım, G., & Sayın, N. (2018). Investigating the psychological resilience, self-confidence, and problem-solving skills of midwife candidates. *Nurse Educ Today*, 64:144-149.
- Fayazi, M., & Hasani, J. (2017). Structural relations between brain-behavioral systems, social anxiety, depression, and Internet addiction: about revised reinforcement sensitivity theory (r-RST). *Computers in Human Behavior*, 72, 441-448.
- Feltz, D. L. (1988). Self-confidence and sport performance. *Exercise and Sports Science Reviews*, 16, 423-458.
- Finney, S. J., & DiStefano, C. (2006). *Non-normal and categorical data in structural equation modeling*. In Hancock, G.R. & Mueller R. O. (Eds.), *Structural equation modeling: A second course*, (pp. 269-314). Information Age Publishing, U.S.A.
- Floros, G., & Siomos, K. (2013). The relationship between optimal parenting, internet addiction and motives for social networking in adolescence. *Psychiatry Res*, 209:529-534.
- Garnezy, N. (1987). Stress, competence, and development: Continuities in the study of schizophrenic adults, children vulnerable to psychopathology and the search for stress-resistant children. *American Journal of Orthopsychiatry*, 57(2), 159-174.
- George, D., & Mallery, M. (2010). *SPSS for windows step by step: A simple guide and reference*, 17.0 update (10a ed.) Boston: Pearson.

- Ha, J. H., Kim, S. Y., Bae, S. C., Bae, S., Kim, H., Sim, M., ... & Cho, S. C. (2007). Depression and Internet addiction in adolescents. *Psychopathology*, 40(6), 424-430.
- Hambly, K., & Bıçakçı, B. (2001). *Self-confidence*. Istanbul: Rota publishing.
- Henderson, N., & Milstein, M.M. (2003). *Resiliency in schools*. Making it happen for students and educators. California: Corwin Press.
- Hu, L. T., & Bentler, P. M. (1999). Cut off criteria for fit indexes in covariance structural analysis: conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 55-65.
- Huck, S. W. (2012). *Reading statistics and research* (6th ed). Boston: Pearson.
- Hyejung, P., & Eunsuk, C. (2017). Smartphone addiction and depression: The mediating effects of self-esteem and resilience among middle school students. *J Korean Acad Community Health Nurs*, 28(3), 280-290.
- Karaca, H. (2019) A research on the relationship between the cyber bullying and victimization among secondary school students and Internet addiction, functions of the family and the Internet usage of the parents. Unpublished Master's Dissertation. Yakın Doğu University, Turkey.
- Kararmak, Ö. (2006). Resilience, risk, and protective factors. *Turkish Psychological Counseling and Guidance Journal*, 26, 129-142.
- Karataş, Z., & Savi-Çakar, F. (2011). Self-esteem and hopelessness, and resiliency: An exploratory study of adolescents in Turkey. *International Education Studies*, 4(4), 84-91.
- Kim, S.Y., Choi, S.Y., & Kim, B.S. (2007). The impact of self-consciousness, stress, and internet use control on internet addiction among adults. *J Korea Soc IT Serv.*, 6,47-67.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. New York: Guilford Press.
- Kobasa, S., Maddi, S. R., & Kahn, S. (1982). Hardiness and health: A prospective study. *Journal of Personality and Social Psychology*, 42, 168-177.
- Kohler, P. (1993). Best practices in transition: Substantiated or implied? *Career Development for Exceptional Individuals*, 16, 107-121.
- Kubey, R. W., Lavin, M. J., & Barrows, J. R. (2001). Internet use and collegiate academic performance decrements: Early findings. *Journal of communication*, 51(2), 366-382.
- Kuss, D.J., & Lopez-Fernandez, O. (2016). Internet addiction and problematic Internet use: A systematic review of clinical research. *World J Psychiatry*, 6(1), 143-76.
- Li, X., Shi, M., Wang, Z., Ki, S.H., Yang, R., & Yang, C. (2010). Resilience as a predictor of internet addiction: The mediation effects of perceived class climate and alienation. *Web Soc (SWS)*, 66,16-7.
- Li, W., O'Brien, J.E., Snyder, S.M., & Howard, M.O. (2015). Characteristics of Internet addiction/pathological Internet use in U.S. university students: A qualitative-method investigation. *PLoS ONE*, 10(2): e0117372.
- Luthar, S.S, Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, 71,543-562.
- Maddi, S.R., & Kobasa, S.C. (1984). *The hardy executive: Health under stress*. Homewood, IL: Dow Jones-Irwin.
- Mak, K.K., Jeong, J., Lee, H.-K., & Lee, K. (2018). Mediating effect of Internet addiction on the association between resilience and depression among Korean University students: A structural equation modeling approach. *Psychiatry Investig*, 15(10), 962-969.
- Masten, A.S. (1999). *Resilience comes of age: Reflections on the past and outlook for the next generation of research*. In M.D.E.J. Glantz, & L. Jeannette (Eds.), *Resilience and development: Positive Life Adaptations*. Longitudinal Research in the Social and Behavioural Sciences (pp. 281–296). Dordrecht, Netherlands: Kluwer-Academic Publishers.
- Masten, A.S., & Coastworth, J. D. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist*, 53(2), 205-220.

- Marcoulides, G., & Schumacher, R. (2001). *New developments and techniques in structural equation modeling*. London: Lawrence Erlbaum Associates, Publishers.
- McDonald, G., Jackson, D., Wilkes, L., & Vickers, M. H. (2012). A work-based educational intervention to support the development of personal resilience in nurses and midwives. *Nurse Education Today*, 32(4), 378-384.
- McKay, M., & Fanning, P. (2006). *Self-Confidence*. Ankara: Arkadas publishing.
- Morsünbül, Ü. (2014). The association of internet addiction with attachment styles, personality traits, loneliness, and life satisfaction. *International Journal of Human Sciences*, 11(1), 357-372.
- Nam, C.R., Lee, D.H., Lee, J.Y., Choi, A.R., Chung, S.J., Kim, D.-J., Bhang, S.-Y., Kwon, J.-G., Kweon, Y.-S., & Choi, J.-S. (2018). The role of resilience in Internet addiction among adolescents between sexes: A moderated mediation model, *J. Clin. Med.*, 7, 222.
- Nygren, B., Alex, L., Jonsen, E., Gustafson, Y., Norberg, A., & Lundman, B. (2005). Resilience, sense of coherence, purpose in life and self-transcendence in relation to perceived physical and mental health amongst the oldest old. *Aging and Mental Health*, 9(4), 354–362.
- Öztürk, E., & Özmen, S.K. (2011). An investigation of the problematic Internet use of teacher candidates based on personality types, shyness, and demographic factors. *Educational Sciences: Theory & Practice*, 11,1799-1808.
- Robertson, T.W., Yan, Z., & Rapoza, K.A. (2018). Is resilience a protective factor of internet addiction? *Computers in Human Behavior*, 78, 255-260.
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*. 57(3), 316–331.
- Schermelleh-Engel, K., & Moosbrugger, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, 8(2), 23-74.
- Schumacher, R., & Lomax, R. (2004). *A beginner's guide to structural equation modelling*. London: Lawrence Erlbaum Associates, Publishers.
- Selfhout, M. H., Branje, S. J., Delsing, M., ter Bogt, T. F., & Meeus, W. H. (2009). Different types of Internet use, depression, and social anxiety: The role of perceived friendship quality. *Journal of adolescence*, 32(4), 819-833.
- Sert-Ağır, M. (2018). A study on psychological resilience, school burnout and internet addiction of adolescents. *Journal of Youth Research*, 6(16), 5-19.
- Soysal, M.N. (2016). Facebook addiction and psychological resiliency. Unpublished Master's Dissertation. Istanbul Gelisim University, Turkey.
- Strand, E.B., Reich, J.W., Zautra, A.J., & Lopez, S.J. (Ed.) (2009). *Positive experiences*. The Encyclopedia of Positive Psychology. Blackwell Publishing Ltd.
- Taş, İ. (2018). The examination of Internet addiction and psychological symptoms among adolescents according to various variables. *Journal of Social Sciences of Mus Alparslan University*, 6(1), 31-41.
- Wagnild, G.M., & Young, H.M. (1993). Development and psychometric evaluation of the resilience scale. *Journal of Nursing Measurement*, 1(2),165-178.
- Wang, H., Zhou, X., Lu, C., Wu, J., Deng, X. (2011). Problematic Internet use in high school students in guangdong province, China. *PLoS ONE*, 6(5): e19660.
- Weston, R., & Gore, P. A., Jr. (2006). A brief guide to structural equation modeling. *The Counseling Psychologist*, 34(5), 719–751.
- Wisniewski, P., Jia, H., Wang, N., Zheng, S., Xu, H., Rosson, M. B., & Carroll, J. M. (2015). Resilience mitigates the negative effects of adolescent Internet addiction and online risk exposure. Conference on Human Factors in Computing Systems, April 18 - 23 2015, Seoul, Republic of Korea DOI: 10.1145/2702123.2702240.

- Yen, J.Y., Lin, H.C., Chou, W.P., Liu, T.L., & Ko, C.H. (2019). Associations among resilience, stress, depression, and Internet gaming disorder in young adults. *Int J Environ Res Public Health*, 16(17), doi: 10.3390/ijerph16173181.
- Young, K. S. (2004). Internet addiction: A new clinical phenomenon and its consequences. *American Behavioral Scientist*, 48(4), 402-415.
- Zhou, P., Zhang, C., Liu, J., & Wang, Z. (2017). The relationship between resilience and Internet addiction: A multiple mediation model through peer relationship and depression. *Cyberpsychology, Behavior, and Social Networking*, 20(10), 634-639.