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SPOR BİLİMLERİ ÖĞRENCİLERİNİN AKILLI TELEFON BAĞIMLILIĞI VE AKADEMİK ÖZ YETERLİKLERİNİN AKADEMİK ERTELEME DAVRANIŞLARINA ETKİSİ*

THE EFFECT OF SMARTPHONE ADDICTION AND ACADEMIC SELF-EFFICACY OF SPORTS SCIENCES STUDENTS ON ACADEMIC PROCRASTINATION BEHAVIORS

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Spor Bilimleri Öğrencilerinin Akıllı Telefon Bağımlılığı ve Akademik Öz Yeterliklerinin Akademik Erteleme Davranışlarına Etkisi

ÖZ

Bu çalışmada spor bilimleri öğrencilerinin akıllı telefon bağımlılığı ve akademik öz yeterliklerinin akademik erteleme becerilerini yordama düzeyi incelenmiştir. İlişkisel tarama modelinde kurgulanan bu araştırmaya, 61 kadın 149 erkek toplam 210 üniversite öğrencisi oluşturmaktadır. Araştırmada veri toplama aracı olarak kişisel bilgi formu, Akıllı Telefon Bağımlılığı Ölçeği-Kısa Formu, Akademik Öz Yeterlik Ölçeği ve Akademik Erteleme Ölçeği-Kısa Formu kullanılmıştır. Araştırmada ilk olarak verilerin normal dağılıma uygun olup olmadığı tespit edilmiştir. Ardından pearson korelasyon analizi ve çoklu doğrusal regresyon analizi yapılmıştır. Araştırmada, spor bilimleri fakültesi öğrencilerinin akıllı telefon bağımlılıkları ile akademik erteleme davranışları arasında pozitif yönlü bir ilişki olduğu belirlenmiştir. Ancak spor bilimleri fakültesi öğrencilerinin akıllı telefon bağımlılıkları ile akademik öz yeterlik ve akademik erteleme ile akademik öz yeterlik arasında anlamlı bir ilişkinin varlığı tespit edilememiştir. Yapılan regresyon analizi sonucunda, akıllı telefon bağımlılığının akademik erteleme becerisini anlamlı şekilde etkilediği; ancak akademik öz yeterliğin akademik erteleme üzerinde anlamlı bir etki yaratmadığı görülmüştür. Sonuç olarak, akıllı telefon bağımlılığı ve akademik öz yeterliğin, akademik erteleme davranışındaki değişimin %41' ini açıkladığı belirlenmiştir.

Anahtar Kelimeler: Akademik erteleme, akademik öz yeterlik, akıllı telefon bağımlılık, spor bilimleri

The Effect of Smartphone Addiction and Academic Self-Efficacy of Sports Sciences Students on Academic Procrastination Behaviors

ABSTRACT

This study examined the level of predicting academic procrastination skills of sports science students' smartphone addiction and academic self-efficacy. This study, designed in the relational screening model, consists of a total of 210 university students, 61 female and 149 male. Personal information form, Smartphone Addiction Scale-Short Form, Academic Self-Efficacy Scale and Academic Procrastination Scale-Short Form were used as data collection tools. In the study, it was first determined whether the data were suitable for normal distribution. Then, Pearson correlation analysis and multiple linear regression analysis were conducted. In the study, it was determined that there was a positive relationship between smartphone addiction and academic procrastination behaviors of sports science faculty students. However, no significant relationship was found between smartphone addiction and academic self-efficacy of sports science faculty students and academic procrastination and academic self-efficacy. As a result of the regression analysis, it was seen that smartphone addiction significantly affected academic procrastination skills; however, academic self-efficacy did not have a significant effect on academic procrastination. As a result, it was determined that smartphone addiction and academic self-efficacy explained 41% of the change in academic procrastination behavior.

Keywords: Academic procrastination, academic self-efficacy, smartphone addiction, sports sciences

INTRODUCTION

The expansion of the usage areas of smartphones makes modern life much more efficient and useful. However, unconscious overuse has brought about many health, social and academic difficulties[1-5]. It can be observed that there is a relationship between excessive smartphone use and individuals' neglect of their responsibilities in areas such as family, work and school[6]. For example, not being able to determine the area and time of smartphone use can lead to unhealthy and dangerous situations and the use of smartphones while driving can cause fatal and severe accidents[7].

The term 'addiction', which had a very narrow usage area in the past years, was generally limited to addiction to substances such as drugs or alcohol. Later, this scope was expanded to include non-substance addictions[3,8,9]. Non-substance addiction includes behavioral addiction, behaviorally focused impulsive control disorder such as exercise or shopping addiction[10].

Addiction is defined by Stein et al. (2010)[11] as "the urge to engage in a rewarding behavior despite its negative consequences on one's physical, mental, social or financial well-being." In the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), published by the American Psychiatric Association (APA), where mental disorders are defined and classified, addictive disorders are listed under two broad categories: substance-related and behavioral. In the DSM-5, published in 2013, only gambling addiction was included in the second category, while addictions related to internet games, exercise and shopping were stated to be included in the list if there is not enough peer-reviewed evidence. Behavioral addictions are listed under the same broad category as substance-related disorders because the activated reward systems and behavioral symptoms associated with both are similar[12]. Physical and psychological symptoms seen in substance-related disorders can also be seen in behavioral addictions. Whether it is substance-related or not, anything that can cause excitement and impulsive reinforcement can create addiction[13]. Smartphone addiction is a type of addiction triggered by internet addiction, but more specific and purposeful. The fact that smartphones incorporate multiple functions and the increase in their usage area also paves the way for the formation of this type of addiction. Smartphone addicted individuals differ from other individuals in that they cannot stop themselves from using the phone at any time and under any circumstances, have a limited sense of control over their phone use, check the phone frequently, feel the need to look at the phone even when they are in communication with others, put their mobile phone in a place where they can reach it at any time when they sleep, always carry their phone with them, disrupt their daily work due to phone use, feel happy by looking at the phone when they are unhappy, and feel unhappy and anxious in the absence of the phone[14]. Individuals who have at least five, if not all, of these characteristics are seen as smartphone addicts.

Studies on technology-related addictive behaviors related to television, internet, games, social media and mobile phones are increasing[15]. Problems that increase with the expansion of the usage areas of smart phones attract the attention of researchers all over the world. In the literature, the concept of excessive smartphone use is often called "problematic smartphone use", "smartphone addiction", "internet addiction", "proneness to smartphone addiction", "mobile phone addiction"[16-20]. Ifeanyi and Chukwuere (2018)[21] expressed smartphone addiction as distracting students' attention from a particular study. Some studies indicate that there is a negative relationship

between learning and smartphone addiction, especially among young people[4,22,23]. It is also noteworthy that students who use smartphones unconsciously have difficulty controlling their use while doing their academic homework[24]. Students spend too much time on social media instead of reading books[25]. In this case, it may cause them to postpone their school-related duties and responsibilities[26]. As a result of these situations, they may experience problems in academic performance (Denizli and Eken, 2018)[27] and difficulty in control[4,22,23].

Procrastination is defined as a self-regulatory problem characterized by the tendency to avoid starting to work on the job or task that needs to be done or to postpone the completion of necessary and important tasks[28,29]. Academic procrastination, on the other hand, is defined as deliberately postponing the initiation or completion of a task that must be done to complete an academic activity[30]. The main difference between procrastination and short-term delay is the feeling of internal discomfort caused by procrastination[31]. These disorders may manifest as anxiety, regret, reluctance or self-blame. Chronic procrastination also has other external consequences such as poor performance, missed opportunities, increased health problems, and problems in relationships[32]. Empirical studies show that 70% of students regularly exhibit procrastination[33,34]. Thus, tasks cannot be completed completely by the deadline or they must be completed in a hurry[35]. Therefore, it is important to understand the causes and consequences of procrastination behavior[36].

It is said that the reasons for procrastination include factors such as gender, school success, perfectionism, academic self-efficacy, academic success tendency, postponed exam and homework deadlines, and test anxiety[37-41]. When the literature is examined, it is seen that academic self-efficacy beliefs (Bandura, 1997)[42] are an important variable explaining academic procrastination[43-45]. Self-efficacy belief directly affects variables such as students' perceptions of their ability to fulfill their duties and responsibilities, the effort and patience they show to achieve suggested choices and goals. Additionally, it can promote thought patterns and positive emotional reactions associated with academic performance[46-48]. As a result of the studies, it is said that there is a relationship between self-efficacy and academic performance and the value given to the task[49,50].

Self-efficacy refers to how a person perceives the resources they have to achieve the goal, rather than their ability to achieve that goal. It also refers to individuals' ability to cope with daily stress factors[51,52]. Self-efficacy theory shows that a person's beliefs about him/herself and his/her choice of tasks significantly affect the amount of effort and perseverance and how he will perform as a result[42]. Bandura argued that if sufficient ability and motivation are present, initial attempts to do and maintain a job will persist. While high self-efficacy plays a role in the initiation and maintenance of behavior, weak self-efficacy plays a role in avoidance behavior[53]. It is argued that self-efficacy mediates the relationship between achievement and goals and physical activity in physical education and sports classes[47].

As a result of studies examining the relationship between the factors that increase procrastination behavior and the academic procrastination, it is said that adolescents and young adults who develop a sense of academic identity are less likely to adopt self-handicapping skills (procrastination skills, etc.) in an academic environment[54-63].

Teacher candidates are directly or indirectly exposed to developments in technology. In this context, it is predicted that smartphone addiction will trigger academic procrastination behavior. In addition, it is thought that in such a situation, the self-efficacy of teacher candidates will also be affected. Individuals studying at the faculty of sports sciences are given more responsibilities than teacher candidates studying in other branches due to their school and sports life, and yet a successful performance is expected. Therefore, keeping the self-efficacy skills of teacher candidates studying in sports sciences high and determining the impact levels of factors that cause procrastination behavior are considered important for both their educational and sports lives.

In this context, the aim of the study is to examine the effects of smartphone addiction and academic self-efficacy of students studying at the faculty of sports sciences on their academic procrastination behavior.

MATERIALS AND METHODS

Research Model

The relational screening model, one of the quantitative research methods, was used in the research. Relational screening model is a research model that aims to determine the existence and degree of change between two or more variables[64,65].

Study Group

"Easily accessible sampling method", one of the purposeful sampling types, was used to determine the research group. The easily accessible sampling method is defined as gaining speed and practicality by focusing on the easiest items to reach when creating a sample from the population in line with the determined purpose[66,67]. In this context, a total of 210 students, 61 female and 149 male, studying at sports science faculties of universities, participated in the research. G*power program was used to determine the number of participants in the study. As a result of the analysis, it was concluded that 200 people could represent the population in the current research.

Data Collection Tools

In addition to the "Personal Information Form" created by the researchers to determine the demographic characteristics of the participants, the "Smartphone Addiction Scale-Short Form", "Academic Self-Efficacy Scale" and "Academic Procrastination Scale-Short Form" were used.

Smartphone Addiction Scale-Short Form: The scale developed by Kwon et al (2013)[9] was adapted to Turkish by Noyan et al (2015)[68]. The short form of the scale consists of 10 items as a single dimension and is answered on a 6-point scale (1-Strongly Disagree, 2-Disagree, 3-Partly Disagree, 4-Partly Agree, 5-Agree, 6-Strongly Agree). The Cronbach alpha reliability coefficient in the process of adaptation to Turkish was calculated as .867. Within the scope of this research, the factor structure of the Smartphone Addiction Scale was tested with Level 1 CFA. As a result of the normal distribution of the data, the Maximum Likelihood calculation method was used. As a result of CFA, the goodness of fit values accepted in the literature were not reached. Thereupon, the correction indices (modification) were examined and 3 modifications (e1→e2, e4→e5, e8→e10) were made. The goodness of fit values obtained as a result of CFA (CMIN: 97.676, DF: 32, CMIN/DF: 3.052, GFI: 0.918, CFI:

0.951, RMSEA: 0.066) showed that the 3-factor model was compatible with the data and acceptable. Cronbach alpha reliability coefficient was found to be .922.

Academic Self-Efficacy Scale: It was developed by Jerusalem and Schwarzer (1981)[69] and adapted into Turkish by Yılmaz et al. (2007)[70]. The scale consists of a single dimension and 7 items, and the items are in the form of a 4-point rating (1-Does not apply to me at all, 2-Applies to me very little, 3-Applies to me, 4-Applies to me completely). The Cronbach alpha reliability coefficient in the process of adaptation to Turkish was calculated as .79. Within the scope of this research, the factor structure of the Academic self-Efficacy Scale was tested with Level 1 CFA. As a result of the normal distribution of the data, the Maximum Likelihood calculation method was used. As a result of CFA, the goodness of fit values accepted in the literature were not reached. Thereupon, Item 7 in the measurement tool was removed due to its low factor load and modification indices were examined, and 2 modifications (e4→e5, e5→e6) were made. Goodness of fit values obtained as a result of CFA (CMIN: 10.726, DF: 7, CMIN/DF: 1.532, GFI: 0.983, CFI: 0.993, RMSEA: 0.050) showed that the single-factor model was compatible with the data and acceptable. Cronbach alpha reliability coefficient was found to be .842.

Academic Procrastination Scale-Short Form: It was developed by McCloskey (2011)[71] and adapted into Turkish by Balkıs and Duru (2022)[72]. In the study, the short form of the scale, 5 items and a one-dimensional scale, was used. Scale items are answered on a 5-point scale (1-Totally Agree, 2-Partly Disagree, 3-Undecided, 4-Partly Agree, 5-Totally Agree). The Cronbach alpha reliability coefficient in the process of adaptation to Turkish was calculated as .88. Within the scope of this research, the factor structure of the Academic Procrastination Scale was tested with Level 1 CFA. As a result of the normal distribution of the data, the Maximum Likelihood calculation method was used. As a result of CFA, goodness-of-fit values accepted in the literature were reached. Goodness of fit values obtained as a result of CFA (CMIN: 9.267, DF: 5, CMIN/DF: 1.853, GFI: 0.983, CFI: 0.992, RMSEA: 0.064) showed that the single-factor model was compatible with the data and acceptable. Cronbach alpha reliability coefficient was found to be .892.

Data Collection

The scales used as data collection tools for the research were shared with the students via Google Forms. The average answer time for the scales is 5 minutes. The study was carried out with the permission of the Ethics Committee. Necessary permissions were obtained for scale use.

Data Analysis

SPSS 25 and AMOS 26 programs were used to analyze the data. Confirmatory Factor Analysis (CFA) was performed to test the construct validity of the SA, AS and APRO Scales. Cronbach Alpha coefficient was calculated to calculate the internal consistency coefficient of the scales. Extreme value analysis (mahalonobis, cook, Z values) was performed and the value range was based on +3/-3. Skewness-Kurtosis values obtained from the scales being between -1/+1 were accepted as the accepted value range for normal distribution[73]. In addition, the linear relationships between the variables were checked with a scatter diagram and it was seen that there was no deviation in the distribution. The correlation values between the variables were also examined and it was determined that there was no multicollinearity problem since no

value above .80 was encountered. In addition, the tolerance and VIF values obtained from the data gave results confirming that there is no multicollinearity between variables (Tolerance > 0.2, VIF < 10). Pearson Moment correlation analysis was conducted to determine the relationship between variables, and multiple linear regression analysis was conducted to determine the effect of smartphone addiction and academic self-efficacy on academic procrastination. The data were evaluated at the p<.05 level. The findings regarding the distributions and coefficients of the scales are shown in the table.

Tablo 1. Mean, Standard Deviation, Minimum, Maximum, Skewness and Kurtosis Values of Scale Scores

Variable	Min.-Max.	X±Ss	Skewness	Kurtosis
Smartphone Addiction	10.00-60.00	30.75±12.13	.160	-.650
Academic Procrastination	5.00-25.00	14.55±5.45	.028	-.898
Academic Self-Efficacy	6.00-24.00	18.67±3.71	-.570	.358

Ethics of Research

During the research, we acted within the framework of the "Higher Education Institutions Scientific Research and Publication Ethics Directive". In this context, approval was received from Erzincan Binali Yıldırım University Human Research Health and Sports Sciences Ethics Committee at its meeting dated 26.05.2023 to conduct the research with protocol number 05/03. All procedures performed in this study complied with the 1964 Helsinki declaration and ethical standards.

FINDINGS

Tablo 2. Correlation Test Results

Variables (n=210)		AP	SA	AS-E
1 Academic Procrastination	r			
	p	1		
2 Smartphone Addiction	r	.635**	1	
	p	.000		
3 Academic Self-Efficacy	r	-.120	-.036	1
	p	.083	.607	

*p<.05

In the study, the relationship between the dependent variables was examined with the correlation test. As a result of the analysis, a moderately positive and significant relationship was detected between academic procrastination and smartphone addiction (r: 0.635; p<0.05). However, the analysis results showed that there was no relationship between academic procrastination and academic self-efficacy (r:-.120; p>.05) and between smartphone addiction and academic self-efficacy (r:-0.036; p>0.05).

Tablo 3. Multiple Linear Regression

	B	Std. Error	Beta	t	Sig	Zero-order	Partial	Part
(Constant)	8.500	1.685		5.044	.000			
SA	.284	.024	.632	11.855	.000	.635	.636	.631
ASE	-.143	.078	-.098	-1.830	.069	-.120	-.126	-.097
R: 0.64; Adjust R^2: 0.41; Durbin Watson: 1.879								

In the study, a multiple linear regression model was established to determine the effect of smartphone addiction and academic self-efficacy on academic procrastination behavior. According to the regression analysis, smartphone addiction was found to be a significant predictor of academic procrastination behaviors. However, it was determined that academic self-efficacy did not have any effect on academic procrastination behavior. When looked at as a model, it was determined that smartphone addiction and academic self-efficacy explained 41% of the variance in academic procrastination behavior.

DISCUSSION

In this section, the findings obtained from the research conducted to examine the effects of smartphone addiction and academic self-efficacy of students studying in sports sciences on academic procrastination behavior were evaluated in line with the literature.

The study found, a statistically significant positive relationship was found between smartphone addiction and academic procrastination. However, no statistically significant relationship was found between academic self-efficacy and academic procrastination. In addition, smartphone addiction turned out to be a significant predictor of academic procrastination. This finding shows that as smartphone addiction increases, academic procrastination behaviors also increase. It is thought that the remaining 59% of the 41% variance obtained as a result of the research may be due to other demographic factors (such as gender, age, education level) or individual differences (such as personality traits, learning styles, motivation levels). It can also be stated that variables such as media literacy, technology use and psychological factors have the potential to explain the existing variance. When the national and international literature is examined, studies supporting this conclusion are found[27,74-77]. Additionally, in the studies conducted by Erdoğan et al. (2013)[78], Demir (2017)[79], Im and Jang (2017)[80], Qaisar et al. (2017)[81], Boyalı (2020)[82], Güngör and Koçak (2020)[83] and Koç (2022)[84] on university students, it was determined that there was a significant relationship between smartphone addiction and academic procrastination. Similarly, in the studies conducted by Kirschner and Karpinski (2010)[85] and Engin and Genç (2020)[86], it is explained that the relationship between the daily use time of mobile phones and academic procrastination is significant. As a result of the study conducted by Akdemir (2013)[87] and Gürültü (2016)[88], it was stated that there is a significant relationship between the time spent on the internet and social media and the academic procrastination behavior. As a result of the study conducted by Yang et al. (2018)[89] to examine the effect of problematic smartphone use on academic procrastination, it was reported that there was a significant relationship between the existing variables. In a different study, contrary to all these findings, it was concluded that there was no relationship between problematic internet use and academic procrastination behavior[90]. In line with the findings and previous studies, it can be said that technology plays an active role in fulfilling responsibilities and duties as a result of its involvement in every aspect of human life. It is thought that effects such as destroying the perception of time, presenting a more colorful and active world, creating virtual status and causing irresponsibility cause procrastination.

In the study, it was determined that there was no significant relationship between smartphone addiction and academic self-efficacy. When the literature is examined,

there are studies supporting the conclusion that there is no significant relationship between smartphone addiction and academic self-efficacy[91-93]. In the study conducted by Erkisi and Sağlam (2020)[93] to investigate the effect of internet addiction on self-efficacy in adolescents, no statistical relationship was found between internet addiction and self-efficacy. When this relationship was examined with many factors such as gender, smartphone ownership, school type, and age, no significant difference was found between the social and emotional subscale scores. In the study conducted by Özaltın et al. (2022)[94], it is claimed that there is a statistically significant and negative relationship between smartphone addiction and academic self-efficacy. As a result of their studies, Judd (2014)[95], Lepp et al. (2014)[96], Lee and Lee (2017)[24] and Yıldırım (2018)[97] emphasize that smartphone addiction of individuals with low academic achievement levels is significantly higher. It is said that the decrease in academic achievement due to the internet, which prevents students from devoting enough time to their educational duties and responsibilities, causes a loss of academic self-efficacy in individuals[98,99]. It is thought that the difference in the study findings is due to the fact that the self-efficacy skills of athletes are higher than normal individuals. In this regard, it can be said that no relationship was detected between smartphone addiction and academic self-efficacy.

In the study, it was determined that there was no significant relationship between academic procrastination and self-efficacy. When the literature was examined, it was stated that there was a low negative relationship between academic procrastination and self-efficacy [44,45,100-111]. Akbay and Gizir (2010)[100], as a result of their study on the role of academic motivation, academic self-efficacy and academic attributional styles in academic procrastination, stated that there is a negative relationship between academic procrastination and smartphone addiction. Additionally, it was said that when students' academic self-efficacy levels are high, their academic procrastination is less, and when their self-efficacy levels are low, their academic procrastination increases. As a result of their study to examine the effect of online and academic procrastination on academic stress and self-efficacy in students with learning disabilities, Niazov et al. (2022)[112] concluded that low academic self-efficacy was associated with academic procrastination, but was not associated with online procrastination. It is said that while academic procrastination is mainly related to the fear of failure[113] and difficulty in organizing and managing time[34], online procrastination is associated with social and technological distraction[114]. It is thought that the difference in the study findings is due to the fact that even if athletes exhibit procrastination in their duties and responsibilities, it does not cause a decrease in their performance, since they have high self-efficacy skills.

As a result of the analysis of the study, it was concluded that smartphone addiction alone had an effect on academic procrastination, while it was observed that the effect of academic self-efficacy on academic procrastination was not significant. It was determined that the effects of smartphone addiction and academic self-efficacy on academic procrastination were significant and they explained 41% of the variance. Recommendations for future studies/researchers based on the results of the research:

- An experimental study on the subject can be conducted, media literacy training can be given to the experimental group and the pre-test and post-test results can be examined. The importance of media literacy can be highlighted by determining the change that media literacy creates on the experimental group.

- A mixed study can be conducted to determine in which department the degree of impact is greater and the reasons for this, by conducting a study involving students studying in the fields of technology (Computer, Coding, Radio and Television, Software, etc.) and students studying in different fields.
- By conducting a qualitative study, the reasons for procrastination for students can be examined in depth. More valid and reliable results can be obtained by supporting mixed methods.

REFERENCES

1. Choi SW., Kim D., Choi JS., Ahn H., Choi EJ., Song WY., et al. (2015). Comparison of risk and protective factors associated with smartphone addiction and Internet addiction. Journal of Behavioral Addictions. 4(4), 308–314.
2. Khoury JM., Silva Codorino Couto LF., Santos D de A., de Oliveira e Silva VH., Sousa Drumond JP., de Carvalho e Silva LL., et al. (2019). Bad choices make good stories: The impaired decision-making process and skin conductance response in subjects with smartphone addiction. Frontiers in Psychiatry. 10, 73.
3. Kwon M., Lee JY., Won WY., Park JW., Min JA., Hahn C., … Kim DJ. (2013). Development and validation of a smartphone addiction scale (SAS). PloS One. 8(2), e56936.
4. Lee J., Cho B., Kim Y., Noh, J. (2015). Smartphone addiction in university students and its implication for learning. In: G. Chen V. Kumar, Kinshuk, R. Huang, S. C. Kong (Eds.), Emerging issues in smart learning (pp. 297–305). Berlin, Heidelberg: Springer.
5. Samaha M., Hawi, N. S. (2016). Relationships among smartphone addiction, stress, academic performance, and satisfaction with life. Computers in Human Behavior. 57, 321–325.
6. Akinci T. (2021). Determination of predictive relationships between problematic smartphone use, self-regulation, academic procrastination and academic stress through modelling. International Journal of Progressive Education. 17(1), 35-53.
7. Pennay D. (2006). Community attitudes to road safety: Community attitudes survey wave 18, 2005 (No. CR 227). Canberra: Australian transport safety bureau.
8. Griffiths, M. (1995). Technological addictions. Clinical Psychology Forum, 76, 14–19. Retrieved from https://www.researchgate.net/publication/284665745_Technological_addictions
9. Kwon M., Kim DJ., Cho H., Yang S. (2013). The Smartphone Addiction Scale: Development and validation of a short version for adolescents. PloS One. 8(12), e83558.
10. Grant JE., Potenza MN., Weinstein A., Gorelick DA. (2010). Introduction to behavioral addictions. The American Journal of Drug and Alcohol Abuse. 36(5), 233–241.
11. Stein DJ., Hollander E., Rothbaum BO. (2010). Textbook of anxiety disorders. American Psychiatric Pub. pp. 359.
12. APA, (2013). Diagnostic and statistical manual of mental disorders. Arlington: American Psychiatric Publishing.
13. Bian M., Leung L. (2015). Linking loneliness, shyness, smartphone addiction symptoms, and patterns of smartphone use to social capital. Social Science Computer Review. 33(1), 61–79.

14. Zou Z., Wang H., d'Oleire Uquillas F., Wang X., Ding J., Chen H. (2017). Definition of substance and non-substance addiction. Substance and non-substance addiction, 21-41.
15. Soror AA., Steelman ZR., Limayem, M. (2012). Discipline yourself before life disciplines you: Deficient self-regulation and mobile phone unregulated use. In: System Science (HICSS), 2012 45th Hawaii International Conference on (pp. 849–858). New Jersey: IEEE.
16. Al-Barashdi H., Bouazza A., Jabur N. (2015). Smartphone addiction among university undergraduates: A literature review. Journal of Scientific Research and Reports. 4(3), 210–225.
17. Hussain Z., Griffiths MD., Sheffield D. (2017). An investigation into problematic smartphone use: The role of narcissism, anxiety, and personality factors. Journal of Behavioral Addictions. 6(3), 378–386.
18. Kim D., Lee Y., Lee J., Nam JK., Chung Y. (2014). Development of Korean smartphone addiction proneness scale for youth. PloS One. 9(5), Article e97920.
19. Park N., Kim YC., Shon HY., Shim, H. (2013). Factors influencing smartphone use and dependency in South Korea. Computers in Human Behavior. 29(4), 1763–1770.
20. Wang P., Lei L., Wang X., Nie J., Chu X., Jin, S. (2018). The exacerbating role of perceived social support and the "buffering" role of depression in the relation between sensation seeking and adolescent smartphone addiction. Personality and Individual Differences. 130, 129–134.
21. Ifeanyi IP., Chukwuere JE. (2018). The impact of using smartphones on the academic performance of undergraduate students. Knowledge Management & E-Learning. 10(3), 290–308.
22. Alosaimi FD., Alyahya H., Alshahwan H., Al Mahyijari N., Shaik S. A. (2016). Smartphone addiction among university students in Riyadh, Saudi Arabia. Saudi Med. J. 37(6), 675–683.
23. Ben-Yahuda, N. (2016). Execute against Japan: The US Decision to Conduct Unrestricted Submarine Warfare.
24. Lee C., Lee JS. (2017). Prevalence and Predictors of Smartphone Addiction Proneness among Korean Adolescents, Children and Youth Services Review. 77, 10-17.
25. Adeniyi A. (2019). The impact of procrastination on students' academic performance in secondary schools. International Journal of Sociology and Anthropology Research. 5(1)17-22.
26. Demir Y., Kutlu, M. (2018). Relationships among internet addiction, academic motivation, academic procrastination and school attachment in adolescents. International Online Journal of Educational Sciences. 10(5), 315-332.
27. Denizli S., Eken E. (2018). Investigation of Smartphone Addiction Among University Students in Terms of Academic Achievement, Academic Procrastination, Smartphone Usage Behaviors and Some Demographic Variables. In Conference: 27th International Congress on Educational Sciences At: Antalya/Turkey.
28. Brownlow S., Reasinger RD. (2000). Putting off until tomorrow what is better done today: Academic procrastination as a function of motivation toward college work. Journal of Social Behavior and Personality. 15(5), 15-34.
29. Ferrari JR. (2010). Still procrastinating? The no regrets guide to getting it done. New York: J. Wiley & Sons, Inc.

30. Schouwenburg HC. (2004). Academic procrastination: Theoretical notions, measurement, and research. In: H. C. Schouwenburg, C. H. Lay, T. A. Pychyl, & J. R. Ferrari (Eds.), Counseling the procrastinator in academic settings (pp. 3–17). Washington, DC: American Psychological Association.
31. Lay CH., Schouwenburg HC. (1993). Trait procrastination, time management, and academic behavior. Journal of Social Behavior & Personality. 8(4), 647-662.
32. Moon SM., Illingworth AJ. (2005). Exploring the dynamic nature of procrastination: A latent growth curve analysis of academic procrastination. Personality and Individual Differences. 38(2), 297–309.
33. Ferrari JR., O'Callaghan J., Newbegin I. (2005). Prevalence of procrastination in the United States, United Kingdom, and Australia: Arousal and avoidance delays among adults. North American Journal of Psychology. 7(1), 1–6.
34. Rabin LA., Fogel J., Nutter-Upham KE. (2011). Academic procrastination in college students: The role of self-reported executive function. Journal of Clinical and Experimental Neuropsychology. 33(3), 344–357.
35. Soloman LJ., Rothblum E. (1994) Academic procrastination: frequency and cognitive-behavioural correlates, Journal of Counselling Psychology. 31, pp. 503-519.
36. Balkıs M., Duru, E. (2007). Erteleme davranışı ile ilişkili karakteristik ve boyutların psikolojik danışma ve rehberlik çerçevesinde incelenmesi. Kuram ve Uygulamada Eğitim Bilimleri. 7(1), 349-385. Retrieved from http://www.edam.com.tr/kuyeb/tr/onceki_sayilar.asp?act=detay&ID=26.
37. Balkis M. (2011). Academic efficacy as a mediator and moderator variable in the relationship between academic procrastination and academic achievement. Egitim Arastirmalari Eurasian. Journal of Educational Research. 45, 1–16.
38. Ferrari, JR., Keane, SM., Wolfe, RN., Beck, BL. (1998). The antecedents and consequences of academic excuse-making: Examining individual differences in procrastination. Research in Higher Education, 39(2), 199–215.
39. Hen M., Goroshit M. (2014). Academic procrastination, emotional intelligence, academic self-efficacy, and GPA: A Comparison between students with and without learning disabilities. Journal of Learning Disabilities. 47(2), 116–124.
40. Özer A., Altun E. (2011). The Reasons for academic procrastination among university students. Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi. 11(21), 45-72.
41. Sadler CD., Buley, J. (1999). Predictors of academic procrastination in college students. Psychological Reports. 84, 686-688.
42. Bandura A. (1997). Self-efficacy: The exercise of control. New York, NY: Worth Publisher.
43. Farran B. (2004). Predictors of academic procrastination ın college students. Unpublished Doctoral Dissertation, Fordham University. ABD.
44. Kandemir M. (2010). Akademik erteleme davranışını açıklayıcı bir model. Doktora Tezi, Gazi Üniversitesi Eğitim Bilimleri Enstitüsü. Ankara.
45. Klassen RM., Krawchuk LL., Rajani S. (2008). Academic procrastination of undergraduates: Low selfefficacy to self-regulate predicts higher levels of procrastination. Contemporary Educational Psychology. 33(4), 915-931.
46. Bandura A. (2000). Self-efficacy: The foundation of agency. En Perrig WJ. & Grob A. Editores, Control of human behavior, mental processes and consciousness. Erlbaum.

47. Gao Z., Lochbaum M., Podlog, L. (2011). Self-efficacy as a mediator of children's achievement motivation and in-class physical activity. Perceptual and Motor Skills. 113, 969–981.
48. Pintrich P., García T. (1993). Intraindividual differences in students' motivation and self-regulated learning. German Journal of Educational Psychology. 7(3), 99-107.
49. Wilson K., Narayan A. (2016). Relationships among personal task self-efficacy, self-regulated learning strategy use and academic performance in a computer-supported collaborative learning environment. Educational Psychology. 36(2), 236-253.
50. Jiang Y., Song J., Lee M., Bong M. (2014). Self-efficacy and achievement goals as motivational links between perceived contexts and achievement. Educational Psychology. 34(1), 92-117.
51. Arias-Chávez D., Ramos-Quispe T., Villalba-Condori KO., Postigo-Zumarán JE. (2020). Academic procrastination, self-esteem, and self-efficacy in first-term university students in the city of Lima. International Journal of Innovation, Creativity and Change. 11(10), 339-357.
52. Scholz U., Schwarzer R. (2005). The general self-efficacy scale: Multicultural validation studies. The Journal of Psychology. 139(5), 439-457.
53. Bandura A. (1985). Social foundations of thought and action: A social cognitive theory. Englewood Cliffs, NJ: Prentice Hall.
54. Brown CM., Kimble CE. (2009). Personal, interpersonal, and situational influences on behavioral self-handicapping. The Journal of Social Psychology. 149(6), 609-626.
55. Chorba K., Was CA., Isaacson RM. (2012). Individual differences in academic identity and self-handicapping in undergraduate college students. Individual Differences Research. 10(2), 60-68.
56. Kearns H., Forbes A., Gardiner M. (2007). A cognitive behavioural coaching intervention for the treatment of perfectionism and self-handicapping in a nonclinical population. Behaviour Change. 24(3), 157-172.
57. Leondari A., Gonida E. (2007). Predicting academic self-handicapping in different age groups: The role of personal achievement goals and social goals. British Journal of Educational Psychology. 77, 595-611.
58. Meyer CL. (2000). Academic procrastination and self-handicapping: Gender differences in response to non-contingent feedback. Procrastination: Current Issues and New Directions [Special Issue]: Journal of Social Behavior and Personality. 15(5), 87-102.
59. Rhodewalt F., Hill K. (1995). Self-handicapping in the classroom: The effects of claimed self-handicaps on responses to academic failure. Basic and Applied Social Psychology. 16(4), 397-416.
60. Steel P., Brothen T., Wambach C. (2001). Procrastination and personality, performance, and mood. Personality and Individual Differences. 30(1), 95-106.
61. Thomas CR., Gadbois SA. (2007). Academic self-handicapping: The role of self-concept clarity and students' learning strategies. British Journal of Educational Psychology. 77, 101-119.
62. Tice DM. (1991). Esteem protection or enhancement? Self-handicapping motives and attributions differ by trait self-esteem. Journal of Personality and Social Psychology. 60(5), 711-725.
63. Trice A., Milton C. (1987). Locus of control as a predictor of procrastination among adults in correspondence course. Perceptual and Motor Skills. 65, 1002.

64. Christensen LB., Johnson RB., Turner LA. (2015). Araştırma yöntemleri desen ve analiz (Çev. Ed. Ahmet Alpay). Ankara: Anı Yayıncılık.
65. Karasar N. (2021). Bilimsel araştırma yöntemi: Kavramlar-ilkeler-teknikler. Ankara: Nobel Yayin Dagitim.
66. Patton MQ. (2005). Qualitative research. Encyclopedia of statistics in behavioral science.
67. Yıldırım A., Şimşek H. (2016). Sosyal bilimlerde nitel araştırma yöntemleri. Ankara: Seçkin Yayıncılık.
68. Noyan CO., Enez Darçın A., Nurmedov S., Yılmaz O., Dilbaz, N. (2015). Akıllı Telefon Bağımlılığı Ölçeğinin Kısa Formunun üniversite öğrencilerindeTürkçe geçerlilik ve güvenilirlik çalışması. Anatolian Journal of Psychiatry/Anadolu Psikiyatri Dergisi. 16.
69. Jerusalem M., Schwarzer R. (1981). Fragebogen zur Erfassung von "Selbstwirksamkeit. Skalen zur Befindlichkeit und Persoenlichkeit In: R. Schwarzer (Hrsg.). (Forschungsbericht No. 5). Berlin: Freie Universitaet, Institut fuer Psychologie.
70. Yılmaz M., Gürçay D., Ekici, G. (2007). Akademik özyeterlik ölçeğinin Türkçe'ye uyarlanması. Hacettepe Üniversitesi Eğitim Fakültesi Dergisi. 33(33), 253-259.
71. McCloskey JD. (2011). Finally, my thesis on academic procrastination (Master's thesis). Retrieved from ProQuest, UMI Dissertations Publishing. (1506326).
72. Balkıs M., Duru, E. (2022). Akademik erteleme ölçeği'nin kısa formunun psikometrik özelliklerinin incelenmesi. Pamukkale Üniversitesi Eğitim Fakültesi Dergisi. (54), 410-425.
73. Hair JF., Ringle CM., Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. Long Range Planning. 46(1-2), 1-12.
74. Albursan IS., Al. Qudah MF., Al-Barashdi HS., Bakhiet SF., Darandari E., Al-Asqah SS., ... & Albursan HI. (2022). Smartphone addiction among university students in light of the COVID-19 pandemic: Prevalence, relationship to academic procrastination, quality of life, gender and educational stage. International Journal of Environmental Research and Public Health. 19(16), 10439.
75. Behzad R. (2021). The relationship between smartphone addiction and procrastination. Annals of the Romanian Society for Cell Biology. 8316-8323.
76. Liu. H. (2018). The Mediating Role of Achievement Motivation in College Students' Cell Phone Dependence and Academic Procrastination.
77. Özyer KK., Altınsoy, F. (2023). Academic procrastination of university students: The role of problematic internet use, self-regulated online learning, and academic self-efficacy. Malaysian Online Journal of Educational Technology. 11(1), 77-93.
78. Erdoğan U., Pamuk M., Eren-Yürük S., Pamuk, K. (2013). Academic procrastination and mobile phone. In International Academic Conference on Education, Teaching and E-learning.
79. Demir Y. (2017). Ergenlerde internet bağımlılığı, akademik güdülenme, akademik erteleme ve okula bağlanma arasındaki ilişkiler. Doktora Tezi, İnönü Üniversitesi. Malatya.
80. Im IC., Jang KA. (2017). The Convergence Influence of excessive smartphone use on attention deficit, learning environment, and academic procrastination in health college students. Journal of the Korea Convergence Society. 8(12), 129-137.

81. Qaisar S., Akhter N., Masood A., Rashid, S. (2017). Problematic mobile phone use, academic procrastination and academic performance of college students. Journal of Educational Research. 20(2), 201-214.
82. Boyalı C. (2020). Öz-kontrol ile akademik erteleme arasındaki ilişkide akıllı telefon bağımlılığının aracı rolünün incelenmesi. Yüksek Lisans Tezi, Marmara Üniversitesi, Eğitim Bilimleri Enstitüsü. İstanbul.
83. Güngör AB., Koçak O. (2020). Üniversite öğrencilerinin akıllı telefon bağımlılığı ve akademik erteleme davranışı arasındaki ilişkininin incelenmesi. Eğitim ve Toplum Araştırmaları Dergisi/JRES. 7(2),397-419.
84. Doğan Koç H. (2022). Üniversite öğrencilerinin teknoloji bağımlılıklarının akademik erteleme davranışları üzerine etkisi. Yüksek Lisans Tezi, Necmettin Erbakan Üniversitesi Eğitim Bilimleri Enstitüsü.
85. Kirschner PA., Karpinski AC. (2010). Facebook ve akademik performans. İnsan Davranışında Bilgisayarlar. 26(6), 1237-1245.
86. Engin G., Genç S. Z. (2020). Öğretmen adaylarının akıllı telefon ekran kullanım süreleri ile akademik erteleme davranışları arasındaki ilişkinin incelenmesi. Celal Bayar Üniversitesi Sosyal Bilimler Dergisi Celal Bayar University Journal of Social Sciences. 18(1), 314-325
87. Akdemir NT. (2013. İlköğretim öğrencilerinin facebook tutumları ile akademik erteleme davranışları ve akademik başarıları arasındaki ilişkilerin incelenmesi. Yüksek Lisans Tezi, Marmara Üniversitesi Eğitim Bilimleri Enstitüsü. İstanbul.
88. Gürültü E. (2016). Lise öğrencilerinin sosyal medya bağımlılıkları ve akademik erteleme davranışları arasındaki ilişkinin incelenmesi. Yüksek Lisans Tezi, Marmara Üniversitesi Eğitim Bilimleri Enstitüsü, İstanbul.
89. Yang Z., Asbury K., Griffiths MD. (2018). An exploration of problematic smartphone use among chinese university students: Associations with academic anxiety, academic procrastination, self-regulation and subjective wellbeing. International Journal of Mental Health and Addiction. 17(3), 596-614
90. Odacı H., Berber Çelik Ç. (2011). Üniversite öğrencilerinin problemli internet kullanımlarının akademik öz-yeterlik, akademik erteleme ve yeme tutumları ile ilişkisi. 5th International Computer & Instructional Technologies Symposium. Fırat University, 22-24 September 2011, Elazığ.
91. Dirik K. (2016). Ergenlerde akıllı telefon bağımlılığı ile öz-güven arasındaki ilişkilerin çeşitli değişkenler açısından incelenmesi. Yüksek Lisans Tezi, İstanbul Gelişim Üniversitesi Sağlık Bilimleri Enstitüsü. İstanbul.
92. Demirel EN., Kumcağız H. (2019). Ortaokul öğrencilerinin akıllı telefon bağımlılığı ile sosyal ilişkileri. Turkish Studies - Information Technologies and Applied Sciences. 14(1), 45-59.
93. Erkişi EP., Sağlam M. (2020). Ergenlerde internet bağımlılığının öz-yeterliğe etkisinin incelenmesi. İnönü Üniversitesi Sağlık Hizmetleri Meslek Yüksek Okulu Dergisi. 8(1), 46-71.
94. Özaltın E., Söyler HÇ., Günay E. (2022). Ortaokul öğrencilerinde akıllı telefon bağımlılığı, algılanan anne baba tutumu, sosyal dışlanma ve akademik özyeterlilik. Sosyal, Beşeri ve İdari Bilimler Dergisi. 5(8), 1093-1109.
95. Judd T. (2014). Making sense of multitasking: The role of Facebook. Computers & Education. 70, 194-202.
96. Lepp A., Barkley J., Karpınşık A. (2014). The relationship between cell phone use, academic performance, anxiety and satisfaction with life in college students. Computers in Human Behavior. 31, 343-350.

97. Yıldırım S. (2018). Ergenlerin öznel iyi oluş ve anne baba tutumları ile akıllı telefon bağımlılığı arasındaki ilişkinin çeşitli değişkenler açısından incelenmesi. Yüksek Lisans Tezi, Sakarya Üniversitesi Eğitim Bilimleri Enstitüsü. Sakarya.
98. Geng J., Han L., Gao F., Jou M., Huang CC. (2018). Internet addiction and procrastination among chinese young adults: A moderated mediation model. Computers in Human Behavior. 84: 320- 333.
99. Kocaaslan EN., Kostak MA., Özdilek S., Topçu N. (2021). Hemşirelik bölümü öğrencilerinin internet bağımlılığı ve akademik öz yeterlilik düzeyleri. Türkiye Klinikleri Hemşirelik Bilimleri Dergisi. 13(3), 493-501.
100. Akbay SE., Gizir CA. (2010). Cinsiyete göre üniversite öğrencilerinde akademik erteleme: akademik güdülenme, akademik öz yeterlik ve akademik yükleme stillerinin rolü. Mersin Üniversitesi Eğitim Fakültesi Dergisi. 6(1), 60-78.
101. Aydoğan D. (2008). Akademik erteleme davranışının benlik saygısı, durumluluk kaygı ve öz-yeterlik ile açıklanabilirliği. Yüksek Lisans Tezi, Gazi Üniversitesi. Ankara.
102. Berber Çelik Ç. (2014). Akademik ertelemenin bazı psiko-sosyal değişkenlere göre açıklanması ve gerçeklik terapisine dayalı akademik erteleme ile başa çıkma eğitim programının etkiliğinin sınanması. Doktora Tezi, Karadeniz Teknik Üniversitesi. Trabzon.
103. Ferrari JR., Parker JT., Ware CB. (1992). Academic procrastination: Personality correlates with Myers Briggs types, self-efficacy, and academic locus of control. Journalof Social Behavior and Personality. 7(3), 495-502.
104. Haycock LA., McCarthy P., Skay CL. (1998). Procrastination in college students: Therole of self- efficacy and anxiety. Journal of Counseling & Development. 76(3), 317-324.
105. Li L., Gao H., Xu, Y. (2020). The mediating and buffering effect of academic self-efficacyon the relationship between smartphone addiction and academic procrastination. Computers & Education. 159, 1-11.
106. Pfister T. (2002). The effect of self-monitoring on academic procrastination, self eficacy and achievement. The Florida State University College of Education, Florida.
107. Sirois F. (2004). Procrastination and intentions to perform health behaviors: The role of self-efficacy and the consideration of future consequences. Personality and Individual Differences. 37(1), 115-128.
108. Şengül M., Seyfi RÖ. (2020). Türkçe öğretmeni adaylarının akademik erteleme davranışları ile akademik öz yeterlikleri arasındaki ilişkinin incelenmesi. Cumhuriyet Uluslararası Eğitim Dergisi. 9(3), 755-773.
109. Wang M., Qian M., Wang W., Chen R. (2011). Effects of group counseling based on self-efficacy for self-regulated learning in students with academic procrastination. Chinese Mental Health Journal. 25(12), 921-926.
110. Wäschle K., Allgaier A., Lachner A., Fink S., Nückles M. (2014). Procrastination and self-efficacy: Tracing vicious and virtuous circles in self-regulated learning. Learning and Instruction. 29, 103–114.
111. Wolters CA. (2003). Understanding procrastination from a self-regulated learning perspective. Journal of Educational Psychology. 95(1), 179-187.
112. Niazov Z., Hen M., Ferrari JR. (2022). Online and academic procrastination in students with learning disabilities: the impact of academic stress and self-efficacy. Psychological Reports. 125(2), 890-912.

113. Haghbin M., McCaffrey A., Pychyl TA. (2012). The complexity of the relation between fear of failure and procrastination. Journal of Rational-Emotive & Cognitive Behavior Therapy. 30(4), 249–263.
114. Soh PCH., Koay KY., Chew KW. (2017). Conceptual view of cyber loafing and non-work domain. SHS Web of Conferences, 33, 1–6.