



International Journal of Disabilities Sports and Health Sciences

e-ISSN: 2645-9094



RESEARCH ARTICLE

Causes of Social Media Addiction in University Students, Sleep Quality? A Study on Sports Science Students

Yaşar Yaşar¹, Tarık Sivrikaya², Gökhan Tuna³, Merve Ferah Tazegül⁴, İhsan Yağcı⁵ and Cüneyt Seydioğlu^{*2}

¹Şırnak University, Şırnak Şırnak Vocational School, Şırnak / Turkey

²Avrasya University, Faculty of Sport Science, Trabzon / Turkey

³Trakya University, Kırkpınar Faculty of Sport Science, Edirne / Turkey

⁴Iğdır University, Tuzluca Vocational School Management and Organization Department, Iğdır / Turkey

⁵Afyon Lisesi, Milli Eğitim Bakanlığı, Afyonkarahisar / Turkey

*Corresponding author: cuneyt_seydioglu@hotmail.com

Abstract

This study aims to investigate social media addiction among college students, specifically the relationship between sleep quality and social media use. The study sample group consisted of 530 students from the departments of coaching education, sports management, leisure and sports, and physical education from four private and two public universities with faculties of sports science. The data of the study were obtained by Personal Information Form, Social Media Addiction Scale and Pittsburgh Sleep Quality Index (PSQI). The data obtained were analyzed using SPSS 25.0 package program and the significance level was determined as 0.05. The findings of the study revealed that there were significant differences in sleep quality and social media addiction levels according to the gender and employment status of the students. While delay in falling asleep and lower sleep efficiency were noteworthy in male students, it was found that the sleep duration of working students was shorter compared to non-working students. It was also observed that virtual tolerance and virtual communication levels were higher in non-working students. While sleep quality sub-dimensions were positively and moderately related to each other, negative and significant relationships were found between social media addiction sub-dimensions and sleep quality. As a result of regression analysis, it was determined that the deterioration in sleep quality significantly increased the level of social media addiction and this relationship had a moderate effect

Keywords

University, Sport Sciences, Social Media, Sleep Quality

INTRODUCTION

With the rapid development of digital technologies, social media has become an integral part of individuals' daily lives. Social media platforms that meet basic needs such as communication, information sharing and socialization are used intensively, especially among young people. This situation causes social media to be perceived as a necessity in modern life (Akbulut & İskender, 2020).

Digital media has become a mandatory part of daily life today due to the non-stop development of technology. 67.1% of the world's population use smartphones, 62.5% use the internet and 58.4% actively use social networks (Pagano et al., 2023).

However, excessive and uncontrolled use of social media leads to the emergence of addiction symptoms in individuals. Social media addiction is a condition characterized by an individual's inability to control social media use, gradually increasing the duration of use, and this situation negatively affects psychological, physical and social functionality (Çömlekçi & Başol, 2019). Research among university students shows that social media addiction is widespread and has effects on students' academic achievement, social relationships, and overall quality of life (Evers et al., 2020).

In 2020, the World Health Organization officially recognized dependence on digital technology (connected devices) as a worldwide

Received: 10 May 2025 ; Revised : 17 June 2025 ; Accepted: 06 July 2025; Published: 25 July 2025

How to cite this article: Yaşar, Y., Sivrikaya, T., Tuna, G., Ferah Tazegül, M., Yağcı, İ., and Seydioğlu, C. (2025). Causes of Social Media Addiction in University Students, Sleep Quality? A Study on Sports Science Students. *Int J Disabil Sports Health Sci*; 8(3):283-290. <https://doi.org/10.33438/ijdshts.1696808>

problem, leading to an inability to manage and balance time, energy and attention (Dresp-Langley & Hutt, 2022).

The effects of social media addiction on individuals' lifestyles and health behaviors are also noteworthy. Increases in the use of electronic devices have gone hand in hand with changes in adolescents' sleep habits. 93% of 13-17 year olds have at least one social media account and adolescents report interacting with such accounts for an average of 3 hours a day. More than two-thirds of adolescents report using electronic devices as the last activity before bedtime, at least three times a week. One-third reported using these devices in the dark before going to sleep (Dibben et al., 2023).

Sleep quality is an important health indicator affected by social media usage habits. Spending time on social media until late at night can lead to decreased sleep time and disruption of sleep patterns (Pantic, 2014). In this context, examining the effect of social media use on sleep quality is important in supporting young adults' healthy living habits.

Sleep is a fundamental physiological process that covers about one-third of human life and plays a vital role in maintaining the individual's overall health. Adequate and quality sleep supports many important functions such as strengthening the immune system, maintaining metabolic balance, and improving mental and physical performance (Dong et al., 2020). In addition, sleep has a critical role in learning, memory consolidation and emotional regulation processes (Şenol et al., 2012).

Quality sleep is associated not only with adequate sleep duration, but also with a healthy sleep structure and pattern. Sleep quality is assessed by factors such as time to fall asleep, continuity of sleep, frequency of awakening and feeling rested in the morning. Inadequate sleep quality can lead to negative consequences such as attention deficit, memory problems, mood disorders and immune system weakening (Kağan et al., 2021). Studies among university students show that the sleep quality of this group is affected by various factors. Academic stress, exam anxiety, irregular living habits, and especially excessive use of technological devices are the main factors that negatively affect students' sleep patterns and quality (Bakotic et al., 2017). In this context, improving

sleep quality is important for students' academic success and overall quality of life.

Athletes have intense physiological demands and require nutrition that is optimized for these demands (Burke et al., 2019). Sleep deprivation negatively affects glucose metabolism and neuroendocrine (a system of nerve cells and endocrine cells) function, which can affect carbohydrate metabolism, appetite, energy intake and protein synthesis. These factors can negatively affect the nutritional, metabolic and endocrine status of the athlete, affecting athletic performance and recovery (Halsen, 2014). Post-exercise recovery is vital for all athletes in terms of next training efficiency. If the balance between training stress and physical recovery is inadequate, the athlete's performance in subsequent training sessions or competitions may be negatively affected (Doherty et al., 2019). Excessive screen time (television, computer or other electronic media) behaviors among youth have been associated with increased cardiometabolic risk, shorter sleep, and unhealthy eating habits in youth (Ahluwalia et al., 2018).

The primary purpose of this study is to investigate the causes of social media addiction among college students, specifically to explore the relationship between sleep and social media addiction. In this context, by analyzing the factors that influence social media addiction among college students, we aim to determine the important role of sleep quality in these causes. Our study will provide insights into the relationship between sleep quality and social media. This may contribute to the development of more effective strategies to prevent or reduce social media addiction. The findings are expected to provide recommendations for regulating university students' social media usage habits and improving their sleep health.

MATERIALS AND METHODS

The study used the relational research model among the quantitative research methods.

Study Group

The purposive sampling method, one of the non-probability sampling methods, was used in the study. The purposive sampling method is defined as a sampling group in which subjects considered suitable for the research and have specific

characteristics are included in the research (Gürbüz & Şahin, 2016). In this context, the population of the study consists of students studying in the faculties of sports sciences in Turkey. The study group of the research consists of 530 volunteer students studying at Marmara University, Health Sciences University, Istanbul Topkapı University, Istanbul Nişantaşı University, Istanbul Rumeli University and Fenerbahçe University in the 2024-2025 academic year, since they have a Faculty of Sports Sciences.

Data Collection Tools

This study followed ethical standards and received approval from the Istanbul Topkapı University, Academic Research and Publication Ethics Commission with reference number (E-49974783-612.09.7-2300006845). Participant provided informed consent, with the volunteer form covering research details, risks, benefits, confidentiality, and participant rights. The research strictly adhered to the ethical principles of the Declaration of Helsinki, prioritizing participant's rights and well-being in design, procedures, and confidentiality measures.

Social Media Addiction Scale

The validity and reliability of the Social Media Addiction Scale was conducted by Şahin and Yağcı (2017). It consists of two sub-dimensions (virtual tolerance and virtual communication) and 20 questions. Items 1 to 11 cover the sub-dimension of virtual tolerance and items 12 to 20 cover the sub-dimension of virtual communication. Items 5 and 11 are reverse scored. The range of points that

can be obtained from the scale varies between 20 and 100. It is evaluated that the individual with a high score perceives himself/herself as a "social media addict". As a result of the analyses, Croanbach's alpha value for the virtual tolerance sub-dimension was found to be .79, .87 for the virtual communication sub-dimension, and .89 for the total score of social media addiction.

Pittsburg Sleep Quality Index (PSQI)

The PDQI was developed by Buysse et al. (1989) and shown to have adequate internal consistency, test-retest reliability and validity. The validity and reliability of the index in Turkey was conducted by Ağargün, Kara, and Anlar (1996) and it was determined that it was appropriate for the Turkish population. Cronbach's alpha internal consistency coefficient was found to be 0.80. 18 items are included in the scoring in the evaluation of the PSI. The PSQI has 7 components including subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbance, sleep medication use and daytime dysfunction. Some of the components are indicated by a single item, while others are obtained by grouping several items. Each item is evaluated on a 0-3 point scale and the sum of the 7 component scores constitutes the total PDQI score. The total score has a value between 0-21, with a high total score indicating poor sleep quality. A total PDQI score of ≤ 5 indicates "good sleep quality" and >5 indicates "poor sleep quality" (Ağargün et al., 1996).

Table 1. Normality test results for the distribution of data

Scale-Factor	Skewness	kurtosis
Subjective Sleep Quality	.854	.653
Sleep Latency/Delay	.158	-1.090
Sleep Duration	.791	.292
Habitual Sleep Activity	-.617	-.217
Sleep Disorder	.830	.437
Use of sleeping pills	.712	.389
Daytime Dysfunction	-.341	-.182
Virtual Tolerance	1.22	.700
Virtual Communication	.253	.918

When Table 1 is examined, it is seen that the skewness and kurtosis values of the data of the scale and sub-dimensions used within the scope of the research are between -2 and +2, which is suitable for normal distribution. It was determined that the data obtained were normally distributed (George & Mallery, 2019) since the skewness and kurtosis values were between -2 and +2. Since it was determined that the data showed normal distribution, parametric tests were applied.

Data Analysis

The research findings were analyzed with SPSS 25.0 package program. Frequency analysis of the demographic characteristics of the students participating in the study was made. In order to determine the normal distribution of the data, Kolmogorov-Smirnov and Shapiro-Wilk tests were performed and it was determined that the skewness and kurtosis values were between ± 2 (George & Mallery, 2010). Parametric tests were applied to the data showing normality distribution. According to the results obtained, independent groups t-test, one-way analysis of variance (ANOVA) for multiple comparisons between different variables and Tukey

test were used to determine the source of differences. Whether the sleep quality levels of the students in the study predicted the sub-factors of the causes of social media addiction was tested by simple regression analysis.

RESULTS

When demographic characteristics are analyzed, it is seen that 246 of the students are female and 284 are male. The distribution according to age groups is 178 students between the ages of 17-20, 231 students between the ages of 21-24 and 121 students in the age group of 25 and above. When the students were asked whether they were working or not, it was determined that 314 of them were working and 216 were not. In terms of living space, 244 students lived with their families, 169 students lived in dormitories and 117 students lived in student houses. In terms of smoking, 328 students stated that they smoked while 202 students stated that they did not smoke. While 194 students were licensed sportsmen, 336 students were not licensed sportsmen (Table 2).

Table 2. Frequency and percentage distributions of the demographic information of the students who participated in the study

Variable	Frequency (n)	Percentage (%)
Gender		
Woman	246	46.4
Male	284	53.6
Age		
17-20	178	33.6
21-24	231	46.6
25 and above	121	22.8
Are you working?		
Working	314	59.2
Not working	216	40.8
Your living space		
I live with my family	244	46
I live in a dormitory	169	31.9
I live in a student house	117	22.1
Do you smoke?		
Yes	328	61.9
No.	202	38.1
Do you play sports under license?		
Yes	194	36.6
No.	336	63.4
Total	530	%100

When the sleep quality and social media addiction levels of male and female participants are compared, the sub-dimensions with statistically significant differences are as follows: Sleep

Latency/Delay scores of men were higher than women ($p=.001$), indicating that men had more difficulty in falling asleep. Women's Habitual Sleep Efficacy scores were significantly higher than men's

($p=.020$), indicating that women had lower sleep efficiency. Although a borderline difference was observed between men and women in the Subjective Sleep Quality sub-dimension, the level of significance was not reached. No statistically significant difference was found between men and

women in the sub-dimensions of Sleep Duration, Sleep Disorder, Sleep Medication Use, Daytime Dysfunction and Social Media Addiction Scale, Virtual Tolerance and Virtual Communication ($p>0.05$) (Table 3).

Table 3. t-test results according to the university type of the students participating in the study

Scale Subscales	Female (N=246)		Male (N=284)		P
	Ort.	Ss.	Ort.	Ss.	
<i>Pittsburg Sleep Quality Index (PSQI)</i>					
Subjective Sleep Quality	2.23	1.11	2.58	1.01	.058
Sleep Latency/Delay	1.95	1.23	2.46	1.14	.001*
Sleep Duration	2.18	1.23	2.10	1.21	.640
Habitual Sleep Activity	2.74	1.44	2.04	1.36	.020*
Sleep Disorder	2.02	1.06	2.26	.91	.590
Use of sleeping pills	2.96	.83	2.83	.74	.154
Daytime Dysfunction	2.38	1.08	2.54	1.02	.183
<i>Social Media Addiction Scale</i>					
Virtual Tolerance	4.43	.57	4.35	.55	.255
Virtual Communication	4.61	.61	4.41	.62	.530

When Table 4 is analyzed, significant differences were found in some scale sub-dimensions in the comparison made according to the employment status of the students. A significant difference was found between working and non-working students in the Sleep Duration sub-dimension ($p=.001$). Sleep duration of non-working students was found to be longer than working students. No statistically significant difference was found in the sub-dimensions of Subjective Sleep

Quality, Sleep Latency/Delay, Habitual Sleep Efficacy, Sleep Disorder, Sleep Medication Use and Daytime Dysfunction ($p>.05$). A significant difference was also found in the participants' social media addiction levels, Virtual Tolerance and Virtual Communication sub-dimensions. Virtual Tolerance and Virtual Communication levels of non- working students were found to be higher than those of working students (Table 4).

Table 4. t-test results according to the employment status of the students participating in the study

Scale Subscales	I work (N=314)		Not working (N=216)		P
	Ort.	Ss.	Ort.	Ss.	
<i>Pittsburg Sleep Quality Index (PSQI)</i>					
Subjective Sleep Quality	2.90	1.18	3.18	1.13	.104
Sleep Latency/Delay	2.11	.86	1.86	.87	.251
Sleep Duration	2.04	.84	3.27	3.02	.001*
Habitual Sleep Activity	2.95	1.39	2.29	1.07	.567
Sleep Disorder	2.23	.70	2.12	.79	.216
Use of sleeping pills	2.54	.94	2.41	1.15	.259
Daytime Dysfunction	2.59	1.05	2.47	1.23	.363
<i>Social Media Addiction Scale</i>					
Virtual Tolerance	3.04	.94	4.30	.95	.022*
Virtual Communication	3.16	1.40	3.57	1.37	.001*

As a result of the Pearson correlation test in Table 5, significant correlations were found between the sub-dimensions of the sleep quality scale and the sub-dimensions of the social media addiction scale. Sleep quality sub-dimensions are

positively and significantly correlated among themselves ($p<.01$). Negative and significant correlations were found between social media addiction sub-dimensions and sleep quality sub-dimensions. In particular, low-moderate negative

correlations between virtual tolerance and virtual communication and sub-dimensions such as subjective sleep quality, habitual sleep activity and

daytime dysfunction are noteworthy. These results suggest that increased social media use may have negative effects on sleep quality.

Table 5. Pearson Correlation Coefficients between Sleep Quality and Social Media Addiction Subdimensions

	Subjective Sleep Quality	Sleep Latency	Sleep Duration	Habitual Sleep Activity	Sleep Disorder	Use of sleeping pills	Daytime Dysfunction	Virtual Tolerance	Virtual Communication
Subjective Sleep Quality	1								
Sleep Latency/Delay	.524**	1							
Sleep Duration	.401**	.478**	1						
Habitual Sleep Activity	.446**	.432**	.510**	1					
Sleep Disorder	.489**	.505**	.370**	.390**	1				
Use of sleeping pills	.221*	.245*	.180*	.215*	.332**	1			
Daytime Dysfunction	.553**	.487**	.372**	.422**	.470**	.199*	1		
Virtual Tolerance	-.32**	-.26**	-.18*	-.29**	-.22*	-.15	-.31**	1	
Virtual Communication	-.28**	-.21*	-.14*	-.24**	-.19*	-.12	-.26**	.763**	1

p<0.05* A low level relationship between 0.000-0.300, a moderate relationship between 0..700, a strong relationship between 0.701-1.00.

According to the results of the regression analysis in Table 6; As a result of the simple regression analysis conducted to determine the effect of sleep quality on social media addiction, the model was found to be significant ($F(1,528) = 40.96$, $p < .001$). Sleep quality variable is a significant predictor of social media addiction ($\beta =$

-0.45 , $p < .001$). According to the results obtained, it can be said that the level of social media addiction increases as sleep quality decreases. The explained variance ratio (R^2) of the model is 20.2%, which indicates that sleep quality has a moderate effect on social media addiction.

Table 6. Simple regression analysis to examine the effect of sleep quality on social media addiction

Variable	B	Std. Error	β	t	p
Fixed	2.15	0.18		11.94	.000
Sleep Quality	-0.32	0.05	-0.45	-6.40	.000

$R^2 = 0.202$, $F(1.528) = 40.96$, $p < .001$

DISCUSSION

This study examined the relationship between social media addiction and the sleep quality of sports sciences students was examined. The study's findings are compatible and supportive with both the existing literature and current thesis studies.

The gender-based findings of the study show that male students have higher sleep latency scores than female students, meaning that males have more difficulty in falling asleep. This finding is in line with the findings of [Díaz-Morales & Escribano \(2015\)](#) that differences in male individuals' ways of coping with stress and anxiety prolong the time to fall asleep. In addition, the finding that female students' habitual sleep activities were lower than those of male students is in line with the findings of [Mallampalli & Carter \(2014\)](#) that women are more

sensitive to hormonal changes, which increases sleep interruptions.

In terms of the employment status variable, it is noteworthy that the sleep duration of non-working students is longer than that of working students.

This result is supported by the findings of [Wright et al. \(2013\)](#), who found that sleep duration decreased due to workload in a study conducted on individuals working in shifts. Similarly, [Karadağ & Tosuntaş \(2021\)](#), in their study on university students, stated that increased workload negatively affected sleep quality and limited social media use. [Sarı et al. \(2015\)](#) reported the frequency of poor sleep quality as 44.3% in men and 39.4% in women in their study. [Güneş \(2022\)](#) reported that 70.1% of women and 81.7% of men had poor sleep quality and emphasized that there was a statistically significant difference between the two groups.

Arslan et al. (2020) found no significant difference in the sleep quality of the participants in terms of gender in their study.

The findings obtained in terms of the sub-dimensions of social media addiction in the study show that the virtual tolerance and virtual communication levels of non-working students are significantly higher than those of working students. This is consistent with the findings of Andreassen et al. (2017), who suggest that social media use is related to leisure time, and Çelik & Yıldız's (2023) thesis study on social media addiction among university students.

When the relationship between sleep quality and social media addiction was analyzed, significant and negative correlations were found. This result is supported by the findings of Custers (2019) that social media use impairs sleep quality and that social media use, especially late at night, increases sleep latency. In addition, Levenson et al. (2017) showed that the frequency of social media use increased sleep disturbances in adolescents and young adults. This inverse relationship between sleep quality and social media addiction also coincides with the results of the thesis study titled "The Relationship Between Social

Media Addiction and Sleep Quality in University Students" conducted by Akça (2020). According to the regression analysis results obtained in the study, sleep quality is a moderate predictor of social media addiction. A decrease in sleep quality leads to an increase in social media addiction. This finding is consistent with Taddei & Contena's (2013) study on the reciprocal relationship between social media addiction and sleep disorders. In a large-scale study by Twenge et al. (2017), it was found that an increase in the duration of social media use decreases sleep duration and decreases sleep quality. In addition, in a thesis study conducted by Özyürek et al. (2022), a significant decrease in sleep quality was reported as the duration of social media use increased.

In line with these findings, it can be said that steps to improve sleep quality can be effective in reducing social media addiction. Especially in groups where physical performance is important, such as sports science students, ensuring sleep hygiene and limiting digital media use are critical for both academic and physical success. In future studies, it is recommended that causality relationships should be more clearly revealed with

longitudinal methods and student groups in different departments should be compared.

Conflict of Interest

The authors declare no conflict of interest. No financial support was received.

Ethics of Research

During the current research, "Higher Education Institutions Scientific Research and Publication Ethics Directive" was followed and the relevant research was approved by Istanbul Topkapı University, Academic Research and Publication Ethics Commission, Ethics Committee decision numbered E-49974783-612.09.7-2300006845

Author Contribution

Study Design: YY, TS, GT; Data Collection: IY, CS; Statistical Analysis: CS; Data Interpretation: YY, TS; Manuscript Preparation: GT, IY; Literature Review: YY, TS, GT, IY, CS. All authors have read and approved the published version of the manuscript.

REFERENCES

- Ahluwalia, N., Frenk, S. M., & Quan, S. F. (2018). Screen time behaviours and caffeine intake in US children: findings from the cross-sectional National Health and Nutrition Examination Survey (NHANES). *BMJ Paediatrics Open*, 2(1), e000258. [PubMed] [CrossRef]
- Akbulut, Y., & İskender, M. (2020). The relationship of social media use with sleep quality, social anxiety and loneliness in adolescents. *Kastamonu Journal of Education*, 28(4), 1681-1690. [CrossRef]
- Akça, F. (2020). The Relationship Between Social Media Addiction and Sleep Quality in University Students (Master's Thesis). Istanbul: Istanbul University.
- Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behaviors*, 64, 287-293. [PubMed] [CrossRef]
- Arslan M., Taşkaya C., & Kavalcı B. (2020). The relationship between physical activity, obesity and sleep quality in university students. *Journal of Health Professionals Research*. 2(1), 16-22.
- Bakotic, M., Radošević-Vidacek, B., & Koscec Bjelajac, A. (2017). Morningness-eveningness and daytime functioning in university students: The mediating role of sleep characteristics. *Journal of Sleep Research*, 26(2), 210-218. [PubMed] [CrossRef]
- Burke, L. M., Jeukendrup, A. E., Jones, A. M., & Mooses, M. (2019). Contemporary Nutrition Strategies to Optimize Performance in Distance Runners and Race Walkers. *International Journal of Sport Nutrition and Exercise Metabolism*, 29(2), 117-129. [PubMed] [CrossRef]

- Custers, K. (2019). The urgent need for rigorous research on problematic social media use. *Cyberpsychology, Behavior, and Social Networking*, 22(6), 349-350.
- Çelik, E., & Yıldız, B. (2023). *The Relationship Between University Students' Social Media Addiction and Sleep Quality*. Master's Thesis, Hacettepe University, Ankara.
- Çömlekçi, M. F., & Başol, O. (2019). Investigation of the Relationship between Social Media Usage Purposes of Young People and Social Media Addiction. *Manisa Celal Bayar University Journal of Social Sciences*, 17(4), 173-188. [CrossRef]
- Díaz-Morales, J. F., & Escribano, C. (2015). Social jetlag, academic achievement and cognitive performance: Understanding gender/sex differences. *Chronobiology International*, 32(6), 822-831. [PubMed] [CrossRef]
- Dibben, G. O., Martin, A., Shore, C. B., Johnstone, A., McMellon, C., Palmer, V., Simpson, S. A. (2023). Adolescents' interactive electronic device use, sleep and mental health: a systematic review of prospective studies. *Journal of Sleep Research*, 32(5), e13899. [PubMed] [CrossRef]
- Doherty, Madigan, Warrington, & Ellis. (2019). Sleep and Nutrition Interactions: Implications for Athletes. *Nutrients*, 11(4), 822. [PubMed] [CrossRef]
- Dong H., Zhang Q., Zhu C., Lv Q. (2020). Sleep quality of nurses in the emergency department of public hospitals in China and its influencing factors: a cross-sectional study. *Health Qual Life Outcomes*. 18(1), 116-129. [PubMed] [CrossRef]
- Dresp-Langley, B., & Hutt, A. (2022). Digital Addiction and Sleep. *International Journal of Research and Public Health*, 19(11), 6910. [PubMed] [CrossRef]
- Evers, K., Chen, S., Rothmann, S., Dhir, A., & Pallesen, S. (2020) Investigating the relation among disturbed sleep due to to social media use, school burnout, and academic performance. *J Adolesc*, 84:156-164. [PubMed] [CrossRef]
- Güneş S. (2022). Evaluation of sleep quality and factors that may affect sleep quality of Kocaeli University Medical Faculty research assistant doctors. Medical Specialization Thesis, Kocaeli University Faculty of Medicine, Kocaeli.
- Halson, S. L. (2014). Sleep in elite athletes and nutritional interventions to enhance sleep. *Sports Medicine*, 44(SUPPL.1), 13-23. [PubMed] [CrossRef]
- Kaçan, C. Y., Özdemir, A., & Ünal, E. (2021). Investigation of nursing students' sleep patterns, psychological states and exercise during the COVID-19 pandemic. *Journal of İnönü University Vocational School of Health Services*. 9(3), 1044-1065. [CrossRef]
- Karadağ, E., & Tosuntaş, Ş. B. (2021). The relationship between digital addiction and sleep quality in university students. *Journal of Qualitative Research in Education*, 9(4), 1271-1290.
- Levenson, J. C., Shensa, A., Sidani, J. E., Colditz, J. B., & Primack, B. A. (2017). Social media use before bed and sleep disturbance among young adults in the United States: A nationally representative study. *Sleep*, 40(9), zsx113. [PubMed] [CrossRef]
- Mallampalli, M. P., & Carter, C. L. (2014). Exploring sex and gender differences in sleep health: A Society for Women's Health Research Report. *Journal of Women's Health*, 23(7), 553-562. [PubMed] [CrossRef]
- Özyürek, P., Kaya, A., & Yıldız, E. (2022). *Examination of the relationship between social media usage time and sleep quality in university students*. Master's Thesis, Ege University, İzmir.
- Pagano, M., Bacaro, V., & Crocetti, E. (2023). Computers in Human Behavior "Using digital media or sleeping that is the question". A meta-analysis on digital media use and unhealthy sleep in adolescence. *Computers in Human Behavior*, 146, 1-16. [CrossRef]
- Pantic, I. (2014). Online social networking and mental health. *Cyberpsychology, Behavior, and Social Networking*, 17(10), 652-657. [PubMed] [CrossRef]
- Sarı ÖY., Üner S., Büyükkakuş B., Bostancı EÖ., Çeliksöz AH., Budak M. (2015). Sleep quality and some factors affecting sleep quality in dormitory students of a university. *TAF Preventive Medicine Bulletin*. 14(2), 1-15. [CrossRef]
- Sümen, A., & Evgin, D. (2021). Social media addiction in high school students: a cross-sectional study examining its relationship with sleep quality and psychological problems. *Child Indicators Research*, 14(6), 2265-2283. [PubMed] [CrossRef]
- Senol, V., Soyuer, F., Pekşen, A. R., & Argun, M. (2012). Sleep quality and affecting factors in adolescents. *Kocatepe Medical Journal*, 14, 93-102.
- Taddei, S., & Contena, B. (2013). Media use and academic performance: The influence of internet usage on academic performance. *Cyberpsychology, Behavior, and Social Networking*, 16(10), 691-697.
- Twenge, J. M., Krizan, Z., & Hisler, G. (2017). Decreases in self-reported sleep duration among U.S. adolescents 2009-2015 and association with new media screen time. *Sleep Medicine*, 39, 47-53. [PubMed] [CrossRef]
- Wright, K. P., McHill, A. W., Birks, B. R., Griffin, B. R., Rusterholz, T., & Chinoy, E. D. (2013). Entrainment of the human circadian clock to the natural light-dark cycle. *Current Biology*, 23(16), 1554-1558. [PubMed] [CrossRef]



This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by-sa/4.0/>).