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Investigation of the Effects of Internet, Social Media Addiction, Musculoskeletal System and Sleep Quality of University Students

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Abstract

Introduction: Prolonged internet and social media use among university students is increasingly associated with adverse health outcomes, particularly in relation to musculoskeletal health and sleep quality. Extended screen exposure often leads to sustained non-ergonomic postures and physical inactivity, contributing to discomfort and pain in the neck, back, and upper extremities. Additionally, nighttime screen usage disrupts circadian rhythms by suppressing melatonin secretion, thereby delaying sleep onset and reducing overall sleep quality. This study aims to investigate the impact of internet and social media usage on musculoskeletal disorders and sleep quality in university students.

Methods: A cross-sectional study was conducted involving 386 undergraduate students from nine academic programs at Dicle University. Data were collected through validated self-report instruments: the Young's Internet Addiction Test (IAT) for assessing internet addiction, the Pittsburgh Sleep Quality Index (PSQI) for evaluating sleep quality, and the Cornell Musculoskeletal Discomfort Questionnaire (CMDQ) for identifying musculoskeletal symptoms. Sociodemographic characteristics were also recorded.

Results: Results indicated that 69.4% of participants reported daily smartphone use ranging from 3 to 5 hours. A significant proportion of students experienced sleep-related problems (58.3%), eye strain (53.1%), and neck pain (46.6%). The mean IAT score indicated a moderate level of internet addiction (50.19/95), which was inversely correlated with sleep quality. CMDQ findings highlighted that discomfort was most prevalent in the right upper extremity, followed by the neck and back regions. These outcomes were strongly associated with prolonged screen exposure, poor posture, inadequate ergonomic conditions, and low levels of physical activity.

Conclusion: The findings underscore the multifaceted negative impact of excessive digital media use on both physical and sleep health in university students. Preventive strategies such as promoting ergonomic awareness, encouraging routine physical activity, and implementing screen-time management interventions are essential to mitigate these health risks and enhance student well-being.

Keywords: Internet addiction, musculoskeletal disorders, sleep, digital health

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Üniversite Öğrencilerinin İnternet, Sosyal Medya Bağımlılığı, Kas İskelet Sistemi ve Uyku Kalitesi Üzerindeki Etkilerinin İncelenmesi

Öz

Giriş: Üniversite öğrencileri arasında uzun süreli internet ve sosyal medya kullanımı, özellikle kas-iskelet sistemi sağlığı ve uyku kalitesi açısından olumsuz sağlık sonuçlarıyla ilişkilendirilmektedir. Uzun ekran maruziyeti, sürdürülen ergonomik olmayan duruşlar ve fiziksel hareketsizlikle birlikte boyun, sırt ve üst ekstremitelerde rahatsızlık ve ağrıya yol açmaktadır. Ayrıca, gece saatlerinde ekran kullanımı melatonin salgısını baskılayarak sirkadiyen ritmi bozar; bu durum uykuya dalmayı geciktirir ve uyku kalitesini düşürür. Bu çalışma, üniversite öğrencilerinde internet ve sosyal medya kullanımının kas-iskelet sistemi rahatsızlıkları ve uyku kalitesi üzerindeki etkilerini araştırmayı amaçlamaktadır.

Yöntemler: Kesitsel tasarımla yürütülen çalışmaya Dicle Üniversitesi'nin dokuz fakültesinden 386 öğrenci katılmıştır. Veri toplama araçları olarak Young'un İnternet Bağımlılığı Testi (IAT), Pittsburgh Uyku Kalitesi İndeksi (PSQI) ve Cornell Kas-İskelet Sistemi Rahatsızlıkları Anketi (CMDQ) kullanılmıştır. Ayrıca sosyodemografik bilgiler de kayıt edilmiştir.

Bulgular: Katılımcıların %69,4'ü günlük 3-5 saat arasında akıllı telefon kullanmaktadır. Öğrencilerin önemli bir kısmı uyku sorunları (%58,3), göz yorgunluğu (%53,1) ve boyun ağrısı (%46,6) yaşamaktadır. Ortalama IAT puanı 50,19 olup orta düzey internet bağımlılığı göstermektedir ve internet bağımlılığı ile uyku kalitesi arasında negatif korelasyon bulunmuştur. CMDQ sonuçları, en çok rahatsızlığın sağ üst ekstremite, boyun ve sırt bölgelerinde olduğunu ortaya koymuştur. Bu sonuçlar uzun ekran süresi, kötü duruş, yetersiz ergonomi ve düşük fiziksel aktiviteyle yakından ilişkilidir.

Sonuç: Bulgular, dijital medya kullanımının üniversite öğrencilerinde hem fiziksel hem de uyku sağlığı üzerinde çok yönlü olumsuz etkileri olduğunu göstermektedir. Ergonomik farkındalığın artırılması, düzenli fiziksel aktivitenin teşvik edilmesi ve ekran süresinin yönetilmesi gibi önleyici stratejiler bu sağlık risklerinin azaltılmasında kritik öneme sahiptir.

Anahtar kelimeler: İnternet bağımlılığı, kas-iskelet rahatsızlıkları, uyku, dijital sağlık.

INTRODUCTION

The widespread use of the internet and social media among university students has significant physical health implications, particularly concerning the musculoskeletal system. Research has shown that excessive screen time is significantly associated with physical discomfort, especially neck and back pain[1]. During prolonged device usage, students often adopt non-ergonomic postures, which increases the risk of developing such disorders. Data indicate that 61% of students use electronic devices for more than two hours on school days, and this figure rises to 78% on weekends. While extensive digital interaction can enhance social connectivity, it also contributes to various health issues such as eye strain and musculoskeletal pain. Studies report that between 64% and 90% of computer users experience visual discomfort due to prolonged screen exposure[2]. Therefore, understanding the physical health effects of internet and social media usage is critical for effectively addressing these emerging health concerns[3]. Cross-sectional studies have revealed a significant positive correlation between internet addiction and the prevalence of musculoskeletal pain among adolescents[4].

In recent years, the pervasive impact of internet and social media use on university students has been examined more frequently, with increasing attention to its physical health consequences. Internet and social media platforms have become indispensable tools for academic achievement and social interaction, contributing to rising tendencies toward addiction. Additionally, the use of social media as a means of identity construction and self-expression has further intensified these behaviors among young adults[5]. Current findings report that the average internet addiction score among adolescents is 26.88; 44.3% are considered at high risk for addiction,

and 15.7% fall into the category of active addiction[6]. Such dependency has been found to affect not only psychological well-being but also physical health, particularly musculoskeletal health. Internet addiction refers to excessive, uncontrolled, or compulsive internet use to the extent that it impairs daily functioning, leading to severe consequences on both physical and mental health. This excessive use has been associated with symptoms such as anxiety, depression, and social withdrawal, highlighting the complex relationship between digital behavior and mental health[7]. The same study also emphasizes the growing prevalence of musculoskeletal disorders among university students who are overexposed to technology. Other research supports this, indicating a strong association between extended screen time and musculoskeletal discomfort, particularly in the form of neck and back pain and eye fatigue5. The high familiarity of young individuals with technology and social media platforms increases their susceptibility to internet addiction[8]. Gender differences have also been identified; male students tend to engage more in digital gaming and online activities, resulting in higher addiction levels compared to female students, who are more likely to use platforms focused on social interaction[9].

Although a growing body of evidence highlights the health risks associated with internet overuse, existing research has primarily focused on psychological and social dimensions. Fewer studies have addressed the specific associations between internet and social media addiction, sleep quality, and musculoskeletal health outcomes. This gap in the literature underscores the need for a more comprehensive understanding of how prolonged digital engagement affects the physical well-being of university students.

Therefore, the present study aims to investigate the multifaceted effects of internet and social media use among university students, with a particular emphasis on musculoskeletal health. Specifically, it explores the impact of prolonged screen exposure on posture-related disorders, repetitive strain injuries, and other musculoskeletal problems, as well as the relationship between internet addiction and sleep quality. By addressing these interrelated dimensions, the study seeks to provide deeper insight into the physical health consequences of digital behaviors in young adults.

METHODS

The study was approved by the local university's ethics committee (Decision No: 26, Date: 16/12/2024). It was conducted as a cross-sectional and descriptive study. The research population included 2,640 students enrolled at the university. Although the target sample size was 450 students, the study was completed with 386 participants, corresponding to a response rate of 85.77%. Data were collected online using Google Forms (Google LLC, Mountain View, CA, USA), and written and verbal informed consent was obtained from all students who voluntarily agreed to participate.

Variables

In addition to demographic information such as age and gender, participants were asked about the following sociodemographic variables:

Average sleep duration

Personal ownership of a smartphone and computer

Internet access at home

Daily internet usage time

Continuous internet usage duration

Time spent playing online games

Smartphone usage duration

Instruments

Internet Addiction: Participants' levels of internet addiction were assessed using Young's

Internet Addiction Test (IAT). This scale consists of 20 items rated on a 5-point Likert scale (1–5 points). The total score ranges from 20 to 100, with scores of 20–49 classified as low, 50–79 as moderate, and 80–100 as high addiction[10]. The Turkish validity and reliability study was conducted by Kutlu et al.[11].

Sleep Quality: The Pittsburgh Sleep Quality Index (PSQI) was used to evaluate sleep quality. This self-report scale, which assesses sleep habits over the past month, consists of 19 items grouped into 7 components. The total score ranges from 0 to 21, with higher scores indicating poorer sleep quality[12]. The Turkish validity and reliability study was conducted by Agargün et al.[13].

Musculoskeletal Disorders: The Cornell Musculoskeletal Discomfort Questionnaire (CMDQ) was employed to assess musculoskeletal complaints. The questionnaire evaluates the frequency, severity, and impact on work performance of discomfort experienced in 20 different body regions (e.g., neck, shoulders, lower back, knees, etc.) within the past week. Scores for each body region range from 0 to 90[14]. The Turkish validity and reliability study was conducted by Erdinç et al.[15]. Parameters were used.

Statistical Analysis

Data were analyzed using IBM SPSS Statistics for Windows, version 25.0 (IBM Corp., Armonk, NY, USA). Continuous variables were summarized as mean ± standard deviation (SD), whereas categorical variables were presented as frequency and percentage (%). The normality of data distribution was assessed using the Kolmogorov-Smirnov test. For normally distributed data, Student's t-test was applied, while the Mann-Whitney U test was used for non-normally distributed data. Comparisons of categorical variables were performed using the Pearson's Chi-square test. All hypothesis tests were conducted as two-tailed, and a p-value of <0.05 was considered statistically significant.

RESULTS

Among the students who participated in the study, 71.0% were female and 29.0% were male. A total of 90.4% reported being right-handed. The average sleep duration was found to be 7 hours. Of the participants, 98.7% owned a smartphone, 51.8% reported using a personal computer, and 80.8% had internet access at home. The main factors limiting internet use were family (25.9%) and coursework (23.1%). The proportion of students who reported playing online games was 42.5%, with an average frequency of 2.8 days per week and 1.87 hours per day. Furthermore, 81.6% of participants reported using the internet for more than 4 years, while 88.1% had an active social media account. The proportion of students who used smartphones for 3–5 hours daily was 69.4%. Among internet-related problems, 58.3% of students reported experiencing sleep disturbances, 53.1% reported burning sensations in the eyes, 46.6% reported neck pain, and 36.8% experienced lower back or upper back pain (Table 1). These findings indicate a high prevalence of internet, social media, and smartphone use among students most of whom are female and suggest that such usage negatively affects sleep quality, visual health, and the musculoskeletal system.

Table I: Categorical Sociodemographic Characteristics of Students

Variables	Average	N	Percentage(%)
Age	21.6±3.4	386	100
BMI	21.06±4.7	386	100
Gender (n=386)			
Female		274	71.0
Male		112	29.0
Dominant Hand			
Right		349	90.4
Left		37	9.6
Average Sleep Time (hours)	6.94±1.7	386	100
Personal Computer (n=386)			
Yes		200	51.8
No		186	48.2
Personal Smartphone (n=386)			
Yes		381	98.7
No		5	1.3
Internet at Home (n=386)			
Yes		312	80.8
No		74	19.2
Internet Limiting Factor (n=386)			
Family		100	25.9
None		176	45.6
Illness		14	3.6
Classes		89	23.1
Friend		7	1.8
Playing Games (n=386)			
Yes		164	42.5
No		222	57.5
How Many Days of Gaming (days)	2.84±1.6	386	100
How Many Hours of Gaming (hours)	1.87±1.1	386	100
Social Account (n=386)			
Yes		340	88.1
No		46	11.9
How Long Have You Been Using the Internet?			
4 years +		315	81.6
3 years		54	14.0
2 years -		17	4.4
Continuous Internet Time (min)	110. 82±38.4	386	100
Smartphone Usage Time			
0-2 (hours)		76	19.7
3 (hours)		137	35.5
5 (hours)		131	33.9
10 (hours)		34	8.8
10+ (hours)		8	2.1
Problems Experienced due to Internet			
Absence from classes		50	13.0
Unbalanced nutrition		87	22.5
Neck pain		180	46.6
Burning eyes		205	53,1
Sleep problems		225	58.3
Deterioration in Manual Skills, Decrease in Handshake Strength		64	16.6
Decrease in hygiene habits		25	6.5
Waist-back pain		142	36.8
Knee pain		36	9.3

Note: Multiple responses were allowed

BMİ: Body Mass Index

According to the results of the Young's Internet Addiction Test (IAT), the mean total score was 50.19 ± 9.5, indicating a moderate level of internet addiction. The average item score was 2.64 out of 5. The highest scores were obtained on the items: "Staying online longer than

intended" (3.26), "Saying just a few more minutes and then staying much longer" (3.29), and "Spending increasing amounts of time online" (2.96). The lowest scores were observed on the items: "Some friends complain about my internet use" (1.95), "Missing appointments due to internet use" (2.23), and "Complaints from people I value" (2.33) (Table 2ab).

Table IIa: Internet Addiction Scale Item Scores (N = 386)

Item	Statement	Mean ± SD
1	Preoccupation with the internet when offline	2.81
2	Thinking about the internet when not online	2.53
3	Restlessness/irritability when away from internet	2.54
4	Spending more time on the internet than planned	3.26
5	Difficulty stopping internet browsing	3.29
6	Unsuccessful attempts to reduce internet use	2.58
7	Overspending on internet-related activities	2.53
8	Increasing time spent on the internet	2.96
9	Growing desire for more internet use	2.90
10	Using internet for more activities than before	2.91
11	Internet increasingly directs daily life	2.81
12	Friends distancing due to internet use	1.95
13	Complaints from others about excessive internet use	2.33
14	Decreased productivity due to internet use	2.63
15	Negative personal changes noticed by close ones	2.51
16	Neglect of responsibilities for internet use	2.47
17	Missing appointments due to internet use	2.23
18	Reduced time spent with others	2.38
19	Conflicts with school/family/employment due to internet	2.57
Total Score		**50.19**

Table IIb: Pittsburgh Sleep Quality Index Scores (N = 386)

Item	Statement	Mean ± SD
1	Bedtime (hours)	23.47
2	Sleep latency (minutes)	21.71
3	Wake-up time (hours)	9.11
4	Actual sleep duration (hours)	7.10
5a	Difficulty falling asleep within 30 minutes	2.37
5b	Waking up during the night/early morning	2.62
5c	Getting up to use the bathroom	1.75
5d	Breathing discomfort	1.86
5e	Loud coughing or snoring	1.61
5f	Feeling too cold	2.01
5g	Feeling too hot	1.94
5h	Having bad dreams	2.10
5i	Experiencing pain	2.18
5j	Other sleep disturbances	1.74
6	Use of sleep medication	1.31
7	Difficulty staying awake during daily activities	1.87
8	Trouble maintaining enthusiasm to get things done	1.86
9	Overall sleep quality rating	2.33

• Note: Higher scores indicate greater levels of internet addiction and poorer sleep quality

Regarding the results of the Cornell Musculoskeletal Discomfort Questionnaire (CMDQ), the highest average score was recorded for the right upper extremity (shoulder, arm, forearm, wrist), with a mean of 91.70 ± 53.11. The lowest score was for the hip region, with a mean of 18.91 ± 9.47. A statistically significant difference was found

between the right and left upper extremities ($p < 0.001$), which can be explained by the dominance of right-handed usage among participants. However, no statistically significant difference was found between the right lower extremity (37.41 ± 15.13) and the left lower extremity (35.58 ± 17.26) ($p > 0.05$).

In terms of spinal regions, the highest score was observed in the neck region (36.21 ± 17.12), followed by the upper back (24.09 ± 13.32) and lower back (21.33 ± 13.73). Statistically significant differences were found between the neck and both the upper and lower back regions ($p < 0.001$), whereas no significant difference was found between the upper and lower back ($p > 0.05$) (Table 3).

Table IIIa: Density of musculoskeletal disorders among students by region

CMDQ Questionnaire	Mean ± Sd (Min-max) **(n=386)**	**Upper Back** Mean ± Sd (Min-max) **(n=386)**	**P**	**Back** Mean ± Sd (Min-max) **(n=386)**	P	**Hip** Mean ± Sd (Min-max) **(n=386)**	**P**
Neck	36.21 ±17.12(0-90)	24.09±13.32(0-90)	**0,001**	21.33 ±13.73(0-90)	**0.001**	18.91±9.47(0-90)	**0.001**
Upper Back	24.09 ±13.32(0-90)	24.09±13.32(0-90)	1	21.33 ±13.73(0-90)	0,722	18.91 ± 9.47(0-90)	0.052
Back	21.33±13..73(0-90)	24.09±13.32(0-90)	0,722	21.33 ±13.73(0-90)	1	18.91 ± 9.47(0-90)	0,287
Hip	18.91 ± 9.47(0-90)	24.09±13.32(0-90)	0.52	21.33 ±13.73(0-90)	0.287	18.91 ± 9.47(0-90)	1

Note: CMDQ = Cornell Musculoskeletal Discomfort Questionnaire. Lower p-values indicate statistically significant differences between regions.

Table IIIb: Upper and Lower Extremity CMDQ Scores (N = 386)

CMDQ Questionnaire (Upper Extremity**)**	Mean ±Sd (Min-max)	**Left** (shoulder, upper arm, forearm, wrist) Mean ± Sd (Min-max)	**P**
Right (shoulder, upper arm, forearm, wrist)	91.70±53.11(0-360)	53.33 ±30.41 (0-360)	**0.001**
CMDQ Questionnaire (Lower Extremity**)**	Mean±Sd (Min-max)	**Left** (upper leg, knee, lower leg) Mean ± Sd (Min-max)	**P**
Right (upper leg, knee, lower leg**)**	37.41 ±15.13 (0-270)	35.58 ±17.26 (0-270)	0.823

Note: CMDQ = Cornell Musculoskeletal Discomfort Questionnaire. Lower p-values indicate statistically significant differences between region.

Based on the Pittsburgh Sleep Quality Index (PSQI) results, the average bedtime was 11:47 PM and wake-up time was 9:11 AM. Although the time spent in bed was around 9 hours, the actual average sleep duration was calculated to be 7 hours and 6 minutes. This suggests an approximate sleep latency or sleep loss of 2 hours. The average sleep latency was 21 minutes and 43 seconds, slightly above the threshold value of 20 minutes.

The most prominent factors causing sleep disturbances were going to bed late and waking up late (2.62), difficulty falling asleep (2.37), and experiencing disturbing dreams (2.10). Since the mean scores for all these factors exceeded 1.5 out of 3, it can be inferred that sleep continuity is significantly disrupted among students. The participants also reported low subjective sleep quality (mean score of 2.33 out of 3), indicating a generally poor sleep experience. In conclusion, based on the PSQI data, students' sleep quality ranged from low to moderate. These findings point to both nocturnal sleep disturbances and daytime performance impairment (Table 2ab).

DISCUSSION

The findings of our study indicate that internet addiction among university students is generally associated with prolonged use of

computers, tablets, or smartphones. Prolonged periods of immobility in non-ergonomic postures lead to increased musculoskeletal discomfort, particularly in the neck, dominant upper extremity (right), back, and lower back regions. Excessive internet use was also observed to exert substantial adverse effects on sleep patterns. Prolonged screen exposure late at night may suppress melatonin secretion, disturb circadian rhythm regulation, extend sleep onset latency, diminish overall sleep quality, and contribute to morning fatigue consequently impairing cognitive functioning and academic performance.

With the rise of virtual interactions and online learning content, students are increasingly inclined to remain sedentary for extended periods, a behavior associated with both physical and psychological health issues. The literature suggests a direct relationship between internet addiction and musculoskeletal disorders, especially due to poor posture and prolonged immobility in young adults6. Similarly, there is a strong correlation between low physical activity levels and musculoskeletal problems. Prolonged inactivity places mechanical stress on the musculoskeletal system, potentially leading to chronic pain and postural disorders[16].

Internet addiction is particularly concerning among young age groups. Previous studies have shown that extended internet use is significantly associated with serious musculoskeletal problems such as neck and back pain6. The widespread use of smartphones and social media has been linked to physical conditions like "text neck syndrome," which results from prolonged neck flexion during device use[17]. This finding is consistent with literature suggesting that excessive media device use during developmental years may adversely affect psychophysical development and contribute to issues such as obesity and attention deficits18. Prolonged interaction with digital devices often leads to poor postural habits and changes in muscular dynamics, most noticeably affecting the neck and hands. Excessive smartphone use is closely associated with musculoskeletal issues such as "text neck," a condition arising from sustained neck flexion during device interaction[18]. Moreover, a study among chronic smartphone users reported significant changes in the length-tension relationships of hand muscles, resulting in reduced grip strength[19]. In another study conducted during the widespread adoption of online education, it was found that 70% of university students reported experiencing lower back pain, though most did not seek medical assistance[20].

In our study, we also identified discomfort in specific musculoskeletal regions among students with varying levels of internet addiction. The upper extremity encompassing the shoulder, upper arm, forearm, and wrist was evaluated as a functional unit, and the highest scores were observed in the right upper extremity. This result is likely related to the fact that 90.4% of participants reported right-hand dominance. The second most affected region was the neck, which has also been frequently emphasized in the literature. However, due to our holistic assessment of the upper extremity as a unit, neck-related complaints did not appear at the top of the list, even though discomfort in this region was reported at high levels. In addition to the neck, high levels of discomfort were reported in the upper and lower back regions. Our findings show that among students with prolonged internet use, musculoskeletal complaints are most common in the dominant upper extremity and neck, followed by the back and lumbar areas findings that largely align with existing literature. Similarly, some studies have reported that smartphone addiction is associated with changes in the length-tension relationships of hand muscles and reduced grip strength among

chronic users19. Furthermore, not all sedentary behaviors have the same health effects; the way screen time is used can directly influence its impact on musculoskeletal health[21].

Various studies on posture have demonstrated that increased screen time can lead to postural deformities and discomfort in body regions such as the neck and shoulders. These conditions are defined in the literature as Smartphone-Related Musculoskeletal Disorders (SRMDs)[22]. The sedentary lifestyle encouraged by excessive screen use results in detrimental changes to muscle function, particularly by disrupting the length-tension relationship of muscles, which contributes to reduced grip strength and increased pain levels[19]. During interaction with digital devices, students often adopt poor posture, placing excessive load on spinal and cervical muscles. This, in turn, exacerbates discomfort and initiates a negative feedback loop that reinforces further sedentary behavior[5]. Consistent with these findings, our study also concluded that the primary cause of discomfort in the neck, back, and lower back regions was students' prolonged use of screens in non-ergonomic positions. Numerous academic studies have documented the adverse effects of prolonged internet use on sleep. In particular, nighttime exposure to digital screens suppresses melatonin secretion, delays sleep onset, and decreases sleep quality23. Increased internet use has been shown to reduce total sleep duration, prolong sleep latency, and increase daytime sleepiness[24]. Studies conducted among adolescents and young adults indicate that prolonged exposure to social media and video content late at night disrupts circadian rhythms and negatively impacts sleep patterns[25]. For instance, Chen et al. found that sleep disorders were more prevalent among individuals with higher levels of internet addiction[26]. Similarly, a study conducted among Chinese university students revealed that prolonged screen exposure led to musculoskeletal inactivity and sleep disturbances associated with physical discomfort, particularly musculoskeletal pain[27].

In our study, we also observed that extended internet use had a negative impact on students' sleep quality. Specifically, it was found that students tended to go to bed late, which delayed their wake-up times, reduced the total time spent in bed, and extended sleep onset latency beyond normal ranges. Furthermore, these sleep disturbances were found to significantly impair students' academic performance. In conclusion, prolonged screen use is increasingly prevalent among university students and contributes to serious health issues such as musculoskeletal disorders and sleep disturbances. Excessive use of smartphones and laptops often leads individuals to adopt fixed and faulty postures, such as slouching or forward head posture, which impose additional strain on the spine and upper extremity muscles. Simultaneously, prolonged social media and internet use results in delayed sleep onset and wake times, leading to sleep difficulties and forming a vicious cycle that negatively affects both social life and academic success.

CONCLUSİON AND RECOMMENDATİONS

• The rising prevalence of musculoskeletal problems associated with internet and social media addiction among university students underscores the urgent need to develop effective prevention and intervention strategies. Based on the findings of our study, increasing ergonomic awareness emerges as a fundamental approach in mitigating such health problems. It is essential for students to organize their workspaces according to ergonomic principles for example, adjusting desk and chair heights appropriately, aligning the screen at eye level, and maintaining proper posture during prolonged screen exposure. Additionally, promoting regular physical activity in daily life may help alleviate the physical strain caused by

sedentary behaviors. The literature shows that ergonomic interventions can significantly reduce the frequency of repetitive strain injuries that develop during computer or mobile device use[28]. Preventative strategies should therefore focus not only on postural education but also on incorporating movement into students' daily routines to reduce the risks associated with prolonged digital engagement. Providing ergonomics training in universities, implementing mandatory short exercise breaks during classes, introducing students to screen-time limitation software and delivering sleep hygiene education to mitigate the impact of internet use on sleep. Such interventions may contribute to improvements in sleep patterns and reductions in musculoskeletal problems.

Ethical approval: The study was approved by the local university's ethics committee (Decision No: 26, Date: 16/12/2024).

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