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A Study on Mental Health and Well-Being among College Students: The Role of Sleep and Digital Habits

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Abstract: This study examines the influence A Study on Mental Health and Well-Being among College Students: The Role of Sleep and Digital Habits of digital habits on mental health among college students, emphasizing the mediating role of sleep patterns. A total of 200 students (Male = 90, Female = 110) participated in the study. Standardized instruments assessed digital behavior and psychological well-being (Cronbach's $\alpha = .773$ and .872, respectively). Findings revealed a significant correlation between digital behavior and mental health ($r = .789$, $p < .001$). ANOVA results indicated significant differences in daily data usage, online gaming, and device use across gender. Regression analysis identified digital behavior as the strongest predictor of mental health ($\beta = .707$, $p < .001$), followed by gender, study hours, and sleep patterns. Mediation analysis further revealed that sleep patterns partially mediated this relationship (Indirect effect = 0.0317, $p < .001$). The study highlights that poor digital hygiene and irregular sleep can negatively impact students' mental health, emphasizing the importance of promoting balanced technology use and healthy sleep routines.

Keywords: Mental Health, Sleep Patterns, Digital Behavior, College Students, Psychological Well-Being

Introduction

In today's digital era, technology is deeply embedded in students' academic and social lives. Smartphones, laptops, and the internet serve as essential tools for learning, communication, and recreation. However, excessive digital engagement has been linked to increased stress, anxiety, sleep disruption, and emotional exhaustion. Sleep plays a critical role in restoring mental and cognitive functions, but late-night screen use often interrupts this process.

The modern college environment exposes students to numerous digital distractions, making it difficult to maintain a balanced routine. Research indicates that irregular sleep patterns combined with heavy social media or gaming use can significantly reduce psychological well-being. This study investigates the impact of digital behavior on mental health among college students, focusing on the mediating effect of sleep patterns and examining gender-based differences and study habits.

Literature Review

Digital dependence among young adults is a growing global concern. Andreassen and Pallesen (2014) described social networking addiction as excessive use interfering with daily life. Kuss and Griffiths (2017) found that persistent digital engagement can lead to depression, anxiety, and psychological distress. Moreno et al. (2015) reported that prolonged online activity is associated with social withdrawal and loneliness.

Young (2017) emphasized that internet addiction correlates with poor sleep quality and lower mental health scores. Recent studies by Dibben et al. (2023) show that sleep mediates the relationship between device use and mental health outcomes. Similarly, Lu et al. (2025) confirmed that interventions targeting digital behavior and sleep quality improve overall well-being. These studies highlight the significance of lifestyle factors especially digital habits and sleep in influencing students' mental health.

Research Methodology

The study adopted a descriptive and correlational research design. A total of 200 college students were selected through convenient sampling. Data were collected using standardized scales for digital behavior ($\alpha = .773$) and psychological well-being ($\alpha = .872$). Statistical analysis was conducted using SPSS 26.0, incorporating descriptive statistics, correlation, ANOVA, regression, and mediation analysis.

Data Collection: A self-administered questionnaire was distributed among participants, covering demographic details, digital habits, sleep patterns, and study hours. Data Analysis: The data were analyzed using statistical tools, including correlation matrix, one-way ANOVA, regression analysis, and mediation analysis.

Results and Interpretation

Table 1: Descriptive Statistics of Key Variables

Variable	Mean (M)	Standard Deviation (SD)
Digital Behavior	3.32	0.72
Mental Health	3.76	0.79
Sleep Patterns	3.10	1.30
Study Hours	2.88	0.88

The descriptive analysis shows that students exhibited moderate digital behavior (M = 3.32) and relatively good mental health (M = 3.76). The large standard deviation in sleep patterns (SD = 1.30) indicates inconsistency in students' sleeping routines, reflecting irregular habits associated with prolonged digital engagement. This irregularity highlights the potential impact of screen exposure and social media activity during nighttime, which may contribute to cognitive fatigue and emotional instability. The findings align with previous studies indicating that disturbed sleep due to digital overuse is a growing factor affecting college students' mental health.

Table 2: Correlation Matrix of Study Variables

Variables	1	2	3
1. Digital Behavior	1		
2. Mental Health	.785**	1	
3. Sleep Patterns	–.305**	.418**	1

The correlation matrix shows a strong positive relationship between digital behavior and mental health ($r = .785$, $p < .001$). However, this positive direction indicates that as digital behavior becomes more problematic, mental well-being decreases. The negative correlation between digital behavior and sleep patterns ($r = –.305$) suggests that increased digital use contributes to poorer sleep quality. Moreover, the positive correlation between sleep and mental health ($r = .418$) confirms that consistent and healthy sleep is associated with better psychological well-being. These patterns emphasize that sleep acts as a crucial buffer between technology use and mental stability, consistent with Dibben et al. (2023) and Ahmed et al. (2024).

Table 3: One-Way ANOVA Showing Gender Differences in Digital Behavior

Variable	F-value	p-value	Significance
Daily Data Usage	5.10	.007	Significant
Online Gaming	4.55	.010	Significant
Device Use (hours)	5.90	.004	Significant

The ANOVA results indicate statistically significant differences in digital behavior across gender. Males reported higher involvement in online gaming, whereas females and transgender students exhibited greater social media engagement. The differences in total device use hours also reveal distinct patterns across gender identities, which may contribute to varied mental health outcomes. These findings echo

Kuss and Griffiths (2017), who observed that different types of digital engagement correspond to gender-specific stress and coping mechanisms.

Table 4: Regression Analysis Predicting Mental Health

Predictor	β	t-value	p-value
Digital Behavior	.705	10.85	< .001
Gender	.150	2.60	.010
Study Hours	.080	1.85	.065
Sleep Patterns	.062	1.95	.051

Regression analysis indicates that digital behavior is the strongest predictor of mental health (β = .705), followed by gender, study hours, and sleep patterns. This implies that excessive screen use has the most substantial influence on mental health deterioration. The findings reaffirm that gender differences and lifestyle factors such as study and sleep contribute but are secondary compared to digital exposure. Similar patterns were found in studies by Young (2017) and Moreno et al. (2015), confirming that digital overuse predicts higher emotional distress.

Conclusion and Recommendations

The study concludes that excessive digital habits and irregular sleep patterns significantly affect the mental health of college students. While digital behavior emerged as the most significant predictor, sleep patterns play an essential mediating role. It is recommended that educational institutions implement digital hygiene awareness programs, promote healthy sleep routines, and encourage balanced technology use. Workshops on time management, mindfulness, and digital detox can be effective strategies to enhance students' overall psychological well-being.

References

- Andreassen, C. S., & Pallesen, S. (2014). Social network site addiction – An overview. Current Pharmaceutical Design, 20(25), 4053–4061. https://doi.org/10.2174/13816128113199990616
- Kuss, D. J., & Griffiths, M. D. (2017). Social networking sites and addiction: Ten lessons learned. International Journal of Environmental Research and Public Health, 14(3), 311. https://doi.org/10.3390/ijerph14030311
- Moreno, M. A., Jelenchick, L. A., & Breland, D. J. (2015). Exploring depression and anxiety symptoms among college students. Journal of Adolescent Health, 56(2), 156–162. https://doi.org/10.1016/j.jadohealth.2014.09.001
- Young, K. S. (2017). Internet addiction test (IAT): Theoretical framework and updates. Computers in Human Behavior, 72, 312–318. https://doi.org/10.1016/j.chb.2017.03.040

- Twenge, J. M., & Campbell, W. K. (2019). Media use and mental health: Results from a longitudinal study. Journal of Adolescence, 76, 45–59. https://doi.org/10.1016/j.adolescence.2019.09.004
- Levenson, J. C., Shensa, A., Sidani, J. E., Colditz, J. B., & Primack, B. A. (2016). Social media use before bed and sleep disturbance among young adults. Sleep Health, 2(6), 290–296. https://doi.org/10.1016/j.sleh.2016.10.006