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Research Paper

Exploring the Effect of Social Media Usage on Sleep Quality and Anxiety Levels in Adults

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ABSTRACT

As social media becomes an integral part of modern life, concerns about its psychological impacts continue to rise. This study investigates the interplay between social media usage, sleep quality, and anxiety among Indian adults aged 18 to 40. Drawing on data from 200 participants and validated assessment tools, results reveal that increased social media engagement correlates with poorer sleep and heightened anxiety. Notably, sleep quality mediates this relationship—suggesting that disrupted rest may intensify emotional distress in frequent users. These findings emphasize the urgent need for digital well-being initiatives, including mindful screen use, sleep hygiene practices, and digital detox strategies. Promoting balanced media habits is essential for safeguarding mental health in a hyperconnected world.

Keywords: *Social Media, Sleep Quality, Anxiety, Digital Wellness, Adults*

In today's digital era, social media is deeply embedded in adults' daily lives, offering platforms for communication, entertainment, and information. However, evidence increasingly highlights its adverse effects on mental health, particularly regarding sleep quality and anxiety. Adults balancing professional and personal roles may overlook the psychological strain caused by prolonged social media use. Nighttime browsing, emotionally charged content, and pressure to remain online can disrupt sleep and intensify anxiety (Watkins et al., 2021).

Sleep, a critical biological function, supports cognitive, emotional, and physical health. Pre-bedtime device use, especially for social media, disrupts sleep through stimulating content, blue light exposure, and delayed sleep onset. Studies among college students confirm that nighttime social media use reduces sleep quality (Garett et al., 2016).

Similarly, the relationship between social media and anxiety is well-documented. Users face pressure to maintain curated personas and are constantly exposed to idealized images and distressing information, fostering feelings of inadequacy and worry. This cycle often worsens anxiety for those already vulnerable (Yu et al., 2024).

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Understanding the impact of social media on sleep and anxiety is vital. By exploring these dynamics, individuals and professionals can develop strategies like digital curfews, mindful engagement, and digital detoxes. As platforms evolve, ongoing research is essential for guiding healthy digital use.

Social media refers to platforms that enable content sharing and interaction, from forums to video-sharing apps, supporting both individual expression and community building (Davis, 2016). Popular platforms like Facebook, Instagram, Twitter, YouTube, and LinkedIn shape how people interact and perceive the world.

Sleep is a naturally recurring state marked by reduced responsiveness and physiological changes, critical for emotional and physical regulation (NINDS). Anxiety, an anticipatory emotional state, includes worry, restlessness, and physiological symptoms. When persistent, it may require clinical attention (APA, n.d.).

1.1 The Impact of Social Media on Sleep Quality

Evening use of platforms like Instagram and Facebook increases alertness and disrupts sleep through blue light exposure and delayed bedtime. A study found that frequent nighttime social media users reported lower sleep satisfaction (Han et al., 2024).

1.2 The Relationship Between Social Media Use and Anxiety

Social media fosters anxiety through idealized portrayals, constant comparisons, and distressing content. Anxious users may engage more with social media, worsening symptoms (Scott & Woods, 2019).

1.3 Mechanisms Linking Social Media Use and Sleep

Sleep is disrupted by emotionally stimulating content, melatonin suppression due to screen light, and time displacement—where scrolling replaces rest (Chin & Kinsella, 2024).

1.4 Mechanisms Linking Social Media Use and Anxiety

Anxiety arises from social comparison, cyberbullying, and pressure to maintain online presence. FOMO and the need for constant responsiveness exacerbate stress (Scott & Woods, 2019).

1.5 The Role of Screen Time in Sleep Disturbances

Prolonged screen use delays sleep and reduce quality. Blue light affects melatonin, while extended device use shortens sleep duration and leads to insomnia-like symptoms (Han et al., 2024).

1.6 The Intersection of Social Media and Sleep

Beyond blue light, emotional engagement from nighttime social media use makes it hard to relax, delaying sleep and reducing rest (Sleep Foundation, 2023).

1.7 Social Media's Influence on Anxiety Levels

Content overload increases anxiety. Key stressors include:

- **Cyberbullying**: Linked to mental health decline (McLean Hospital)
- **Social Comparison**: Leads to low self-esteem (Shafer, 2017)
- **Negative News:** "Doomscrolling" intensifies anxiety (McLean Hospital) Overuse and digital addiction also correlate with anxiety (Lopes et al., 2022).

1.8 Factors Influencing the Impact of Social Media

Impact varies by:

- **Time Spent**: Longer use affects sleep and mood (Dzierzewski et al., 2021)
- **Content Type**: Negative content increases anxiety; positive content may uplift (Ahmed, 2023)
- **Timing**: Late-night use disrupts circadian rhythms (Kelly, 2025)
- **Emotional Attachment**: Increases vulnerability to anxiety

1.9 Psychological Theories Explaining Social Media's Impact

- **Stimulus-Control Theory**: Using devices in bed promotes wakefulness (Bootzin, 1972)
- **Social Comparison Theory**: Drives self-evaluation and inferiority (Festinger, 1954)
- **Uses and Gratifications Theory**: Seeks emotional satisfaction but may cause fatigue (Katz et al., 1973)

1.10 Individual Differences in Social Media Impact

Effects vary by personality. High neuroticism or poor emotional regulation increases risk of distress. Interventions should be tailored (Marino et al., 2020).

1.11 Digital Well-being: Mindful Social Media Use

Practices like usage limits, night mode, and conscious engagement improve mental health. Blue light filters also help maintain sleep rhythms (Twenge et al., 2018).

1.12 Mindfulness and Self-Regulation in Digital Use

Mindfulness practices reduce online stress. Self-regulation—curating content, breaks, and limits—encourages healthier use (You et al., 2022).

1.13 Social Media's Impact: Adolescents vs. Adults

Though teens are often studied, adults also suffer digital stress. Social media is deeply tied to careers and networking, making boundaries harder (Keles et al., 2020).

1.14 Digital Literacy and Awareness

Education on algorithms, fatigue, and emotional effects improves self-awareness and encourages safe practices. Awareness campaigns can reduce harm (Livingstone & Helsper, 2019).

1.15 Ethics in Social Media and Mental Health Research

Research must address privacy, consent, and misinformation. Platforms should integrate mental health features like break reminders and support links (Metzger & Flanagin, 2015).

1.16 Digital Detox Interventions

Short-term detoxes improve sleep and reduce anxiety, but lasting benefits depend on long-term behavioral changes (Brown & Kuss, 2020).

1.17 Future Research Directions

As digital habits evolve, research must assess new platforms and integrate insights across disciplines for a fuller understanding.

1.18 Policy Implications

Policies can promote healthier online environments through moderation, reducing addictive designs, and ensuring transparency (Montag et al., 2021).

1.19 Encouraging Healthy Social Media Habits

Digital wellness needs collaboration from users, educators, and developers. Strategies include time management, positive engagement, breaks, and supportive institutional policies (Ardesch et al., 2023).

REVIEW OF LITERATURE

The increasing integration of social media into everyday life has prompted significant research into its effects on adult mental health, particularly regarding sleep quality and anxiety. While social media offers enhanced connectivity, growing evidence suggests that excessive use may contribute to sleep disturbances and heightened anxiety, especially among young adults and adolescents. This chapter synthesizes key findings from recent studies, identifies emerging patterns, and highlights research gaps.

Altay & Yilmaz Yavuz (2025) found that while social media plays a role in poor sleep among university students, it is not the sole factor. Bonsaksen et al. (2025) challenged earlier assumptions by finding no direct correlation between social media use and sleep disturbance during the late COVID-19 phase. Frielingsdorf et al. (2025) linked extended screen time, including social media, with lower self-rated sleep quality, indirectly impacting mental health.

Ma et al. (2025) emphasized the mediating role of daytime sleepiness and poor sleep in the link between social media use and suicidal ideation among college students. Similarly, Ghenai et al. (2025) found anxiety levels increased in users exposed to toxic content online. Pradhan et al. (2025) reported that social media addiction among Nepalese adolescents is associated with both poor sleep and higher anxiety.

Steyn and Slabbert (2025) found that a smartphone app aimed at reducing anxiety and depression, distributed via social media, yielded improvements in anxiety symptoms, suggesting positive technological interventions. Al-Garni et al. (2024) identified strong links between excessive Snapchat and YouTube use and disrupted sleep patterns among secondary school students.

Carvalho & Vilaça (2024) described a feedback loop where poor sleep, exacerbated by social media overuse, increases anxiety and stress. Chen et al. (2024), in a meta-analysis, found Facebook users reported the greatest sleep disturbances, especially when browsing at night.

Ferini-Strambi & Franceschini (2024) noted that inadequate sleep impairs emotional regulation, increasing vulnerability to anxiety—especially in those engaging in late-night social media use. Meng et al. (2024) highlighted doomscrolling and social comparison as major contributors to anxiety in heavy users. Ong et al. (2024) found a strong correlation between excessive smartphone use, particularly for social media, and anxiety and depression among Singaporean adults.

Jaffer et al. (2024) emphasized how digital device use before bed reduces melatonin and disrupts circadian rhythms. Sanchez et al. (2024) found excessive nighttime social media engagement increases insomnia and sleep fragmentation. Sahithya and Panwar (2024)

reported that platforms like Instagram and Snapchat contribute to delayed sleep and shorter duration among university students.

Youvan (2024) explained the addictive nature of social media through digital conditioning and intermittent reinforcement, which contribute to compulsive scrolling, attention deficits, and poor impulse control. Zhao & Zhang (2024) identified academic stress and social media as compounding factors in student anxiety and sleep disruption.

Al Houri (2023) reported that visually stimulating content before bed increased sleep latency and reduced quality. Appollis and Sutcliffe (2022) noted that YouTube and Instagram browsing contribute to poor sleep hygiene in college students. Hattingh et al. (2022) found that FoMO, particularly among Snapchat users, leads to compulsive nighttime checking and fragmented sleep.

Watkins et al. (2022) linked prolonged social media use with impaired sleep and performance in collegiate athletes. Swain and Pati (2021) showed that blue light exposure from platforms like YouTube and Instagram disrupts melatonin production, delaying sleep onset.

Baltaci (2019) found that social media addiction among Turkish students is associated with social anxiety and loneliness, but inversely linked to happiness. Scott, Biello, and Woods (2019), using data from 11,872 UK adolescents, found that heavier social media use predicted poorer sleep outcomes, including increased sleep latency and difficulty falling back asleep.
Triantafillou et al. (2019) found that daily sleep quality had a stronger effect on next-day mood than vice versa, reinforcing sleep's centrality to emotional health. Holmgren and Coyne (2017) identified poor self-regulation as a key mediator between pathological social media use and negative psychological outcomes like depression and aggression.

Levenson et al. (2017) showed that those who frequently used social media in the 30 minutes before bed were 62% more likely to experience sleep disturbances, even after controlling for overall daily use. Garett, Liu, and Young (2016) studied first-year university students and found Twitter activity negatively impacted sleep quality during a critical adaptation period.
Woods and Scott (2016) emphasized that nighttime social media use in adolescents is linked to poor sleep, low self-esteem, and higher anxiety and depression. Emotional investment in social media use further exacerbated these outcomes.

METHODOLOGY

3.1 Aim

The aim of this study was to investigate the impact of social media usage on sleep quality and anxiety levels among Indian adults aged 18–40 years.

3.2 Research Design

This study employed a quantitative research design using self-reported survey data. A structured questionnaire comprising validated instruments was administered to Indian adults aged 18–40 years. The data were analyzed using SPSS software, with statistical techniques including descriptive statistics, correlation analysis, regression analysis, and mediation analysis.

3.3 Rationale of the Study

The increasing prevalence of social media has raised concerns about its impact on mental health, particularly in relation to sleep disturbances and anxiety. Sleep plays a crucial role in

psychological well-being, and disruptions in sleep have been associated with heightened anxiety. However, limited research has examined the interaction between social media usage, sleep quality, and anxiety among the Indian population. This study aimed to address this gap by investigating whether sleep quality mediates the relationship between social media use and anxiety, thereby providing insights for mental health awareness and intervention strategies.

3.4 Objectives

This study aimed to explore the effects of social media usage on sleep quality and anxiety levels among Indian adults aged 18–40 years. The objectives were as follows:

- To understand the extent and nature of social media engagement within this age group.
- To examine how social media usage may be linked to changes in sleep quality.
- To investigate the relationship between social media activity and anxiety symptoms.
- To determine whether sleep quality mediates the relationship between social media use and anxiety levels.

3.5 Hypotheses

- **H1**: Social media usage negatively affects sleep quality, such that increased usage leads to poorer sleep quality.
- **H2**: Social media usage is positively associated with anxiety levels, meaning higher usage correlates with increased anxiety.
- **H3**: Sleep quality negatively affects anxiety levels, such that better sleep quality is associated with lower anxiety.
- **H4**: Sleep quality mediates the relationship between social media usage and anxiety levels, where increased social media usage leads to poorer sleep quality, which in turn increases anxiety levels.

3.6 Sample

The sample comprised 200 Indian adults aged 18–40 years. A convenience sampling method was used due to feasibility and accessibility. Participants were recruited from educational institutions, workplaces, and community settings, ensuring diversity in terms of social media usage, sleep patterns, and anxiety levels.

3.7 Tools Used

Three validated instruments were used to assess social media usage, sleep quality, and anxiety levels:

- **Social Media Use Questionnaire (SMUQ)**
  - *Developer*: Bányai et al. (2017)
  - *Purpose*: Measures frequency, duration, and purpose of social media use, distinguishing between active and passive usage.
  - *Reliability*: Cronbach's $\alpha = .88$
  - *Rationale*: Offers detailed insight into social media habits relevant to sleep and anxiety.
- **Sleep Quality Scale (SQS)**
  - *Developers*: Yi, Shin, & Shin (2006)
  - *Purpose*: Assesses overall sleep quality, including disturbances, duration, and efficiency.
  - *Reliability*: Cronbach's $\alpha = .92$
  - *Rationale*: Provides a robust measure of sleep quality in relation to mental health variables.

- **Generalized Anxiety Disorder-7 (GAD-7)**
  - *Developers*: Spitzer, Kroenke, Williams, & Löwe (2006)
  - *Purpose*: Evaluates symptoms of generalized anxiety.
  - *Reliability*: Cronbach's α = .89–.92; Sensitivity = 89%, Specificity = 82%
  - *Rationale*: Widely accepted and validated tool for measuring anxiety in both clinical and non-clinical settings.

3.8 Data Collection Method

Data were collected through paper-based questionnaires distributed across educational, professional, and community settings. Prior to participation, individuals were provided with instructions and informed consent forms. Anonymity and confidentiality were maintained to encourage honest responses.

3.9 Ethical Considerations

This study adhered to ethical guidelines to ensure participant rights and well-being:

- **Informed Consent**: Participants were informed about the study's purpose, procedures, and their right to withdraw.
- **Confidentiality**: All responses were anonymized and used solely for research purposes.
- **Voluntary Participation**: Participation was entirely voluntary.
- **Ethical Approval**: The study conformed to institutional ethical standards.

3.10 Data Analysis

Data analysis was conducted using SPSS and R software. The following statistical methods were used:

- **Descriptive Statistics**: To summarize participant demographics, social media usage, sleep quality, and anxiety levels.
- **Correlation Analysis**: To assess associations between the variables.
- **Regression Analysis**: To determine predictive relationships among social media usage, sleep quality, and anxiety.
- **Mediation Analysis**: To examine whether sleep quality mediates the relationship between social media usage and anxiety levels, using the approach outlined by Baron and Kenny (1986) or Hayes' PROCESS macro.

RESULT AND INTERPRETATION

Table 1 Add Table Name

Variable	N	Mean	Std. Error	Median	Std. Dev.	Variance	Min	Max	Skewness	Skew SE	Kurtosis	Kurt SE
Total Sleep Quality	200	35.7	0.772	36.0	10.9	119	0	71	-0.018	0.172	0.874	0.342
Total Social Media Use	200	44.5	1.10	42.5	15.6	243	17	90	0.526	0.172	-0.039	0.342
Total Anxiety	200	8.30	0.350	8.00	4.95	24.5	0	21	0.238	0.172	-0.465	0.342

The results of the descriptive statistics provide an overview of the sample's social media use, sleep quality, and anxiety levels. The mean scores suggest that, on average, participants

reported moderate social media use (M = 44.5), average sleep quality (M = 35.7), and low levels of anxiety (M = 8.30). The variability of social media use (SD = 15.6) is notably higher than both sleep quality (SD = 10.9) and anxiety (SD = 4.95), indicating that social media use varies more widely across the sample. The skewness and kurtosis values suggest that the distributions of sleep quality and anxiety are fairly normal, while social media use shows a slight positive skew, indicating that a smaller proportion of participants report very high usage. These descriptive statistics serve as a foundation for understanding the central tendencies and variability of the key study variables.

Correlation Analysis

Table 2 Correlation Matrix between study variables

Pearson's Correlation Matrix Among Social Media Use, Sleep Quality, and Anxiety

	Total sleep quality	Total social media use	Total anxiety
Total sleep quality	—		
Total social media use	-0.356***	—	
Total anxiety	0.467***	0.351***	—

Note. * p < .05, ** p < .01, *** p < .001

The results of the correlation analysis reveal significant relationships between social media use, sleep quality, and anxiety. Social media use is negatively correlated with sleep quality ($r = -0.356$, $p < .001$), suggesting that as social media use increases, sleep quality decreases. Additionally, both sleep quality and social media use are positively correlated with anxiety ($r = 0.467$, $p < .001$ and $r = 0.351$, $p < .001$, respectively), indicating that higher levels of social media use and poorer sleep quality are both associated with increased anxiety. These findings support the hypothesis that greater social media use is linked to poorer sleep and higher anxiety, providing evidence for the interconnectedness of these variables in the study.

Regression Analysis

Table 3 Linear Regression with total social media use as a predictor of total anxiety

Model Fit Measures

				Overall Model Test			
Model	**R**	**R^2**	**Adjusted R^2**	**F**	**df1**	**df2**	**p**
1	0.351	0.123	0.119	27.9	1	198	<.001

Note. Models estimated using sample size of N=200

Omnibus ANOVA Test

	Sum of Squares	df	Mean Square	F	p
Total social media use	600	1	600.5	27.9	<.001
Residuals	4268	198	21.6		

Note. Type 3 sum of squares

Model Coefficients - Total anxiety

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept	3.339	0.9955	3.35	<.001	
Total social media use	0.112	0.0211	5.28	<.001	0.351

The regression analysis demonstrates that social media use is a significant predictor of anxiety ($\beta = 0.351$, $p < .001$), explaining 12.3% of the variance in anxiety. This result indicates that as social media use increases, anxiety levels also tend to rise. The positive relationship between social media use and anxiety suggests that individuals who engage in higher levels of social media usage may be more likely to experience increased anxiety, supporting the hypothesis that social media use contributes to heightened anxiety.

Table 3 Linear Regression with total social media use as a predictor of total social media use

Model Fit Measures

				Overall Model Test			
Model	**R**	**R^2**	**Adjusted R^2**	**F**	**df1**	**df2**	**p**
1	-0.356	0.127	0.122	28.8	1	198	<.001

Note. Models estimated using sample size of N=200

Omnibus ANOVA Test

	Sum of Squares	df	Mean Square	F	p
Total social media use	3009	1	3009	28.8	<.001
Residuals	20708	198	105		

Note. Type 3 sum of squares

Model Coefficients - Total sleep quality

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept	24.631	2.1929	11.23	<.001	
Total social media use	-0.250	0.0465	5.36	<.001	-0.356

The regression analysis further shows that social media use significantly predicts sleep quality ($\beta = -0.356$, $p < .001$), explaining 12.7% of the variance in sleep quality. This negative relationship indicates that higher social media use is associated with poorer sleep quality. As social media use increases, sleep quality decreases, which aligns with the hypothesis that excessive use of social media negatively impacts sleep, contributing to sleep disturbances.

Table 5 Mediation Model: Sleep Quality as a Mediator between Social Media Use and Anxiety (H4)

Outcome Model (Y = Anxiety)

Predictor	B	SE	t	p	Beta	Tolerance	VIF
Intercept	3.339	0.995	3.35	<.001	—	—	—
Social Media Use	0.112	0.021	5.28	<.001	0.351	0.873	1.146
Sleep Quality	0.121	0.026	4.65	<.001	0.312	0.873	1.146

Mediator Model (M = Sleep Quality)

Predictor	B	SE	t	p	Beta	Tolerance	VIF
Intercept	24.631	2.193	11.23	<.001	—	—	—
Social Media Use	-0.250	0.046	-5.36	<.001	-0.356	1.000	1.000

Collinearity Statistics for Predictors (H4)

Predictor	Tolerance	VIF
Social Media Use	0.873	1.146
Sleep Quality	0.873	1.146

The results of the mediation analysis support **H4**, showing that sleep quality partially mediates the relationship between social media use and anxiety. Increased social media use leads to poorer sleep quality, which, in turn, contributes to higher levels of anxiety. The indirect effect through sleep quality was significant, confirming partial mediation. Furthermore, the analysis revealed no concerns with multicollinearity, ensuring that the relationships between the predictors and the outcome variable are robust and reliable. These findings emphasize the importance of considering sleep quality as a potential pathway through which social media use influences anxiety.

DISCUSSION AND CONCLUSION

This study investigated the relationship between social media usage, sleep quality, and anxiety levels among Indian adults aged 18–40, with a focus on sleep quality as a potential mediator. The results provide robust empirical support for the mediation hypothesis and align with established psychological theories and previous research.

The mediation analysis revealed that **sleep quality significantly mediated the relationship between social media usage and anxiety**, supporting theoretical models such as the *Cognitive-Behavioral Model of Anxiety* (Clark & Wells, 1995) and the *Circadian Rhythm Disruption Theory*. These frameworks explain how heightened cognitive arousal and exposure to blue light from screens impair sleep, which subsequently worsens anxiety symptoms. The findings suggest that the effects of social media on anxiety are not solely direct but are significantly routed through disrupted sleep patterns.

The **direct relationship between social media use and anxiety (H2)** was affirmed. Participants with higher social media usage reported greater anxiety levels. This finding is consistent with research by *Primack et al. (2017)*, which associates passive social media consumption with increased stress, upward social comparisons, and reduced self-esteem. The present data extend these findings within an Indian adult population.

Similarly, **social media usage was negatively associated with sleep quality (H1)**. Frequent usage, particularly before bedtime, appears to interfere with sleep initiation and maintenance. This supports the observations of *Haack & Philbrook (2020)*, who noted that pre-sleep digital engagement reduces sleep duration and quality due to increased alertness and disrupted melatonin production. These findings align with growing evidence of digital overuse as a barrier to restorative sleep.

Further, the study confirmed **a strong inverse relationship between sleep quality and anxiety (H3)**, in line with prior research demonstrating that sleep disturbances increase vulnerability to anxiety disorders (*Bowers & Moyer, 2017*). Notably, the mediation analysis (H4) established that **poor sleep quality amplifies the impact of social media use on anxiety**, echoing the conclusions of *LeBourgeois et al. (2017)* who emphasized sleep as a critical mechanism linking screen exposure and mental health outcomes.

Practical Implications

These findings offer meaningful implications for mental health interventions. Mental health professionals and educators should incorporate sleep hygiene strategies into programs addressing anxiety, particularly for individuals with high social media usage. **Cognitive Behavioral Therapy (CBT)** tailored to include digital behavior management and sleep optimization may prove especially effective.

In addition, **digital detox strategies**—such as limiting screen time before bed, engaging in mindfulness practices, and promoting sleep-conducive environments—could mitigate the impact of social media on sleep and anxiety. Policymakers and public health campaigns should raise awareness about the indirect mental health effects of excessive digital engagement.

Limitations

While the study offers valuable insights, it is not without limitations. Its **cross-sectional design** prevents causal inference, and reliance on **self-reported measures** introduces potential biases. Future research employing **longitudinal methods** and **objective digital and sleep tracking** could provide a more accurate and dynamic understanding of these relationships.

Moreover, the **sample was limited to Indian adults aged 18–40**, restricting generalizability. Future studies should include broader age ranges and cross-cultural comparisons to enhance external validity.

Future Directions

Future research should investigate the **specific nature of social media engagement**—e.g., active vs. passive use, content type, or platform—to determine differential effects on sleep and anxiety. Intervention-based studies testing **behavioral modification** and **platform-specific usage guidelines** could yield practical solutions for managing digital consumption's psychological impacts.

CONCLUSION

This study adds to the growing body of literature on digital well-being by demonstrating that **sleep quality mediates the relationship between social media use and anxiety** among Indian adults. These findings underscore the urgent need to consider **sleep as a central factor in digital mental health interventions**. As social media becomes increasingly

intertwined with daily life, understanding its nuanced impact on mental health is essential. Targeted interventions that address both digital habits and sleep hygiene offer a promising avenue to enhance psychological well-being in the digital age.

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