

Fear of Missing Out (FOMO) and Sleep Disturbances Amongst Young Adults: A Correlational Study

Neha Kalia^{1*}, Chiya Jaiswal², O.P. Sharma³

¹ Research Scholar, Department of Psychology, University of Rajasthan, Jaipur, (Raj.), India

² Research Scholar, Department of Psychology, University of Rajasthan, Jaipur, (Raj.), India

³ Professor, Department of Psychology, University of Rajasthan, Jaipur (Raj.), India

^{1*}Corresponding Author Email: nkkalia99@gmail.com

Abstract— Fear of Missing Out (FOMO) is a psychological state involving anxiety regarding the loss of social experiences and interactions, typically driven by excessive social media consumption. At the same time, sleep disorders have become widespread among young adults, heavily influencing their mental and physical health. The goal of this study was to explore the connection among FOMO and sleep disorders in young adults in Jaipur, India. It was predicted that FOMO and sleep quality would be significantly correlated. Participants in the study were 100 young adults of age range 18 to 25 (50 men and 50 women). “The Pittsburgh Sleep Quality Index (PSQI)” was utilized to assess sleep quality, while the “Fear of Missing Out Scale (FOMOs)” was employed to evaluate the extent of FOMO. To explore the connection between FOMO and problems with sleep, a correlational study method was used. The results indicated a substantial positive relationship ($r = 0.34$, $p = 0.001$) between FOMO and sleep disturbances, which indicated that participants with greater FOMO had poorer quality sleep. The average FOMO score was 21.45 (SD = 6.50), and the average PSQI score was 6.80 (SD = 3.15), which shows that a significant majority of the sample had difficulty sleeping. The findings support the hypothesis and align with previous studies indicating that high levels of social media engagement at night and heightened cognitive stimulation prior to sleep result in poor sleep quality. The implications of the study point to interventions for digital mindfulness and good sleep hygiene to prevent FOMO-induced sleep disruptions in young adults.

Keywords: Fear of Missing Out (FOMO), Sleep Disturbances, Social Media Use, Young Adults, Sleep Quality, Digital Well-being

I. INTRODUCTION

“Fear of Missing Out (FOMO)” is a widespread fear that other people may be having enjoyable experiences from which one is excluded, with a compulsive need to remain constantly in touch with what others are experiencing. FOMO is essentially a form of social anxiety in which one is afraid of missing out on social gatherings, chats, or other enjoyable experiences. Psychologically, FOMO has been linked to negative emotional states (e.g., low mood, anxiety) and problematic social media attachment, as individuals are always looking for connectedness to prevent feelings of exclusion (Gupta & Sharma, 2021). Sleep disturbances, on the contrary, describe interruptions in the regular sleep pattern that result in arousal or awakening, making it hard to initiate or maintain sleep (Swathika et al., 2022). Sleep disruption (generally measured as low sleep quality or insomnia) is a serious problem, for it can compromise cognitive function, raise the risk of depression and anxiety, and impair daytime functioning and well-being (University of Rhode Island, 2018). FOMO as well as sleep problems are significant complaints among youths, prompting crucial questions regarding their interrelation. The importance of researching FOMO and sleep disturbances among young adults is based on lifestyle and developmental considerations.

Young adults today (older teenagers and college students) are heavy users of social media and smartphones, which can fuel FOMO and intrude on sleep. A recent report by the American Academy of Sleep Medicine (2023) revealed that nearly 93% of Gen Z teens have experienced sleep loss due to staying up late on social media. Prioritizing social connectivity oversleep is common in this age group, one report even dubbed these youth “the young and the restless,” noting that socializing or phone use often trumps sleep due to FOMO-driven urges to remain available for calls, texts, or online interactions. As a result, numerous young adults keep their phones close by and wake up to all notifications, a behavior that disrupts sleep and leads to “sleep texting” and ongoing sleep deprivation. Since more than half of college students might experience sleep disturbances and FOMO is particularly relevant in the times of social media, it is psychologically and clinically important to know how

these issues are connected. The current paper examines the connection between FOMO and sleep problems in young adults, specifically focusing on young adults. By understanding this connection, we can illuminate how contemporary social anxieties may be influencing sleep health in young adults, and guide interventions for enhancing mental health and lifestyle harmony.

II. REVIEW OF LITERATURE

An increasing body of research has considered the interaction between FOMO (often compounded by social media usage) and sleep issues among young people. Social media and technology consumption are often cited as mediating variables. Numerous studies have linked excessive electronic media use, especially in the evening, to poorer sleep quality (Han et al., 2024). Meta-analytic evidence suggests that overall smartphone use/social media use is strongly linked to reduced sleep quality (mean pooled effect size ~ 0.28) and increased sleep disturbances. One possible mechanism is that social networking and online interactions may lead to arousal of cognition and emotion in the evening.

For example, Kinsella et al. (2024) discovered that pre-sleep cognitive arousal and negative social comparison, the process of viewing other people's highlight reels and feeling as though one is missing out, are the primary mechanisms that relate social media use to poor sleep quality. This implies that sentiments similar to FOMO and racing thoughts at night may operate as a mediating factor in the effect of social media on sleep. Actually, a lot of research has looked at FOMO in particular as a predictor of poor late-night phone use and sleep disturbance.

One study by Adams et al. (2020) identified that FOMO relates to symptoms of insomnia among college students. In their paper "Sleep in the Social World of College Students," greater stress and FOMO were both related to increased levels of insomnia, which subsequently correlated with worse mental health. The researchers concluded that FOMO and stress can lead to dysregulated sleep, which are avenues through which social pressures undermine well-being. In a 2016 study, compulsive smartphone use "elicited largely due to FOMO" was listed as a key "sleep stealer" among college freshmen (Patani & Babu, 2023). Members had reported having phones placed under the pillow and waking up to each notification, as a fear of missing calls or messages was extremely disturbing their sleep (Rafique et al., 2020). Such behaviors demonstrate the direct way that FOMO can result in sleep fragmentation (e.g., through continuous checking or replying at night). Certain empirical studies in various settings support the FOMO-sleep connection.

For instance, adolescents' pre-sleep anxiety and FOMO were linked with increased sleep onset latency (prolonged falling asleep) and reduced sleep duration, according to a survey conducted by Scott and Woods (2018). Young people who experienced anxiety over not being involved in online activity slept later on their devices, and sleep was put off until later at night (Adams et al., 2016).

Another Israeli college student study by Shoval et al. (2021) explored "sleep-smartphone hygiene" (smartphone behavior in the sleep setting) in combination with psychological factors. They discovered that poorer sleep quality was linked to high trait anxiety, high FOMO levels, and unhealthy bedtime phone activities. In fact, the study found that trait anxiety mitigated the effects of phone usage on sleep, and that FOMO, anxiety, and nocturnal phone use all explained around 20% of the variation in sleep quality. This indicates FOMO does not operate alone; it is usually found together with anxiety and contributes to behaviors (such as nighttime phone use) that lower sleep quality.

A number of studies in East Asia, in which smartphone and social media use are very high, have also reported associations between FOMO and sleep. In a comprehensive survey of Chinese university students, Li et al. (2020) found a direct link among poor sleep quality and negative affect (overall emotional discomfort), which was largely mediated by smartphone addiction and FOMO. That is, students with higher baseline anxiety/depression had poorer sleep, and some of this effect was due to their higher FOMO and consequent problematic smartphone use. This suggests that FOMO could be a mechanism for translating emotional challenges into sleep challenges. Interestingly, the same research distinguished between trait-FOMO (overall tendency to experience FOMO) and state-FOMO (temporal fear of missing online material); The study found that trait/state FOMO and phone addiction served as mediators in the association between negative affect and sleep (Zhang et al., 2024).

Huang et al. (2023) conducted a study in China amid the COVID-19 pandemic to explore mobile phone dependency among university students. Their findings revealed that increased phone addiction was positively associated with poorer sleep quality, bedtime procrastination, and fear of missing out (FOMO). Additionally, FOMO emerged as a significant mediator linking excessive phone usage to both reduced sleep quality and delayed bedtime behavior. These results highlight that FOMO can both be a consequence of excessive smartphone use and be a cause of delayed sleep timing, thus forming a vicious cycle.

FOMO's association with mental health variables also seems to be pertinent to sleep. Since FOMO is associated with symptoms of social anxiety and depressive emotions, it has the potential to worsen nighttime rumination and emotional activation that interferes with sleep.

A general review by Liu, Liu and Wan (2023) reported that FOMO has been linked with a variety of adverse consequences, such as anxiety, reduced life satisfaction, and sleep disturbances. Additionally, a moderated mediation investigation of medical students by Ye et al. (2023) discovered FOMO to influence academic burnout indirectly via addiction of smartphone and sleep quality. In that research, greater FOMO was linked to more maladaptive smartphone use, which in turn was related to lower sleep quality (and finally more burnout). It's interesting to note that they discovered a substantial positive link between FOMO ratings and poor sleep quality as determined by PSQI. This suggests that even in high-achieving student populations, those who suffer from FOMO have poor sleep quality.

III. OBJECTIVE

The current study was created with the following goal in mind, drawing from the literature mentioned above:

- To explore the relationship among FOMO and sleep disturbances in young adults.

III.I. HYPOTHESIS

- There would be a significant correlation between Fear of Missing Out (FOMO) scores and sleep quality in young adults.

III.II. METHOD

Sample

The study's sample comprised 100 young adults from Jaipur, Rajasthan, India. An equal gender split was maintained by including 50 males and 50 females. The participants were between the ages of 18 and 25. Inclusion criteria mandated that participants should belong to the young adult age category (18–25 years) and be studying in Jaipur at the time of the study. Exclusion criteria were subjects with diagnosed sleep disorders, those receiving medication that may have an effect on sleep patterns, and those with chronic illnesses that would impair sleep quality. Participants gave their consent before participating in the study.

III.III. RESEARCH DESIGN

The research design that was employed was correlational. This is effective for examining the natural relationship between sleep quality and FOMO within the population. The data were gathered at one point in time with standardized questionnaires.

III.IV. PSYCHOLOGICAL MEASURES

Two main psychological measures/instruments were utilized to operationalize the variables:

- **Fear of Missing Out Scale (FOMOs) by Przybylski et al. (2013):**

This self-report measure has ten items. Every piece expresses a dread of missing out (for example, "I get worried when I find out my friends are having fun without me" or "I feel anxious if I don't know what my friends are up to"). Participants assess each item on a Likert scale ranging from 1 ("Not at all true of me") to 5 ("Extremely true of me"), indicating how well the statement describes them. The FOMOs produce a total score by adding responses (after appropriate reverse-scoring for any reversed items). Greater scores reflect higher levels of FOMO, with total scores ranging from 10 to 50. Previous studies have reported strong internal consistency for the FOMO scale (Cronbach's $\alpha \sim 0.70-0.80$ in college samples).

- **Pittsburgh Sleep Quality Index (PSQI) by Buysse et al. (1989):**

The Pittsburgh Sleep Quality Index evaluated both the general quality of sleep and the presence of sleep disturbances. A widely used standardized test that measures sleep quality over a month is the PSQI. It is composed of seven components and 19 self-reported items, namely "Subjective sleep quality, Sleep latency (the time taken to fall asleep), Sleep duration, Habitual sleep efficiency (the percentage of time spent in bed that one is actually asleep), Sleep disturbances (such as nighttime awakenings, nightmares), Use of sleep medications, and Daytime dysfunction (like feeling drowsy during the day)". Each component provides a score range of 0 to 3, with 3 representing the most adverse scenario (for instance, extremely poor sleep

quality or frequently experiencing disturbances). The overall PSQI score, which can vary from 0 to 21, is calculated by adding the scores of these separate components. A global score of more than five usually indicates severe sleep disruptions or poor sleep quality. The PSQI demonstrates high validity and reliability; for example, Buysse and others (1989) noted good sensitivity and specificity for differentiating between good and poor sleepers, while our research indicated an internal consistency of $\alpha \approx 0.74$ for the PSQI. Elevated PSQI scores in our findings indicate poorer sleep (more disturbances, reduced sleep duration, etc.).

III.V. PROCEDURE

The data were gathered using Google Forms. The aim of the study was explained to the participants, who also gave their agreement and were assured of secrecy. It was optional, and participants might withdraw at any moment. The Google form contained the FOMO Scale and PSQI. Standardized instructions highlighted honesty in responding. The FOMO Scale was administered first in order to avoid bias from sleep questions. Following collection, answers were screened for completeness and entered into statistical packages (e.g., SPSS).

IV. RESULTS

Table 1: Descriptive statistics for the FOMO scores and Sleep Quality (PSQI) scores in the sample (N = 100).

Measure	Mean (M)	Standard Deviation (SD)
Fear of Missing Out (FOMO score)	21.45	6.50
Sleep Quality (PSQI global score)	6.80	3.15

Participants reported subjectively experiencing moderate levels of FOMO and poor sleep quality on average, as per the descriptive statistics of the study's two most significant variables, sleep quality and fear of missing. The mean score of FOMO was 21.45 with a standard deviation of 6.50, indicating that whereas some participants indicated relatively low FOMO, others indicated significantly high levels of this social anxiety. Since the FOMO scale has a score range of 10 to 50, the mean score indicates that the participants, on average, experience FOMO at a moderate level, consistent with previous studies on young adult groups. The average "Pittsburgh Sleep Quality Index (PSQI)" global score was 6.80 with a standard deviation of 3.15. In accordance with conventional PSQI cutoffs, greater than 5 scores suggest poor sleep quality, and as such, the average participant in this sample lies within the poor sleep range. This is an indication that the majority of the sample have sleep problems, such as problems associated with sleep onset, maintenance, or restorative sleep.

CORRELATION ANALYSIS

Table 2: Pearson Correlation between FOMO and Sleep Quality (N = 100)

Variables	Pearson <i>r</i> (Correlation)	<i>p</i> -value (two-tailed)
FOMO and Sleep Quality	+0.34	0.001 **

Note: FOMO = Fear of Missing Out (score), Sleep Quality = PSQI global score. $p < .01$

A moderately positive association between young people's sleep disruption and FOMO was shown by the correlation analysis. Higher FOMO scores were linked to poorer sleep quality (as shown by higher PSQI scores), according to the Pearson correlation coefficient, which was $r = 0.34$. The correlation was found significant at $p = 0.001$, i.e., the likelihood of this result occurring by chance is extremely low ($p < 0.01$).

This finding supports this study's hypothesis that the participants with greater levels of FOMO have greater sleep disturbances, such as difficulty falling asleep, drowsiness, or daytime impairment caused by insufficient sleep. The positive sign of correlation indicates that, as FOMO scores increase, the quality of sleep diminishes. Since $r = 0.34$ is a medium effect size, this is a significant relationship, although there could be other factors contributing to sleep as well.

V. DISCUSSION

Fear of Missing Out (FOMO) is a major psychological issue among young adults in today's digital age, which refers to an enduring anxiety that other people are doing something enjoyable or fulfilling while the individual is not present. Since social media continues to encourage hyper-connectivity, those suffering from FOMO would indulge in overuse of the internet, especially at late nights. Concurrently, sleep disturbance has emerged as a common phenomenon among young adults, with diminished sleep quality having an impact on cognitive function, emotional control, and general well-being. Given these concerns, this study aimed to explore the relationship between sleep disturbances and FOMO among young adults.

The study aimed to measure if those who experience higher FOMO have more sleep disturbances. Earlier research implied that FOMO is linked with more use of social media at night, cognitive arousal before sleep, and procrastination at bedtime, all of which have resulted in disrupted sleep patterns. Grounded in these theoretical and empirical bases, the study proposed a substantial positive correlation between FOMO and sleep disturbances, where respondents with higher FOMO would have lower sleep quality.

The findings of the study corroborated the hypothesized hypothesis, with a statistically significant positive correlation between FOMO and sleep disturbances in young adults. As indicated in Table 1, participants reported moderate FOMO and poor sleep quality on average. Moreover, Table 2 demonstrates a moderate positive relationship between FOMC and sleep disturbances, which implies that people who suffer from increased social exclusion fears and often seek online interactions to alleviate such fears are likely to experience poorer sleep quality. The results indicate that overconcern about missing out on social events can result in activities like sleeping late to catch up on social media posts, waking up repeatedly at night to respond to messages, and having racing thoughts prior to sleep, eventually leading to sleep fragmentation and reduced sleep time.

A lot of recent investigations corroborate the findings of the current research. For instance, Blackwell and colleagues (2017) found that problematic social media use driven by FOMO significantly predicted poor sleep quality in youth because excessive social media use delayed bedtime and raised pre-sleep cognitive alertness. Demirci and colleagues (2015) also identified a strong correlation between problematic smartphone use and sleep disturbances, noting that individuals with high FOMO were more likely to use social media late at night, disrupting their normal sleep patterns. Additionally, a meta-analysis of social media use and sleep outcomes was carried out by Carter et al. (2016), who concluded that excessive nocturnal connections are to blame for poor sleep efficiency and short sleep duration.

Zhu et al. (2023) explored how FOMO, anxiety, and sleep issues are interconnected among college students. Their findings suggested that students with higher levels of FOMO took longer to fall asleep and were generally less satisfied with their sleep quality. Similarly, Vernon et al. (2018) found that FOMO played a key mediating role between social media usage and symptoms of insomnia, as individuals with elevated FOMO often engaged in prolonged nighttime screen use, which negatively impacted their sleep patterns. In addition, a longitudinal study by Van Den Eijnden and colleagues (2017) reported that participants who had persistent FOMO over several years had higher declines in sleep quality, indicating that FOMO-related behaviors' long-term effects can contribute to sleep problems.

Collectively, the current study's findings, together with prior studies, highlight the necessity of FOMO being considered as a psychological factor in determining sleep quality. The consistency of findings across various studies suggests that FOMO-driven behaviors, particularly late-night social media use and increased cognitive engagement before sleep, are major contributors to poor sleep among young adults. As both FOMO and sleep issues become more widespread, targeted interventions aimed at decreasing the addiction to social media and promoting digital well-being could be effective in improving sleep hygiene among young populations.

VI. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Although the study offers important perspectives on the connection between sleep problems and FOMO, it has certain limitations. Primarily, its cross-sectional design limits the ability to establish causality, leaving uncertainty about whether sleep problems directly result from FOMO or if poor sleep contributes to increased FOMO. The causal nature should be established in future studies using longitudinal or experimental designs. Second, the use of self-report measures poses potential biases such as social desirability or recall errors. The inclusion of objective sleep-monitoring devices or electronic monitoring of social media use in future studies can yield stronger results. Moreover, the research was done with a particular sample of young adults in Jaipur, India, and therefore it is not generalizable. Future studies should be conducted across diverse demographic groups and cultural backgrounds to examine differences in the FOMO-sleep relationship. Lastly, the investigation of other

mediating variables like anxiety, screen time, and digital detox interventions may further elucidate the underlying mechanisms that connect FOMO and sleep disturbances.

VII. IMPLICATIONS

The implications of the results are significant for mental health workers, educators, and policymakers. As FOMO is related to sleep issues, interventions directed at digital mindfulness and self-regulation techniques may assist young adults in adopting improved social media behavior and enhancing sleep hygiene. Awareness programs on managing FOMO-induced anxiety and its effects on sleep can be introduced by schools, with emphasis on technology-free bedtime routines. In addition, parents and caregivers can promote balanced digital use by limiting screen time at night and promoting offline social interaction. Social media sites themselves could also intervene by providing features that promote responsible use, including reminding people to put down their screens at night and tools for managing screen time. Treating FOMO with psychological and behavioral interventions could reduce its harmful impact on sleep and overall health.

VIII. CONCLUSION

The present study offers factual support for the association between young people's sleep issues and FOMO. In line with other research that connected excessive nocturnal social media use and cognitive activation to sleep problems, the findings indicate that greater levels of FOMO are linked to lower sleep quality. Although the research adds to the increasing body of knowledge on FOMO's psychological effects, its limitations indicate that more work may be necessary with heterogeneous populations and research methods. Finally, tackling FOMO through education campaigns, digital well-being measures, and behavioral interventions can potentially contribute towards the enhancement of the sleep health of young adults. As social media progresses, developing conscious digital habits will be critical in preventing FOMO-driven sleep disturbances and encouraging overall mental and physical health.

REFERENCES

1. Adams, S. K., Murdock, K. K., Daly-Cano, M., & Rose, M. (2020). Sleep in the Social World of College Students: Bridging Interpersonal Stress and Fear of Missing Out with Mental Health. *Behavioral Sciences*, 10(2), 54. <https://doi.org/10.3390/bs10020054>
2. Adams, S. K., Williford, D. N., Vaccaro, A., Kisler, T. S., Francis, A., & Newman, B. (2016). The young and the restless: Socializing trumps sleep, fear of missing out, and technological distractions in first-year college students. *International Journal of Adolescence and Youth*, 22(3), 337–348. <https://doi.org/10.1080/02673843.2016.1181557>
3. American Academy of Sleep Medicine. (2023). *Are you TikTok tired? 93% of Gen Z admit to staying up past their bedtime due to social media*. American Academy of Sleep Medicine
4. Blackwell, D., Leaman, C., Tramposch, R., Osborne, C., & Liss, M. (2017). Extraversion, neuroticism, attachment style and fear of missing out as predictors of social media use and addiction. *Personality and Individual Differences*, 116, 69–72. <https://doi.org/10.1016/j.paid.2017.04.039>
5. Carter, B., Rees, P., Hale, L., Bhattacharjee, D., & Paradkar, M. (2016). Association between portable screen-based media device access or use and sleep outcomes: A systematic review and meta-analysis. *JAMA Pediatrics*, 170(12), 1202–1208. <https://doi.org/10.1001/jamapediatrics.2016.2341>
6. Demirci, K., Akgönül, M., & Akpınar, A. (2015). Relationship of smartphone use severity with sleep quality, depression, and anxiety in university students. *Journal of Behavioral Addictions*, 4(2), 85–92. <https://doi.org/10.1556/2006.4.2015.010>
7. Gupta, M., & Sharma, A. (2021). Fear of missing out: A brief overview of the origin, theoretical underpinnings and relationship with mental health. *World Journal of Clinical Cases*, 9(19), 4881. <https://doi.org/10.12998/wjcc.v9.i19.4881>
8. Han, X., Zhou, E., & Liu, D. (2024). Electronic Media Use and Sleep Quality: Updated Systematic Review and Meta-Analysis. *Journal of Medical Internet Research*; 26. DOI: [10.2196/48356](https://doi.org/10.2196/48356)

9. Huang, T., Liu, Y., Tan, T.C. *et al.* (2023). Mobile phone dependency and sleep quality in college students during COVID-19 outbreak: the mediating role of bedtime procrastination and fear of missing out. *BMC Public Health*, 23, 1200. <https://doi.org/10.1186/s12889-023-16061-4>
10. Kinsella, J. E., & Chin, B. N. (2024). Mechanisms Linking Social Media Use and Sleep in Emerging Adults in the United States. *Behavioral Sciences*, 14(9), 794. <https://doi.org/10.3390/bs14090794>
11. Li, L., Griffiths, M. D., Mei, S., & Niu, Z. (2020). Fear of missing out and smartphone addiction mediates the relationship between positive and negative affect and sleep quality among Chinese university students. *Frontiers in Psychiatry*, 11, 877.
12. Liu, X., Liu, T., Zhou, Z. *et al.* (2023). The Effect of Fear of Missing Out on Mental Health: Differences in Different Solitude Behaviors. *BMC Psychology*, 11, 141 <https://doi.org/10.1186/s40359-023-01184-5>
13. Patani, N.S., & Babu, K. (2023). Smartphone Use, Fear of Missing Out (FOMO), and Social Connectedness among College Students. *The International Journal of Indian Psychology*, 11(3). DOI:10.25215/1103.427.
14. Rafique, N., Al-Asoom, L.I., Alsunni, A.A., Saudagar, F.N., Almulhim, L., & Alkaltham, G. (2020). Effects of Mobile Use on Subjective Sleep Quality. *Nature and Science of Sleep*, 12, 357. <https://doi.org/10.2147/NSS.S253375>
15. Scott, H. and Cleland Woods, H. (2018) Fear of Missing Out and Sleep: Cognitive Behavioral Factors in Adolescents' Nighttime Social Media Use. *Journal of Adolescence*, 68, pp. 61-65.
16. Shoval D, Tal N, & Tzischinsky O. (2021) Smartphone Usage at Bedtime: The Effect of Sleep–Smartphone Hygiene, Trait Anxiety, and FOMO on Sleep Quality. *OBM Neurobiology*; 5(1): 088; DOI:10.21926/obm.neurobiol.2101088.
17. Swathika, R., Kalyani, P., & Felix, J.W. (2022). Sleep disturbances and its associated factors among the college students in Tamil Nadu- A cross-sectional study. *International Journal of Community Medicine And Public Health*, 9(12), 4655–4661. <https://doi.org/10.18203/2394-6040.ijcmph20223228>
18. University of Rhode Island. (2018). *Bedtime story study finds sleep-deprived students suffer academically and emotionally*. University of Rhode Island.
19. Van Den Eijnden, R. J. J. M., Geurts, S. M., Ter Bogt, T. F. M., van der Rijst, V. G., & Koning, I. M. (2021). Social Media Use and Adolescents' Sleep: A Longitudinal Study on the Protective Role of Parental Rules Regarding Internet Use before Sleep. *International journal of environmental research and public health*, 18(3), 1346. <https://doi.org/10.3390/ijerph18031346>
20. Vernon, L., Modecki, K. L., & Barber, B. L. (2018). Mobile phones in the bedroom: Trajectories of sleep habits and subsequent adolescent psychosocial development. *Child Development*, 89(1), 66–77. <https://doi.org/10.1111/cdev.12836>
21. Ye, X., Li, Y., Liu, Y., Zheng, Q., Lin, Z., Zeng, Y., Lin, Z., Zhu, T., Chen, X., Chen, L., & Liu, T. (2023). Effect of fear of missing out on learning burnout in medical students: A moderated mediation. *Frontiers in Psychiatry*, 14, 1289906. <https://doi.org/10.3389/fpsy.2023.1289906>
22. Zhang, J., Deng, Y., Zheng, S., & Wan, C. (2024). The mediating effect of rumination and fear of missing out between mobile phone addiction and sleep quality among college students. *Scientific reports*, 14(1), 27394. <https://doi.org/10.1038/s41598-024-79235-z>