

Social Media Addiction on Sleep Quality among Adolescents

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Abstract

Social media addiction is recognized as a worldwide issue. Neurologists have discovered that it leads to increased dopamine levels in the brain. The rising use of social media among adolescents has heightened concerns regarding its impact on sleep quality. This article offers a detailed examination of the link between social media addiction and the sleep quality of adolescents. It utilizes quantitative surveys and qualitative interviews to collect extensive data on social media use, addiction symptoms, and sleep quality in individuals aged 18 to 22. The study employs the Social Media Addiction Scale (SMAS) and the Pittsburgh Sleep Quality Index (PSQI) as psychological instruments. Additionally, in-depth interviews will be conducted to gain valuable perspectives on the subjective experiences and views of adolescents concerning social media addiction and its influence on their sleep patterns.

Keywords: social media addiction, sleep quality, adolescents

Introduction

Nowadays, people can only live with smart phones and the internet in this digital world. As studied in school days, basic needs are food, water, and shelter, but things have changed, and the list of essential materials of human beings includes smart phones and internet facilities. Social Media Addiction is a widely discussed topic all over the world. The term "social media addiction" describes an individual's uncontrolled and compulsive use of social media platforms, which results in a loss of control and has detrimental effects on many facets of their life. Social Media's ability to become hooked is well known, but its effects on Sleep Quality are still a cause for concern. Continual accessibility of smart phones, as a result of which Adolescents may face sleep difficulties due to the constant access to Social Media information, the appeal of virtual connections, and the fear of missing out (FOMO).

The adolescent is the age group that plays a vital role in the developmental stage, mainly marked by the changes in physical appearance, functions of the brain, and psychosocial behaviours. During the adolescent period, sleep habits change. The researchers state that adolescents require 8 to 10 hours of sleep every night. However, several circumstances and situations, such as social commitments, extracurricular activities, and academic stress, frequently cause sleep deprivation and irregular sleep cycles. According to neuroscience research, the extensive usage of social media has led to an association with alterations in neurochemistry and neurological activity. Many studies have been conducted on social media, focusing on how social media addiction affects the human body. Some of this research states that social media addiction has affected many aspects of the human body, such as sleep quality and attention span. A study found that the Digital India initiative has increased digital literacy among people across rural and urban areas of India, stating that 38% of households in India are digitally literate. According to the research conducted by the Ministry of Telecommunication, the cost of 1GB of data in India is Rs20, whereas in the US, it is 70.

The impact of COVID-19 has changed the lifestyle of people, especially adolescents who spend time on social media for education and study purposes. They shifted their focus to spend more time on social media accounts as they do not have healthy social interactions due to the lockdowns put forward by the government bodies. Due to increased social media usage, special counselling centres are established. They mainly have cases related to less concentration, lack of sleeplessness, and less social interaction; many parents complain that they are always on social media, they are not active in their studies, and they become less interactive with their friends, parents, and family members.

Many research studies examined the connection between social media use and sleep quality, emphasizing the adverse effects of overuse. Sleep length and quality are harmed by the blue light emitted by electronic devices, the psychological stimulation from exciting content, and the disturbance of bedtime rituals. Due to their higher rates of social media use and stage of development, which requires a careful balancing act between sleep requirements and numerous psychosocial demands, adolescents are particularly susceptible to these effects. Social media addiction has become a crucial area of research that examines the effects of teen social media addiction on their ability to sleep. To minimize the adverse effects and promote ideal sleep health among adolescents in the digital era, evidence-based interventions can be developed by considering the relationship's underlying mechanisms and potential mediators. As a result, social media addiction and health-related issues related to it are widely discussed all over the world. This research showcases the impact of social media addiction on adolescents' sleep quality and attention span.

Literature Review

Social media addiction is a widely discussed topic across all over the world. The studies stress that social media has affected physically and mentally related problems among adolescents. The covid19 pandemic has made the people stay in their home which leads to less social and environmental interaction. Due to which, people started developing relationships and interactions through social media accounts and this made the people addicted to social media and adolescents are highly affected due to the online learning methods. The problem arises during the post covid where people don't have less physical interactions and they started using social media for long hours without focusing on their jobs and adolescents were not focused on their studies and they are focused highly on social media. The review states that social media addiction has affected the sleep quality of adolescents. Many studies state that due to less sleep quality many adolescents face psychological issues such as anxiety, depression, anger etc. Some studies state that social media addiction has led to other health issues such as eye strain, neck joint problems, disturbance in the ear balance etc. The attention span is the blessing that we have and that makes us wise human beings compared to other animals. Many teachers and parents complain that the social media addiction has decreased the average amount of attention span among adolescents. Many studies related to this topic state that the attention span has decreased due to increased use of social media addiction. Hence, social media addiction has decreased the sleep quality and attention span among adolescents.

Methods

This study focuses on the relationship between social media addiction and adolescent sleep quality. The study mainly focuses on quantitative research methods under which the descriptive research design is used in this study. As a result, the data collected in this study is the quantitative data from the study participants. The sample size of the study is 102. The sample population of this study is adolescents, especially college students under the age group of 18-22 years of age. The sampling method used in this research is random sampling. The demographic information taken in this study is regarding the age and gender of the participants involved in this study. The SMAS tool is the Social Media Addiction Scale, used to assess adolescent social media addiction. It was developed in the year 2017 in Turkey. It is a five-point Likert scale with 29 items and 4 subsections. The first five items of the scale come under the first subsection, which is virtual tolerance. The second subsection of the scale is virtual communication, which consists of the 6th-12th item of the scale. The third subsection of the scale is a virtual problem that consists of the 15th to 23rd items of the scale. The fourth subsection of the scale is virtual information, which consists of the 24th to 29th item of the scale. Combining all this together computes the social media addiction of a person. The Pittsburgh Sleep Quality Index was developed

in 1997 and updated recently. Daniel J. Buyssey developed it. This scale consists of ten items, whereas item 5 has sub-items. The scale has seven components. The first component of the scale is Subjective sleep quality, which consists of the 9th item of the scale. The second component of the scale is sleep latency, which consists of the 2nd item and the first sub-item of the 5th item of the scale. The third component of the scale is sleep duration, which consists of the 4th item of the scale. The fourth component of the scale is sleep efficiency, consisting of the first, second, and third of the scale. The fifth component of the scale is sleep disturbance, which consists from the second subsection of the 5th item to the last subsection of the 5th item. The fifth component of the scale is sleep disturbance, which consists from the second subsection of the 5th item to the previous subsection of the 5th item. The sixth component of the scale is medication use, which consists of the sixth item. The seventh and last component of the scale is the daytime dysfunction, which includes the seventh and eighth items. Combining all this computes the sleep quality index of an individual. The reliability and validity of the research mainly focus on the classical test theory. The Cronbach alpha fluctuates between 0.70 and 0.85. The SMAS tool is the Social Media Addiction Scale, used to assess social media addiction among adolescents. It is a five-point Likert scale with 29 items and four subsections. The Pittsburgh Sleep Quality Index was developed in 1997 and updated recently. Daniel J. Buyssey developed it. This scale consists of ten items, whereas item 5 has sub-items. This study gathers quantitative data on the relationship between social media addiction and sleep quality among adolescents. Random sampling refers to the process of observing a sample from the population. The descriptive research design refers to the accurate and systematic population description. The descriptive research design is mainly used for survey and observational research methods. The Pearson correlation method is used to find out the relationship between social media addiction and sleep quality among adolescents, which is based on the first objective and to state that the null hypothesis is true. The SPSS software used in this study is used for the computation of Pearson correlation, t-test, mean, and the sample size of the population.

Methodology

This study focuses on the relationship between social media addiction and sleep quality among adolescents. Social media addiction refers to the preoccupation and obsession with social media among adolescents. According to the world health organization it states that adolescents are the age group who come between the phase of childhood and adulthood. The sleep quality refers to the quantity of sleep which a person requires for the overall well-being of the physical and mental health of an individual. However, this study focuses on the relationship between social media addiction and sleep quality among adolescents. The methodology used to cover the participant context, data collecting, data analysis, and

ethical considerations present in the study. The study mainly focuses on quantitative research methods. The quantitative research method is the process of collecting and analyzing the numerical data mainly used to make predictions to wider populations. Under quantitative research method descriptive research design is used in this study. The Descriptive research design refers to the process of obtaining summary of the data by measuring its average and variability. This study mainly focuses on adolescents especially college students who are under the age group of 18-22 years of age. A sample size of 102 participants will be taken for this study. The data collected type is quantitative data from the participants.

Data Analysis

The study gathers quantitative data on the correlation between social media addiction and sleep quality among adolescents. Random sampling involves selecting a representative group from the entire population. The descriptive research design entails a detailed and methodical approach to characterizing the population, commonly employed in surveys and observational studies. To ascertain the link between social media addiction and sleep quality in adolescents, the Pearson correlation coefficient was utilized. This analysis was conducted in accordance with the initial objective and the verification of the null hypothesis.

Results

This study has four main objectives. First, we aim to understand the relationship between sleep quality and social media addiction among adolescents. Second, we will measure the relationship between sleep quality and social media addiction among adolescents. Third, we will determine the relationship between sleep quality and social media addiction among adolescents based on age. Fourth, we will identify the differences between sleep quality and social media addiction among adolescents based on gender. The study's objectives must be achieved. To do so, we must test the hypotheses. The first null hypothesis (H_0) states that there is no relationship between social media addiction and sleep quality of adolescents. The second hypothesis states that there is no significant relationship between sleep disturbances caused by social media addiction among adolescents. The third hypothesis of the study is that there is no significant relationship between sleep quality and social media addiction among adolescents based on age. The fourth hypothesis of the study is that there is no significant difference between sleep quality and social media addiction among adolescents based on gender. This study focuses on gathering quantitative data that will definitively show the relationship between social media addiction and sleep quality among adolescents. The research identified a significant correlation between virtual tolerance and sleep disturbances, with a p-value of 0.05,

indicating a positive correlation (0.22). This suggests that social media addiction is linked to sleep disturbances in adolescents. A comparable study in Iran by Pirdehghan et al., dated April 16, 2021, supports these findings. Additionally, a significant correlation exists between virtual communication and the use of sleep medication, evidenced by a p-value of 0.01, implying that social media addiction leads to medication use for sleep issues. A similar pattern is observed with daytime dysfunction, where a significant correlation at the 0.05 level suggests that social media addiction contributes to daytime sleep-related dysfunction. Furthermore, virtual communication is significantly related to overall sleep quality at the 0.01 level, indicating a positive correlation (0.21) and suggesting that social media addiction impacts sleep quality. Corresponding results were found in a study by Rahman et al. from the University of Sharjah, dated September 22, 2020, which also highlighted a significant link between medication use and daytime dysfunction. There is a significant relationship between social media addiction and sleep disturbance at the 0.01 level (0.24), which means that social media addiction causes sleep disturbances. There is also a significant relationship between social media addiction and the use of medication at the 0.01 level (0.22), which means that social media addiction causes sleep disturbances. This means that social media addiction leads to the use of medications for sleep. Social media addiction shows a significant relationship with daytime dysfunction at the 0.05 level (0.30), which means that there is a positive relationship between social media addiction and sleep quality. This means that social media addiction causes daytime dysfunction in sleep quality. Social media addiction has a significant relationship with total sleep quality at the 0.01 level (0.22), which means that there is a positive relationship between social media addiction and sleep quality. This means that social media addiction causes sleep quality. Related to these studies, a significant effect was found in a study conducted by Alonzo et al. (2021, April 16). The t-test of the study clearly shows that there is a significant difference in virtual tolerance between males and females. This means that the null hypothesis is rejected, and it can be stated with confidence that females have virtual information compared to males. The t-test of the study also indicates that there is a significant difference in sleep disturbance between the two groups. This means that the null hypothesis of the study is rejected, and it can be stated with confidence that females have high sleep disturbance compared with males. The t-test of the study also shows that there is a significant difference in daytime dysfunction between the two groups. The daytime dysfunction variable is used to measure an individual's sleep quality. It is the process of maintaining enthusiasm and keeping awake. The study shows that females have significantly higher daytime dysfunction than males.

Discussions

Social media addiction is a significant global issue, particularly affecting the current generation's sleep patterns, which should be adequate for their age group. This study will examine social media addiction and the sleep quality index among adolescents. It will employ quantitative research methods and use random sampling for participant selection. The study will include 102 adolescents under 22 years old, with socio-demographic variables being age and gender, comprising 68 females and 34 males, primarily from Kerala. The Social Media Addiction Scale (SMAS) and the Pittsburgh Sleep Quality Index will serve as the research tools. The SMAS will evaluate social media addiction in adolescents, while the Pittsburgh Index will assess their sleep quality. The study will utilize SPSS software to perform Pearson correlation, t-tests, and calculate means and sample sizes. The Pearson correlation results indicate a significant correlation between virtual to lérance and sleep disturbances at the 0.05 level, a notable link between virtual communication and medication use at the 0.01 level, and a significant positive association between virtual communication and daytime dysfunction at the 0.05 level. Virtual communication is significantly related to overall sleep quality at the 0.01 level. A significant relationship exists between social media addiction and sleep disturbance, medication use, and daytime dysfunction at the 0.01 and 0.05 levels, respectively. The study also found no correlation between age and the variables studied. It revealed a significant gender difference in virtual communication, with females engaging more than males, indicating higher awareness of social media activities like filter usage in reels, financial apps, and online gaming. Furthermore, sleep disturbances were notably higher among females, characterized by irregular sleep patterns, interrupted sleep, and difficulty initiating sleep. Daytime dysfunction was also more prevalent in females, leading to excessive daytime sleepiness, fatigue, and reduced energy for daily tasks. Ethical considerations were duly observed in the study.

Conclusion

The research examined the effects of social media addiction on sleep quality in adolescents. It identified that affordable internet and telecommunications have contributed to increased social media addiction. The researcher analyzed various academic articles, determining that this addiction adversely affects the sleep quality of adolescents. The study established precise objectives derived from the research questions. It sought to comprehend the correlation between sleep quality and social media addiction in adolescents. Additionally, it aimed to assess this relationship among adolescents, discern the impact based on age, and identify any gender-based differences. The study predominantly employed quantitative research methods. The target demographic comprised college students aged 18-22, with a total sample size of 102 individuals selected

through random sampling. This sample included 68 females and 34 males, with a distribution across age groups: 14 participants under 18, 21 under 19, 37 under 20, 22 under 21, and 8 under 22. The participants hailed predominantly from Kerala, Pune, and Delhi. The instruments utilized were the Social Media Addiction Scale (SMAS) and the Pittsburgh Sleep Quality Index.

Limitations and Future Studies

- **Generalizability:** The findings of the study may not be generalizable to the broader population of adolescents.
- **Self-report measures:** The study may rely on self-report measures to assess social media addiction and sleep quality among adolescents. However, self-report measures are subjective and may be influenced by social desirability bias or memory recall biases.
- **Contextual factors:** The study does not fully consider the impact of contextual factors, such as cultural differences, socioeconomic status, or healthcare systems, on psychological distress and hope among dementia caregivers.
- **Measurement limitations:** The instruments do not fully capture the complexity and nuances of these constructs in the context of social media addiction and sleep quality. There may be other unmeasured variables that could have influenced the outcomes.
- **Response bias:** Participants may exhibit response bias, providing socially desirable answers or altering their responses based on their perception of what is expected. This can impact the accuracy and validity of the findings.

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