

A STUDY ON THE EFFECT OF EXCESSIVE USE OF SOCIAL MEDIA ON SLEEP DISTURBANCE IN ADOLESCENTS

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Abstract:

This study investigates the relationship between excessive use of social media and sleep disturbances among adolescents aged 13–18 years. In recent years, the rapid growth of digital technology and the increasing popularity of social networking platforms have significantly influenced adolescents' daily routines and lifestyle habits. Social media platforms such as Instagram, Facebook, WhatsApp, Snapchat, and YouTube have become an important part of adolescents' communication, entertainment, and social interaction. However, excessive engagement with these platforms may lead to several health-related issues, particularly disturbances in sleep patterns.

The present study was conducted using a descriptive survey method with a sample of 100 adolescents selected through random sampling. Data were collected using a structured questionnaire designed to measure daily social media usage patterns and different types of sleep disturbances experienced by adolescents. Statistical techniques such as mean, percentage, and correlation were used to analyze the collected data. The results of the study revealed that a significant number of adolescents spend more than three hours daily on social media, especially during late-night hours. The analysis also indicated a strong positive relationship between excessive social media use and sleep disturbance, suggesting that increased screen exposure, late-night usage, constant notifications, and social media addiction contribute to poor sleep quality, daytime fatigue, and reduced concentration among adolescents. The findings highlight the need for awareness regarding responsible social media usage and the importance of maintaining healthy sleep habits among adolescents.

Keywords: Social Media Use, Sleep Disturbance, Adolescents, Screen Time, Digital Behavior, Sleep Quality

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Introduction:

Adolescents are among the most active users of social media, using platforms like Instagram, Facebook, WhatsApp, Snapchat, and YouTube for communication, entertainment, and self-expression. While these platforms offer many benefits, excessive use can negatively affect physical health, psychological well-being, academic performance, and social behavior. One of the major concerns is sleep disturbance, as late-night social media use can interfere with sleep, which is essential for proper growth, brain development, and emotional stability.

Adolescents need about 8–10 hours of sleep for optimal health, but increased use of digital devices and social media often leads to delayed sleep and poor sleep quality. Exposure to blue light from smartphones reduces

melatonin production, causing difficulty in falling asleep, shorter sleep duration, and disturbed sleep.

Another important factor is the psychological impact of social media engagement. Adolescents often feel the need to constantly check updates, respond to messages, or remain active online due to the fear of missing out (FOMO). Notifications, online chats, and continuous scrolling can keep the brain alert and prevent relaxation before bedtime. This leads to irregular sleep schedules and daytime fatigue.

Sleep disturbances in adolescents can lead to poor concentration, low academic performance, mood swings, stress, headaches, and reduced well-being. Therefore, it is important to understand how excessive social media use affects sleep. This study aims to examine the impact of social media use on sleep disturbances among adolescents aged 13–18 years and to suggest measures for promoting healthy sleep habits..

Objectives:

1. To measure the duration and patterns of social media use among adolescents.
2. To identify and categorize the types of sleep disturbances experienced by adolescents.
3. To examine the relationship between excessive social media use and sleep disturbances among adolescents.

Hypothesis:

Excessive use of social media significantly increases sleep disturbance among adolescents.

Review of Literature:

Several studies have investigated the relationship between digital media use and sleep patterns among adolescents. Previous research indicates that excessive screen time can significantly influence sleep duration, sleep quality, and overall well-being.

According to research conducted by the National Sleep Foundation, adolescents who frequently use electronic devices before bedtime experience delayed sleep onset and reduced sleep duration. Exposure to screen light suppresses melatonin production, which disrupts the body's natural circadian rhythm and delays the process of falling asleep.

Hale and Guan (2015) conducted a systematic review examining the impact of electronic media use on sleep among children and adolescents. The study found that increased screen exposure, particularly during evening hours, was associated with shorter sleep duration and increased sleep problems.

Research conducted by Twenge et al. (2017) found that adolescents who spent more time on digital devices, including social media platforms, reported lower sleep duration and higher levels of sleep disturbance. The study suggested that late-night use of smartphones and social networking applications plays a significant role in sleep deprivation among teenagers.

Another study by Levenson et al. (2016) examined the relationship between social media use and sleep disturbance among young adults. The results indicated that individuals who frequently checked social media platforms were more likely to experience difficulty falling asleep and daytime fatigue.

Similarly, research on adolescent behavior indicates that social media addiction can increase psychological stress and anxiety, which may further affect sleep quality. Adolescents who remain engaged in online communication

late at night may experience mental stimulation that prevents relaxation and proper sleep.

Existing literature consistently highlights the negative effects of excessive screen exposure and social media engagement on sleep patterns. However, the rapid growth of social networking platforms and the increasing dependence of adolescents on digital communication require further investigation into how these behaviors influence sleep disturbances.

Research Gap:

Although previous studies have examined the relationship between digital media use and sleep patterns, several gaps still exist in the current body of research. Many earlier studies focused broadly on electronic media or general screen time rather than specifically examining social media usage patterns among adolescents.

Additionally, most existing research has been conducted in developed countries, and there is limited data focusing on adolescents in developing countries such as India. Cultural factors, educational pressure, lifestyle habits, and accessibility to technology may influence social media usage patterns differently across regions.

Another limitation of earlier studies is that they often focus on either social media use or sleep problems independently rather than analyzing the statistical relationship between these two variables. Furthermore, behavioral aspects such as late-night scrolling, constant notification checking, and fear of missing out are not always examined in detail.

Therefore, there is a need for research that specifically investigates how excessive social media use contributes to sleep disturbances among adolescents using systematic data collection and statistical analysis.

Research Methodology:

The present study adopts the Descriptive Survey Method to investigate the effect of excessive use of social media on sleep disturbance among adolescents. The descriptive survey method is appropriate for this study because it helps in collecting detailed information about existing conditions, behaviors, and relationships between variables. This method enables the researcher to gather data from a group of participants and analyze patterns related to social media usage and sleep disturbance without manipulating any variables. Through this method, the researcher can describe the current situation of adolescents' social media habits and examine how these habits influence their sleep patterns.

1. Sample

The sample for the present study consists of 100 adolescents aged between 13 and 18 years. These participants were selected from different schools and include students studying in classes VIII to XII. Adolescence is an important developmental stage where individuals are highly engaged with digital technology and social networking platforms, making them an appropriate group for studying the relationship between social media use and sleep disturbance.

The sample size of 100 adolescents was considered adequate to obtain meaningful data and to represent the general behavior patterns of students in this age group. Both male and female students were included in the study to ensure a balanced representation of the adolescent population.

The participants were selected using a random sampling technique. In random sampling, each student in the population has an equal chance of being selected for the study. This technique helps to reduce bias and ensures that the collected data represents a wide range of students with different social media usage patterns and sleep habits.

2. Variables of the Study

The present research includes two main variables:

Independent Variable:

The independent variable in this study is the excessive use of social media. Social media refers to online platforms that allow users to create, share, and interact with digital content. Adolescents frequently use platforms such as Instagram, Facebook, WhatsApp, Snapchat, and YouTube for communication, entertainment, and information sharing. Excessive use in this study refers to spending long hours on these platforms, particularly more than three hours per day, including late-night usage and frequent checking of notifications.

Dependent Variable:

The dependent variable in this study is sleep disturbance among adolescents. Sleep disturbance refers to problems related to sleep patterns, such as difficulty falling asleep, waking up frequently during the night, feeling tired after waking up, experiencing daytime sleepiness, and difficulty concentrating due to lack of proper sleep. These disturbances may occur as a result of excessive screen exposure and late-night social media usage.

The study aims to examine how the independent variable (social media usage) influences the dependent variable (sleep disturbance).

Research Tool (Questionnaire):

For the purpose of data collection, the researcher used a structured questionnaire as the primary research tool. The questionnaire was designed and prepared by the researcher to gather relevant information regarding adolescents' social media usage and their sleep patterns.

The questionnaire consisted of several sections to collect different types of information:

Personal Information:

This section collected basic demographic information about the respondents, including their age, gender, and class level. This information helped the researcher understand the background characteristics of the participants.

Social Media Usage Patterns:

This section included questions related to the frequency and duration of social media use. Students were asked about their daily use of social media, the number of hours they spend online, whether they use social media late at night, and how frequently they check notifications.

Sleep Disturbance:

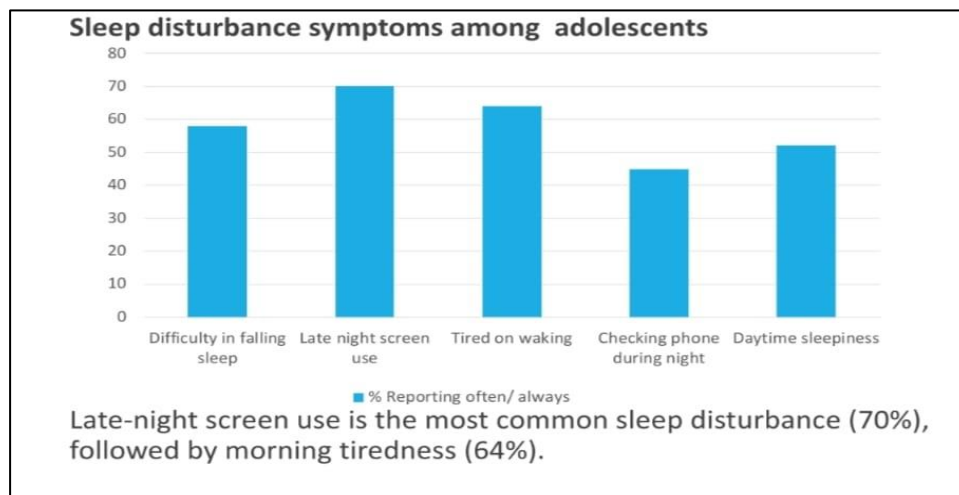
This section included questions designed to identify sleep-related problems among adolescents. Students were asked about difficulties in falling asleep, waking up during the night to check their phones, feeling tired in the morning, experiencing daytime sleepiness, and having headaches or concentration problems due to lack of sleep.

Perception of Students:

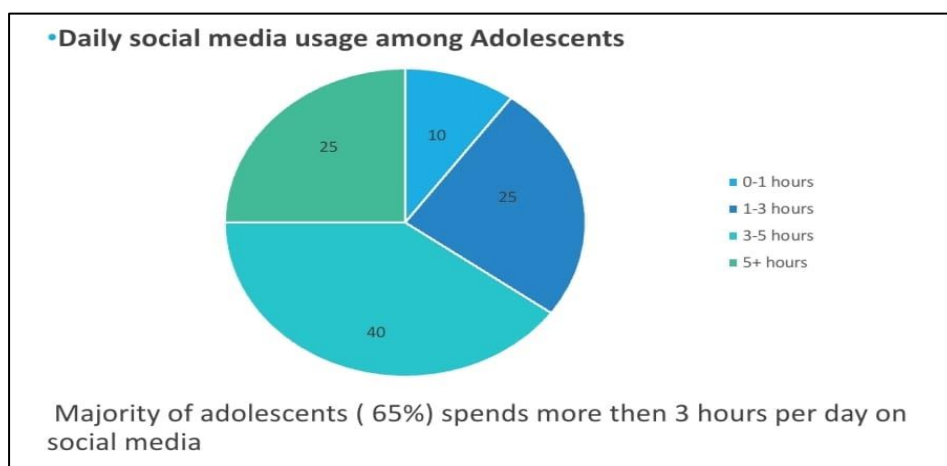
This section examined students' opinions about the relationship between social media use and sleep quality. Questions in this section asked whether students believe social media affects their sleep and whether they are willing to reduce their screen time to improve their sleep habits.

The responses were measured using rating scales such as Always, Often, Sometimes, Rarely, and Never, which helped quantify the behavior patterns of students. The collected responses were later analyzed using statistical techniques such as mean, percentage, and correlation to determine the relationship between excessive social media use and sleep disturbance among adolescents.

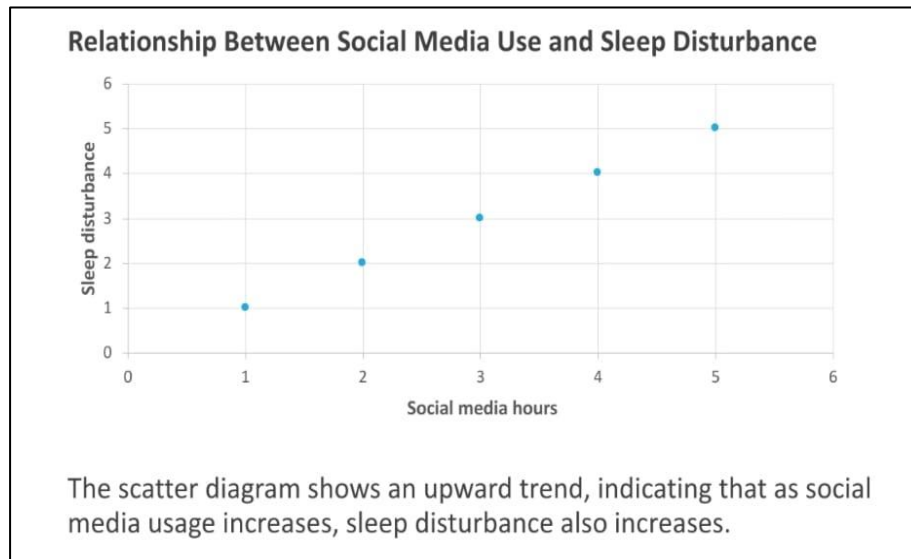
Data Analysis:



Data Analysis:



Data Analysis:



Findings:

1. Most adolescents (65%) spend more than 3 hours daily on social media.
2. A majority (70%) use social media late at night, delaying sleep onset.
3. High levels of sleep disturbance are reported difficulty sleeping, nighttime phone checking, morning tiredness.
4. Statistical correlation confirms that more screen time is associated with greater sleep disturbance.
5. Psychological factors like FOMO, online chatting, and continuous notifications worsen sleep quality.

Future Scope:

1. Future studies can include a larger sample size to obtain more accurate and generalizable results
2. Research can be conducted in different regions and schools to compare sleep patterns among adolescents from various backgrounds.
3. Future researchers can study the impact of specific social media platforms such as Instagram, WhatsApp, Snapchat, and YouTube on sleep behavior.
4. The study can be extended to examine the effect of social media on academic performance, mental health, and stress levels.
5. Future research may use advanced statistical techniques for deeper analysis of the relationship between social media use and sleep disturbance.

Conclusion:

The present study examined the effect of excessive use of social media on sleep disturbance among adolescents aged 13–18 years. The findings of the study indicate that a large number of adolescents spend a significant amount of time on social media platforms such as Instagram, Facebook, WhatsApp, Snapchat, and YouTube. Many students reported using social media for more than three hours per day, particularly during late-night hours. This excessive usage often delays bedtime and interferes with natural sleep patterns. As a result,

adolescents experience several sleep-related problems such as difficulty falling asleep, waking up during the night to check their phones, feeling tired in the morning, and experiencing daytime sleepiness.

The statistical analysis of the collected data also showed a strong positive relationship between social media usage and sleep disturbance, with a correlation value of $r = +0.68$. This indicates that as the duration of social media use increases, the level of sleep disturbance among adolescents also increases. The study therefore concludes that excessive social media use negatively affects the sleep quality and daily functioning of adolescents. It is important for students to develop balanced digital habits, limit screen time before bedtime, and maintain healthy sleep routines. Parents, teachers, and educational institutions should also create awareness about responsible social media usage to help adolescents protect their physical and mental well-being.

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