

# Teenagers Sleeping Pattern Affecting Their Health

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## Abstract

Sleep is a fundamental need. Teenagers need adequate sleep to cope well in everyday life. However, there is no firm evidence on which factors protect or impair teenagers but in today's era it has been seen that teenager's don't fulfill their sleeping requirements. There are various factors responsible for ones not getting enough sleep, such as busy schedules, active social life, going out with friends more, watching late night movies, forgetting the time playing computer games, after school sport activities and homework commitments etc. Sleep affects physical growth, behavior and emotional development besides learning, and attention. Sleep research suggests that a teenager needs between 8 to 9 hour every night. The Objective beside this review was to understand the scope of teenagers sleep patterns, to understand the effect of sleep patterns, examine how much sleep we need, and learn how to improve our quality of sleep. There are many theories concerning the need for sleep.

However, what we know has primarily evolved from research studies conducted in animals and humans examining the impact of sleep patterns on the physiological and neurobehavioral system. During sleep create new pathways of the brain that may interfere with the learning memory. The brain of a sleepy person works harder, but performs less. Sleep can be called "food for the brain. If brain gets affected ultimately health gets affected. Lack of sleep not only affects our mental fitness, but also our physical well-being. It endangers our personality in several indirect way. Teenager's sleep habits tend to change as they enter puberty. The teenage years are a time when the body clock, an internal structure that controls our daily rhythm, undergoes major changes.

**Keywords:** Sleep Habits, Sleep Patterns, Teenagers

## 1. Introduction

Sleep affects physical growth, behaviour and emotional development besides determining cognitive functioning, learning and attention.<sup>[1]</sup> Sleep patterns of teenagers have been extensively studied and have revealed considered variations between total sleep time and daytime sleepiness.<sup>[2]</sup> Changes in sleep with aging sleep patterns change during life, newborns may spend more than 16 h a day asleep but intermittently sleep and awaken throughout the 24 h period. Sleep patterns and sleep regulation change markedly throughout adolescent development, decrease in sleep electroencephalographic (EEG), slow-wave activity (SWA), Non-rapid eye movement sleep stages. Sleep is a naturally recurring state characterized by reduced or absent consciousness, relatively suspended sensory activity. Sleep is divided into two broad types: Rapid eye movement (REM) and Non-rapid eye movement

sleep.<sup>[3]</sup> The American Academy of sleep medicines (AASM) describes the stages of sleep cycles.<sup>[4]</sup> Sleep has an important role in maintaining health and wellbeing; this relationship is becoming increase many functions (including promoting growth, learning and cognitive development) as a role in immunity. Sleeping is the basic and indispensable components for post exercise recovery and regeneration (PERR). It can influence the mental and physical functioning of human body directly. Teenagers sleep patterns depends of sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleep medication, and daytime dysfunction. Sleep is a major role of recovery, repair and physiological growth of athletes and great influences on daily work performance. Lack of sleep has been shown to have many negative effects on the body. Not sleeping the recommended eight hours per night can weaken the immune system, increase the risk of respiratory and heart disease, and affect body weight and hormone production.<sup>[5]</sup> In addition to the effects on the physical state of the body, even small amounts of sleep deprivation have significant effects on emotional function and mood. Lack of sleep can increase emotional reactivity, so people who do not get enough sleep are more likely to be emotionally volatile and react negatively to situations in which they would otherwise have been calm. Also, in general, sleep-deprived people are more irritable and less empathetic, resulting in a lower frequency of positive moods.<sup>[6]</sup>

The study was conducted by doing survey to find out how sleeping patterns of teenagers affects their physical as well as their mental health, from which certain information were collected. The survey was done by spreading the google docs containing various questions and thus the data was collected and noted.

#### **Some of the question answers are as follows:**

Q) How many hours before sleep do teenager eat food and what do teenager have for dinner?

Ans. Everyone has a normal dinner before sleeping like rice, green vegetable. Dinner time is sleeping before 2 hours

Q) How many hours does teen sleep?

Ans. 46% teen receive 5-6, 25% receive 7-8, 20% receive <5, 9% receive 9 or more hours sleep (Fig.1).

Q. Teenagers take caffeinated drinks?

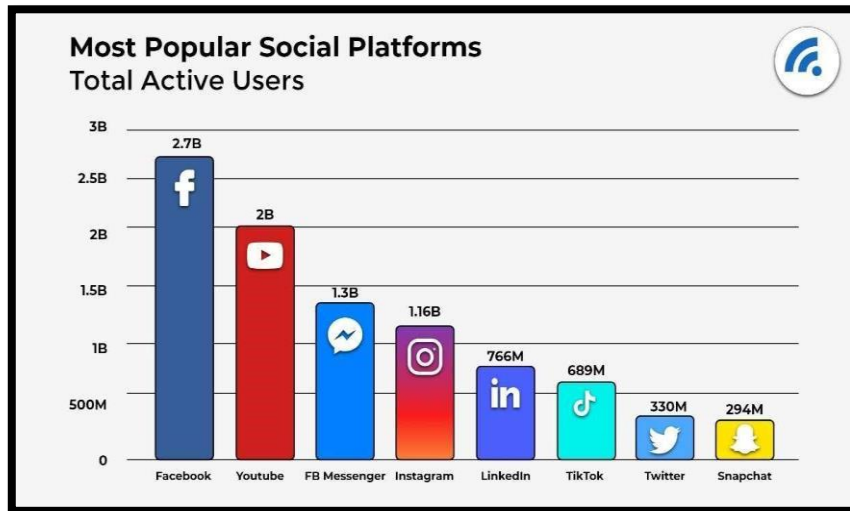
Ans. Tea 58%, coffee 23%, other drinks 20% (Fig.2)

Q) Cause of late sleep at night?

Ans. Watching movies / web series , active in social media platform.

#### **SOCIAL MEDIA:**

Social media are interactive technologies that facilitate the creation and sharing of information ,ideas, interest ,and other forms of expression through virtual communities and networks communicate and stay up to date with family and communities; network with other people who share important issues. There were 465.0 million social media users in India in 2022 . In India young individual aged 18- 24 years spend excessive time on these application having 97.2million and 69million users from this age group (Fig.3).



**Fig.3: - Total active users in social platforms.**

**GAMES:**

A game is an activity or sport usually involving skill, knowledge or chance in which one follow fixed rules and try to win against an opponent or to solve a puzzle. 76% of teenagers are playing online games today like Pub G, Free fire and other high-quality games.

**Irregular Sleeping Patterns:**

Sleeping without any real schedule symptoms of sleep wake syndrome include irregular periods of sleeps and wakefulness which disrupt the normal daily sleep wake cycle . Sleep off and on in a series of naps during the day and at night. Have a total sleep time that is not normal for their age. Insomnia, sleep apnoea, narcolepsy, Restless Legs Syndrome, caffeine /alcohol (Fig.4)

Q) Teenagers Sleeping patterns

- Typical bedtime: -between 11 pm.to 1 am.
- Typical awakening time: -between 8.00 am to 10.00 am
- Typical amount of time it takes to fall asleep: -1/2 hours
- Typical number if awakening per night: -1 or 2 time every 4 hours

Q) Do teenager have a concentration problem during lesson in college?

Ans. The average amount of sleep that teenagers get is between 6 – 8 hours. Teenagers do not get enough sleep for a number of reasons shift in sleep schedule. When people don't get enough sleep, their attention and concentration abilities decline (Fig.5).

Q) How does getting less sleep affect in health?

Ans. Many teenagers affect in headache, body weakness, digestion problem etc. fewer sleeping patterns Several reports have shown that acute exercise have demonstrable effect on sleep regulation, but today's children get involved more in indoor games rather than outdoor games. Clinical impact of exercise on sleep patterns regarding the effect of insomnia patients have individual sleep '8 hour' each night, without day time sleepiness and sleep pills can affect sleep patterns of teenagers.<sup>[7]</sup> Data shows that the chronic sleep deprivation coupled with low energy intake.<sup>[8]</sup> Dynamic behavior that is more

absence of working sleep is a special activity of brain and body function.<sup>[9]</sup> Sleep is also important for human health and implanting new memories.<sup>[10]</sup>

An early sign that a patient is developing problems with their sleep may be sleep fragmentation, where sufferers have difficulty staying asleep, resulting in them not feeling refreshed. This sleep fragmentation can then lead to other health consequences of poor sleep, including daytime sleepiness, impaired cognition and low mood.<sup>[11]</sup> Previous research found that short sleepers tend to be ambitious, energetic, and mentally healthy, while long sleepers are described as nervous, self-critical, worrying, and often depressed.<sup>[12]</sup>

Conversely, recent studies indicated that short sleepers are psychologically less adapted, more anxious, less creative and more neurotic compared to long sleepers.<sup>[13] [14] [15]</sup> The shorter sleep was associated with more negative mind and less mood positively.<sup>[16]</sup> Now a days it is a fashion to consume stimulants such caffeine, nicotine and alcohol which reduces sleep quality and quantity in teenagers sleeping patterns.<sup>[17]</sup> Inadequate sleep in adolescence has been associated with decreased executive functioning<sup>[18]</sup>, poorer academic performance, and decreased learning ability<sup>[19][20][21]</sup> and increased prevalence of affective disorders.<sup>[22]</sup> The sleep /awake cycle sleep systems also get affected due to pubertal changes of life.<sup>[23]</sup> The negative mind is the state of anger, anxiety and depression affect teenagers sleeping time.<sup>[24]</sup>

Sleep deprivation can impair the development of the frontal lobe, a part of the brain critical for controlling impulsive behavior. Not surprisingly, numerous studies have found that adolescents who do not get enough sleep are more likely to engage in risky behavior such as drunk driving, texting while driving, and not wearing a seat belt, drug and alcohol use, smoking, fighting are also more likely among teens who do not get enough.<sup>[25]</sup>

## CONCLUSION

- Here by conducting this survey and literature review, come to the end on the topic “Teenagers sleeping patterns affecting their health”. From this we can conclude that 60% of teenagers watches movie and connect to social media at night which affect teenagers sleep patterns and cause sleeplessness which leads to anxiety, stress, overthinking and also affect human health and growth hormones.
- Chronic sleep deprivation can have dramatic effects on a teenager’s life, including affecting their mental wellbeing and reducing their academic performance at school.
- We should consider together how to increase their nightly sleep, certain suggestions are one must avoid stimulants such as coffee, tea, soft drinks and energy drinks in the evening can contribute to better sleep. Help teen better plan their after-school/ college commitments so they have more time for rest and sleep.
- Sleep contributes to the effective functioning of virtually all body systems. It strengthens the immune system, helps regulate hormones, and allows muscles and tissues to recover.
- During puberty, significant physical development occurs that can be negatively affected by lack of sleep. For example, researchers have found that adolescents who do not get enough sleep have a troubling metabolic profile. It was a wonderful learning experience while conducting this survey.

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## 3. Authors' Biography

Sachin Kumar Dewangan is a graduate student who completed his graduation with distinctions from Shankaracharya College of Pharmaceutical Sciences, Junwani, Bhilai He has demonstrated a strong commitment to academic excellence and a passion for advancing knowledge in Pharmacy field. As the corresponding author of this paper, Laxmi Rao played a pivotal role in coordinating the research efforts, liaising with co-authors, and overseeing the manuscript's preparation for publication.

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