

# Effect of Social Media Use on Learning, Social Interactions and Sleep Duration among College Students

**Vishwa Gamit**

Assistant Professor, The Mandvi Education Society Institute of Business Management and Computer Studies, Mandvi, Surat

## ABSTRACT

Today's college students use social media extensively for entertainment, education, and communication. However, excessive internet use can have an impact on their sleep schedule, social life, and academic performance. The purpose of this study is to investigate how college students in the Mandvi region use social media in relation to their academic performance, in-person social interactions, and sleep duration. Students' information was gathered using a structured questionnaire. According to the research, students who use social media excessively may become distracted from their studies, engage in fewer social and physical activities, and experience sleep delays. Students who spend more time online at night frequently have trouble sleeping and are less focused in class. Social media facilitates communication and academic activities, but excessive use has detrimental effects on both academic performance and health. According to this study, students should receive guidance on how to properly manage their digital habits. To guarantee better learning, wholesome relationships, and enhanced wellbeing, educators and parents must encourage social media use in moderation.

**KEYWORDS:** Social media impact, Academic performance, Sleep deprivation, Digital distraction, College students

## INTRODUCTION

Particularly for college students, social media has grown to be a significant aspect of daily life. It offers a platform for entertainment, information sharing, communication, and learning resources. Students use various social media platforms, including Facebook, YouTube, Instagram, and WhatsApp, for both personal and academic purposes. Although these platforms have many advantages, overuse can result in major issues.

Students who spend too much time on social media may become less focused on their studies and perform worse academically. Additionally, it can take the place of in-person social interactions, which can cause loneliness, stress, and anxiety. Mobile phone use late at night has a detrimental effect on both the length and quality of sleep, which further affects students' health and academic performance. Due to their flexible schedules and high levels of social media activity, college students are especially vulnerable.

Uncontrolled social media use can impact learning habits, impair focus, and disrupt daily lifestyle patterns, according to numerous studies conducted worldwide. However, the degree of impact may vary based on online time, usage behavior, and purpose.

Thus, the purpose of this study is to investigate how social media use affects learning, social interactions, and sleep duration among Mandvi region college students. The study's findings will assist parents, educators, and students in realizing how crucial it is to strike a healthy balance between digital engagement and both academic and personal wellbeing.

### **EFFECTS OF SOCIAL MEDIA USE ON LEARNING**

For students' education, social media can be both beneficial and detrimental. It offers easy access to knowledge, instructional videos, and educational resources. Additionally, students can use groups and messages to interact with teachers and fellow students. On the other hand, excessive scrolling and chatting can cut into study time and concentration. Notifications may cause students to become sidetracked during study sessions or classes. Academic performance, focus, and memory capacity may all suffer as a result. Late-night social media use can also make you exhausted during the day, which hinders your ability to learn. To support education, responsible and balanced use is required.

### **EFFECTS OF SOCIAL MEDIA USE ON SOCIAL INTERACTIONS**

Students can maintain friendships and form new ones with the aid of social media. It makes it simple to share ideas and moments and to communicate. On the other hand, excessive online engagement may diminish in-person communication. Instead of interacting with people in person, students might spend more time online. Relationship misunderstandings, stress, and loneliness may result from this. Additionally, some students may compare themselves to others, which undermines their confidence. Real conversations, not just online chats, are necessary for healthy social interactions. As a result, social media should complement in-person social interactions rather than take their place.

### **EFFECTS OF SOCIAL MEDIA USE ON SLEEP DURATION**

Late at night, a lot of students use their phones to browse social media, chat, and watch videos. This behavior shortens the amount of time spent sleeping overall and delays sleep. The brain is also impacted by the bright screen light, which makes it challenging to quickly fall asleep. Insufficient sleep causes fatigue, annoyance, and trouble concentrating during the day. Academic performance, memory, and decision-making can all be impacted by sleep deprivation. Both physical and mental health can be impacted by persistent sleep issues. For better everyday functioning and to maintain high-quality sleep, students should limit their use of phones before bed.

### **REVIEW OF LITERATURE**

The amount of time Erbil high school students spend on social media has an impact on their academic performance and study habits. Students who use social media more frequently are more negatively impacted. In order to help students balance social media and academics, educators and legislators should advise students on how to control their digital usage. **(Shamsadeen Abdullah Mohammed, Helen Naif Ahmad, Mohammed Tayeb Sadeeq, Hardi Abdulqadir Hasan, Zakaria Tahsin khdir, 2025)**

According to this study, social media facilitates group learning and maintains social ties among college students. Students communicate with friends and share study materials via apps like Instagram and WhatsApp. Teamwork and interaction are enhanced, but communication with teachers and leadership abilities are still lacking. Universities should therefore advise students on how to use social media for learning in a more beneficial and balanced manner. **(Muhammad Saeed Hashmi,2025)**

This study examined the relationship between excessive social media use and teens' sleep, mental health, and academic achievement. The findings demonstrate that increased social media use can have a detrimental impact on sleep patterns and quality. Problems with psychological well-being and academic achievement follow from inadequate sleep. In general, students' wellbeing may be harmed by excessive use of social media. **(Mubashir Gull, Bulle Ruth Sravani, 2024)**

Students at universities frequently have trouble sleeping. According to the study, poor sleep quality is caused by excessive social media use and social media fatigue. Social media fatigue is more common among students who get less than nine hours of sleep. Sleep is also made worse by social media addiction and fear of missing out (FoMO). To help students develop better sleeping habits, more studies and initiatives are required. **(Xinhong ZhuID, Taoyun Zheng, Linlin Ding, Xiaona Zhang, Zhihan Li, Hao Jiang, 2023)**

The majority of students used social media extensively, which decreased their sleep and diverted them from their studies. Additionally, it reduced in-person social interaction, which led to mood disorders like depression and anxiety. Late-night phone use raises the risk of illness and has an impact on long-term health. An unhealthy lifestyle results from excessive screen time, which also lowers physical activity. As a result, people should restrict their use of social media and develop better sleeping habits. **(Manjur Kolhara, Raisa Nazir Ahmed Kazi, Abdalla Alameen, 2021)**

According to the study, Iranian students who use social media frequently have lower sleep quality, shorter sleep duration, and higher levels of depression. Many students have trouble sleeping at night because they keep their phones on in their rooms. Teachers, parents, and health officials should take action to help students limit their use of devices and social media, particularly at night. **(Azar Pirdehghan, Edris Khezme, Soheila Panahi, 2021)**

According to the study, students are more likely to experience anxiety and depression when they have an emotional attachment to social media. The likelihood of these issues increases with the strength of the emotional bond. However, anxiety, depression, and self-esteem were unaffected by social media usage alone. **(Ahmed A. Alsunni, PhD and Rabia Latif, PhD, 2021)**

41.5% of students used social media, primarily YouTube and WhatsApp, for up to three hours every day. It was frequently used for research, assignments, and health information. Academically, female students outperformed male students. Students who received lower grades used social media more frequently. Higher levels of addiction and poorer academic performance have been associated with increased social media use. **(Ajay M. Bhandarkar, Arvind Kumar Pandey, Ramya Nayak, Kailesh Pujary, Ashwini Kumar, 2020)**

According to the study, the majority of students use social media on a daily basis for entertainment and conversation, mostly via mobile devices. The most widely used platform was Facebook. Many students thought social media helped them stay informed and communicate, but it had little or no effect on their lives. Some, however, claimed that it might interfere with studies and waste time. According to the study, social media should be used responsibly to avoid interfering with daily life or education. **(Shilpi Rani Saha, Arun Kanti Guha, 2019)**

This study shows that social media use significantly affects medical students' academic performance. It is recommended that medical educators create guidelines for social media use in the classroom that will help students perform better academically. **(Rafi Alnjadat PhD, Malek M. Hmaid MSN, Thamer E. Samha MBBS, Mhd M. Kilani, Ahmed M. Hasswan MBBS, 2019)**

Social media is primarily used by students to connect with and make friends. Although it consumes the

majority of their leisure time, many believe it aids in socializing and exam preparation. As a result, they spend less time engaging in healthy pursuits like sports, reading, and social interaction, which may have an impact on their development. Social media does, however, also offer certain advantages, such as learning materials and maintaining relationships with peers. (Gilbert M. Talaue, Ali AlSaad, Naif AlRushaidan, Alwaleed AlHugail, Saad AlFahhad, 2018)

This study found that when students find social media easy and useful for learning, they use it more for educational purposes. Using social media helps students interact with each other, engage more in courses, and communicate with teachers. Better student interaction and course engagement lead to improved collaborative learning. However, interaction with teachers through social media did not strongly improve collaboration. (Aysun Bozanta, Sona Mardikyan, 2017)

## RESEARCH METHODOLOGY

### Statement of Problem:

Every day, college students spend a lot of time on social media, which could have an impact on their daily schedules and way of life. Online activities are preferred by many students over in-person interactions, academic pursuits, and sound sleeping practices. This leads to issues like poor academic achievement, decreased social interaction, and sleep disturbances. Students frequently don't realize the negative effects of excessive screen time on their health and academic performance. Therefore, it's critical to comprehend how college students in the Mandvi region use social media in relation to learning, social relationships, and sleep duration. This study will assist in determining these impacts and offer recommendations for enhancing responsible social media use.

### Objectives of the Study:

1. To study the duration of time spent on social media platforms during the day and at night
2. To study purposes for which social media platforms are used and the percentage of students who use social media
3. To study effect of social media use on learning and distraction from learning activities
4. To Study effect of social media use on relationships with family members and friends

### Scope of the Study:

This study looks at how social media use impacts learning, social interactions, and sleep duration among college students in the Mandvi region. Students from various age groups and colleges are represented. The goal of the study is to comprehend how social media affects students' everyday lives and academic achievement, both positively and negatively. It primarily gathers data regarding the amount of time spent on social media, the reasons behind usage, and the results. The findings will assist parents, educators, and students in encouraging social media use that is balanced and healthful.

### Limitations:

1. The range of the study only covers college students of a specific region.
2. The research was based on a small sample size of college students.
3. "Learning, Social Interactions and Sleep Duration" are dynamic and subject to change over time; the study reflects the situation during the research period only.

**Research Design:** Descriptive research study has been done for this research.

**Method of Data Collection:** A self-designed questionnaire is utilized to collect primary data.

**Sample Population:** College students of Mandvi Taluka

**Sample Size:** A sample of 100 college students from Mandvi Taluka participated in this study.

**Sampling Technique:** The respondents for this study were chosen using a convenience sampling technique.

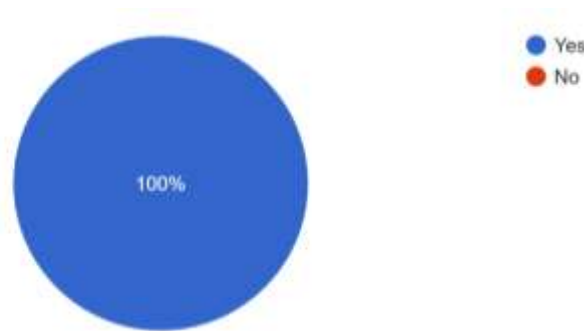
**Data Analysis Techniques:** To determine the significance of the results, the Chi-square test was used to statistically analyze the gathered data. A significance level of 5% ( $\alpha = 0.05$ ) was established.

**Tools used for Analysis:** The data analysis tool was Microsoft Excel.

## DATA PRESENTATION AND ANALYSIS

### 1. Do you use social media applications?

Chart: 1

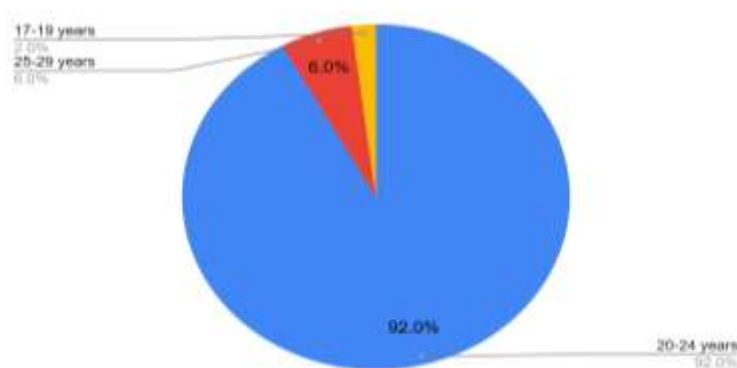


#### Interpretation:

According to the data, all respondents (100%) use social media. This suggests that social media is an integral part of Mandvi region college students' everyday lives. The fact that every student in the sample is an active user attests to the study's high relevance because all participants are directly exposed to the possible impacts of digital platforms on their learning and well-being.

### 2. What is your current age?

Chart: 2



#### Interpretation:

According to the data, 92% of the participants are between the ages of 20 and 24. Younger students between the ages of 17 and 19 make up a very small portion of the sample. This suggests that mature college students' social media usage and lifestyle patterns are largely reflected in the study's findings. Given that the majority of these respondents are probably nearing the end of their education or beginning their careers, both professional networking and academic obligations may have an impact on how they use social media.

**3. Which social media platforms do you use daily? (Select all that apply)**

**Table: 1**

Social Media Platforms	Frequency	Percentage
WhatsApp	87	87
Instagram	80	80
Facebook	30	30
Snapchat	57	57
YouTube	67	67
Twitter/X	10	10

**Interpretation:**

According to the data, the two most popular platforms that college students in the Mandvi region use on a daily basis are Instagram (80%) and WhatsApp (87%). This implies a strong inclination toward visual storytelling and instant messaging. Because it serves as a source for both entertainment and educational tutorials, YouTube also maintains a high daily reach of 67%.

On the other hand, daily engagement on more conventional platforms such as Facebook (30%) and Twitter/X (10%) is significantly lower. One significant finding from this data is that students are not restricted to using just one app; on average, a typical respondent uses three to four different platforms every day. This habit of using multiple platforms raises the frequency of notifications, which could be a factor in the sleep delays and academic distractions covered later in this study.

**4. For what purpose do you primarily use social media? (Select all that apply)**

**Table: 2**

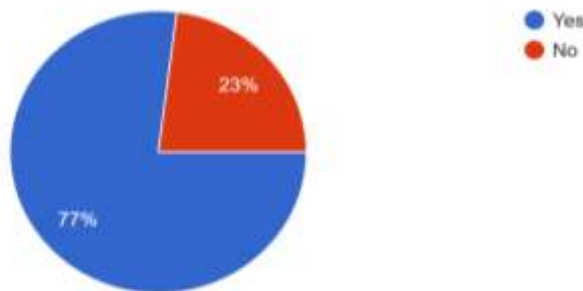
Purposes	Frequency	Percentage
Academic purpose	60	60
Chatting on WhatsApp/Facebook/Snapchat/...	66	66
Instagram video making	31	31
Internet shopping	47	47
News	50	50
Playing games	32	32
Playing music	50	50
Watching movies	69	69

## Interpretation:

According to the data, students use social media for a variety of purposes that strike a balance between productivity and entertainment. The most popular reason is to watch movies (69%), which is closely followed by talking (66%). This implies that social media is the main platform for communication and leisure.

Significantly, 60% of students use these platforms for academic purposes, demonstrating the importance of social media as a learning tool. Furthermore, precisely half of the respondents (50%) use it to play music and stay up to date on news. Lower frequencies were noted for gaming (32%), and video production (31%). Overall, even though social media is an essential educational tool, entertainment-related activities still account for a large portion of its usage, which may cause users to become distracted from their serious studies.

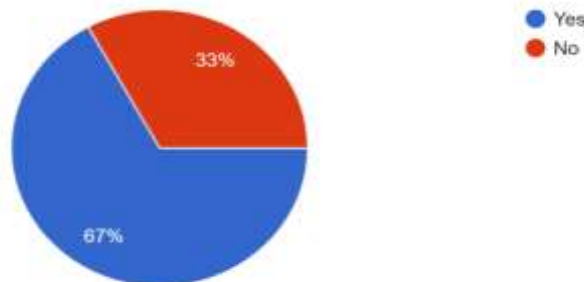
## 5. Do you think use of social media has affected your study timing?



## Interpretation:

According to the survey, a sizable majority of students (77%) believe social media has influenced when they study. This implies that the majority of respondents frequently find that their planned academic schedule is disrupted by digital activities. Social media is a significant source of academic distraction for the majority of college students in the Mandvi region, as evidenced by the fact that only 23% of students think their study time is unaffected.

## 6. Do you feel more attracted towards social media compared to study?



## Interpretation:

According to the data, 67% of students find social media more appealing than their coursework. This demonstrates that the majority of respondents find digital platforms' instant gratification to be more alluring than academic work. Social media is a fierce rival for students' attention and interest, as evidenced by the fact that only 33% of students believe they are more focused on their studies.

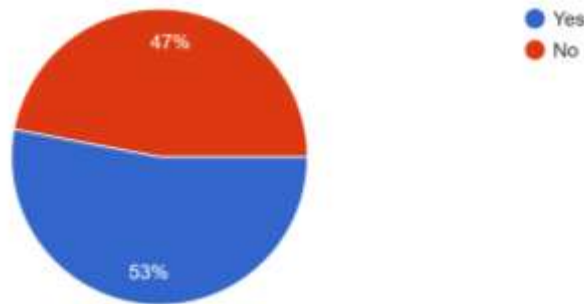
**7. Has your social media use substantially affected your academic performance, learning, and knowledge acquisition?**



**Interpretation:**

According to the data, social media's effects on education are evenly distributed. Thirty percent of students say it has a negative impact on their academic performance, while thirty-five percent say it has a positive impact on their knowledge. The remaining 35% believe their academic pursuits are unaffected. This implies that even though social media can be a helpful information source, people who have trouble with distraction still run a serious risk when using it.

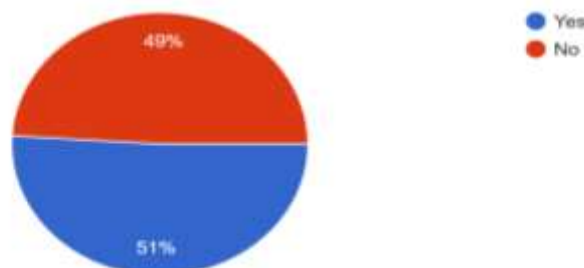
**8. Do you consider yourself addicted to social media?**



**Interpretation:**

According to the data, 53% of students think they have a social media addiction. This majority shows that more than half of the participants acknowledge that controlling their digital habits is challenging. In contrast, 47% of respondents think they are not addicted, indicating a nearly equal split. This implies that a significant percentage of students in the Mandvi region may be experiencing digital dependency, even though many of them are conscious of their excessive usage.

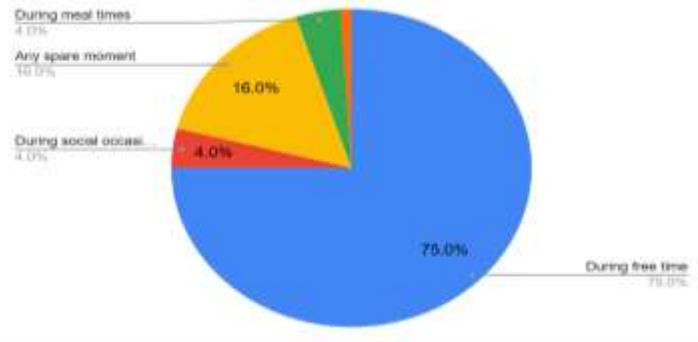
**9. Do you believe that your excessive social media use has negatively affected your relationships with your family and friends?**



**Interpretation:**

According to the survey, 51% of students think that using social media has harmed their friendships and family ties. This suggests that digital engagement is interfering with in-person social ties for over half of the respondents. In contrast, 49% of students believe that their relationships have not deteriorated. These findings demonstrate that although social media keeps some people in the Mandvi region connected, it also causes social distance for many others.

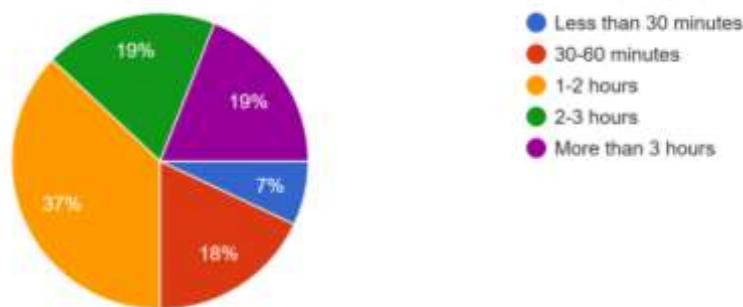
**10. When do you access social media?**



**Interpretation:**

According to the data, the majority of students (75%) use social media mostly in their spare time. This suggests that the majority of students still consider social media to be a recreational activity. But 16% use it "any spare moment," indicating a more impulsive or habitual usage pattern. It's interesting to note that very few students (just 1%) acknowledge using it while enrolled in classes, indicating that academic settings in the Mandvi region may still uphold a barrier against digital distractions.

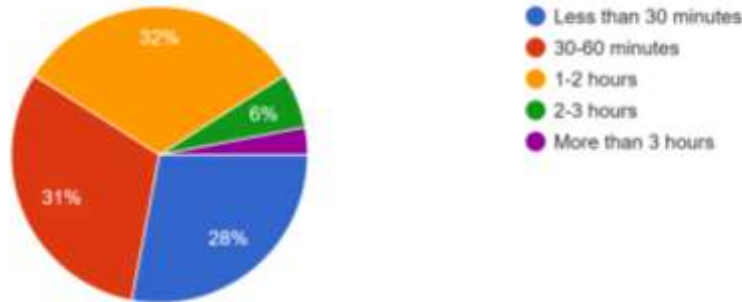
**11. How much time do you spend on social media during the day?**



**Interpretation:**

According to the data, 37% of students use social media for one to two hours every day, making it the most popular time of day. Nonetheless, a noteworthy 38% of all respondents use the internet for more than two hours. Just 7% of people spend less than 30 minutes. This indicates that most students in the Mandvi region spend a significant amount of their daylight hours on social media, which may limit their time for physical activity or in-person interactions.

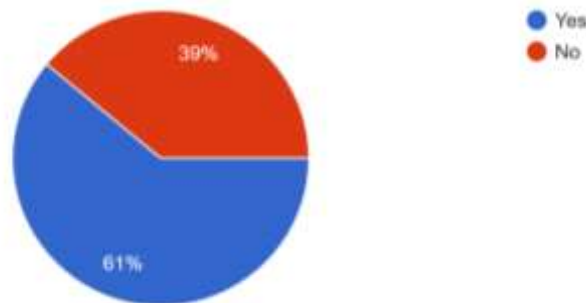
**12. How much time do you spend on social media during the night?**



**Interpretation:**

According to the data, 32% of students use social media for one to two hours at night, while 31% use it for thirty to sixty minutes. Together, more than 60% of respondents spend a considerable amount of time on social media before going to bed. The overall engagement indicates that many students in the Mandvi region are using their mobile devices during hours meant for rest, which probably contributes to sleep delays, even though late-night usage of more than two hours is relatively low (9%).

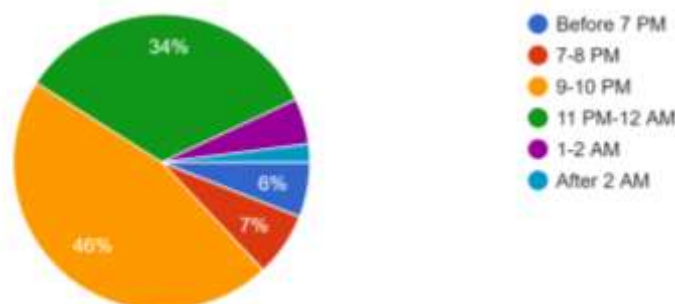
**13. Do you believe that social media use has affected your bedtime?**



**Interpretation:**

According to the data, 61% of students think social media has influenced their bedtime, whereas 39% disagree. This suggests that using digital devices causes most respondents to stay up later than they had planned. These results imply that social media use plays a major role in postponing sleep, which can lead to shorter sleep duration and fatigue during the day for college students in the Mandvi region.

**14. What time do you usually go to bed each day?**



**Interpretation:**

According to the data, 46% of students typically go to bed between 9 and 10 p.m. Nonetheless, a small

percentage (7%) goes to bed after 1 AM, and a noteworthy 34% remain up until 11 PM or 12 AM. In contrast to the earlier questions, this indicates that almost half of the students in the Mandvi region are probably going to bed later due to the high volume of social media use at night. Shorter sleep duration and decreased alertness during morning classes may result from this shift into late-night hours.

## HYPOTHESIS TESTING

### 1. To study duration of time spent on social media platforms during the day and at night

H<sub>0</sub>: There is no significant difference between the time students spend on social media during the day and at night.

H<sub>1</sub>: There is a significant difference between the time students spend on social media during the day and at night.

Chi-Square Test of Independence (Q11 and Q12) was conducted.

The calculated p-value (0.0000) < 0.05, which indicates that the outcome is statistically significant.

Consequently, the null hypothesis is rejected and the alternative hypothesis is accepted.

This shows that students' usage patterns differ significantly, with daytime usage being significantly higher and longer than nighttime usage.

### 2. To study effect of social media use on learning and distraction from learning activities

H<sub>0</sub>: Social media use does not significantly affect students' learning and distraction level.

H<sub>1</sub>: Social media use significantly affects students' learning and distraction level.

Chi-square goodness of fit test (Q5) was conducted.

The calculated p-value (0.0000) < 0.05, which indicates that the outcome is statistically significant.

Consequently, the null hypothesis is rejected and the alternative hypothesis is accepted.

This shows how social media significantly affects students' learning schedules and levels of distraction, frequently resulting in a change in study times and academic focus.

### 3. To Study effect of social media use on relationships with family members and friends

H<sub>0</sub>: Social media use has no significant effect on students' relationships with family members and friends.

H<sub>1</sub>: Social media use has a significant effect on students' relationships with family members and friends.

Chi-square goodness of fit test (Q9) was conducted.

The calculated p-value (0.8415) > 0.05, which indicates that the outcome is not statistically significant.

Consequently, we fail to reject the null hypothesis.

This shows that there is no compelling statistical evidence to suggest that social media use is seriously harming the relationships of the majority of students in this group, even though about half of them feel an impact. It has a split or neutral effect.

## FINDINGS

- In the Mandvi region, 100% of college students actively use social media. (Question 1)
- Ninety-two percent of the respondents are between the ages of twenty and twenty-four. (Question 2)
- The most popular platforms for daily engagement among students are Instagram (80%) and WhatsApp (87%). (Question 3)
- Watching movies (69%) and interacting with people (66%) are the main reasons people use social media. (Question 4)
- Sixty percent of students use social media sites for educational purposes. (Question 4)

- The majority of respondents (77%) think that their intended study times are directly impacted by their use of social media. (Question 5)
- The majority of students (67%) believe that social media platforms are more appealing than their academic pursuits. (Question 6)
- The impact on learning is split; 30% report a negative impact on performance, while 35% see a positive impact on knowledge. (Question 7)
- 53% of the students say they are dependent on social media. (Question 8)
- According to the survey, 51% of students believe social media has impacted their relationships, while 49% disagree. Nevertheless, the Chi-square test ( $p=0.8415$ ) indicates that this outcome is not statistically significant, indicating a split or neutral effect on interpersonal relationships. (Question 9)
- During their allotted free time, the majority of students (75%) mainly use these platforms. (Question 10)
- 38% of students spend more than two hours online during the day, compared to 37% who spend one to two hours. (Question 11)
- Sixty-three percent of students use social media for thirty to two hours at night. (Question 12)
- Sixty-one percent of respondents agreed that using social media has delayed or impacted their bedtime. (Question 13)
- 41% of students typically go to bed late, specifically after 11 PM or 12 AM, according to the data. (Question 14)

## CONCLUSION

According to the current study, controlling social media use and how it affects academic life is a continuous problem that calls for constant work rather than a one-time solution. While social media offers useful tools for learning and communication (60%), most students still struggle to strike the right balance between digital engagement and study time (77%). A self-perceived addiction and digital distractions continue to cause academic stress for some students (53%). But not all social media use is harmful; when utilized sensibly, it promotes social bonding and knowledge acquisition. It's critical how well educational institutions and students handle these digital habits. Students can greatly lessen academic pressure and sleep delays (61%) by implementing improved time management techniques, awareness campaigns, and balanced routines. Students' needs and habits will change in tandem with changes in digital trends. Students must therefore continuously evaluate and improve their digital lifestyle choices in order to maintain both academic focus and personal well-being.

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