

Original Research Article

HEALTH IMPACT OF SOCIAL MEDIA USE AMONG MEDICAL AND PARAMEDICAL UNDERGRADUATE STUDENTS

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Abstract

Context: Social media use is a two-edged sword with its pros and cons. Its excessive use contributes to misuse and addiction and affects physical and mental health. According to a report by the Internet and Mobile Association of India (IAMAI), 66% of the 180 million internet users in urban India regularly access social media platforms. A study on Facebook use among medical students found a positive correlation between its excess use and adverse health effects. With increasing internet and social media use, more research requires on their uses and impact on health. The data regarding its use and the effect on students' health at our medical college has not yet been documented.

Aims: To evaluate the effect of social media use on the health of medical and paramedical undergraduate students.

Settings and Design: At Government Medical, Nursing and Physiotherapy College. The questionnaire-based cross-sectional study

Methods and Material: The questionnaire-based cross-sectional study conducted among students of MBBS, B.Sc. Nursing and physiotherapy at a government medical college for over one month. Questionnaires were distributed among the students and were filled by the students anonymously. Descriptive statistical analysis was done by using Microsoft Excel.

Statistical analysis: Descriptive statistical analysis is done by using Microsoft Excel.

Results: A total of 375 responses were obtained. Among them, 77.7% use WhatsApp, followed by 54.7% use Instagram. Social media is mostly used for entertainment (65.8%) and contact with family and friends (62.8%). 1-3 hours spent daily on social media by 53.9% of students, more in the evening (56.5%) and at night (56.5%). Physical symptoms like burning eyes (43.6%), headache (34.8%), neck pain (17.9%) and back pain (10.9%) are common within 1 month of use. Reduced concentration in a study (63.2%) and disturbed sleep (35.4%) are reported. (39.6%) students postpone their meals.

Conclusions: Unwisely, use of social media is linked with a negative effect on physical health and health-related behaviours.

Keywords: Social media, medical students, physical health, paramedical students

Introduction

Social media are now one the most crucial part of everyone's life. People use them for obtaining various information for various entertainment activities. Social media is a form of electronic communication that creates online communities where the users can share ideas, personal messages, information, and other content, including various social networking sites (SNS) and blogs ^[1]. Social networking sites like Facebook, Twitter, Instagram, Linked, WhatsApp, etc. are popular among everyone, specifically among college students.

Social media can be categorized into five groups: joint projects (e.g., Wikipedia), blogs or microblogs (e.g., Blogger, Twitter), content communities (e.g., YouTube), social network sites (e.g., Facebook, WhatsApp, Instagram), and virtual games or social worlds (e.g., Human Sim) ^[2, 3] According to a report by the Internet and Mobile Association of India (IAMAI), 66% of the 180 million Internet users in urban India regularly access social media platform ^[4].

Social media use is a two-edged sword with its pros and cons. Excessive use contributes to misuse and addiction and affects physical and mental health. A study on Facebook use among medical students found a positive correlation between its excess use and adverse health effects ^[5]. With the increase in internet and social media use, more research requires on their uses and related health effects. The data regarding its use and impact on students' health at our medical college is yet to be established. Therefore, this study was conducted to evaluate the effect of social media use on the health of medical and paramedical undergraduate students.

Materials and Methods

This is a cross-sectional questioner-based study. It was conducted among medical, physiotherapy and B.Sc. nursing undergraduate students at the tertiary care hospital in South Gujarat between April to May 2018. Prior Approval from Scientific Review Committee (SRC) and The Institutional Ethics Committee for Human Research (IECHR) was taken.

Inclusion criteria

1. All undergraduate students of MBBS, Physiotherapy and B.Sc. nursing above the age of >18 years.
2. Students willing to give written informed consent.

Exclusion criteria

1. Students < 18 years of age.
2. Students not willing to give informed consent.
3. Students who were not present at the time of study duration.

Sampling

There were 600 students present at the time of the study. All were invited to participate in the study. The first purpose of the study was explained to the students in their classroom. After obtaining written informed consent, a paper-based questionnaire was provided to students and a half-hour was given to fulfill that Questionnaire. The Questionnaire was anonymously filled out. The participant did not have to write their name or roll number on the Questionnaire. The confidentiality of participants was maintained.

Instrument

The Questionnaire was developed through previously published research articles that contain a pre-validated questionnaire. (5,6,7,8) Before starting the study, a questionnaire was given to 10 students to fulfill, in which we observed that responses were consistent. Those 10 students were not included in the study. There was a total of 18 questions in final form. The Questionnaire was given in appendix 1

The final Questionnaire contains questions like

1. Demographic data of participant (age, gender, course of study, year of study).
2. About social media (medium of accessing the social media, type of social media most used, the purpose of its used, how much relevant information they gain from social media, how much social media helps in their academic, place where they maximum access).
3. About Duration of social media use (for how long they were using social media, the time they preferred to use social media, average time spent on social media/day).
4. About effect of social media on their health and health-related Behaviour (Any kind of physical symptoms they perceived with the use of social media, any kind of changes in their health-related behavior they noticed with the use of social media).
5. Improving the use of social media (if they have tried to reduce the time spent of social media, if yes state the reason).

Half of the question contains a single answer and in other questions, students can choose multiple answers.

Statistical analysis

We have entered all responses in excel sheets and analyzed them with simple descriptive statistics (frequency and percentage) for each question using Microsoft excel version 2201.

Results

We distributed a questionnaire to 600 students, and from this, we got 375 responses. The response rate is 62.5%.

(Table 1) Shows demographic data of the participant. There were 94 males and 281 females. 244 responders were between the age of 18 to 19. Students from MBBS were 158 followed by nursing and physiotherapy. 58% were in their 2nd year of study.

Students use WhatsApp most commonly 77.7% (290), followed by Instagram 54.7% (204),

Facebook 13.4% (50). (Figure 1) 82.90% (310) using social media for > 1 year whereas 8.80% (33) using since 6 month.

53.9% (202) students spent 1-3 hours daily on social media whereas 28.5% (107) spend 1 hours, 14.1% (53) spend 4-5 hours and 3.5% (13) spend > 5 hours. (Figure 2)

Physical symptoms perceived by students are shown in (Figure 3). Most common are burning eye 43.6% (153), then headache 34.8% (122), neck pain 17.9% (63), back pain 10.5% (37) and wrist pain 7.7% (27). 19.4% (68) of students don't have any physical symptoms.

Figure 4 shows other problems perceived by students. 63.2 % (230) complain about reduced concentration in study and 35.4% (129) complain about disturbed sleep, followed by weight gain and reduced appetite.

Students were also asked about any other health-related behavioral changes they feel. 53.8% (174) students answered that they are either skipping their meals or postponing their meals, 12.7% (41) say they are holding their urination or defecation and 1% (1) say they are easily irritated, skipping their assignment, or go to a clinic. 36.8% (119) don't have changes in their behavior.

Table 1: Demographic data of participants

Sr. No.	Characteristics		Percentage (number)
1.	Gender	Male Female	25.1% (94) 74.9% (281)
2.	Age	18-19 years 20-21 years >21 years	66.85% (244) 29.86% (109) 3.28% (12)
3.	Course of study	MBBS Physiotherapy Nursing	42.1% (158) 22.9% (86) 34.9% (131)
4.	Year of study	1 st year 2 nd year 3 rd year	16.3% (61) 58.00% (217) 25.7% (96)

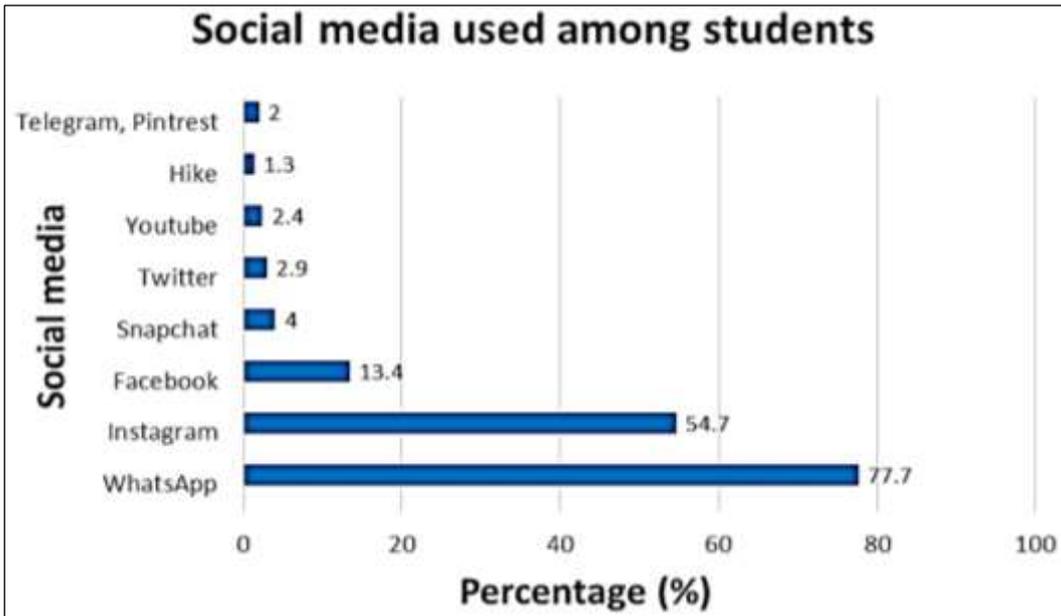


Fig 1: Types of social media use among students

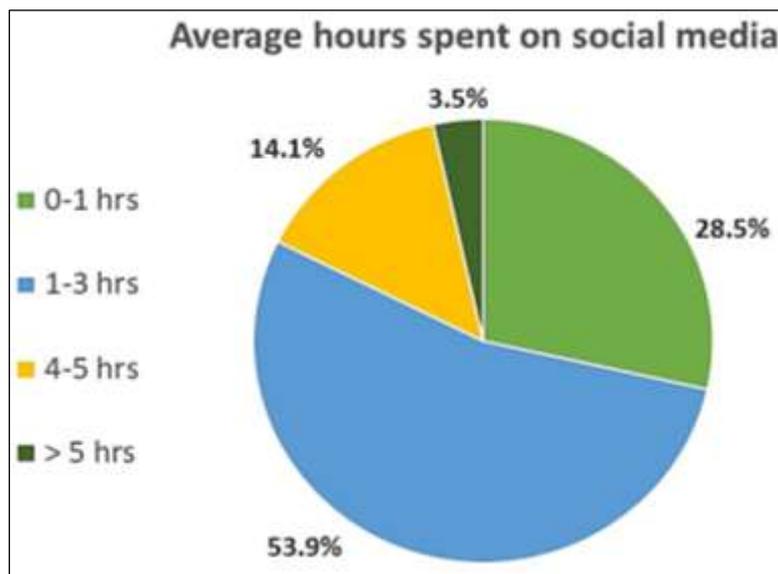


Fig 2: Average hours spent on social media by students

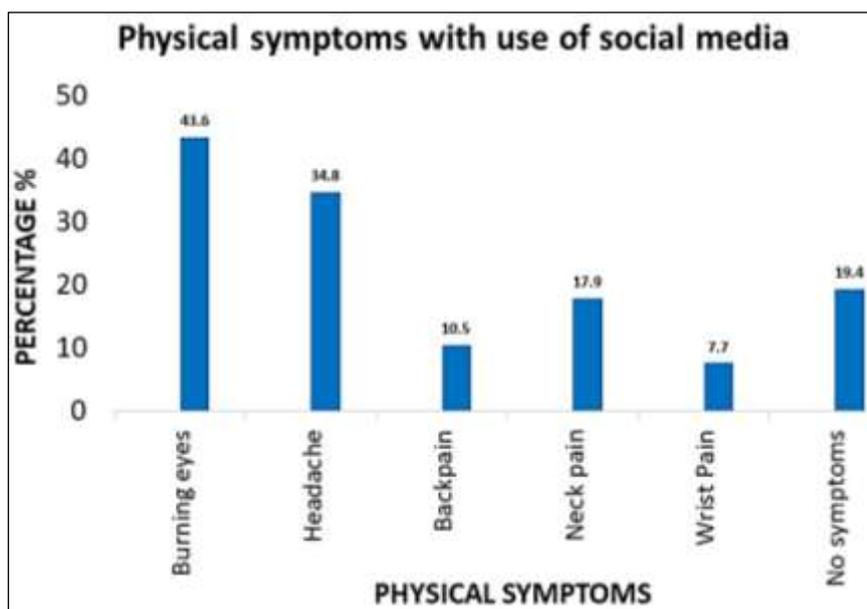


Fig 3: Physical symptoms perceived by students due to social media use

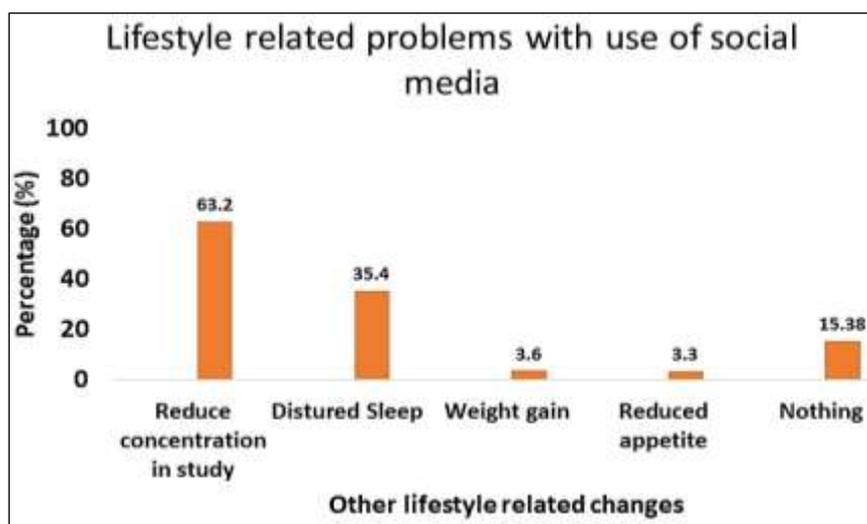


Fig4: Lifestyle related problems perceived by students due to social media use

Discussion

This study was planned to assess social media use and its effect on the health of medical and paramedical students at government medical colleges. Most of the students in our study used more than two social media applications. Among social media use, WhatsApp was the most used, followed by Instagram and Facebook. A study done by Rami *et al.* shows Facebook (52.5%) and Instagram (20.8%) were the most used social media. WhatsApp was only used by 9.9% of students [6]. Study conducted on medical students from Khartoum University showed that Facebook and WhatsApp were the most social sites used by medical students [9]. Ease in access and more features in social media over time may influence the use of it. In our results, we found that 52.4% of students use social media for their educational purpose. Whereas 65.5% used it for entertainment, 62.8% used it for a stay in contact/communication with friends and family.

In our study, 97.3% of students access their social media on their smartphones. A study done by Ankit Gupta (75%) and Raj (75.7%) *et al.* also shows that the smartphone was the most commonly used gadget to access social media ^[10, 11] Majority of students in our study use social media over >1 year, where study done by Ali *et al.* students used social media (65.7%) over >3 years ^[9].

The average time spent on social media in our study is 1-3 hours per day (53.9%). A study done by Ankit Gupta *et al.* also reported that students spend an average of 59.9% spend 1-2 hrs on social media ^[10, 12]. In compared to a study done by Aljabry *et al.* and Abbas *et al.* which found that the average time for usage of social media was 2-3 hours and 5-6 hours ^[9, 13].

56.5% of students in our study access social media in the evening and at night (after 10 pm) less in the morning and afternoon (20%) which to a study done by Ankit Gupta (10) Sierra *et al.* stated that both quantity and quality of sleep might strongly influence mood and subjective well-being, which in turn could impact the academic performance of the students who use Facebook late at night and do not allow for sufficient sleep ^[14, 15, 16].

In our study students complain about burning eyes (43.6%), then headache (34.8%), neck pain (17.9%), back pain (10.5%), and wrist pain (7.7%) with the use of social media. Other studies showed adverse physical effects due to computer use, such as headache, backache, weight change and eye problems ^[7, 8, 17]. Where 19.4% do not report any adverse health effects.

Al-Dubai *et al.* indicated a significant association between Facebook use, its adverse health effects, and unhealthy behavior. They have recommended that higher educational institutions should create awareness and safer practices for their students. Additionally, they have advocated regular health screening of students to avoid the possible health consequences due to Facebook use ^[5, 17].

In our study students also complain about changes in their health-related behavior e.g. disturbed sleep, weight gain, reduced appetite, reduce concentration in study, skipping their meals or postponing their meals, holding urination or defecation, easily irritated.

A study done by David S. Lee *et al.* shows that social media use is associated with various physical health indicators (increase in CRP level), experiencing more frequent somatic symptoms and behavioral health indices among college students ^[18].

As social media becomes an important part of education and day-to-day life for every person. Easy availability of the internet and more user's friendly interphase by applications and sites allows every age group to engage on social media. Recent outbreaks of COVID-19 have already shifted our education from physical to online mode. Students are spending their time on mobile or other electronic devices without awareness of their effect on physical and psychological health. Proper training should be given to students on how they can manage their time on social media. Also, make them aware of the negative effect of excessive use of social media. Further study should plan to determine the long-term effect of social media on health.

Limitations

We have only taken the students of medical and paramedical backgrounds to a single hospital setup, so results cannot be generalizable to other students of different educational backgrounds. It was a self-administrative questionnaire, so responses were subjective. We

have not taken any socioeconomic factors in the Questionnaire; it may have some effect on the results.

Conclusion

Social media are used by mostly every student for either their educational or other day-to-day activity. Each student has a preference for social media and the time spent on social media is also different. Unwisely use of social media is linked with a negative effect on physical health and health-related behaviors. Students should make aware of these effects and teach how to balance their time on social media.

Acknowledgment: Nil.

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Appendix 1

Questionnaire form

Title of study: Health impact of social media use among Medical and Paramedical undergraduate students.

Instruction

- 1) Encircle the answer.
- 2) All questions are compulsory.

1. Age: _____

2. Gender:

- a) Male b) Female

3. Course of study

- a) MBBS b) Physiotherapy c) BSc Nursing

4. Year of study:

- a) 1st year b) 2nd year c) 3rd year

5. How do you access your social network account? (You can choose more than one)

- a) Desktop b) Laptop
c) Smartphone d) iPod/iPad/Tablets
e) Others (Specify): _____

6. Which social media do you use the most?

- a) Facebook b) WhatsApp
c) Instagram d) Twitter
e) Other (Specify): _____

7. For what purpose do you use it maximally?
 - a) Educational
 - b) Entertainment
 - c) Contact with friends and family
 - d) For News/New updates
 - e) Others (Specify): _____

8. Where do you access it maximum?
 - a) College
 - b) Home
 - c) Reading room
 - d) Hostel

9. At what time do you prefer to use it the most?
 - a) Morning
 - b) Afternoon
 - c) Evening
 - d) Night (after 10 PM)

10. For how long have you been using social media?
 - a) < 1 month
 - b) 1 to 6 months
 - c) 7 to 12 months
 - d) 1 years

11. On an average, how many hours per day do you spent for social media?
 - a) 0-1 hour
 - b) 1-3hour
 - c) 4-5 hour
 - d) >5 hour

12. How much of the relevant information for your study is accessible through social media?
 - a) Quite a lot
 - b) Somewhat
 - c) Not at all

13. To what extent do u get help in academics from others using social media?
 - a) Quite a lot
 - b) Some what
 - c) Not at all

14. Any kind of physical symptoms do you feel with use of social media in last 1 month?
 - a) Burning eyes
 - b) Headache
 - c) Neck pain
 - d) Back pain
 - e) Wrist pain
 - f) Others (specify): _____

15. Any kind of symptoms do you feel with use of social media in 1 month?
 - a) Disturbed sleep
 - b) Reduce appetite
 - c) Reduced concentration on study
 - d) Weight gain
 - e) Others (specify): _____

16. Any kind of health-related behavioural disturbance do you feel with use of social media?
 - a) Holding urine
 - b) Holding defecation
 - c) Postponing meal
 - d) Forgetting or skipping of meal
 - e) Others (Specify): _____

17. Did you ever try to reduce time on use of social media?
 - a) No, I didn't
 - b) Yes, I tried but couldn't succeed

c) Yes, I tried and succeed

18. For what reason you have tried to reduce time on using social media?

a) To use my time for academic b) To use my time for some creative work

c) To improve my relation d) To reduced physical health

e) Others (Specify):