

# Effects of internet and social media use among medical students of a tertiary care teaching hospital

Jayant Deshpande, Adish Kulshrestha, Manasa Akella, Akash Kumar, Harshada Ambekar

Department of Community Medicine, Rural Medical College, Pravara Institute of Medical Sciences, Loni, Maharashtra, India

Correspondence to: Jayant Deshpande, E-mail: drjayant10@gmail.com

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## ABSTRACT

**Background:** The launch of many free low cost data packages has put India on the global map for large scale consumption of mobile data leading to exponential usage of social media. Internet has both positive and negative advantages on its users. Excessive use of social media is affecting the lifestyle of youth moreover, statistics show that addiction to social media resulted in increased health problems and change in behavior. **Objectives:** The objectives of the study were to study the pattern of internet and social media use and its physical and psycho-social effects on the medical students. **Materials and Methods:** A cross-sectional descriptive study was conducted among medical students at a tertiary care teaching hospital in a rural area using self-administered pretested questionnaire using Google forms. The descriptive statistical analysis of data was performed in the form of mean, standard deviation, percentages, and proportions. **Results:** The number of male and female participants was 184 (44.4%) and 230 (55.6%), respectively. Almost 37% of students spend more than 4 h on internet daily and 56% students responded that they visit social media more than 6 times/day. Headache, sleep disturbances, and burning sensation of eyes and neck pain were the prominent disabling symptoms. One hundred and twenty-seven (30.7%) students sleep for <6 h and 64.8% students stay up late to access internet and 43.9% students check social media immediately after waking up. **Conclusion:** Time spent on internet, social media to perform online access can be very productive but compulsive internet and social media use can have negative impact on physical and psycho-social health.


**KEY WORDS:** Health effects; Internet use; Medical students; Social media

## INTRODUCTION

Internet and social media are now integral part of life. Internet and social media are predominantly used by youth. All over the world, use of social media has become popular. Initially chat room was popular but now social media have grown to millions of users active all around the globe. Social media are mainly used for connecting with each other. Significant time may be spent in the virtual world rather than socializing

in real life. The launch of many free low cost data packages has put India on the global map for large scale consumption of mobile data leading to exponential usage of social media. The “Jio wave” with attractive telecom pricing has increased internet penetration and social media usage in the past 2 years even in rural area of India. Social media are disproportionately dominated by youth. Social media are often referred to as a lifeline for “socializing” among youth. According to the Statista Global Consumer Survey 2020, there were 326.1 million social media users in the year 2018. They are expecting that these numbers will be approximately 448 million in 2023 which is nearly one-third of the Indian Population.<sup>[1]</sup>

Pros and cons of social media and internet use have been studied by the previous research workers.<sup>[2-4]</sup> Few studies have also evaluated effect of internet and social media

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usage on mental health.<sup>[5,6]</sup> It is affecting lifestyle of young generation and can result in health problems and change in the behavior. Medical students mainly access the internet for academic purpose. The irresistible urge to check social media, again and again, is Social Media Addiction. Most of the social media users are addicted in some way. Social media addiction is a severe problem which is ignored by many. Recently students have greater exposure to electronic gadgets such as smart-phones at a much younger age, and hence, more prone to overuse or addiction. Hence, it is essential to speak about these problems and find healthy solutions for the same. Most of the studies on social media use were conducted in the west, with very few data available on Indian students, in whom the pattern of use and symptoms may differ from those in Western countries. With these backgrounds in mind the objectives of the present study were to study the pattern of internet and social media usage and associated physical and psychosocial health issues among medical students.

## MATERIALS AND METHODS

A descriptive cross-sectional study was conducted among medical, students at a tertiary care teaching hospital in rural area using self-administered pre-tested questionnaire. The study was approved by the Institutional Ethical Committee. Participation in the study was on the voluntary basis. Students were assured about anonymity and confidentiality of their responses. Pre-tested questionnaire was used. Information was collected on the demographic data such as age and gender of respondents, furthermore information about the kind of usage, the duration of usage of internet and social networking sites by them and the time they are exposed to explicit content on the web, etc. The questionnaire was prepared in such way that used only one or two answer methods, such as fill-ins and check boxes. Age, class, gender, body mass index (BMI), economic status, hours of sleep, purpose for using internet, daily frequency of visiting social media profile, and medical and psychosocial effects of overuse were some of the study variables. Google form was prepared for the questionnaire and the link for the survey was circulated to participants through various social sites and through them data were collected and entered in Microsoft Excel. The descriptive statistics was applied and data were analyzed in the form of mean, standard deviation, percentages, and proportions.

## RESULTS

In the present study, 414 medical students responded through Google forms circulated through various social sites [Table 1]. In the present study, there were 184 (44.4%) male and 230 (55.6%) female students. The mean age of participants was  $20.5 \pm 2$  years and 22.46% students were overweight with a BMI >24.9. In relation to socioeconomic status, 146 (35.26) respondents belongs to the upper middle class, while 247 (59.67) were belonging to middle class as per modified BG Prasad classification.

It is evident from Table 2 that 154 (37%) of students spend more than 4 h on internet daily. When asked about daily frequency of visiting social media site, approximately 56% students responded that they visit social media more than 6 times/day and 86.4% students believe that their internet usage has increased since they began using it, with 8% individuals surfing the web for more than 7 h/day. In the present study, 182(43.8) students were engaged in the physical activity of <30 min daily while 232 (56.2) students were having physical activity of more than 30 min. In relation to the questions on effect on social life, 58.3% of the students admitted that they avoid social meetings and prefer using their phone instead, 44% students get anxious if they do not check their phones, 50% students reported that they use social media or internet during meals and 41.4% students get anxious when their phone is discharged. Alarming thing is that 43.6% students use social media or internet while walking.

It is evident from Table 3 that the most commonly used applications were WhatsApp, YouTube, Instagram, and Facebook. In addition to these apps Skype, omegle, and tinder were also used by few students. Most commonly played games by the students were Pubg (12.3%), FIFA (5.6%), and counter strike (3.6%), and cash of clans (3.6%). When asked about effect of internet and social media 51.8% students think that internet or social media have improved their academic performance and 70.9% students use academic apps such as Marrow, Prepladder, Dams, Dbmci, and Pre-pg, while 63.4% students use news app such as News18, Deccan Chronicle,

**Table 1:** Class-wise distribution of the study participants

Class	No. of responses	Percentage
First MBBS	129	31.20
Second MBBS	98	23.70
Third MBBS	127	30.80
Fourth MBBS	60	14.30
Total	414	100.00

**Table 2:** Number of hours spent on the internet per day

Frequency (h)	Responses	Percentage
<1	37	09
1-3	223	54
4-6	120	29
>7	34	08
Total	414	100

**Table 3:** Types of apps used

Application	Respondents	Percentage
WhatsApp	391	94.4
YouTube	353	85.3
Instagram	334	80.7
Facebook	229	55.3
Snap chat	117	42.8
Twitter	44	10.6

Times of India, and the Hindu. Interestingly, 72% of students admitted that they cannot study continuously for 2 h without using internet and 44% students admitted that they check their social media/internet applications notifications between studies or important work. When asked about hours of gaming spent on mobiles or laptop, 62% students responded that they play games on electronic devices for more than 1 h and around 8% individuals spend more than 3 h playing games. The majority (71.2%) reported that they do not play games before going to sleep while 19.2% students play games before going to sleep and 53.8% of students do not regret after spending time on gaming while 28.8% do so.

It is evident from Table 4 that main reason for using social media applications was information seeking, maintaining relationships, freedom of expression, escaping daily problems, creating and managing identities, and peer attention.

According to the data collected from students, it is clear that majority had at least one or more symptoms and headache, sleep disturbances and neck pain were the prominent symptoms [Table 5]. When asked about number of hours of sleep during night 127 (30.7%) students sleep for <6 h, 64.8% students stay up late to access internet and 43.9% students check social media immediately after waking up. Selfitis is new term used for taking photos of one's self and posting each of the photos on social media. Out of 414 social media users, 60 (14.6%) occasionally take and post selfies on social media, 24 (5.9%) reported frequent taking and posting selfies on social media. In the present study, 100 students (24.1%) had ringxiety.

## DISCUSSION

In the present study, 414 students from first to final M.B.B.S. Participated using self-administered pre-tested questionnaire

**Table 4:** Reasons of using social media

Reasons	Respondents	Percentage
Information seeking	323	78.6
Maintaining relationships	250	60.8
Freedom of expression	139	33.8
Escape daily problems	132	32.1
Create and manage identity	89	21.7
Peer attention	71	17.3

**Table 5:** Disabling symptoms

Symptoms	No. of students	Percentage
Headache	187	42.6
Sleep disturbances	147	35.6
Neck pain	97	23.5
Back pain	96	23.2
Burning sensation of eyes	59	14.3
Diminution of vision	45	10.9
Fatigue of fingers	29	7.0

using Google forms. One hundred and fifty-four (37%) of students spend more than 4 h on internet daily, approximately 56% Students responded that they visit social media more than 6 times/day and 86.4% students believe that their internet usage has increased since they began using it. In the present study, 182 (43.8) students were engaged in physical activity of <30 min daily and 22.46% students were overweight with a BMI >24.9. Alarming thing was 58.3% of the students admitted that they avoid social meetings and prefer using their mobile phone instead. Most commonly used applications were WhatsApp, YouTube, Instagram, and Facebook. Good thing was that 70.9% students use academic apps such as Marrow, prepladder, DAMS, dbmci, and pre-pg, while 63.4% students use news app such as News18, Deccan Chronicle, Times of India, the Hindu, and 51.8% students think that internet or social media have improved their academic performance. Interestingly, 72% of students admitted that they cannot study continuously for 2 h without using internet and 44% students admitted that they check their social media/ internet applications notifications between studies or important work. When asked about hours of gaming spent on mobiles or laptop, 62% students responded that they play games on electronic devices for more than 1 h and around 8% individuals spend more than 3 h playing games. The main reason for using social media applications was information seeking, maintaining relationships, freedom of expression, escaping daily problems, creating and managing identities, and peer attention. The majority of the students had at least one or more disabling symptoms and headache, sleep disturbances neck and back pain were the prominent symptoms. Significant numbers of the students stay up late to access internet, and sleep for <6 h.

Sheldon reported that 54% of students visited frequently to Facebook in a day and 19% of students changed their Facebook profile on daily basis.<sup>[7]</sup> According to Kubey *et al.*, there is a correlation between academic performance and the dependency on social media platforms.<sup>[8]</sup> George and Dellasega concluded that the use of social media augmented academic opportunities to the students and also helped them to improve communication with the expert in the medical field.<sup>[9]</sup> Contrary to these findings study by Paul *et al.* reported negative relationship between the time spent on social media by the students and their academic performance.<sup>[10]</sup> In a study by Oye *et al.* most of the students accepted that the social networking media are useful for educational purpose.<sup>[11]</sup> However, other studies shown negative correlation between use of social media and educational achievement.<sup>[12,13]</sup> The social communication pattern is transforming from the traditional face-to-face meeting to the excessive use of virtual social media. These technologies have proliferated to the extent that can disrupt the delicate elements of our social fabric.<sup>[14]</sup> In the present study, 43.8% students were engaged in physical activity of <30 min daily and 22.46% students were overweight with a BMI >24.9. The previous studies reported similar findings in relation to physical

inactivity and obesity.<sup>[15,16]</sup> Erfanian *et al.* carried out similar study among students from different fields including medicine, nursing, health, and paraclinical in Iran. They found that 57.5% medical students were aware of social networking sites. However, more than half (55%) used it for socialization and hardly 11% students used social media for educational purposes. They suggested that there was a need to improve the cultural and educational quality of social media sites for producing optimal outcome.<sup>[17]</sup> Problems such as headache, neck pain, sleep disturbances, decrease in vision, back pain, and Fatigue of finger are directly linked to number of hours of mobile phone or social media usage and also continuous sitting or lying down posture. The sedentary lifestyle is also linked to excessive social media usage. Similar physical problems were observed in a study in health university students of Bengaluru.<sup>[18]</sup> In the present study, 64.8% students stay up late to access internet. Similar to the present study, the previous studies reported that late night use of internet affecting quality of sleep which is affecting daily performance and resulting day time sleepiness.<sup>[19-21]</sup> In relation to gaming on internet, the average playtime with students was 3 h and those having gaming disorder in the study was more than 6 h which are the same as the study conducted by Rehbein *et al.*<sup>[22]</sup> In the present study, out of 414 social media users, 60 (14.6%) occasionally take and post selfies on social media, 24 (5.9%) reported frequent taking and posting selfies on social media. Marshall, Lefringhausen, and Ferenczi reported that narcissism is common among social media users.<sup>[23]</sup> Similarly, social media users who had Ringxiety were prone to get addicted to social media. In the present study, 100 students (24.1%) had Ringxiety. Higher percentage of ring anxiety among social media users was reported by Masthi *et al.*<sup>[18]</sup>

### Strengths and Limitations

Most of the previous studies on social media addictions are on individual social media platforms such as WhatsApp, Facebook, and Internet Gaming unlike the present study where the combined effects of all types of social media have been taken, to measure the burden of social media use. As the present study is carried out on a sample of the students of a medical college, so study results might not be representative of all medical students hence findings of the study cannot be generalized.

### CONCLUSION

The internet is the easiest to meet the needs in finding the information related to academic or research purpose, variety of literature and references for medical students. Technology brought about social media which are a valuable tool but is somewhat misused. Time spent on internet, social media to perform online access can be very productive but overuse of social media can have negative effect on physical and

psychosocial health. Duration of time spent on the internet and social media needs to be monitored.

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