Assessment of Social Media Usage in Dental Education of Students of Teerthanker Mahaveer University, Moradabad

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ABSTRACT

Background: Rapid increase in the usage of social media among dental students and practitioners has profoundly altered dental education.

Aim: The main aim of this study was to access the social media usage for dental education among the dental students of Teerthanker Mahaveer Dental College and Research Centre and to find out the most visited social networking sites.

Materials and methods: Prevalidated questionnaire that consists of 26 questions including sociodemographic details was distributed to 400 students of dental college. Ethical clearance was obtained from the Institutional Ethical Committee of Teerthanker Mahaveer University. Descriptive statistics was used for the frequency distribution and percentage.

Results: According to this survey, females (73.7%) tend to use more social media than males (26.3%). They found that almost every student (94.9%) uses the Smartphones for daily work like learning, SMS, research, and seminars. Students use social media for email purpose (79.04%), use social media for instructional YouTube videos (80.9%), and use the web for surfing material (72%). Social media improves the quality of education and provides access to courses and learning material.

Conclusion: Social media is bringing new dimension to healthcare, dental students, and health promotion. Dental students have profound knowledge of using social media for dental education.

Keywords: Dental education, Dental students, Social media, Social networking sites.

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INTRODUCTION

Social media is revolutionizing the education system worldwide. In 1989, the invention of worldwide web changed the access to information rapidly.¹ There is increased usage of social media tremendously in the daily-life activities and healthcare sector.

Social media refers to a mode of communication among people in which they create, share, spread, and exchange information and ideas in virtual communities and networks.² Social media include social media sites, blogs, Wiki, Micro blogs, media sharing sites, serving functions such as social networking sites such as Facebook, Twitter, Instagram, WhatsApp, Snapchat, Google+, YouTube, Gmail, Skype.³

It has been estimated that, by 2021, there will be around 636 million users in India. Facebook has been found to be the most popular social networking site used in India. There are 290 million Facebook users in India in 2020, making it a leading country in terms of Facebook users.⁴

Social networking sites have gained popular attention in the last few years in the healthcare field, medical as well as dental education. It has become a reliable tool for healthcare professionals to market their service, communicate, and connect with their patients. Social media has become affordable way to promote and publicize the dental care. Dentists use social media for various reasons such as reading news article, recent advancements and development, consulting different colleagues with their cases, it is providing a platform to share their cases and ideas, discuss treatment plan, market their practices, and engage in healthcare delivery system.⁵

Many studies have suggested that social media tools use has enhanced the clinical education, professionalism, understanding of communication, and ethics.⁵ The lower cost of Internet provides a cost-effective medium of communication for dental students.

MATERIALS AND METHODS

A cross-sectional study was carried out to find out the assessment of social media usage in dental education of students of the Teerthanker Mahaveer University, Moradabad. The study was carried out during the month of October and November in 2019. Ethical clearance was obtained from the Institutional Ethical Committee of Teerthanker Mahaveer Dental College and Research...
Usage of Social Media among Students

Center, Moradabad. The sample size was calculated on the basis of the previous study sample, and it was estimated to be 350. Participants were assembled in a lecture hall where a questionnaire was distributed to them and were asked to fill them in a given period of 20 minutes. The inclusion criteria were as follows: the participants who were present on the day of distribution of questionnaire and those who use social networking sites. The participants who were absent on the day of distribution of questionnaire were excluded from the study.

The questionnaire consists of two sections:

- **Section 1:** The demographic details of participants such as name, age, gender, specialty (undergraduates), social networking sites used by the participants.
- **Section 2:** Prevalidated questionnaire that consists of 26 questions related to the social media usage, frequency of usage was distributed to the participants.

All the data obtained from the participants were transferred into MS excel sheet. Descriptive statistics was used for the frequency distribution, and Chi-square test was used to know the statistical relationship between the two groups. \( p \) value < 0.05 was considered statistically significant.

**Results**

The data collection resulted in the responses of 350 participants. Of the participants, 73.7% were females and 26.3% were males.

**Table 1** shows the most popular social media platform used by the participants. Most of the participants used personal social media (79.1%) such as WhatsApp. Of them, 72.3% use Instagram as social media account followed by Facebook of 75.4%, Snapchat of 53.1%, LinkedIn of 49.7%, and the least used social media platform by participants was Twitter.

**Table 2** shows the questionnaire-wise frequency distribution of responses study participants. Most of the participants do not agree to have part-time job (97.1%), while 2.9% agreed to have part-time job at the side of their studies. Almost every participants give a positive response (70.5%) on having access to Wi-Fi Internet at university, 28% of the participants were having access to Wi-Fi at home.

The results showed that almost 94.9% participants have smart phones, and 5.1% does not have smartphones. Most of the participants have android-based (63.1%) smartphones, whereas 36.9% of the students have iPhone.

Table 1: Demographic characteristics of study sample

| Variable               | N (%)   |
|------------------------|---------|
| Gender                 |         |
| Male                   | 92 (26.3%) |
| Female                 | 258 (73.7%) |
| Personal social media  |         |
| Yes                    | 79.1% |
| No                     | 20.9% |
| Social networking sites|         |
| Snapchat               | 53.1% |
| Instagram              | 72.9% |
| Twitter                | 12%    |
| Facebook               | 75.4%  |
| LinkedIn               | 49.7%  |
| Other                  | 38%    |

Table 2: Questionnaire-wise distribution of responses

| Questions                                                      | Responses (%) |
|----------------------------------------------------------------|---------------|
| **1. Do you have part-time job at side of your studies?**     |               |
| Yes                                                            | 10 (2.9%)     |
| No                                                             | 340 (97.1%)   |
| **2. Do you have access to Wi-Fi Internet?**                  |               |
| At home (positive response)                                    | 98 (28%)      |
| At University (positive response)                              | 247 (70.5%)   |
| Elsewhere (hostel) positive response                           | 5 (1.4%)      |
| **3. Do you have a smart phone?**                             |               |
| Yes                                                            | 332 (94.9%)   |
| No                                                             | 18 (5.1%)     |
| **4. What type of smartphone do you have?**                   |               |
| Android based                                                  | 221 (63.1%)   |
| iPhone                                                         | 129 (36.9%)   |
| Windows based                                                  | 0             |
| Blackberry                                                     | 0             |
| Android and Blackberry based                                  | 0             |
| **5. Does your mobile phone contract allow for Internet data use through 3G network?** |           |
| Yes, limited amount of data per month                         | 131 (37.4%)   |
| Yes, unlimited amount of data per month                       | 219 (62.6%)   |
| No I don't have data allowance                                 | 0             |
| **6. Do you access the Internet with your smartphone?**       |               |
| Yes, through Wi-Fi connection only                            | 149 (42.6%)   |
| Through Wi-Fi and mobile                                      | 171 (48.9%)   |
| No, I don't have smartphone for Internet access               | 30 (8.6%)     |
| **7. Which of the following best describes whether you own or interested in getting tablet device (e.g., Apple, iPad, Samsung Galaxy tab)?** |           |
| I have a mobile tablet device right now                       | 41.7%         |
| I am likely to get a mobile tablet device within next year    | 46.9%         |
| I am unlikely to get a mobile tablet within the next year     | 11.4%         |
| **8. Can You?**                                               |               |
| Email                                                          | Yes: 72 (20.6%) |
| Discuss your work with your colleagues through Internet       | Yes: 268 (76.6%) |
| Add comments in social media, e.g., Facebook?                  | Yes: 155 (44.3%) |
| Listen to instructional audio clips from the Internet         | Yes: 283 (80.9%) |
| **(Contd...)**                                                 |               |
Table 2: (Contd...)

| Questions                                                                 | Responses (%) | n = 350 |
|---------------------------------------------------------------------------|--------------|---------|
| Manage your schedule                                                     | Yes          | 242 (69.1%) |
|                                                                           | No           | 108 (30.1%) |
| Take pictures                                                             | Yes          | 350 (100%)  |
|                                                                           | No           | 0          |
| Record clinical procedures/instructional videos                          | Yes          | 195 (55.7%) |
|                                                                           | No           | 155 (44.3%) |
| Upload pictures on the web                                               | Yes          | 283 (80.9%) |
|                                                                           | No           | 67 (19.1%)  |
| 9. Can You share your course timetable through networking apps (Facebook, WhatsApp)? | Yes          | 270 (77.1%) |
|                                                                           | No           | 80 (22.9%)  |
| 10. Can you look up/place announcements on social media sites?            | Yes          | 250 (71.4%) |
|                                                                           | No           | 100 (28.4%) |
| 11. Do you share links with staff/colleagues on social media?            | Yes          | 207 (59.1%) |
|                                                                           | No           | 143 (40.9%) |
| 12. Do you read/share educational articles uploaded on social media apps (Facebook/WhatsApp) | Yes          | 252 (72%)   |
|                                                                           | No           | 98 (28%)    |
| 13. Do you have any educational groups on social media (e.g., Facebook/Twitter) | Yes          | 243 (69.4%) |
|                                                                           | No           | 107 (30.6%) |
| 14. Do you watch instructional videos uploaded on the Internet?           | Yes          | 283 (80.9%) |
|                                                                           | No           | 67 (19.1%)  |
| 15. Do you discuss cases on networking cases app?                        | Yes          | 186 (53.1%) |
|                                                                           | No           | 164 (46.9%) |
| 16. Do you surf the web for learning material?                           | Yes          | 249 (71.1%) |
|                                                                           | No           | 101 (28.9%) |
| 17. Do you share notes with colleagues networking apps (Facebook/WhatsApp) | Yes          | 240 (68.6%) |
|                                                                           | No           | 110 (31.4%) |
| 18. Do you upload photos of your work?                                   | Yes          | 125 (35.7%) |
|                                                                           | No           | 225 (64.3%) |
| 19. Do you share videos of your work?                                    | Yes          | 125 (35.7%) |
|                                                                           | No           | 225 (64.3%) |

20. Do you have any applications related to dentistry or education?       
Yes                                                                         | 45 (12.9%)   
No                                                                          | 305 (87.1%)  

21. Where do you normally use your smartphone for learning activities?     
At library                                                                 
   Regularly                                                                | 109 (31.1%)  
   Often                                                                    | 241 (68.9%)  
   Seldom                                                                   | 0            
   Never                                                                    | 0            
During tutorials/workshop                                                  
   Regularly                                                                | 0            
   Often                                                                    | 138 (39.4%)  
   Seldom                                                                   | 212 (60.6%)  
   Never                                                                    | 0            
Elsewhere on campus                                                        
   Regularly                                                                | 226 (64.6%)  
   Often                                                                    | 124 (35.4%)  
   Seldom                                                                   | 0            
   Never                                                                    | 0            

22. Do you have access to social media (Facebook/Twitter) regularly?       
Yes                                                                         | 275 (78.6%)  
No                                                                          | 75 (21.4%)   

23. Have you found any social media for your education?                     
Yes                                                                         | 295 (70.0%)  
No                                                                          | 15 (4.3)     

24. Social media improves access to your courses and learning material?    
Yes                                                                         | 243 (69.4%)  
No                                                                          | 67 (19.1%)   

25. Social media helps you to learn more independently?                    
Yes                                                                         | 295 (70.0%)  
No                                                                          | 67 (19.1%)   

26. Social media should be utilized by university/teaching staff?          
Yes                                                                         | 243 (69.4%)  
No                                                                          | 107 (30.6%)  

Discussion
In recent years, the explosive growth of social media sites have provided millions of users to create, share the information. Today more and more members of dental profession are using embracing social media for sharing some useful medical information, providing patient care, marketing purpose.

In the present study, 94.9% of the students use smartphone. The study shows that students use social media for education purpose, seminars, online studies, clinical trials, which is in contrast with the study by Shanmuga Priya et al. concluded that 44.5% of the students use smart phone for general and dental purpose.

In the present study, majority of the students use smart phone that are android based 63.1%, 36.9% of the students use iPhone, whereas the study conducted by Saurav Sen et al. showed that 70.4% of the students use android-based smartphones.
In this study, 62.6% of the students showed that they use unlimited amount of data per month, while the study conducted by Kim et al. found that majority of the students use limited data allowance.8

A study conducted by Saurav Sen et al. showed that 58.6% of the college students use wireless connection and 3G mobile carrier, whereas the present study showed that most of the students use wireless connection and 3G mobile carrier.5 The result almost showed the similarity because of the availability of Wi-Fi connection which is provided in colleges.

In the present study, it was found that students tend to get mobile tablet device within the next year, whereas study conducted by Stockwell shows that students like to use mobile phones more than PC, iPods, and tablets.9

In our study, the general use of social media was found to be email purpose, whereas the study conducted by Saurav Sen et al. found that 91.6% students use social media for the same purpose.

According to the study conducted by Wong et al., most of the students prefer social media for managing the schedule; similarly, in our study, it was found that 69.1% of students prefer social media for managing schedule.10

In our study, it was found that the use of social media for taking pictures, editing pictures and videos, uploading it on the web were of very higher rate because of valuable connection with family and friends, similar to the study conducted by Saurav Sen et al., where it was found that usage was 91 and 87%, respectively.

According to our study, it was found that 66.7% students do not synchronize with their home computers, whereas the study by Glenn Stockwell et al. found that most of the students synchronize with their computers because smartphone took long time as compared with home computers.5

According to the study conducted by Saurav Sen et al., it was found that majority of the students (86.7%) use social networking apps as medium of communication for sharing timetable with their colleagues, which was similar to our study students share their time table through networking apps because it is easier for the students to be aware of ongoing issues and notices in the college.

In the present study, it was found that 71.4% of the students look up/place for announcement on social media sites, whereas in the study conducted by Saurav Sen et al., it was found that 83.6% of the students use social media sites for the announcement because it is an easier way of sharing information in daily life.6

According to our study, it was found that 59.1% of the students use to share links with staff/colleagues on social media because of the easy accessibility of mobile phones. In the present study, it was found that students use social media to read/share educational articles upon social media apps (Facebook, WhatsApp) because students use Facebook in their free time.5

According to the study conducted by Saurav Sen et al., 87.4% students watch instructional videos uploaded on the Internet which was in accordance with our study, that is, 80.9% students do the same.

In present study, it was found that 71.1% students surf the web for learning material because it is easy to get learning material in mobile phones if they do not have books to refer similarly it was found in the study conducted by Chen et al.12

According to the study conducted by Saurav Sen et al., 85% students upload photos of their work which is dissimilar to our study, which found that 64.3% students do not upload photos of their work. In accordance with our study, it was also found that 64.3% do not share videos of their work.

In the present study, it was found that 68.9% (often) students normally use their smart phone for learning activities, which was not similar to study conducted by Saurav Sen et al., which was found to be 42.8%. According to our study, students using social media during tutorials/workshop and in campus were 60.6 and 64.6%, respectively. The study shows that the use of smartphone at home was 60.3%, which is similar to the study conducted by Saurav Sen et al.

Almost 78.6% of the students access to social media (Facebook/Twitter) regularly, which is found to be in accordance with study conducted by Spallek et al. as most of the sites used by the students regularly due to day-to-day communication links, videos, news update with growing network of contacts.14

Significant number of students (84.3%) believed that social media improve access to their course and learning material, which is similar to the study conducted by Saurav Sen et al. In present study, 95.7% students think that social media helps to learn more independently which was similar to Zhang et al.15

Wong et al. found that social media is an excellent platform for student discussion of their day-to-day cases, activities, presentations; similarly in our study, it was found that social media should be utilized by university and staff for educational purposes.10

The present study has been conducted to know the assessment of social media usage in dental education. This could be improvement in the curriculum of dental education.16 Some of the limitations of our study were as follows: less number of sample size, questionnaire was distributed only among the study participants, and informative lecture should have been arranged.

Furthermore, our recommendation is to use social media for educational purposes to foster professional behaviors by teaching certain guidelines in continuing education material. There should be filter present available networking sites in the university, which can prevent students from accessing wrong information. Paid research sites should also be available in the university. Therefore, students of various dental college should understand the perception of using social media.

Conclusion
We concluded that in this era of digital media, proper guidance is required to orient the students for maximum benefit in the field of education and academic research investigations. We recommend that Internet cannot completely replace textbooks or professional guidance, but it can serve as excellent adjunct educational tool if utilized properly.

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Usage of Social Media among Students

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