

Research Article

## MEDICAL STUDENTS PERSPECTIVES ON THE ROLE OF SOCIAL MEDIA IN MEDICAL EDUCATION AND TRAINING

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### ABSTRACT

**Objective:** Social media (SM) is an integral part of life. Our study aims to investigate how SM impacts the educational experience of medical students and seek to acquire a better understanding of the scope of studies pertaining to the influence of social media on medical education.

**Materials and Methods:** The participants were given a questionnaire developed by the researchers with a completion time of approximately 5 minutes. The questionnaire comprised inquiries that were designed to evaluate the extent to which students employed SM in their academic pursuits, drawing based on a review of relevant literature.

**Results:** The social media platforms that were predominantly entered were Instagram and YouTube. Moreover, a majority of respondents (48.4%) expressed a preference for a hybrid educational framework that integrates conventional and digital practices. A substantial majority of respondents (70.3%) held the belief that SM does indeed have an impact on medical education.

**Conclusion:** With the impact of developing technology, SM has become an important part of information and medical education. Although the conventional clinical teaching approach remains firmly established in medical education, there is a growing recognition towards the need to integrate technology to enrich the educational experience. In the coming years, educational institutions will prioritize enhancing online education experience and instructors' competencies, as well as facilitating students' disciplined and comfortable participation, so as to add a new dimension to education through the use of technology.

**Keywords:** Medical education, medical students, social media

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## INTRODUCTION

In today's information age, social media has become an integral part of our daily lives. Although often associated with entertainment, these platforms also provide a wealth of educational content across various fields, making them valuable resources for learning.

The COVID-19 pandemic, which began in 2020, along with subsequent lockdowns and quarantine periods, has also significantly increased the global user base of social media. As of 2024, an estimated 5.04 billion people worldwide are active users of social media platforms (1). In our country alone, as of January 2024, there are approximately 57.50 million users (2).

Social media refers to web-based tools that facilitate interaction by enabling individuals to share and access information. Definitions vary, with a general understanding from a dictionary perspective as "websites and software programs used for social networking" (3). Academically, it is viewed as a platform where individuals, rather than professional journalists, can generate and disseminate news and content, thus creating a hub for user-generated information (4).

The rapid access to information via social media is notably quicker than traditional sources. However, this speed also contributes to information pollution, highlighting the importance of verifying the accuracy of content. As technology evolves, social media's role in our lives has expanded, impacting daily activities and contributing to phenomena such as social media addiction (5).

The use of social media is rising across various sectors, offering significant conveniences and opportunities, particularly in the health industry. In recent years, its integration into medical practice has become crucial (6). The popularity of social media is growing every day, helping to increase interaction between medical students and educators. Social media serves varied purposes among different user groups, including healthcare consumers, organizations, professionals, and researchers (7).

Despite its advantages for physicians, the use of non-professional social media tools for professional purposes presents various risks and challenges. These include ethical and legal issues, patient privacy concerns, breaches of confidentiality, and security vulnerabilities (8,9).

This study aims to investigate the impact of social media on the education of medical students at our university.

## MATERIALS AND METHODS

### *Participants*

The study was conducted from May 1, 2023, to November 1, 2023, at the Manisa Celal Bayar University Faculty of Medicine, Hafsa Sultan Hospital Emergency Medicine Clinic Seminar Hall. Led by our research team, this study aimed to investigate the impact of social media on medical education at our university. Participants were involved in completing a multiple-choice questionnaire developed by the researchers, which was expected to take approximately 5 minutes. Responses were documented, and voluntary consent was obtained from all participants. The questionnaires were designed to ensure the confidentiality of the participants and adherence to the Personal Data Protection Law. Participants included students from the

Manisa Celal Bayar University Faculty of Medicine who were also social media users. Approval for this study was obtained from Manisa Celal Bayar University Non-interventional Clinical Research Ethics Committee with decision number 20.478.486 / 03.05.2023.

### Statistical analysis

Descriptive statistics are presented as median (minimum-maximum), mean  $\pm$  standard deviation for numerical variables (age) and categorical values are presented as n (%).

**Table 1.** Students' social media usage habits (n=532)

Questionnaire Questions	n (%)
Do you use social media every day?	
Yes	517 (%97.2)
No	15 (%2.8)
How do access to your social media use?	
Home Internet	483 (%90.8)
Mobile Network	462 (%86.8)
Institution/organization internet	164 (%38.8)
Dormitory/Pension internet	80 (%15.0)
Approximately how much time do you spend on social media in a day?	
Less than 1 hour	20 (%3.8)
More than 1 hour – 2 hours	124 (%23.4)
More than 2 hour – 4 hours	227 (%42.7)
More than 4 hour – 6 hours	125 (%23.5)
6 hours or more	35 (%6.6)
Which social media platforms do you use?	
Instagram	492 (%92.7)
Youtube	488 (%92.1)
Twitter	311 (%58.6)
Tiktok	102 (%19.2)
Facebook	56 (%10.5)
Which social media platform do you use the most?	
Instagram	305 (%58.0)
Youtube	113 (%21.5)
Twitter	95 (%18.1)
Tiktok	12 (%2.3)
Facebook	1 (%0.2)

## RESULTS

A total of 541 students participated in the study, but 9 students were excluded from the study because they did not use social media. The mean age of the participants was 21.52 ( $\pm$ 1.98) and the median age was 22.0 (17.0-32.0). Of the students who indicated their sex, 59.3% were female and 40.7% were male. The distribution of participants across academic terms was as follows: 3.7% in First Year, 33.1% in Second Year, 9.8% in Third Year, 14.1% in Fourth Year, 19.9% in Fifth, and 19.4% in Sixth Year. A significant 97.2% of these students reported using social media daily. Among these, 90.8% accessed the internet from home, and 86.8% used mobile networks. Approximately 42.7% of the participants spent about 2-4 hours daily on social media. The

most popular platforms were Instagram, with a usage rate of 92.7%, closely followed by YouTube at 92.1% (Table 1).

**Table 2.** Students' opinions about online education and platforms (n=532)

Questionnaire Questions	n(%)
Have you received online (distance learning) education prior to your university studies?	
Yes	336 (%63.3)
No	195 (%36.7)
What are your thoughts on online education?	
I am not satisfied at all	95 (%18.0)
Not satisfied	164 (%31.1)
Undecided	158 (%29.9)
I am satisfied	89 (%16.9)
I am very satisfied	22 (%4.2)
What are your opinions about the ability of the instructors to use technology in the online education process within the scope of your courses at the university?	
I am not satisfied at all	42 (%7.9)
Not satisfied	156 (%29.4)
Undecided	179 (%33.8)
I am satisfied	142 (%26.8)
I am very satisfied	11 (%2.1)
Would you prefer a system in which the classical education system and online education system are carried out together in your education process?	
Yes	257 (%48.4)
No	239 (%45.0)
I have no idea	35 (%6.6)
Which online live training platforms have you used before?	
Teams	523 (%98.7)
Zoom	426 (%80.4)
Skype	71 (%13.4)
Others (Google meets, teamlink..)	12 (%2.3)
Which of the online live training platforms do you prefer to use?	
Teams	419 (%84.0)
Zoom	72 (%14.4)
Others (Google meets, teamlink..)	6 (%1.2)
Skype	2 (%0.4)
What is your reason for choosing your preferred education platform?	
Easy of use	488 (%96.8)
Time restriction	44 (%8.7)
Number of users restriction	24 (%4.8)
Other ( school's preference, more organized...)	12 (%2.3)

Before enrolling in the university, 63.3% of the participants reported that they received online education. While 31.1% of the students were not satisfied with online education, 29.9% of them stated that they were undecided about their satisfaction with online education. A total of 26.8% of the students expressed satisfaction with the instructors' ability to utilize technology in the online education process for the purpose of their university courses, while 29.4% remained undecided. A hybrid system that integrates traditional and online education was not preferred by 45% of the students, while 48.4% of them expressed a preference for such a system. 84% of respondents favored Microsoft Teams as their online education platform of choice. Ease

of use was the most frequently cited factor (96.8%) among the reasons individuals cited for favoring an educational platform (Table 2).

**Table 3.** Distribution of students' answers to questions about the role of social media in medical education (n=532)

<b>Questionnaire Questions</b>	<b>n (%)</b>
How often do you use social media for your medical education?	
Never	41 (%7.7)
Sometimes	364 (%68.4)
Usually	88 (%16.5)
Frequently	30 (%5.6)
Always	9 (%1.7)
When you want to research something related to your education, what is the first source you consult?	
Websites	415 (%78.9)
Book/textbook	90 (%17.1)
Consultation with a specialist	16 (%3.0)
Social media	5 (%1.0)
What do you think about the impact of social media on medical education?	
Has an impact	371 (%70.3)
I have no idea	94 (%17.8)
No impact	63 (%11.9)
In which subject(s) do you need to conduct research on social media related to your education?	
Interventional Procedures	330 (%69.9)
Inspection	267 (%56.6)
Imaging Results	259 (%54.9)
Blood tests	204 (%43.2)
Anamnesis	125 (%26.5)
Which of the content producers related to medical education on social media do you trust more?	
Physician	507 (%97.1)
Emergency Medicine Technician	12 (%2.3)
Nurse	2 (%0.4)
Paramedic	1 (%0.2)
Which of the following affects your trust in the person sharing the information?	
Being an expert in the field	510 (%97.0)
Social media sharing platform Number of views	150 (%28.5)
Number of subscribers	126 (%24.0)
Regular sharing	116 (%22.1)
Number of views	85 (%16.2)
Number of likes	63 (%12.0)
Do you feel the need to confirm the information you learn about your education on social media from the source books (such as textbooks)?	
Yes	318 (%60.6)
No	207 (%39.4)
To what extent do you think the information you get on social media covers face-to-face education?	
Not at all	28 (%5.3)
Not covered	158 (%30.2)
Undecided	221 (%42.2)
Inclusive	112 (%21.4)
Very inclusive	5 (%1.0)
Do you have a personal social media account where you share medical content?	
Yes	17 (%3.2)

I plan in the future	93 (%17.6)
No and I don't plan	172 (%32.6)
No, I have no idea	246 (%46.6)

The participants were queried about their perceptions of social media's role in medical education, and their responses were analyzed accordingly. A total of 68.4% of the students reported occasionally using social media for medical educational purposes, 1.7% indicated they always used it, and 7.7% stated they never used it. When seeking information related to their education, 78.9% primarily consulted websites, whereas only five students indicated that social media was their first point of reference.

Overall, 70.3% of the participants believed that social media influences medical education. The most frequently researched topic on social media was "interventional procedures," noted by 69.9% of the students, followed by "physical examination" at 56.6%.

The study findings revealed that 97.1% of students primarily trust physicians as content creators for medical education on social media. The primary determinant of trust in online information sharers was their expertise in the field (97%). Only 12% of students considered the number of likes as a factor influencing their trust in content creators. Furthermore, 318 students (60.6%) felt compelled to verify medical information acquired from social media with source books, whereas 207 students (39.4%) did not find cross-referencing necessary.

A notable proportion of the students (42.2%) remained undecided about whether the information obtained via social media is sufficient to replace face-to-face educational experiences (Table 3).

## DISCUSSION

With digital transformation impacting all sectors worldwide, social media has increasingly integrated into various fields, including education. This study aims to investigate how social media contributes to the education of medical students at the Manisa Celal Bayar University Faculty of Medicine, Hafsa Sultan Hospital Emergency Medicine Clinic Seminar Hall, focusing on equality across social classes and identifying key areas of student-driven research on these platforms.

A substantial majority (98.3%) reported using social media, underscoring its pervasive role in their daily lives. This finding aligns with literature indicating rising social media engagement over the years, as revealed by Correa et al. (2010) reporting a usage rate of 72.5%, Vural et al. noting 85.9% among 319 university students, and Knight-McCord et al. observing a 97% usage rate among 363 students (10,11,12).

Our findings reveal that 97.2% of participants use social media platforms daily, with 42.7% spending approximately 2-4 hours on these platforms. Instagram was found to be the most popular, used by 92.7% of the students, closely followed by YouTube at 92.2%. This preference complies with the findings from other studies as in Güler et al., who reported that 45.6% of university students spend over three hours daily on social media, and Bhola et al., who found an average daily usage of 3.6 hours among students in India (13,14).

Regarding online education, only 21.1% of students were satisfied with purely online formats, while 48.4% favored a hybrid educational model. Additionally, 28.9% were satisfied with educators' technological

skills in online settings. These insights suggest a potential area for improvement in enhancing educators' technology proficiency to better support online education. This preference for in-person learning, particularly for clinical training, is consistent with findings from Atılgan et al., where a significant majority of medical students favored traditional over online education (15).

The literature review highlights a predominant focus on social media addiction, with less emphasis on educational uses. Nevertheless, our study found that 92.3% of students utilize social media for educational purposes, primarily entering such websites as Google or Yahoo when initiating research (78.9%). Additionally, 70.3% acknowledged the impact of social media on medical education. In a study conducted by Toğay et al. it was found that the most frequently used social media tool for educational purposes by students was Youtube with a rate of 58.6% (20). For online trainings, 84% of the participants in the study stated that they preferred Teams application. The main factor affecting this preference was the ease of use and usage habits of the participants (16).

The most frequent educational uses of social media included researching 'interventional procedures' (69.9%) and 'patient physical examinations' (56.6%). 60.6% of students reported the need to verify social media-derived information against reliable source books, reflecting concerns about information accuracy on these platforms.

### ***Limitations***

The data was unable to comprehensively represent all medical education preferences in the country due to the study's single-center design. The absence of social media addiction assessments prevented the determination of the extent of addiction among the participants. Another limitation is the lack of detailed information on the proportion of time spent by the participants on social media only for medical purposes. The role and significance of social media in medical education must be universalized through the implementation of more extensive and multicenter research.

### **CONCLUSION**

In conclusion, as educational institutions continue to embrace digital enhancements, a focus on improving online teaching competencies and facilitating structured and engaging student participation through technology will be crucial.

We believe that in an age where social media has entered every moment of our lives, more sensitivity should be shown in integrating these opportunities into education. We think that the fact that students search more on social media, especially for interventional procedures and physical examination procedures, is an indication that the online education system, which increased in prevalence during the COVID-19 pandemic period, is weak in terms of teaching information by contacting the patient and therefore students seek additional resources. We believe that we can benefit more from the power of social media and online education if the weakness in teachers' ability to use technology, which is one of the main reasons why students express negative opinions about online education, is addressed and the technical infrastructures are well integrated into the traditional education system.

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### **Declaration of competing interest**

The authors declare that they have no competing interests.

### **Ethics**

Written consent was obtained from Manisa Celal Bayar University School of Medicine Ethics Committee ( Accept number: 20.478.486 // 03.05.2023).

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