

## Attitudes Toward Social Media among Practicing Doctors and Medical Students in Clinical Years in Saudi Arabia During the COVID-19 Pandemic

Somaya Abdulrahman\*<sup>1</sup>, Albatul Alqahtani<sup>2</sup>, Eman Alsaber<sup>3</sup>, Jamila Asiri<sup>4</sup>, Kholoud Algeshebi<sup>5</sup>, Rawan Salawati<sup>4</sup> and Wejdan Alzahrani<sup>6</sup>

<sup>1</sup>Private Dental Practice, Makkah, Saudi Arabia

<sup>2</sup>King Khalid University, Faculty of Medicine, Abha, Saudi Arabia

<sup>3</sup>Ministry of Health, Al Iman General Hospital, Obstetrics and Gynecology Department, Riyadh, Saudi Arabia

<sup>4</sup>Umm Al Qura University, Faculty of Medicine, Makkah, Saudi Arabia

<sup>5</sup>King Fahad General Hospital, Neurology Department, Faculty of Medicine, Jeddah, Saudi Arabia

<sup>6</sup>King Fahad General Hospital, Cardiology Department, Jeddah, Saudi Arabia

**\*Corresponding Author:** Somaya Abdulrahman, Private Dental Practice, Makkah, Saudi Arabia.

**Received:** November 09, 2021; **Published:** November 22, 2021

### Abstract

**Introduction:** Social media (SM) use by health care practitioners has been rising significantly, both professionally and in their daily lives.

**Aim:** To assess attitudes about SM among practicing doctors and medical students in clinical years in Saudi Arabia during the COVID-19 pandemic.

**Methods:** This cross-sectional study collected data from 145 medical students and physicians in Saudi Arabia. Data were collected via a self-reported questionnaire that measured the participant's number of SM accounts, number of days spent on SM platforms, reasons for using SM, attitudes about what constitutes unprofessional use of SM, and the effects of COVID-19 on SM use. SPSS was used to analyze the data.

**Results:** The mean (M) days of SM account use was 4.65 days, and the standard deviation (SD) was 2.23. The highest number of days of SM platform use were for WhatsApp (M = 5.24, SD = 2.16) and Snapchat (M = 4.47, SD = 2.49). The most frequent personal reasons for using SM were spending time for leisure (89%) and finding useful information (86.9%). The most common professional reasons for using SM were learning from other professionals (85.5%) and finding medical information (82.1%). The behaviors that were rated most frequently as unprofessional when using SM were posting information/photos about a patient without the patient's permission (76.6%) and using vulgar words (74.5%).

**Conclusion:** Medical students and physicians in Saudi Arabia use SM extensively. The majority reported that posting information/photos about a patient without the patient's permission was unprofessional. COVID-19 was reported to increase SM use. It is recommended to have more restrictive guidelines for posting patient information without permission by medical practitioners in Saudi Arabia.

**Keywords:** Attitudes Toward Social; Practicing Doctors; During the COVID-19 Pandemic

### Abbreviations

M: Mean; SD: Standard Deviation; SM: Social Media

**Citation:** Somaya Abdulrahman., et al. "Attitudes Toward Social Media among Practicing Doctors and Medical Students in Clinical Years in Saudi Arabia During the COVID-19 Pandemic". *EC Neurology* 13.12 (2021): 26-33.

## Introduction

Social media (SM) can be described as any application or website that enables users to create and share content or participate in various forms of social networking [1,2]. SM consists of many platforms, including Twitter, Facebook, Instagram, YouTube, and others. Recently, SM use by health care practitioners has been rising significantly for both professional reasons and private ones related to daily life [3,4].

The coronavirus disease (COVID-19) is an infectious disease caused by a novel coronavirus [5]. The first case was discovered in late December 2019 in Wuhan, China. From there, the infection began spreading on a worldwide level and has become a pandemic [6]. SM platforms have helped people worldwide maintain communication with family and friends and reduce feelings of isolation, which has been associated with anxiety and long-term distress. Therefore, the use of SM has become an important recommendation for reducing the psychological impacts of pandemic distancing [7].

For health practitioners, SM is used to spread acquired knowledge about treating patients and working with colleagues. In addition, SM is used to post important announcements regarding workshops and conferences [8]. Within an educational framework, SM has helped medical students enhance their learning processes. They can also use SM to learn the newest and most updated information and to seek the opinions of others through scientific discussions [9,10].

In one study, around one-third of adults stated that they use the internet to help them diagnose medical conditions [11]. The same number of participants who had internet access used it to look at articles, news groups, and websites regarding the medical knowledge shared by others, and 6% of these individuals have commented, messaged, sent pictures or messages, or even sent health assessments made for them by professionals or institutions on these sites [12]. Another study noted that individuals who suffer from chronic diseases, such as multiple sclerosis, are able to participate in patient communities online, which gives them the opportunity to share their experiences and treatment plans, contact their doctors, and socialize with other patients. SM can also give them the chance to gather detailed information about their diseases [13]. Physicians are also increasingly using SM both professionally and in their daily lives [13].

One study showed that medical students spent the majority of their time on SM for social communication and entertainment [14]. This was also supported by another study [9], in which only 20% of medical students used SM for academic and educational purposes [9]. Studies conducted among students at Arab universities have shown that they mainly used SM for socialization, entertainment, and political and cultural activities [10,15-17]. One study conducted in Saudi Arabia measured physicians' attitudes toward SM use for professional purposes and found that the most commonly used SM platforms among the participants were Facebook (37.9%), YouTube (35.7%), and Twitter (34.5%). The least used platforms were LinkedIn (7.7%) and Instagram (3.9%) [18]. Most of those respondents spent 1-3 hours a day on SM [18]. This is similar to a study from Jordan that stated almost two-thirds of the participants used SM for 3 hours or more each day. It also showed that most medical students used two or more SM sites, although most of those students did not consider SM to be a trusted source for inquiring about medical information. Therefore, more than half of the students rarely or never used SM to gather such data [19].

A study conducted in Jordan showed that most medical students used two or more SM sites/applications, mainly Facebook and Instagram. In a study conducted in South Africa, the participants mainly used SM for personal purposes. Google+ and Facebook were the most frequently used platforms among dentists [20]. Another study also showed that Facebook is the most commonly used platform in the United States [21]. The reasons given by respondents for using SM mostly fell into two categories: marketing (91%) and patient communication (73%) [21]. A study conducted in 2019 stated that the most common professional reasons for SM use among dentists and dental students were watching clinical procedures (videos or live) to learn about them and finding dental information (learning) [22].

As already alluded to, we collected various data regarding the use of SM among medical and dental students around the globe for education or entertainment. However, in Saudi Arabia, no study had been conducted on this subject among doctors and medical students during the COVID-19 pandemic. Therefore, this study aimed to assess attitudes about SM among practicing doctors and medical students in clinical years in Saudi Arabia during the COVID-19 pandemic.

## Methods

This was a cross-sectional study that used a questionnaire to assess attitudes about SM among practicing doctors and medical students in clinical years in Saudi Arabia. The study recruited participants from throughout Saudi Arabia using a convenience sampling technique, sending the study's questionnaire through various SM platforms, including WhatsApp, Instagram, Facebook, Telegram, ResearchGate, and Twitter. The study's inclusion criteria were that respondents should be doctors or medical students who lived and worked in Saudi Arabia at a private or governmental institution. The exclusion criteria were those who would not sign the informed consent form. Data gathering was conducted from October 2021 to November 2021.

The questionnaire, which was adopted from previous studies [22], consisted of 41 items divided into three main sections. The first section's six questions were meant to gather sociodemographic information, including gender, age, place of study, and work region. The second section consisted of three questions asking about the general use of SM among the participants. The two types of answers to these questions were short answer replies or yes/no answers. The third and final section of the questionnaire consisted of two parts. The first part had two questions with multiple-choice answers determining the principles of professionalism in using SM according to the participants, and the second part had three questions asking about the use of SM during the COVID-19 pandemic. Answering the questionnaire took respondents approximately 5 minutes.

Data were collected, tabulated, and analyzed using SPSS version 25 (IBM Corp., Armonk, NY, USA). Descriptive analysis was completed using mean (M), standard deviation (SD), frequency, and percentage. The statistically significant level was set at 0.05. Chi-square, t-test, and ANOVA were used for the analysis. All data were treated anonymously to protect the participants' confidentiality, and they were stored on a private computer accessed only by the researcher.

**Results**

The data were taken from a total of 145 participants, who were aged M = 25.31, with SD = 5.37. Table 1 shows the demographic data of the study participants.

	<b>Variable</b>	<b>Frequency</b>	<b>%</b>
Gender	Male	25	17.2%
	Female	120	82.8%
Qualification	Student	84	57.9%
	Intern	8	5.5%
	General practitioner/resident	42	29.0%
	Specialist/consultant	11	7.6%
Organization	Governmental college	127	87.6%
	Private college	18	12.4%
Region in Saudi Arabia	Western	96	66.2%
	Central	10	6.9%
	Southern	22	15.2%
	Eastern	13	9.0%
	Northern	4	2.8%
Nationality	Saudi	139	95.9%
	Non-Saudi	6	4.1%

**Table 1:** Participant demographic data.

The participants had different numbers of active SM accounts, with M = 4.65 SM accounts, with SD = 2.23. The number of days spent using different SM accounts is shown in table 2.

<b>Social media platform</b>	<b>M</b>	<b>SD</b>
WhatsApp	5.24	2.16
Snapchat	4.47	2.49
YouTube	4.32	2.34
Instagram	3.79	2.54
Twitter	3.62	2.76
TikTok	2.17	2.68
Facebook	0.34	1.14
LinkedIn	0.26	0.89

**Table 2:** Number of days participants used different social media platforms.

The attitudes of medical students and physicians about the use of SM are discussed in the following sections, including reasons for the use of SM, unprofessional use of SM, and the effects of COVID-19 on SM use.

The participants' personal reasons for using SM are detailed in table 3. The participants' professional reasons for using SM are shown in table 4.

Personal reasons for SM use		Frequency	%
Find useful information	Yes	126	86.9%
	No	19	13.1%
Socializing	Yes	118	81.4%
	No	27	18.6%
Sharing photos, files, music, videos	Yes	108	74.5%
	No	37	25.5%
Sharing your ideas	Yes	80	55.2%
	No	65	44.8%
Business (buy or sell general items)	Yes	51	35.2%
	No	94	64.8%
Spending time for leisure	Yes	129	89.0%
	No	16	11.0%
Curiosity	Yes	107	73.8%
	No	38	26.2%

**Table 3:** Personal reasons for using social media (SM) among medical students and physicians.

Professional reasons for SM use		Frequency	%
Finding medical information (learning)	Yes	119	82.1%
	No	26	17.9%
Watching clinical procedure (videos or live) for learning	Yes	115	79.3%
	No	30	20.7%
Learning from other professionals (peer learning)	Yes	124	85.5%
	No	21	14.5%
Virtual meeting with other students/faculty	Yes	110	75.9%
	No	35	24.1%
Sharing medical content such as files, pictures, X-rays, and other	Yes	104	71.7%
	No	41	28.3%
Professional marketing as a physician	Yes	48	33.1%
	No	97	66.9%
Developing an e-portfolio for future employment	Yes	68	46.9%
	No	77	53.1%
Communicate with patients	Yes	50	34.5%
	No	95	65.5%
Increase well-being (such as self-esteem) by positive feedback from people	Yes	78	53.8%
	No	67	46.2%

**Table 4:** Professional reasons for using social media (SM) among medical students and physicians.

Participants had different beliefs about the unprofessional use of SM, which are detailed in table 5.

Behavior	Professional behavior?	Frequency	%
Posting information/photos about a patient without the patient's permission	Yes	111	76.6%
	No	34	23.4%
Posting information/photos about a patient <i>with</i> the patient's permission	Yes	55	37.9%
	No	90	62.1%
Attitudes of superiority or high ego levels	Yes	103	71.0%
	No	42	29.0%
Critical comments about university staff, a student, or a medical colleague	Yes	93	64.1%
	No	52	35.9%
Critical comments about university or place of work in an organization	Yes	89	61.4%
	No	56	38.6%
Using vulgar words (swearing)	Yes	108	74.5%
	No	37	25.5%
Comments about controversial scientific issues	Yes	69	47.6%
	No	76	52.4%

**Table 5:** Participant beliefs about the unprofessional use of social media.

The COVID-19 pandemic had different effects on medical students and physicians in the study sample. A total of 120 (82.8%) participants reported an increase in the duration of use of SM platforms during the COVID-19 pandemic. Also, 45 participants (31%) reported increased engagement with people on SM platforms due to the COVID-19 pandemic. Finally, 120 (70.3%) participants believed that the COVID-19 pandemic caused them to use different SM platforms.

When comparing the number of SM platforms used and the number of days spent on the various SM media platforms against gender, qualification, and organization, few differences were found. This can be seen in table 6.

	Number of SM sites	Facebook	Twitter	Instagram	Snapchat	WhatsApp	LinkedIn	YouTube	TikTok
	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)
Gender									
Male	4.52 (2.58)	0.64 (1.08)	3.52 (2.84)	2.76 (2.37)	3.76 (2.77)	5.44 (2.16)	0.32 (0.56)	4.96 (2.26)	1.44 (2.22)
Female	4.67 (2.16)	0.28 (1.15)	3.64 (2.75)	4 (2.53)*	4.62 (2.41)	5.2 (2.17)	0.25 (0.95)	4.18 (2.34)	2.33 (2.74)
Qualification									
Student	4.9 (2.36)	0.05 (0.21)	3.82 (2.57)	3.68 (2.55)	4.3 (2.32)	4.95 (2.28)	0.21 (0.89)	3.96 (2.34)	2.61 (2.67)
Intern	4.25 (1.49)	0.13 (0.35)	4.5 (2.83)	5.38 (1.92)	6.25 (1.49)	6.13 (1.64)	0.38 (1.06)	5.38 (2.07)	2.5 (3.02)
General practitioner/resident	4.57 (2.09)	0.83 (1.86)	3.36 (3.05)	3.62 (2.53)	4.69 (2.7)	5.62 (1.92)	0.26 (0.86)	5.07 (2.16)	1.62 (2.75)
Specialist/consultant	3.27 (1.85)	0.91 (1.45)**	2.45 (2.88)	4.09 (2.84)	3.64 (3.04)	5.36 (2.34)	0.55 (0.93)	3.36 (2.5)	0.73 (1.19)
Organization									
Governmental college	4.68 (2.17)	0.28 (1.01)	3.83 (2.69)	3.9 (2.53)	4.51 (2.46)	5.28 (2.17)	0.22 (0.81)	4.35 (2.37)	2.31 (2.73)
Private college	4.44 (2.71)	0.83 (1.79)	2.17 (2.87)*	3 (2.57)	4.17 (2.77)	5 (2.2)	0.56 (1.34)	4.06 (2.15)	1.22 (2.1)

M = Mean, SD = standard deviation.

\*p < 0.05.

\*\* Only general practitioners had a significantly higher number of days using Facebook than students.

The other subcategories were not significantly different.

**Table 6:** Number of social media (SM) sites visited and days spent on different SM platforms by medical students and physicians, by gender, qualification, and organization.

## Discussion

The aim of this study was to assess attitudes toward SM among practicing doctors and medical students in clinical years in Saudi Arabia during the COVID-19 pandemic. In general, the participants had different numbers of SM accounts ( $M = 4.65$ ,  $SD = 2.23$ ). Regarding the number of days spent using different SM accounts, WhatsApp had the highest number ( $M = 5.24$ ,  $SD = 2.16$ ), followed by Snapchat ( $M = 4.32$ ,  $SD = 2.49$ ) and YouTube ( $M = 4.32$ ,  $SD = 2.34$ ), while LinkedIn ( $M = 0.26$ ,  $SD = 0.89$ ) and Facebook ( $M = 0.34$ ,  $SD = 1.14$ ) were the least frequently used apps. This finding is similar to a study conducted by Aboalshamat [22] among dentists and dental students that showed WhatsApp, Snapchat, and Instagram were the most frequently used, while Facebook and LinkedIn were used only by some participants and had abnormal data distributions, with a median of 0, minimum of 0, and maximum of 7 days. Another study stated that most respondents used YouTube (58%) and Facebook (50%), but this result may be due to cultural differences [23].

Regarding the attitudes of medical students and physicians about the use of SM for personal reasons, most of the participants reported doing so to spend time on leisure (89%) and to find useful information (86.9%). Conversely, sharing ideas (55.2%) and conducting business by buying or selling goods (35.2%) were the least frequently cited personal reasons for SM use.

Regarding professional reasons for using SM, the most commonly cited reasons were learning from other professionals (peer learning; 85.5%) and learning by finding medical information (82.1%). A study conducted in Taibah reported that 44% of students used SM to inquire about medical information [19]. The least frequently chosen reasons for professional SM use were marketing as a physician (33.1%) and communicating with patients (34.5%), which is similar to the findings of other studies. The first study stated that more than half of the participants did not interact with patients using SM, and 57.5% of the respondents did not discuss SM use with patients [18]. However, in another study, 59% were opposed to employing SM for patient interaction [33]. In another study a survey was sent to the American Society of Plastic Surgeons members showed that most of plastic surgeons use SM for practice branding, attract patients, and public educational purpose [27]. A study made by Merry Markham Stated that participation in online case-based discussion is an important opportunity for professional development [28]. Now a days Twitter has become the second-best frontier for the traditional journal club by taking the discussion out of the classroom and into the public, international space [28]. Therefore, networking and connecting with other medical practionairs on SM is one of the main positive impacts of participation [28].

Participants' beliefs about unprofessional use of SM included posting information or photos about a patient without the patient's permission (76.6%) and using bad words (swearing; 74.5%) as the top two unprofessional behaviors. The behaviors that were least frequently cited as unprofessional were making comments about controversial scientific issues (47.65%) and posting information/photos about a patient with the patient's permission (37.9%). A study conducted in Australian medical schools reported that only 1.6% of its respondents have posted patient information online [24]. Other than the unprofessional use of SM there is a negative impact of SM such as social addiction wich was suggested by a study done in Pakistan that it can result in task distraction which is further enhanced by jealousy and social anxiety among nurses [29].

The COVID-19 pandemic had a significant effect on medical students and physicians in terms of SM use. The majority of this study's participants reported an increase in the duration of SM platform use during that period. Due to the COVID-19 pandemic, around 31% reported an increase in their engagement with people on SM platforms. Finally, 70.3% of the respondents believed that the COVID-19 pandemic had made them use different SM platforms than they had previously used. These findings are similar to 2020 study's findings that whenever there is an outbreak, the majority of people turn to SM to gather information. The study noted that on March 11, 2020, there were nearly 20 million mentions of coronavirus on SM [26].

When comparing the number of active SM platforms and the days spent on different SM sites against gender, qualification, and organization, the results showed no significant differences for gender, organization, or qualification. However, there was a notable difference in the number of days using Facebook among general practitioners in comparison to students.



The present study had many limitations, including being conducted online using a convenience sampling method, which makes interacting with participants much harder. In addition, the size of the data set is relatively small.

## **Conclusion**

In conclusion, medical students, and physicians in Saudi Arabia use SM extensively. The majority reported that posting information/photos about a patient without patient permission is unprofessional. COVID-19 was reported to increase their SM use. It is recommended that more restrictive guidelines be set for posting information about patients without their permission by medical practitioners in Saudi Arabia.

## **Bibliography**

1. "Social media N." Oxford English Dictionary (2018).
2. Kaplan AM and Haenlein M. "Users of the world, unite! The challenges and opportunities of social media". *Business Horizons* 53.1 (2010): 59-68.
3. Osman A and Wardle A. "Is it time for medicine to update its Facebook status?" *British Medical Journal* 343 (2011): d6334.
4. Mansfield SJ, et al. "Social media and the medical profession". *Medical Journal of Australia* 194.12 (2011): 642-644.
5. Coronavirus Disease (COVID-19). World Health Organization (2020).
6. Chakraborty I and Maity P. "COVID-19 outbreak: Migration, effects on society, global environment and prevention". *Science of the Total Environment* 728 (2020): 138882.
7. Brooks SK, et al. "The psychological impact of quarantine and how to reduce it: Rapid review of the evidence". *The Lancet* 395.10227 (2020): 912-920.
8. Javed MW and Bhatti R. "Usage of social media by medical and dental students at Nishtar Medical College, Multan, Pakistan". *Journal of Hospital Librarianship* 15.1 (2015): 53-64.
9. Guraya SY. "The usage of social networking sites by medical students for educational purposes: A meta-analysis and systematic review". *North American Journal of Medical Sciences* 8.7 (2016): 268-278.
10. Guraya SY, et al. "Measuring the extent and nature of use of social networking sites in medical education (SNSME) by university students: Results of a multi-center study". *Medical Education Online* 23.1 (2018): 1505400.
11. Fox S and Duggan M. "Health Online 2013". *Pew Research Center* (2013).
12. Fox S. "Peer-to-Peer Healthcare". *Pew Research Center* (2011).
13. Lewis P. "86% of physicians use internet to access health information". *American Medical News* (2010).
14. Byrne-Davis L, et al. "An international study of consumption and contribution to social media by medical students". *Journal of the European Association for Health Information and Libraries* 11.2 (2016): 25-33.
15. Hamade Samir N. "Perception and use of social networking sites among university students". *Library Review* 62.6/7 (2013): 388-397.
16. Shen K and Khalifa M. "Facebook Usage Among Arabic College Students: Preliminary Findings on Gender Differences". *University of Wollongong in Dubai-Papers* (2010).
17. AlFaris E, et al. "The pattern of social media use and its association with academic performance among medical students". *Medical Teacher* 40.1 (2018): S77-S82.

18. Alanzi T and Al-Yami S. "Physicians' attitude towards the use of social media for professional purposes in Saudi Arabia". *International Journal of Telemedicine and Applications* (2019): 6323962.
19. Saadeh RA., et al. "Determining the usage of social media for medical information by the medical and dental students in northern Jordan". *Journal of Taibah University Medical Sciences* 15.2 (2020): 110-115.
20. Snyman L and Visser JH. "The adoption of social media and social media marketing by dentists in South Africa". *SADJ* 69.6 (2014): 258-260.
21. Henry RK., et al. "A survey of US dental practices' use of social media". *Journal of Contemporary Dental Practice* 13.2 (2012): 137-141.
22. Aboalshamat K., et al. "Attitudes toward social media among practicing dentists and dental students in clinical years in Saudi Arabia". *The Open Dentistry Journal* 13.1 (2019): 143-149.
23. Wang AT., et al. "Using social media to improve continuing medical education: A survey of course participants". *Mayo Clinic Proceedings* 87.12 (2012): 1162-1170.
24. Jain K., et al. "A new wave of urologists? Graduating urology residents' practices of and attitudes toward social media". *Canadian Urological Association Journal* 12.7 (2018): E298-E313.
25. Barlow CJ., et al. "Unprofessional behaviour on social media by medical students". *Medical Journal of Australia* 203.11 (2015): 439.
26. Anwar A., et al. "Role of mass media and public health communications in the COVID-19 pandemic". *Cureus* 12.9 (2020): e10453.
27. Cho MJ., et al. "Current trends in the use of social media by plastic surgeons". *Plastic and Reconstructive Surgery* 146.1 (2020): 83e-91e.
28. Markham MJ., et al. "Social media for networking, professional development, and patient engagement". *American Society of Clinical Oncology Educational Book* 37 (2017): 782-787.
29. Majid A., et al. "From envy to social anxiety and rumination: How social media site addiction triggers task distraction amongst nurses". *Journal of Nursing Management* 28.3 (2020): 504-513.

**Volume 13 Issue 12 December 2021**

**©All rights reserved by Somaya Abdulrahman., et al.**