Assessing The Role Of Social Media In Dental Education Among Dental Students In MAHSA University During COVID-19 Pandemic

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ABSTRACT

One can definitely agree that social media has been a significant place to obtain information and aid in completing various tasks. In the perspective of dental students, the quality of education depends on the accessibility to reading materials, comprehensive ability, training and exposure to clinical cases by the lecturers, and practicing acquired skills on consented patients. Nevertheless, during the Covid-19 pandemic most students have to depend solely on online classes and social media platforms in order to familiarize themselves with clinical based cases and to enhance their knowledge. Thus the aim of our research was to investigate and report the impact of social media and correlate it to the level of dental education among dental students during Covid-19 pandemic through a structured questionnaire comprising of 16 questions acquired and adopted from several reference articles with validated questionnaires survey form among 128 dental students at Mahsa University, where preclinical students were 50 while clinical students were 78 respectively. We have found that, 119 (93%) of the students access social media regularly. 104 (81.3%) of the students read/share educational articles on social networking apps. 112 (87.5%) of them follow educational groups on social media. 112 (87.5%) students agree that social media helps in their dental education and according to 107 (83.6%) students, social media helps them to learn more independently. Thus, we have come to conclude that, social media really helps the students with their education during the Covid-19 pandemic.

Keywords: Covid-19, Social media, Dental education, Preclinical, Clinical

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INTRODUCTION

The use of digital platforms, especially social media is not something new in the 21st century. People's access to information has shifted as a result of the digital revolution. The Internet provides access to far more knowledge than any single individual could ever consume.[1] Individuals can attain facts and documentations via the Internet with just a single click on their mouse or mobile screens. Arguably, the level of education in individuals has seen much improvement compared to the last decade, as educational materials have been more attainable than ever thanks to the array of choices and uploads through online websites and social media platforms.[2] However, having information readily available has drawbacks; for example, not all information available on the Internet is trustworthy and dependable. The inability to segregate between reliable and false information is indeed a major drawback.[3] As a result, technology has changed not only the amount of information available to students, but also the types of

abilities pupils need to recognize reliable information and the places where learning takes place. Technology has also enabled learning to take place outside of the classroom. Students are no longer constrained to face-to-face learning, thanks to advancements that allow them to choose whether to attend class in person, online, or in a hybrid format.[4]

The expansion of Internet access and the widespread availability of computers have significantly increased opportunities for learning beyond traditional classrooms. The amount of research into the effects of technology in the classroom is growing rapidly; however, there is ongoing debate regarding whether technology has a significant and consistent impact on student learning outcomes.[5] Nonetheless, current evidence suggests that technology is being integrated to foster a specific set of 21st-century skills such as collaboration, digital literacy, problem-solving, and self-directed learning.[6] In addition to improving accessibility, technology enables personalized and flexible learning experiences both inside and outside the classroom environment.[7] While these are key advantages, it is equally important to understand how technology-based instruction is designed, implemented, and supported to ensure its effectiveness in educational settings.

AIM

To investigate the impact of social media on dental education and its association with the level of dental education among dental students during the COVID-19 pandemic.

MATERIALS AND METHODS

A descriptive study was conducted among preclinical and clinical undergraduate dental students at MAHSA University from March 2021 to April 2022 using a validated, structured, closed-ended questionnaire referenced from the study by Sen et al. Ethical approval was obtained from the Research Management Center, MAHSA University (Ref. RMC/EC42/2021). The minimum required sample size was calculated as 126 students using Power and Sample Size software, with 80% power and a 95% confidence level. A total of 128 dental students from Years 1–5 were selected using simple random sampling. The questionnaire was administered online through Google Forms over three months, from June to August 2021. A student representative from each academic year was contacted to distribute the questionnaire link through social media, primarily WhatsApp. Participation was voluntary, and informed consent was obtained from each participant before questionnaire completion.

INCLUSION CRITERIA

Year 1 to Year 5 dental students in MAHSA University.

EXCLUSION CRITERIA

1. Postgraduate students
2. Dental students of other universities
3. Graduated dental students.

STATISTICAL ANALYSIS

Cross-tabulation analysis was done to analyze the data collected using the SPSS version 28.

RESULTS

Table 1. Data collected amongst the 128 undergraduate dental students at MAHSA University, of which 50 were preclinical students and 78 were clinical students.

No.	Question	Response	Pre-clinical		Clinical		Total	
			n	%	n	%	n	%
1.	Do you access social media regularly?	Yes	42	84.0%	77	98.7%	119	93.0%
		No	8	16.0%	1	1.3%	9	7.0%
2.	Do you use social networking apps (Facebook, WhatsApp) to share your course timetable?	Yes	39	78.0%	76	97.4%	115	89.8%
		No	11	22.0%	2	2.6%	13	10.3%
3.	Do you use social media to share links related to dental course with staff/classmates?	Yes	38	76.0%	69	88.5%	107	83.6%
		No	12	24.0%	9	11.5%	21	16.4%
4.	Do you read/share educational articles on social networking apps(Facebook/WhatsApp)?	Yes	37	74.0%	67	85.9%	104	81.3%
		No	13	26.0%	11	14.1%	24	18.8%
5.	Do you follow any educational groups on social media (eg: Facebook/WhatsApp)	Yes	44	88.0%	68	87.2%	112	87.5%
		No	6	12.0%	10	12.8%	16	12.5%
6.	Do you watch instructional educational videos uploaded on the internet (YouTube, Facebook)?	Yes	49	98.0%	77	98.7%	126	98.4%
		No	1	2.0%	1	1.3%	2	1.6%
7.	Do you discuss clinical cases on social networking apps (Facebook/WhatsApp)?	Yes	37	74.0%	59	75.6%	96	75.0%
		No	13	26.0%	19	24.4%	32	25.0%
8.	Do you surf the internet for learning material?	Yes	49	98.0%	78	100.0%	127	99.2%
		No	1	2.0%	0	0.0%	1	0.8%
9.		Yes	28	56.0%	43	55.1%	71	55.5%

No.	Question	Response	Pre-clinical		Clinical		Total	
			n	%	n	%	n	%
	Do you have any mobile applications related to dentistry or education?	No	22	44.0%	35	44.9%	57	44.5%
10.	Does social media help in your education process?	Yes	42	84.0%	70	89.7%	112	87.5%
		No	8	16.0%	8	10.3%	16	12.5%
11.	Does social media improve access to your courses and learning material?	Yes	44	88.0%	72	92.3%	116	90.6%
		No	4	12.0%	6	7.7%	12	9.4%
12.	Does social media helps you to learn more independently?	Yes	39	78.0%	68	87.2%	107	83.6%
		No	11	22.0%	10	12.8%	21	16.4%
13.	Should social media be utilized more by university/teaching staff?	Yes	36	72.0%	70	89.7%	106	82.8%
		No	14	28.0%	8	10.3%	22	17.2%

According to table 1, we have found that, among the 128 dental students surveyed at MAHSA University during the COVID-19 pandemic, comprising 50 pre-clinical and 78 clinical students, social media and online resources were widely used for educational purposes. Overall, 93.0% regularly accessed social media, 89.8% used social networking applications to share course timetables, 83.6% shared dental course-related links, and 81.3% read or shared educational articles, with higher proportions reported among clinical students than pre-clinical students. Most respondents followed educational groups (87.5%), watched instructional videos online (98.4%), and searched the internet for learning materials (99.2%), demonstrating extensive engagement with digital learning resources across both groups. Clinical case discussions were reported by 75.0% of respondents, whereas possession of dentistry- or education-related mobile applications was comparatively lower (55.5%), with similar proportions in both groups. Regarding perceived educational benefits, 87.5% reported that social media supported their educational process, 90.6% indicated improved access to courses and learning materials, and 83.6% perceived greater support for independent learning; these perceptions were more frequently reported by clinical students. Furthermore, 82.8% supported greater use of social media by university or teaching staff, with a higher proportion among clinical students (89.7%) than pre-clinical students (72.0%). Overall, the findings suggest a favourable perceived role of social media in supporting dental education, with clinical students generally reporting greater academic use and more positive perceptions; however, these descriptive findings do not establish a causal impact on learning outcomes or a statistically significant association with the level of dental education.

DISCUSSION

Digital platforms and social media have undoubtedly played a significant role in enhancing knowledge acquisition for individuals in the dental field, expanding learning opportunities beyond the traditional classroom setting.[8] A majority of dental students reported using the Internet regularly and acknowledged that social media platforms have improved their access to learning materials. With just a single tap on their smartphones, students can access a wide array of educational content, including scholarly articles, discussion groups, and tutorial videos.[9,10] Furthermore, many participants indicated that they frequently share and discuss clinical cases posted on social media with their peers, promoting peer-to-peer learning and collaborative discussion. Approximately half of the surveyed students reported downloading mobile applications related to their studies, emphasizing the growing relevance of mobile learning in dental education.[11] Overall, the findings of this research highlight the supportive role of social media in fostering independent learning among dental students. Respondents largely agreed that social media should be integrated more thoroughly into the dental curriculum.

Despite these benefits, social media cannot fully replace face-to-face learning particularly in dentistry, a profession that is inherently hands-on. Clinical experience with real, consented patients remains an essential component of dental training.[12] Reduced face-to-face interaction between students and lecturers was also reported to negatively impact engagement during lecture sessions.

Moreover, the overwhelming volume of online information makes it difficult for inexperienced undergraduate students to distinguish credible sources from unreliable ones, increasing the risk of misinformation.[13] Compounding this issue is the fact that procedures accepted in one country may not be applicable in another due to variations in local regulations and standards, even though all countries strive to adhere to guidelines from organizations such as the WHO and FDI.[14] Another concern is the digital divide: if digital platforms become the sole medium for education in the future, students in rural or underserved areas may struggle to access online learning due to poor internet connectivity. This can exacerbate educational inequality.[15] A study by Spallek et al.[16] (2010) found that social media was commonly used for emailing, peer discussions, and knowledge exchange. Around 91.6% of students reported using it for these purposes. Similarly, their study noted that students uploaded videos for educational purposes more frequently than the general population, a trend echoed by

our findings (~91%). Kim et al.[10] (2014) observed that mobile phones were often used by students for sharing syllabi and timetables, which aligns with our data showing that 89.98% of students used networking apps for this purpose. Cavus and Ibrahim[17] (2009) reported that online discussion boards were the primary communication tool for facilitating learning activities, consistent with our findings in which 75% of students discussed clinical cases through apps like Facebook and WhatsApp.

CONCLUSION

This research demonstrates that social media significantly facilitates learning among dental students, especially during the COVID-19 pandemic. The responses and behavior observed in this study reflect those found in previous research, indicating that social media is indeed a useful, accessible, and effective tool in dental education. Therefore, the null hypothesis stating that there is no increase in social media use for dental education among MAHSA University students during the COVID-19 pandemic is rejected.

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