

The use of social media (communication applications) in the training of medical students, especially oral and maxillofacial surgery residents in Iran

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To Editor,

Social media platforms have revolutionized how we communicate and share information across various life domains. Lately, the impact of social media on education and professional training has gained remarkable attention. Medical education, a complex and continuous learning process, necessitates adaptability to field advancements. Traditionally, medical training predominantly hinged on textbooks, lectures, and practical hands-on experience. However, the advent of social media has introduced innovative pathways for the dissemination of knowledge, collaboration, and networking among medical professionals.

Oral and maxillofacial surgery residency programs in Iran grapple with distinct challenges due to resource constraints and the demand for superior training. Social media platforms like WhatsApp, Telegram, and Instagram have become increasingly popular among medical educators and learners. These platforms provide miscellaneous opportunities to enrich medical education, such as sharing educational materials, discussing case studies, and fostering mentorship. This article delves into the utilization of social media, particularly communication applications, in medical student training, focusing on oral and maxillofacial surgery residents in Iran.

Education with social media: reality or dream?

The popularity of social media platforms like Telegram, WhatsApp, and Instagram is growing rapidly. These applications provide a multitude of advantages for assistants in oral and maxillofacial surgery. They can stay updated in their field, connect with colleagues worldwide, and share experiences. Given the intricacy of this profession, social media can play a vital role in assistant training. They provide an interactive and engaging

platform to access educational materials, incorporating photos, videos, and feedback from other assistants. This approach enriches the training experience, making it both challenging and interesting.¹

Although widely popular, WhatsApp, Telegram, and Instagram are not tailored for oral and maxillofacial surgery education. Their core features include messaging, media sharing, and socializing.² According to new studies, 54% of oral, maxillofacial surgeons regularly use social media, mainly for content related to maxillofacial surgery. 65% use YouTube, 48% Instagram, and 16% use WhatsApp, and 97% of people get their information from videos and 82% from movies. In the same study, 69% of participants stated that social media significantly contributed to their internship training.³

WhatsApp Application

On account of its free usage and superior features, WhatsApp has drawn more attention than other messaging applications.⁴ Previous studies have shown that WhatsApp significantly improves communication among oral, maxillofacial, and facial surgery teams. It facilitates the exchange of panoramic radiographic images, CBCT, and MRI videos, as well as clinical and laboratory information. A recent study also highlights the reliability of instant messaging applications in evaluating maxillofacial fractures through the sharing of radiological images.^{5,6}

Its user-friendly interface, rapid data transfer, ability to share photos and videos, as well as voice and video call functionalities, render it an effective platform for consultation and treatment idea exchange during medical emergencies.⁴

Instagram application

Instagram serves as a beneficial social media platform

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for oral and maxillofacial surgery. It not only promotes medical services and improves patient communication, but also increases public awareness. A study by Meira et al underscores its efficacy in communication based on visual content.⁷

In recent years, Instagram has emerged as the favored social media platform for disseminating educational and promotional content to a wide range of audiences. According to a previous report, the prevalence of Instagram accounts in oral and maxillofacial surgery residency programs was found to be lower (18.7%) than those in plastic surgery (74.7%) and otolaryngology (35%) residency programs.

However, recent studies reveal that by 2021, 53.3% of U.S. oral, maxillofacial, and facial surgery residency programs had established Instagram accounts. This marks a substantial increase from 18.7% in May 2020 to 53.3% in December 2020, reflecting the growing inclination of assistants in these programs to utilize Instagram.^{8,9}

Telegram application

Features of Telegram, including large group chats, broadcast channels, polls, and robust security, facilitate easy access to educational resources, provide limitless sharing capabilities, and foster collaborative learning among peers.¹⁰

The effectiveness of WhatsApp, Telegram, and Instagram in assistant training, when compared to conventional methods, remains equivocal. However, these platforms provide advantages in both education and communication. They support instant messaging, file sharing, and video calling, which facilitate real-time dialogues and demonstrations between instructors and trainees. This proves especially beneficial in remote learning scenarios. Moreover, these platforms enable the establishment of groups or channels for disseminating educational content to a broader audience. Trainees have the opportunity to access a variety of resources, including videos, images, articles, and discussions pertinent to oral and maxillofacial surgery.¹¹

The advantages of utilizing social media in the training of assistants for oral and maxillofacial surgery

Therefore, in general, social media can benefit the training of assistants in oral and maxillofacial surgery in several ways:

1. *Communication and collaboration:* These platforms enable immediate communication between trainers and trainees, fostering information exchange, discussions, and guidance. The provision of real-time feedback from instructors enriches the learning process.
2. *Multimedia sharing:* These applications empower residents to share images or videos of patient cases for collaborative discussion and analysis during their training. Professors can offer feedback on surgical

techniques and propose alternative approaches.

3. *Educational resources:* Groups or channels on WhatsApp and Telegram can be established to disseminate educational materials such as articles, research papers, case studies, and surgical videos related to maxillofacial surgery. These resources can be accessed conveniently by assistants to broaden their knowledge base.
4. *Virtual training:* Experienced maxillofacial surgeons can host live sessions on Instagram or Telegram to demonstrate surgical procedures and engage in related discussions. Assistants can participate actively by posing questions and seeking clarifications.
5. *Peer training:* These platforms allow trainees to connect with fellow surgical assistants to exchange experiences, deliberate on challenging cases, and seek advice. This peer-to-peer learning cultivates a collaborative environment.
6. *Continuing education:* These platforms keep residents informed about conferences, workshops, webinars, and other educational events related to maxillofacial surgery. This enables trainees to stay updated with the latest advancements in the field and engage in pertinent training activities.⁸⁻¹³

Reality & Limitation

Hands-on training and direct supervision are crucial in surgical training. While tech applications enhance training, they can't fully replace traditional methods involving interaction with experienced surgeons and hands-on operating room experience. The effectiveness of these programs for oral and maxillofacial surgery assistants depends on their integration into a comprehensive training program combining traditional and modern tools.^{13,14}

Recent studies indicate a remarkable increase in the utilization of Instagram by residency programs for oral and maxillofacial surgery. Numerous educational institutions actively leverage this social media platform. However, with the continuous evolution of social media, it becomes imperative to devise appropriate and efficacious applications of Instagram within assistant programs. Despite its benefits, the use of social media in education has certain drawbacks, such as the potential for assistants to squander valuable time on non-educational content.^{2,9}

Social media has not yet assumed a formal role in medical education, largely due to the prevalence of conservative and traditional teaching methodologies in clinical environments, coupled with concerns about data privacy.^{2,14}

Patient privacy and rights must always be safeguarded, even on social media platforms. Only patient information that has received explicit consent can be disseminated or shared. When securing consent, it should be communicated that patient data or photographs will be shared on social media. Extra caution is necessary for procedures involving the jaw and face, as patients can be

readily identified from the published images.¹²

Studies in emergency medicine indicate that the use of digital tools rooted in social networks can help save time in training sessions. The establishment of a virtual environment for assistant Q&A fosters the education of emergency medicine assistants, accelerates the learning process, and saves time for both faculty members and assistants. Given the importance and role of social networks in communication, collaboration, and the exchange of scientific information, it is advisable to further develop their educational use.¹⁵

A study conducted in Tehran, Iran, revealed that mobile learning is widespread among dental students at the Tehran University of Medical Sciences. Approximately, half of these dental students utilize smartphones to access software or educational resources related to dentistry.¹⁶

In a study, it was found that 43% of participants expressed no apprehension regarding the utilization of medical content on social media. While social media platforms are frequently employed for personal and social interactions, their use for medical education necessitates evidence-based endorsement, given the crucial aspect of dealing with human lives.^{3,13}

Among the constraints of this study, it is worth noting that educational use of social networks necessitates high-speed internet and unhindered access to these platforms. However, due to the limited internet speed and restrictions on social networks like WhatsApp, Telegram, and Instagram in Iran, such access is unattainable.

Conclusion

The employment of social media and communication applications in the education of medical students, specifically oral and maxillofacial surgery residents in Iran, has demonstrated significant potential for enriching medical education. This is achieved by offering convenient access to information, collaboration with peers and experts, and providing mentorship opportunities. Platforms such as WhatsApp, Telegram, and Instagram enable residents to stay updated with the latest advancements through real-time sharing of educational resources, research articles, and clinical guidelines. Online discussion groups and virtual communities promote collaborative learning and facilitate interaction with professionals from diverse institutions. Moreover, social media paves the way for global connections, allowing residents in Iran to gain from the mentorship and guidance of experts worldwide. Consequently, social media has become an integral part of the education system for oral and maxillofacial surgery residents in Iran, providing convenient access to information, promoting collaborative learning, and offering mentorship, thereby contributing to the advancement of the field.

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Competing Interests

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