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ROLE OF DIGITAL NETWORKING IN CLINICAL ODONTOLOGY- A REVIEW

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ABSTRACT

With the emergence of the digital era, it has become a need to understand the benefits and risks involved in the use of social media in dentistry while maintaining professionalism. The objective is to acknowledge the durability of digital footprints on interactive multimedia platforms, as well as obtain knowledge on the regulatory mandates applied in addition to the advantages and disadvantages of the same. This literature review comprises of Cross-Sectional studies using electronic surveys, personal interviews, and digitally self-administered questionnaires. A thorough literature search was conducted on Google Scholar and PubMed systematically to gather information, which was later narrowed down to the final set of articles after careful scrutinization. A total of 3 articles were finalized from 21 selected publications. Though there are many risks involved in the professional usage of social media, with proper regulatory guidelines put forth by the Global Dental Council given in June 2016, it can be used for the benefit of the community, as it provides a platform for the patients to learn about the procedure priorly thereby saving chairside time. As far as dental professionals are concerned, it has

proved to be an edge over conventional advertising and marketing strategies. Facilitating the dental students and researchers from various parts of the world to discuss cases over a single platform, thus encouraging learning and widening the confines of knowledge.

Keywords: PubMed- (((social media) AND (dentistry)) OR (dentists)), Google Scholar- social media, dentistry and dentists

INTRODUCTION

The term internet dates back to 1974 as the shorthand of the term internetwork [1]. According to the 2014 assessment, approximately three billion people use the internet daily[2]. Since then, it has marked its influence on health and health care immensely by educating and empowering the community, promoting the embracement of a healthy lifestyle, better compliance with advice, and appropriate utilization of medicines[3].

Social Media and Networking are mediums to ease relationships and communications within a population and marked their existence even before the internet. Friendster, which was founded in 2002, was the first social networking site followed by Facebook in 2004, which was made open to the public in 2006, YouTube in 2005, Twitter in 2006, WhatsApp in 2009, and Instagram in 2011[4]. Social media has not only influenced other health specialities but also has a significant part to play in dentistry as well [5].

Social Media is favourable for dental practice as it saves patients time of the first appointment by explaining procedures and information priorly[6]. It has also aided in

marketing strategy by providing a forum for public communication for timely and cost-effective marketing[5]. Social Media has led to new opportunities to communicate, create, connect and share information without requiring specialized skills like coding, thus making it easy[7].

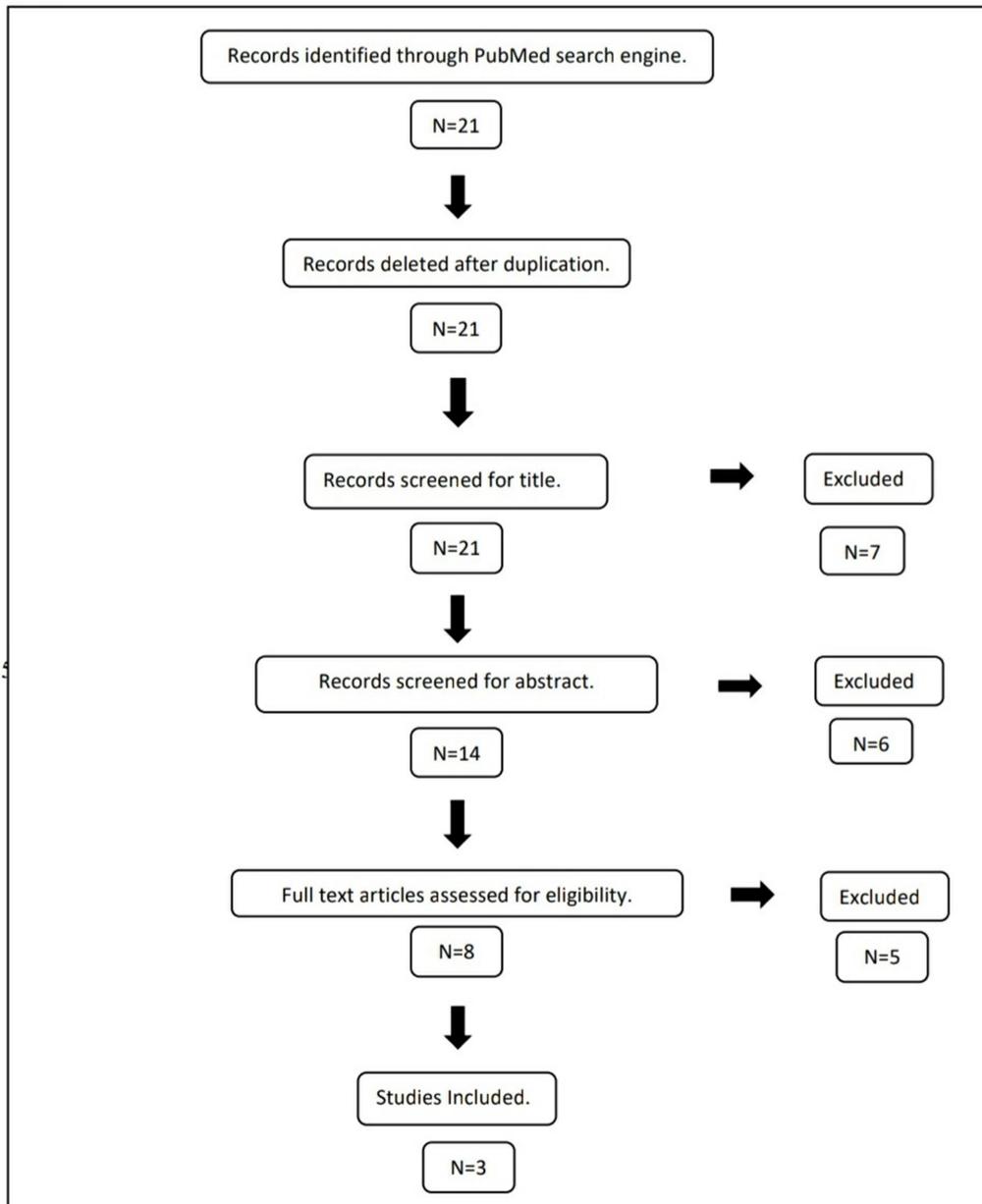
Social media is usually referred to as a source of entertainment and medical services are considered more formal and professional [5]. It is all the more likely to harm the dentist-patient relationship by blending the boundaries amidst personal and professional lives [8]. Since the reputation of a profession in society is highly influenced by social media[9], General Dental Council (GDC) published its first guidelines on social media usage on September 30, 2013[2]. It states that the dental unit is responsible to behave professionally both online and offline maintaining appropriate boundaries with patients. Social media provides both honest and misleading information online which should be dealt with proper care[10]. Therefore, this review was done to understand the relationship between social media and clinical dentistry.

MATERIALS AND METHODS

A thorough literature search was conducted on 1 July 2021 on PubMed and Google Scholar. The keywords used in PubMed were (((social media) AND (dentistry)) OR (dentists)) and on Google Scholar were social media, dentistry, and dentists.

The literature review consists of Cross-Sectional studies using electronic surveys,

personal interviews, and digitally self-administered questionnaires. All the studies considered were written and published in the English language only. Time restraint was applied for the year 2021 considering the pandemic Covid-19 and its effects on the dental profession [11].



DISCUSSION

Traditionally, dentists would advertise their services using a local telephone directory, or on the windows of dental clinics [12]. The introduction of the internet by Tim Berners-Lee in 1989 [13] has led to the current age of digital dentistry [12]. Social media on the other hand has helped to connect with patients and colleagues, learn and advertise on a single platform [14]. Social media comprises collaborative projects such as Wikipedia, blogs, content communities such as YouTube, and social networking sites such as Facebook, Instagram, or Twitter [13].

Distinct social media platforms

According to Mondkar *et al* [13], Facebook, Twitter, Instagram, Google+, Reddit, YouTube, Snapchat, and blogs like GDPUK and Dental Town are the leading social media sites. On the other hand, messaging applications or sites such as WhatsApp are still being debated upon. Users of varied generations had various purposes for distinct social media platforms. The study also revealed that social media was a part of almost all dentist's everyday life irrespective of the stage of career they were in. Since the advancement of technology with smartphones, tablets, laptops, and computers, access is much easier.

Al-Khalifa *et al* [14] reported younger generation has a preference for Twitter, WhatsApp, Instagram, YouTube, and Snapchat whereas the older generation preferred Facebook. The authors, unlike others, considered WhatsApp a part of social media thereby resolving the conflict. Meira *et al* [12] found Instagram to be the most dominant social media site. They stated in specific to targeting the young adults for business marketing, aesthetics, and receiving oral health measures. Owing to hashtags, searching for the desired content has become uncomplicated.

By virtue of the studies done we can conclude that although WhatsApp is the most used social networking site, it is still not considered a part of social media due to it being just a texting application. Instagram on the other hand was found to be the most useful social media for various purposes as stated above. Succeeded by Facebook which now is less popular in younger adults when compared to Instagram. LinkedIn has special consideration in the dental practice with few dentists using it on daily basis. Twitter also holds a spot, though with a minimal number. There are a few other local sites as well which help people share content related to dentistry or socialize even though they are not popular.

Edge of Social Media

Mondkar *et al* [13] rightly stated that social media made networking conveniently fast and easy. This also resulted in personal-professional growth through supportive learning among colleagues from various parts of the world. It aided in the engagement of introverts by giving them confidence, as it does not involve face-to-face interactions. The introduction of private conversations removed the insecurities associated with trust. It supported learning through discussions and debates over a single platform. To some extent, it reduced unemployment through increased job alerts and catering information regarding various courses and career opportunities. An insight into common problems associated with the dental community was also accomplished. Due to the technological enhancement, people missing on recent advancement because of personal reasons such as pregnancy or ill health were no longer excluded from shared experiences and knowledge. On the other hand, tailor-made advertisements have the potential to manipulate users to certain aspects of dentistry.

Al-Khalifa *et al* [14] also had similar observations with dentists booming in the digital world of social media every passing day. It has become a tool to learn, involving professional knowledge and experiences,

and a mode to connect. Proper communication always has been the primary factor for success for all healthcare providers. Hence, the gradual increase of social media is justified by providing one platform involving interactive blogs, audio-visual dissemination arenas catering to a larger community of potential future patients. Thereby, being a more effective marketing method when compared to the conventional marketing strategies. Not only for dental professionals but also the patients, social media has proved to be an extraordinary tool by aiding them with health concerns, bringing them one step closer to healthcare providers and information on their health status on a single tap. The current generation's psychology has led to an increased influx of patients in dental clinics due to constant search and the social security they gain post many reviews. This ease of contact between the community and dental professionals is one of the social media's biggest assets.

Meira *et al* [12] set forth the advantage of social media postings in developing and maintaining the loyalty of present patients as well as probable future patients. People who have had experiences of various dental treatments were able to understand the technical aspects and could also relate to them with just the audio-visual posted on

social media. Dentists became capable of advertising professional trajectories, concentrating on ethically educating the laymen without devaluation of profession or unfair competition.

Social Media is favourable for dental practice as it saves patients time of the first appointment by explaining procedures and information priorly. It has not only helped the patients cope with dental anxiety, but also favoured in gaining confidence that dental management is convenient and non-threatening. It has aided in marketing strategy by providing a forum for public communication for timely and cost-effective marketing. It grants professionals from various geographic regions to discuss and obtain feedback, thereby providing lifelong learning and professional development. As per dental students are concerned, access to more information on various subjects is made available at fingertips due to social media, thus making learning more interesting, creative, innovative, and enabling new resources for improved research skills. Social Media has led to new opportunities to communicate, create, connect and share information without requiring specialized skills like coding, thus making it easy. Social Media can be used for the betterment of dental professionals as well as the patient community. As observed in various studies,

age did not defy the use of social media, rather just the preferred platform. Therefore, if used with its full capability in harmony with professional ethics, it can be used for the welfare of the dental health of public and dental health care providers.

Deleterious effects of social media

Although there are many benefits of social media, there are certain aspects that do not favor it. According to Mondkar *et al* [13] without control over social media's use, it could be hazardous for individuals by resulting in unwanted addiction and time consumption. In addition to that, lack of face-to-face conversations and misinterpretation of text content leads to impaired communication. The qualification of the source and the quality of information being displayed is also one of the prime concerns. Most of the society creates an online bubble in which they only see what they wish to see, missing out on the information that actually should be known, leading to scepticism. On the other hand, excess of information leads to overwhelmed emotions of the general public, leading to self-diagnosis. Self-promotion may lead to flaunting and thus, creating a negative reputation for the professionals.

Al-Khalifa *et al* [14] agreed to the sudden spread of misinformation than reliable facts in their study which leads to confusion and

causes cyber disarray affecting the dentist-patient relationship unfavorably. The image of the profession remains at stake each time ethics are blown off, especially in the case of confidentiality of the patients. Concerns raised on these social media platforms have such a big impact that minimal ignorance can bring up professional licensing issues. It is worth mentioning the exaggeration of information with manipulation each time it is being forwarded.

Meira *et al* [12] also had similar concerns with breaching professional ethical conduct. Before uploading the patient's images or sharing the case on social networking sites, one must have an informed consent followed by providing data security, anonymity, and confidentiality of the patient. Social media handles which are being used for professional display when used along with the personal handle, lead to distrust due to images with alcoholic beverages and smoking.

Although online learning does sound a wise option during times like the pandemic COVID-19, it cannot take over the practical aspect of learning in dentistry. The content of social media tends to create a sense of false confidence in clinicians regarding various treatments and procedures, whereas dentistry is supposedly more of a hands-on learning experience and clinical work

rather than just observation. Social media does not provide a guarantee for the authenticity of the content being uploaded, therefore leading to the transfer of misinformation among the general population. The use of social media platforms with assertiveness could portray better professional credibility if used ethically and professionally.

Professionalism on social media

During the last decade, the rise of social media in the medical field lead to the formation of the term e-professionalism, representing the crossroad between health science and social networking [9]. Neville and Waylen defined online professionalism as behaviour related to professional standards and ethics using electronic communications [2]. Like every other health care profession, dentistry also has its challenges to face concerning professional behaviour both online and offline.

Mondkar *et al* [13] proposed managing privacy settings on social media platforms by creating a separate professional and personal profile to maintain ethical conduct. Thereby, one can reduce the number of patients in their respective personal channels and also use their professional channels for advertisement, learning, and other purposes. The context of the situation should be clearly understood, hence answers being provided

online in the comments section should be appropriately filtered with utmost civility. The most important aspect associated with e-professionalism is the fact that the entire information stays on these platforms for a long period and this is known as digital footprint. Inadequacy of system to maintain professional conduct on social media indicates the need for the development of an integrated undergraduate program to ensure proper use. Another argument discussed is about the time after which one becomes addicted to it. Maintaining a social life beyond social media is equally necessary.

Al-Khalifa *et al* [14] also recommended similar perceptions, while they also addressed the controversy of the accuracy of information provided online. Dental health care providers as a community should lead in rectifying false information and guiding the public to more authentic and scientific sites for their research. New dental students should be taught the appropriate way of using the current technology since they tend to leave behind a digital footprint which later on should not be a point of regret for them.

Agreeing with the authors, an informed written consent should be taken from patients before displaying their information and photographs on social media to create a sense of social security. With developing

digital platforms, new regulations need to be implemented to prohibit any kind of misconduct online and offline. Continuing dental education programs should thus involve educating the dental students and professionals on maintaining ethics online and should be incorporated in the dental curriculum as well. These would prove to bring favorable evolution in the field of digital dentistry.

Regulation of social media in dentistry

On 27 June 2016 General Dental Council published guidelines on using social media platforms considering emerging digitalisation in the dental profession. Mondkar *et al* [13] mentioned the characteristic features of the update as communication and learning approach. The impact could be understood when the process of consent was made mandatory to portray on social media. The authors also urged the universities to employ educators to parent students on social media learning. Al-Khalifa *et al* [14] addressed the consequences of overuse of social media and thereby encourage counselling services to guide dental professionals. Critical appraisal skills should be developed in collaboration with patients to be able to judge the posts on social media channels on reliability and authenticity. Virtual clinics could be one way to channelize social

media networking for learning and to disseminate knowledge.

Meira *et al* [12] discussed the importance of the public's perception of professionalism and credibility to ace establishing social media and encouraging users for the betterment of society.

CONCLUSION

Social networking sites is the emerging new trend in the field of clinical dentistry, leading to professional guidelines being incorporated by General Dental Council. It has an edge over the classical way of learning, advertising, and patient interaction. Though there are areas to still work upon, such as ethical principles and professionalism, studies are being conducted in various aspects of social media across the globe to understand it better and use it for the development of dental health and profession among communities.

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