

Navigating ethics: social media challenges in Indonesian dental practice

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ABSTRACT

Social media has evolved into an important tool for dental practitioners to promote their services and attract patients, necessitating a careful balance between effective promotion and upholding ethical standards to maintain patient trust. This research delves into the challenges and implications associated with using social media in dentistry, emphasizing the ethical considerations, legal frameworks, and the potential impact on public understanding of oral and dental health. By providing a comprehensive discussion on the importance of ethical promotion in the dental profession, the study not only highlights the need for dental practitioners to prioritize ethical standards in their social media activities but also offers effective strategies for attracting patients. These strategies include delivering relevant and informative content, engaging with followers, demonstrating professionalism and expertise, obtaining informed consent, and respecting patient privacy. The research underscores that navigating these complexities is essential for dental practitioners to promote their services ethically, contributing to the success and growth of their practice while safeguarding the integrity of health information and fostering positive relationships with the public.

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1. INTRODUCTION

In the era of globalization and advancing technology, efforts to gather information from books and magazines have shifted towards the internet and smartphones [1]. Social media has become one of the technologies favored by society today, as it can be used to share information in the form of photos or videos, communicate, serve as a learning tool, and as a broader form of marketing [2]. In the field of health promotion, the use of social media can provide benefits in terms of improving access to health information and reducing costs that need to be incurred [3].

Dentists, as healthcare practitioners, have recognized the importance of promotion and marketing strategies in attracting new patients, especially through social media [4]. Before uploading promotional content on social media platforms, dentists need to consider various aspects to effectively communicate their promotional message visually to potential patients and build trust with them to visit the dentist [3], [4]. Legal and ethical issues should also be considered by dentists because the content or promotional messages they convey can influence the mindset and judgment of potential patients [5].

In order to capture the attention of the public in maintaining oral and dental health, various promotional efforts are made. Nowadays, advancements in information technology allow us to market products or services online conveniently, easily, and to a wider customer base. This can be applied in the healthcare

field, including in hospitals or dental clinics [5], [6]. One form of utilizing social media in the field of dentistry is as a means to provide easily accessible information related to oral and dental health, which can help in obtaining the best dental and oral healthcare. Therefore, when utilizing social media in the field of oral and dental health, it is important to note that the primary goal is to provide accurate, clear, and concise information regarding oral and dental health from various perspectives [3].

When conducting promotions in the field of dentistry, it is essential to consider legal and ethical issues, such as ensuring that advertisements contain truthful and accountable elements without disparaging religion, culture, country, or community [3]. In Indonesia, promotions in the field of dentistry must adhere to the Indonesian Dental Code of Ethics of 2020 and the Republic of Indonesia Ministry of Health Regulation No. 1787 of 2010 regarding Health Service Advertising and Publications [3], [7], [8]. Promoting through social media can educate the public to enhance their knowledge about oral and dental health [9], but it must be remembered that promotions can also lead to misunderstandings if the public misinterprets the information provided [10]. Therefore, it is important for dentists to understand the principles of ethics and legality in social media promotions to have a positive impact on society [11].

This research aims to investigate the challenges and implications associated with using social media as a promotional tool in dentistry, focusing on the ethical considerations, legal frameworks, and the potential impact on public understanding of oral and dental health. The primary concern is to understand how dentists navigate the delicate balance between promoting their services effectively and adhering to ethical principles and legal requirements. Exploring these complexities is essential for developing guidelines that promote responsible social media practices in the dental profession, safeguarding the integrity of health information while fostering positive relationships between dental practitioners and the public.

2. METHOD

This research adopts a meticulous and holistic research approach to investigate the dynamics of social media usage in dental practice in Indonesia. As an initial step in detailing the research approach, this study utilizes a normative approach integrated with the use of rich and relevant legal literature. The normative approach serves as the primary foundation in formulating the basis of this research. This approach involves in-depth exploration and analysis of ethical and legal norms governing dental practice, particularly in the context of social media utilization. In this process, legal literature serves as a key tool used to comprehend the legal framework binding dental practitioners.

The legislative approach is the next step taken to specify how existing regulations influence the dynamics of social media in dental practice. The legislative analysis process includes comprehensive research on applicable regulations, especially those related to ethics and dental practice in the digital era. This approach opens a window into the legal dimension guiding professional practice in utilizing social media. The conceptual approach forms a profound pillar in understanding key aspects related to the utilization of social media by dental practitioners. By defining key concepts, this research details the conceptual framework underlying legal literature analysis. This conceptualization helps depict how specific aspects of ethics and regulations are reflected in dental practice activities on social media.

Identified data sources supporting this research include relevant legal literature, regulations related to dental practice, and published ethical guidelines. Legal literature serves as the main reference material for gaining a deep understanding of the legal foundations of dental practice, while regulations and ethical guidelines provide a concrete overview of the regulations to be followed by practitioners in using social media. By integrating these four approaches, this research aims to investigate how dental practitioners in Indonesia adhere to ethics and regulations in the utilization of social media, creating a holistic and informative foundation for understanding this complex issue.

3. DISCUSSION

3.1. Social media

Social media is an online platform that allows users to interact with others by giving them the opportunity to share information, opinions, and interests in specific areas [12]. Social media engagement refers to the extent to which an individual participates in social media activities. Essentially, someone engaged in social media shares personal or social information with close acquaintances on social networks, such as family and friends [13]. Some types of social media usage include: i) Social network: a means that enables interaction between users by forming new friendships based on shared interests, examples of which include Facebook and Instagram; ii) Blog: social media that facilitates users to write, post daily activities, provide comments, and share with other users, examples of which include blogspot; iii) Microblogging: a type of social media that allows users to post their activities and opinions, an example of which is Twitter; iv) Media sharing: social

media that enables users to share and store media such as documents, videos, and photos online, examples of which include YouTube, Flickr, or TikTok; v) Social bookmarking: social media that serves to organize, store, manage, and search for information or news online, examples of which include Reddit.com, Digg.com, and LintasMe from Indonesia; and vi) Wiki: a collaborative media whose content is generated by user collaboration; each user can change or edit published content, an example of which is Wikipedia [14], [15].

Social media possesses specific characteristics that set it apart from other forms of media. Firstly, it has an infrastructure network that allows users to connect with other devices through computer-mediated communication [16]. Secondly, all social media users can create representations of their own identities, produce content, and engage in interactions based on that content [17]. Information generated from social media can be produced, disseminated, exchanged, repackaged, stored, and consumed, making information a valuable product [18]. Additionally, information from social media can be accessed anytime and through any device because social media has archival characteristics [19]. The interaction process among social media users is also a distinctive characteristic of social media [20]. Moreover, social media users must meet two conditions to engage in social simulation: connecting to cyberspace and engaging in self-identity disclosure [21]. Finally, content generated in social media is entirely the personal property and based on the contributions of users or account owners, making this content a specific characteristic of social media [22].

The use of social media in the field of oral and dental health involves providing accurate, clear, and concise information from various perspectives [23]. By optimizing the use of social media, dentists can reach as many patients or the general public as possible [3]. Social media can also be used in professional education and promotion. Dentists find it convenient to upload educational videos and presentations that explain various dental procedures for the benefit of colleagues and dental students [24]. Additionally, dentists also use social media to advertise their clinics and promote professional activities such as seminars. According to recent research, the internet has a significant impact on influencing prospective patients who have never received treatment at a clinic to seek health information, seek doctor recommendations or treatment, and even engage in remote medical consultations with doctors through online platforms [25].

3.2. Health promotion

Promotion is an effort to increase turnover or advance a business or enterprise. The term "promotion" originates from the English word "promote," which means to expand or enhance. In the context of sales, promotion is considered one of the strategies to increase sales volume. Promotion is a form of marketing communication that seeks to disseminate information, influence, and remind the target market about the company and its products so that they are willing to purchase and remain loyal to the product. On the other hand, promotion is also a series of activities aimed at influencing consumers to become aware of and favor the products offered by a company, ultimately leading to their purchase [26].

Health promotion refers to efforts to empower communities to maintain, improve, and protect their health. Its goal is to increase awareness, willingness, abilities, and the development of a healthy environment. Initially known as health education, health counseling, health information communication, social marketing in the health field, and community involvement, it is now better known as health promotion [27]. Essentially, health promotion and disease prevention aim to improve personal and community health through a combination of strategies such as behavioral change, health education, health risk detection, and health improvement and maintenance. On the other hand, curative and rehabilitative actions are generally provided on an individual basis [28]. Therefore, it is important to provide information about oral health to the public through various media and teaching aids, designed with the principle that knowledge is acquired or perceived through the five senses. The more senses used to receive information, the clearer and more easily understood the acquired knowledge [29].

One cost-effective way to improve oral and dental health in a country is by implementing effective oral health programs in schools. Schools are an ideal place to promote oral and dental health by providing oral health information to children [30]. Through effective oral health promotion, children's knowledge can significantly increase, enabling them to have good and sufficient knowledge of oral health. It is essential to motivate every individual to make regular visits to the dentist, making them aware of the importance of self-examination for dental health. Therefore, effective oral health promotion should also include information about the importance of visiting a dentist at least every six months as a preventive measure against dental caries, early disease detection, and timely intervention, thereby reducing the burden of disease and treatment costs [31].

3.3. Ethics

From an etymological perspective, the term "ethics" comes from the Greek words "ethikos" or "ethos," which mean customs, habits, and practices. Ethics is not an addition to moral teachings but rather a philosophy or critical and fundamental thinking about moral teachings and views. Ethics is a science, not just a set of teachings. Another definition of ethics is the science of good and evil, as well as moral rights and obligations (morality) [32]. Ethics serves as a guide for behavior with clear reasons that align with specific values and

justifications. Ethics is crucial because society is constantly evolving, so we need to choose and be aware of the diversity of norms (practical philosophy). In other words, ethics provides the rationale for choosing the right values amid a variety of norms (moral philosophy) [33].

There are four fundamental moral principles and some rules related to these principles. The four basic moral principles are as follows: i) respect for autonomy: This principle closely relates to respecting the dignity of human beings with all their characteristics because they are human and have value and the right to request. Autonomy is a personal rule free from interference by others. ii) Beneficence: This principle demands that humans treat others as autonomous beings and not harm them. It also requires individuals to assess the well-being of others. iii) Non-maleficence: This principle aims to protect those who are incapacitated (disabled) or non-autonomous individuals, stating that the obligation not to harm others is stronger than the obligation to do good. iv) Justice: This principle involves fairness and requires individuals to act justly toward others, such as determining who needs health care first based on the severity of their illness. Philosophical theories of justice usually concern a person's lifelong integrity and are not temporary [34], [35]. The behavior of using social media in Indonesian society is regulated by Law No. 19 of 2016 concerning electronic information and transactions (ITE), which prohibits the dissemination of information that incites hatred among social groups based on ethnicity, religion, race, and inter-group (SARA), threats or extortion, defamation or slander, and other similar activities [36].

The study of promotion according to medical ethics includes several points, including: i) Educational articles or advertisements should be created primarily for the purpose of educating the public about healthy living [37]. Any promotional interests related to products should be secondary; ii) It is understandable that promotion is a reasonable effort when conducted by relevant manufacturers, but it is not appropriate for a doctor or professional association to engage in promoting the sale of such products [38]; iii) The terms "educational advertisement" must be distinguished from regular advertisements because educational articles should be balanced, objective, educational, not misleading, fear-inducing, or in violation of prevailing norms or decency in Indonesia; iv) Educational articles should preferably be created by doctors or professional associations, while regular advertisements are made by individuals working for manufacturers; v) Sponsors should not interfere with the creation of educational articles, but may display their support or promotional messages in close proximity to the educational article; vi) Draft educational articles must be consulted with and approved by the Medical Ethics Commission (MKEK IDI)/The Ethics Commission of the Indonesian Dental Association (MKEKG PDGI) before being aired on television, broadcast on the radio, or disseminated through print media; vii) Writings that visually resemble educational articles but serve promotional purposes must be clearly labeled "advertising" in the upper left or right corner; and viii) Regular advertisements in print media or television (created by manufacturers) should not feature message deliverers wearing doctors' uniforms, display the emblem of IDI/PDGI, use the name/symbol of a professional association, or carry the title "doctor." This does not apply to content that is purely for public service or education [39].

3.4. The function of social media for dentists and the public

Social media has rapidly expanded, with nearly one-third of the world's population actively using it. People in general access a wide range of information through various types of social media. The accessed information is quite diverse, and one of the frequently sought-after types of information is related to health. One of the health-related topics people seek information about is dental and oral health care. People use social media to find information about the location, prices, and types of services provided by dentists. A survey conducted by the Indonesian Internet Service Providers Association (APJII) revealed that in 2022, the Indonesian population already had internet access, with approximately 215,626,156 people having internet access [40].

Maharani found that social media can influence how people brush their teeth when seeking information about dental and oral health through social media. Their research was conducted among 521 junior high school students in Jakarta, and it found that the health information disseminated on social media affects toothbrushing behavior [41]. Numerous studies have identified that social media technology also makes it easier for people to access information about diseases, prevention, and treatment options, as well as assisting in making healthcare decisions [42]-[44].

Social media platforms such as Instagram, Twitter, Facebook, WhatsApp, and others are commonly used by the public to seek information about dental and oral health. The Ministry of Communication and Information of the Republic of Indonesia conducted a survey in 2020, which showed that 76% of the population uses social media to find various information [45]. According to a study in Qassim, Saudi Arabia, Twitter is the most commonly used social media application to access health-related information [46]. Aksoy and other colleagues noted that people often use Google search to find information about dental and oral health on the internet [47]-[50].

Based on existing surveys and journals, it is also found that social media is one of the platforms frequently and even effectively used by dental practitioners. One of the functions of social media used by dentists is as a means for discussions with colleagues. Additionally, social media is used for searching for sources of knowledge and information in the process of professional development. Dentists also use various social media for promoting dental health and their practices. Social media is utilized for professional communication between practitioners and patients. According to a study conducted by Chérrez-Ojeda *et al.* [51], among 342 dentists from Ecuador who participated in the research, 97.66% of them had social media and used smart devices (smartphones, tablet PCs, laptops/computers) to interact with colleagues and patients. Chérrez-Ojeda *et al.* [51] also stated that respondents used social media to advance their knowledge in dentistry, search for new job opportunities, and enhance promotional efforts. Research conducted by Henry *et al.* [52] on 22,682 dentists in the United States also indicated that 51% of the study's respondents used social media, with more practitioners under the age of 45 being more active or having social media compared to practitioners who were the same age or older than 45. Younger practitioners indeed grasp the use of social media more quickly to meet their needs [52].

In the effort to promote dental health, dentists use social media as a platform to share knowledge about dental and oral health and to promote their clinics or practices with photos. These photos include documentation of before and after treatments. These photos are useful in building trust with consumers/patients who have seen the practitioner's social media and decide to undergo dental treatment with that practitioner. For health information, it can also be presented in the form of photos or short videos shared on social media pages. Mayasari in 2021 confirmed that there is a difference in opinion among respondents when it comes to using social media as a means of health promotion. 91.7% of the respondents agreed, stating that it makes it easier for individuals to access information about dental and oral health, even though it may not always be based on accurate and reliable references. It also eliminates the barrier for people to obtain health information, which is typically only available through face-to-face consultations with a dentist at their practice. 8.3% of the research respondents disagreed (opposed) to using social media for health promotion due to ethical considerations [53].

Various social media platforms are commonly used by dentists to promote dental health. Social media platforms such as Instagram, Facebook, Twitter, WhatsApp, and many others can be used for promoting dental health. Bahabri *et al.* [25] stated in their research that 49% of dentists and 51% of specialist dentists affiliated with The Saudi Dental Association chose Instagram as the most commonly used social media platform. Instagram has a unique feature that allows the account owner to share photos with their followers. Therefore, if a follower is seeking information about dental care, they can view the photos shared by a dentist's account and consider receiving dental treatment at the clinic/practice owned by the account holder. Therefore, effective management of a dentist's social media account is essential in presenting their profile to the public in a way that increases the dentist's chances of being chosen by individuals who follow the dentist's account, ultimately leading to them becoming potential patients [25].

3.5. Rules of promotion in dentistry

3.5.1. Indonesian dental code of ethics

Promotion in the field of dentistry is regulated in the Indonesian dental code of ethics (KODEKGI). It is written in Article 3 regarding professional independence, the first point of which states that dentists in Indonesia are prohibited from promoting themselves in any form, such as self-praise, advertising any equipment or materials, making direct or indirect promises, and others, with the goal of attracting patients to seek treatment from them [8], [54]. As a professional, a dentist must ensure that they convey information about their expertise honestly and objectively. This information must be accurate and accountable and should not be used to demonstrate personal superiority through mass media, including meetings, print media, electronic media, social media, or other high-tech communication media. Promotion or advertising done for healthcare services, such as dental practice, can violate professional ethics and pose risks to other dentists, patients, and the profession's reputation. Therefore, dentists are prohibited from promoting themselves, colleagues, alma mater, or healthcare facilities in a manner contrary to applicable laws or regulations [8].

Dentists are not allowed to promote their skills or attributes in the form of superlative statements, such as claiming to be the 'only one' or asserting specific excellence, uniqueness, or sophistication, and offering guarantees of treatment success. Such actions can mislead patients and are solely performed to attract their attention. In promoting health, dentists must not engage in self-promotion that may degrade the dignity of the profession, either verbally or in writing. Dentists are also prohibited from being models in advertisements for medications, medical equipment, health supplies, or healthcare facilities, except in public service advertisements that are official government programs and/or endorsed by PDGI [8].

When presenting educational or scientific information in articles, seminars, or other programs, dentists must disclose to readers or participants the companies whose products are being promoted or support the presentation. This disclosure must be made within the promotional presentation itself. Dentists must not

recommend to patients treatments or diagnostic examinations that are not based on clear medical indications or accepted scientific knowledge or not supported by research [8].

Dentists in Indonesia must prescribe, provide, or recommend healthcare equipment and recognized medications. They should not use healthcare equipment, medications, other materials, methods, or techniques exclusively if they have not been scientifically proven. Dentists must report to PDGI if there are side effects from medications or healthcare equipment, or to the National Agency of Drug and Food Control/Ministry of Health. Furthermore, advertising medications, food supplements, or healthcare equipment that do not have market authorization or do not meet quality and safety standards is not allowed. Dentists must not pressure patients to purchase products or undergo procedures by providing inaccurate information. They have an independent obligation to investigate the truth and accuracy of claims and verify that these claims are based on accepted scientific knowledge [8].

3.5.2. Regulations of the Ministry of Health of the Republic of Indonesia

Regulation of the Ministry of Health Number 1787/MENKES/PER/XII/2010 regulates health promotion in general. In this regulation, healthcare advertising is defined as a communication activity aimed at introducing or promoting health policies, programs, or services through images, sounds, or writing. The purpose of this advertising is to attract public interest and facilitate access to health policies, programs, and/or services, and it can be done through various media, with or without compensation to the broadcasting institutions concerned [7]. Healthcare facilities are locations used by healthcare professionals to provide healthcare services, including promotive, preventive, curative, and rehabilitative efforts provided by the government, local government, and/or private sector. Healthcare professionals are not allowed to promote or appear as models in advertisements for medicines, medical devices, medical equipment, or healthcare facilities, except in public service advertisements. This type of advertisement aims to increase public awareness of healthy and clean-living behaviors (PHBS) or support government programs and is non-commercial in nature. To monitor and control healthcare advertising and publications, the Minister may establish an Assessment and Supervision Team for Healthcare Advertising and Publications under the Ministry of Health. The team's duties include evaluating and supervising healthcare advertising and publication materials before and after they are broadcast [7].

3.6. Do and don't for dentists in the ethics of promotion on social media

In the context of social media platforms such as Instagram, TikTok, Twitter, Facebook, LinkedIn, Snapchat, users have the ability to engage in various roles and objectives different from the classical communication process [55]. They become their own publicity and do not require the support of an editor to make their content publicly available [56]. The use of social media offers an engaging experience, such as quick idea exchange, impulsive content posting, and the potential for rapid virality. With the advancement of technology, the use of social media has become a daily habit for most people. New media and social media, in particular, can bring many opportunities and risks, especially for the younger generation accustomed to their fast-paced usage. This creates ethical issues and challenges not always covered in traditional media ethics. The openness of social media can bring significant expectations and risks as it lacks strict regulations. In this regard, many questions need to be asked to determine what can be uploaded and shared with others and the boundaries of user behavior, as well as how equal participation and freedom of expression can be ensured on social media platforms. This is where ethical issues and dilemmas arise when posting or sharing content through social media platforms [57], [58].

It is explained that dentists can and should advertise their professional background, work field, procedures, and treatment techniques by focusing on information that effectively contributes to public understanding in an educational manner, without engaging in trade or creating unhealthy competition or undermining the value of the dental profession. Most current posts predominantly focus on aesthetic appeal, magical comparisons of appearance before and after treatment, unnaturally white smiles on manipulated and expressionless faces. Dentistry seems to have abandoned its role as a healthcare profession, so what we see on social networks is not health promotion. In this context, as a dentist, one should not cease promoting the values of dentistry. They should not give up on advocating for greater interests and protecting patients [59], [60].

In the book *ADA Principles of Ethics and Code of Conduct*, it is stated that dentists should not make unreasonable claims about treatment outcomes that can be achieved or provide material or objective representations indicating that the advertised services are superior in quality to those of other dentists if such claims cannot be reasonably substantiated [61]. This aligns with article 3 in KODEKGI, which prohibits dentists from advertising their abilities or strengths using superlative statements like 'the only one' or implying specific superiority, uniqueness, or sophistication, including providing treatment success guarantees, as this can mislead patients into seeking their services. Furthermore, dentists are also prohibited from influencing

patients to purchase products or undergo procedures by misinterpreting the value of the product or professional expertise in recommending those products or procedures [8].

3.7. Advantages and disadvantages of social media for patients

According to a study conducted by Mir *et al.* [62], the majority of survey participants agree that dentists should be able to communicate with patients through social media compared to conventional media such as TV, newspapers, and magazines. This is in line with research conducted by Parmar *et al.* [63], which states that participants appreciate healthcare providers' communication through social media. The reason for this trust is the direct communication with dentists, and the information conveyed can be trusted without filtering or manipulation [63]. Based on the findings of these studies, patients want to know the qualifications of dental professionals before visiting a dental practice. For some patients, positive reviews, awards, and original content on dentists' social media can be very useful information before choosing a dentist [64].

More than half of the survey participants agree that social media is their first choice for obtaining information about dental treatments, especially in the field of aesthetics. Participants feel that they gain a lot of helpful information for making treatment decisions and choosing a dentist through social media. Before-and-after photos are an essential factor, especially among women. In fact, most dental advertisements rely on before-and-after photos because these photos provide the aesthetic results and overall quality desired by patients [65]. Most patients pay attention to positive reviews when visiting dentists' social media accounts. Negative online reviews discourage 94% of consumers from visiting a dental practice. Therefore, positive online reviews have a better impact on a dental clinic. Dentists' qualifications are another crucial factor [66], [67].

The quality of the website is also vital in influencing patients and visitors and has a positive impact on dental practice. This helps improve customer confidence in the professionalism of the clinic [62]. The scheduling of patient appointments through the website also saves time. There is even a correlation between the design of the dental clinic's website and increased patient attraction to the clinic [66].

Although social media can be used to improve patient care and education, it can also pose potential risks to patients and healthcare providers. The dissemination of low-quality information can be harmful to patients and damage professional images. Although patient engagement on social media is seen by many as a factor that influences improved health and reduced costs, there is a relatively high risk for patients to receive misleading information. Healthcare practitioners can help reduce the potential dangers caused by unreliable information taken from social media by sharing accurate knowledge and educating patients about reputable websites. Another risk is the exchange of inappropriate online information or advice for direct visits to healthcare providers [68].

Dental practitioners may also face issues in managing their professional image and relationships with patients due to wide and fast information access. Patients and dentists may face additional issues that threaten their privacy due to the use of social media [69]. It is reported that dentists do not fully understand the concepts, methods, and processes associated with social media communication. Some issues experienced by patients, such as after-clinic care and dental anxiety, can be discussed on social media. Dental anxiety is a serious issue in dentistry, often leading to depression, sleep disorders, reluctance to build intimate interpersonal relationships, and workplace difficulties [65].

3.8. Advantages and disadvantages of social-media dental promotion

Social media has become an integral part of modern life [25]. Social media has transformed personal and professional life, raising many ethical questions for healthcare service providers and clinicians [70]. Social media makes it easier for professionals to provide health promotion, feedback, and health education to the general public. Through social media, healthcare professionals can enhance their services in the healthcare field. Wise use of social media will increase public awareness of the importance of maintaining oral health, create patient interest in available treatments, and publish research [71]. Today, peer communication not only leads to referrals but also serves as a platform for sharing experiences. Social media also facilitates a wealth of educational materials, both from experienced and less experienced doctors [70], [72].

In the field of education and research, the use of internet-based platforms and social media has dramatically expanded the reach of education in recent years [73]. Numerous free media and websites make it easy for dentists to access international dental information. This also allows dentists to broaden their knowledge without being constrained by distance and time. Dentists can publish research results online and share them with dentists worldwide [25].

The role of doctors encompasses not only patient care in clinics or hospitals but also advancing the knowledge and understanding of patients and their families. Nowadays, patients can easily access health knowledge through social media [74]. This role aligns with the principles requiring doctors to act to promote the health of their patients, prioritizing patient health, and justice principles, which require doctors to consider the effects of their actions on other members of society beyond their current patients [71].

The widespread availability and easy access to information on social media and the internet increase doctors' responsibility to educate the public and protect patients from incorrect information [75]. If the doctors do not provide accurate information, the public can be exposed to incorrect information widely disseminated on social media. Verifying information presented online is not easy, and it has been proven that the speed of spreading false information online is nearly ten times greater than the rate and speed of spreading accurate information [70].

The easy access to information is also a challenge for dentists. As dental professionals, it is essential to understand the evidence base of the information we access. Poor-quality information is a significant drawback when using social media for learning because it is challenging to ensure the validity of the provided information. For example, through social media, a dentist may obtain unreferenced information, a lack of evidence base, and the fact that any user can upload content to any website [70].

If a dentist does not follow guidelines and set limits on social media usage, this action can damage their professional image [71]. A dentist should not upload information that denigrates the entire profession. Although social media allows dentists to communicate freely and anonymously, users must be cautious about posting inappropriate or potentially harmful material that could harm their own reputation and the reputation of the profession as a whole [25], [76].

The easy access to all information through social media, combined with the increased knowledge of patients, can create gaps that are detrimental to a dentist's practice. Patients can easily publish both positive and negative post-treatment experiences. Dentists must be careful when publishing patient-related information. All patient-related information should be anonymized, and once information is published, it is challenging to retract it [70]. If there is a breach, dentists may receive warnings and further disciplinary action sanctions. Therefore, it is crucial to establish publication limits from the beginning and obtain valid written consent that does not allow patient-identifiable information to be shared on social media [71].

Social media serves as an entertainment medium for professionals in their personal lives. There are always limits to this, and when those limits are exceeded, social media can become an escape from reality, making dentists reluctant to address real-life issues. Peer pressure allows for a lack of self-confidence in a dentist after seeing what other dentists have published on social media. This can lead to social envy and excessive anxiety in a dentist [77].

The absence of limits on a publication can harm the fundamental principles of a dentist's profession. If a dentist publishes comprehensive information about their work, it may provide an opening for irresponsible individuals to imitate procedures and case management done by the dentist. In addition, society today has the broad right to speak and comment, and share information that is not guaranteed to be true. This can ultimately lead to damage to a dentist's reputation [78].

3.9. Ethical dilemmas of social media promotion

In the promotion of dentistry, especially on social media, there are several ethical dilemmas to consider. There are common ethical dilemmas in the promotion of dentistry, including: (i) Credibility, which needs to be considered in dental promotion. For example, if a dentist engages in excessive promotion that doesn't align with their everyday performance, it can reduce the dentist's credibility and affect patient trust [79]; (ii) Balancing benefits and risks, promotions about services offered should also consider this aspect. For example, if a dental clinic promotes invasive dental treatments without considering a patient's dental condition, it poses risks of dental damage and harm to patients [80]; (iii) Accurate information, accuracy is also a crucial element in dental promotion. For instance, if a dental clinic promotes products or services that lack scientific evidence or are unproven in effectiveness, it can mislead patients and violate ethical principles in dentistry [81]; (iv) Patient privacy, promotions must consider this and avoid misusing patients' personal information for promotional purposes. For example, if a dental clinic promotes specific services based on a patient's private medical information, it can breach patient privacy and violate ethical principles in dentistry [82]; Finally, (v) Excessive promotion, dentists should refrain from over-promotion. For example, if a dentist engages in spamming or excessively calling patients, it can affect the dentist's integrity and violate ethical principles in dentistry [83].

4. CONCLUSION

When promoting or advertising dental practices, there are several things that dentists need to consider. One of them is the use of appropriate and accurate language in social media. This is done to avoid appearing excessive and giving unrealistic expectations to patients, or even damaging the reputation of other dentists. Dentists must also ensure that their promotions adhere to ethical standards in the field of dentistry.

In today's era of digital globalization, social media is a double-edged sword because, besides being a very useful tool for promoting businesses, it can also have detrimental effects, potentially disrupting the

operation of a business. Social media provides significant benefits for dental and oral health services as it can be used as an educational tool for a broad audience, thereby increasing public awareness of the importance of oral and dental health. However, unwise use of social media, which does not adhere to medical ethics, can harm the image of dentists. Moreover, using social media inappropriately can create unrealistically high expectations for patients regarding a particular treatment, leading to patient disappointment. The use of social media will be highly effective when done while adhering to medical ethics and the ethical principles necessary for health promotion, including credibility, a balance between benefits and risks, information accuracy, patient privacy, and awareness of the consequences of excessive promotion.

FUNDING INFORMATION

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AUTHOR CONTRIBUTIONS STATEMENT

This journal uses the Contributor Roles Taxonomy (CRediT) to recognize individual author contributions, reduce authorship disputes, and facilitate collaboration.

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Aditya Pratama	✓	✓	✓	✓	✓	✓		✓	✓	✓				✓
Sarwono														
Marie Louisa		✓				✓		✓	✓	✓	✓	✓		

C : **C**onceptualization

M : **M**ethodology

So : **S**oftware

Va : **V**alidation

Fo : **F**ormal analysis

I : **I**nterpretation

R : **R**esources

D : **D**ata Curation

O : Writing - **O**riginal Draft

E : Writing - Review & **E**dit

Vi : **V**isualization

Su : **S**upervision

P : **P**roject administration

Fu : **F**unding acquisition

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Authors state no conflict of interest.

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Data availability is not applicable to this paper as no new data were created or analyzed in this study.

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