Social Media Use, Attitude, and Perception of Digital Professionalism among Dental Students at The University of Benghazi

By

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This Thesis was Successfully Defended and Approved on **.2022**

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Dedication

I dedicate this work to the dearest people in my heart my family, my mother, and my father, their encouragement, help, support, and blessing are the main reason behind any successful event throughout my lifetime. I most would like to express my unfailing gratitude to my husband Salah Adem, for all the support and encouragement that he provided for me during my studies.

Last but not least thank you, my children, Sofian, Seraj, and Noor for being in my life.

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List of Abbreviations

Abbreviation	
GDC	General Dental Council
ADEA	The American Dental Education Association
ADA	The American Dental Association
UK	United Kingdom
USA	United States of America

Social Media Use, Attitude, and Perception of Digital Professionalism among Dental Students at The University of Benghazi

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Abstract

Aims and Objectives

The study's primary aim is to assess dental students' usage patterns use of social media, their attitudes, and perceptions of digital professionalism. The secondary objective is to assess the impact of teaching digital professionalism at the

University of Benghazi on the attitudes and perceptions of dental students.

Materials and Methods:

This study used a paper-based questionnaire which was developed and administrated to undergraduate dental students in the academic year 2020/2021 at the faculty of dentistry, Benghazi University. The questionnaire comprised of closeended questions to identify dental students pattern use of different social media platforms: ('Facebook', 'Twitter', 'Instagram', 'YouTube', 'Snapchat', 'Telegram'), their privacy setting on each platform, and their perception and attitudes towards digital professionalism (e-professionalism). The data was then compared among those who received and did not receive professionalism lecture.

All data were analyzed using SPSS (version 25) software at p-value ≤0.05.

Results:

The number of students responded (N=364) out of 400 students accessed, almost all of them used multiple social media platforms and the most used site was Telegram (98.9%) by followed by Facebook (96.4%), 4th year students more likely to use telegram on daily basis than those in the internship year (P< 0.05). half of the of respondents (57.5%) felt that their online behavior is personal, separate from their life as a dental student, while 71.1% believed that their online behavior would not affect their future job opportunities. Most students 70.9% described social media posts that disclose information about the dental patients to be unprofessional.

However, only 6.4% of the students considered communicating with patients on social media as unprofessional behavior which 4th year students were less likely to report this behavior as unprofessional compared to intern students (P-value = 0.026).

Furthermore, 52.4% of the students reported that negative comments about the teaching process, staff, or colleagues as unprofessional online behavior.

Conclusion:

Almost all of the participants in this study used multiple social media sites which confirms the popularity of social media sites in recent years and gives tangible evidence regarding the use of social media among the dental students at the University of Benghazi, with Telegram and Facebook being, respectively, the most popular sites. Most students tend to use their real names when using social media

platforms and use a privacy setting to limit their audience. However, a concerning number exhibited a deficit in their reporting of unprofessional online behaviors about maintaining patients' privacy and creating personal-professional boundaries on social media. This study highlights

the need to establish policies for the professional and ethical use of social media by the University and emphasizes the need to include digital professionalism teaching to all dental undergraduates.

Chapter 1 Introduction

1.1 Introduction

With the ubiquity of social media in almost every aspect of life, sites such as Facebook, Twitter, Snapchat, and Instagram provide a new way of communication that creates a challenge for healthcare professionals to maintain their professional manners on these platform [1, 2]. Social media allowed health professionals to be more expressive and enabled them to make social interaction with others that they do not know, which creates challenges for users when creating profiles, sharing photographs, personal information, and details about their daily interactions, commenting on things they like or dislike, which were not traditionally available to the public doing so, they create an 'online persona' in which students and professionals may feel comfortable sharing and revealing personal information that might be inappropriate from professional stand point [3, 4].

For health professionals, the use of social media could adversely impact patients' trust in health professionals because it blurs the personal-professional boundaries [5, 6]. For example, patients' confidentiality could be compromised by sharing and discussing their condition online [7, 8]. Although, using privacy settings might limit the number of people who can access the content posted on these platforms, this requires users to stay attentive when using social media as information tend to reach a broader audience than intended and it may be wrongly

interpreted and raise negative public response toward both professionals and the educational institutions [7, 9]. In response to these challenges, a new term 'e-professionalism' which means 'behavior related to professional standards and ethics when using electronic communications' has emerged in response to the widespread use of social media for health care and education [10].

Professionalism is a concept that informs how professionals should act and conduct themselves with patients, colleagues, and others in public places when no one is watching, therefore, it is founded on principles of ethics that guide the medical and dental professions [8, 9, 11]. Professionalism is defined as: *"the conduct and/or behavior of the individual in upholding the social contract between society and the profession"* [12]. Being professional is considered to be one of the main competencies needed by dentists to act effectively, acceptably, and ethically and is seen as a central part of dental education [13-17]. This emphasis on professionalism supports the notion that becoming a health professional requires not only gaining medical knowledge and skills but also a high moral standard, which requires commitment toward professional values such as integrity, compassion, altruism, continuous improvement, excellence, working in partnership healthcare team and respect for others [18].

Social media is popular in Libya, particularly following the February uprising and the role social medial had played in what is the so-called Arab spring. Anecdotal

evidence suggests that the unfavorable behaviors by many dental students on social media have become a common notice. The reliance on social media for dental education and marketing has notably increased in recent years. However, there is a shortage of research studies that attempts to explore the behaviors of Libyan dental students on social media. To address this issue, an assessment of current attitudes and perceptions toward e-professionalism of the students is vital for designing an intervention for improving professional behavior and to inform policymakers at the University of Benghazi and wider country level.

Chapter 2 Literature review

In the last several years there were several studies conducted to evaluate the behavior of health professionals on social media, many of these studies focused on e-professionalism in healthcare students as future health professionals [4, 6, 19-25]. In undertaking the following literature review, definitions of social media and different platforms that are commonly used, are presented. In addition, the concept of professionalism, e-professionalism in both medical and dental fields are explained, to end this chapter by revising previous studies of e-professionalism in healthcare disciplines.

2.1 Social media

Social media is defined as "software that enables individuals and communities to gather, communicate, share and in some cases collaborate or play" [26]. The term social media is used to refer to a range of internet based applications intended for the purpose of information sharing and interacting including blogs, wikis, and social networking sites such as Facebook, Twitter, LinkedIn, WhatsApp, Skype, YouTube, Flickr, Telegram, Instagram, and Pinterest, that allow the creation and exchange of user-generated content [27, 28].

Facebook is a very popular social media platform that can be accessed from different internet connected devices such as personal computers, tablets,

and smartphones. Facebook users can create profiles revealing information about themselves. They can post text, photos, and multimedia which are shared with any other users who have agreed to be their "friend" or, with different privacy settings, publicly. Users can also communicate directly with each other with Facebook Messenger, join common-interest groups, and receive notifications on the activities of their Facebook friends and pages they follow [29]. On the other hand, Twitter is a microblogging social media platform on which users post and interact with "tweets". A Tweet is any message posted to Twitter that may contain photos, videos, links, and text Tweets are restricted to 280 characters, registered users can post, like, and retweet tweets, but unregistered users can only read those that are publicly available [30].

Instagram is an online photo sharing application and social network platform that allows users to edit and upload photos and short videos through a mobile application. Users can add a caption to each of their posts and use hashtags and location-based geotags to index these posts and make them searchable by other users within the application. Each post by a user appears on their followers' Instagram feeds and can also be viewed by the public when tagged using hashtags or geotags. Users also have the option of making their profile private so that only their followers can view their posts. As with other social networking platforms,

Instagram users can like, comment on and bookmark others' posts. Photos can be shared on one or several other social media sites including Twitter, Facebook [31].

YouTube is a video sharing platform, anyone with access to a computer or mobile device and an internet connection can watch YouTube content and share their own. YouTube can also provide relevant educational information for public awareness on various health issues. YouTube has had an unprecedented social impact, influencing popular culture, internet trends, and creating multimillionaire celebrities [32, 33].

Snapchat is a mobile messaging application used to share photos, videos, text, and drawings. It has become hugely popular in a very short space of time, especially with young people. There is one feature that makes Snapchat different from other forms of texting and photo sharing: the messages disappear from the recipient's phone after a few seconds. Another popular feature on the application is Snapchat Stories. Users can compile photos/videos for all their friends to view and publish them as a Story. Unlike normal Snaps, Snapchat Stories last for 24 hours and can be viewed more than once. This feature allows users to share snapshots of their lives from the last 24 hours with all of their friends. There is also an option to share your story publicly using the "Our Story" feature. Snapchat users can also browse through stories published by popular brands and celebrities [34].

Telegram is a mobile and desktop messaging application with a focus on security and speed. With Telegram, users can send messages, photos, videos, and files of other types, as well as create groups for up to 200,000 people or channels for broadcasting to unlimited audiences [35].

2.1.1 Advantages of social media

Social media offers various audio-visual tools which create valuable opportunities for healthcare students and professionals in diverse aspects of their life. These include knowledge sharing is one of the best features that social media provides for healthcare professionals to keep up to date with the new as many health institutions and organizations use social media to share discoveries and researches. Moreover, collaborating with colleagues and mentoring students are no longer limited by geography. An example of this, Twitter has gained popularity among the medical and dental communities for knowledge sharing [36, 37].

Also, Telegram allows creating groups or channels with a large number of users to provide a fast interchange of information and communication between doctors [38]. Furthermore, most conferences now have an accompanying blog, where readers can go to learn more about the conference proceedings and presentations [39]. Social media is an important information source for policymakers, promoting and informing health policy, it can also provide health information for patients and the public from trusted sources [40].

2.1.2 Disadvantages of social media

Social media platforms are open spaces. A person can upload information that is not true or belong to someone else. For healthcare provider, social media holds more challenges including breaching patient's privacy with a post or image that may provide enough data to recognize, patient-doctor/dentist relationship should be based on trust and respect however the interactions of doctors with patients and self-exposure nature of social media may comprise this relationship [41-43].

2.2 Professionalism in the healthcare profession

While we have an instinctive understanding of professionalism as we are expected to uphold from the beginning of our training and throughout our entire professional life, it is still a challenging task to define professionalism in healthcare, there are various definitions of professionalism in the literature and across regulatory bodies and institutions [18].

Professionalism as a word can be simply defined in many dictionaries as " the conduct, aims, or qualities that characterize or mark a profession or a professional person" [44]. While to understand professionalism and the root of a doctors' obligations to the profession, we must first comprehend their professional status and role. A profession is considered as ' *well-defined group of individuals who had undergone formal training to gain a body of specialized knowledge in order to carry*

out a particular form of work, over which they had monopoly and self-regulation, in
return for placing the interests of others before themselves [45].

Interestingly, the professional status is not an inherent right, but is granted by society and society bestows professional rank on people [46]. Thus, for a profession to sustain its status, the public's belief remains that professionals are trustworthy and meet their obligations of the society in which they work, and these needs change with time and this is called the social contract. The social contract between the medical profession and society is to provide healthcare services while maintaining appropriate professional values, behaviors, and identity.

The rise of interest in professionalism in the medical profession lead the Royal College of Physicians, state that; "Social and political factors, together with the achievement and promise of medical science, have reshaped attitudes and expectations of both the public and of doctors" They went on to explain that these changes required a new definition of medical professionalism: "Medical professionalism signifies a set of values, behaviors, and relationships that underpins the trust the public has in doctors" [47].

Likewise, the General Medical Council in the UK also commented on 'Maintaining a professional boundary between you and your patient' advising

doctors to 'ensure that your conduct, both at work and in your personal life, justifies patients trust in you and the public's trust in the dental profession' [48].

2.3 Dental Professionalism and its importance

The dental profession holds a special position of trust within society. As a consequence, society affords the profession certain privileges that are not available to members of the public at large. In return, the profession makes a commitment to society that its members will adhere to high ethical standards of conduct [49, 50]. especially when dentistry has continued to be identified as a regulated occupation with a unique set of knowledge and skills dependent on appropriate training[12], and professionalism is widely acknowledged as an important component of the competencies needed to perform dentistry.

Trathen and Gallagher (2009)[18], proposed a definition for dental professionalism in their paper 'Dental professionalism: definitions and debate': "Dental professionalism signifies a set of values, behaviors, and relationships that underpins the trust the public has in dentists. Dentistry is a vocation in which a dentist's knowledge, clinical skills, and judgment are put in the service of protecting and restoring oral, dental, and social well-being. This purpose is realized through a partnership between patient and dentist, one based on mutual respect, individual responsibility, and appropriate accountability. In their day to day practice, dentists

are committed to integrity, compassion, altruism, continuous improvement, excellence, working in partnership with members of the wider healthcare team"[18].

2.3.1 Importance of Professionalism in Dentistry

Professionalism leads to better patient care; studies have shown patients place a high value on professionalism and feel comfortable entrusting their health to dentists who are regarded to be professional. The foundation of a successful dentist-patient relationship is trust, whether or not a patient will seek dental care on a frequent basis is determined by his or her level of trust in the practitioner. Dentists who always act in their patients' best interests earn trust, patients trust that their personal information will be kept private and that they will be able to make fully informed decisions that are respected and safeguarded. A patient who believes a dentist is trustworthy is more likely to accept the dentist's treatment recommendation than one who suspects the goal is financially motivated [51]. Furthermore, professionalism also entails respecting, maintaining appropriate and dignified boundaries with patients. and refraining from allowing their personal interests to influence their clinical judgment [52].

2.4 Aspects of dental professionalism

Dental professionalism is a complex, multidimensional concept, which has individual, interpersonal, and societal dimensions that encompass professional behaviors within areas relating to ethics, regulation [17].

2.4.1 Ethics

Ethics are defined as the 'moral principles that govern a person's behavior or the conducting of an activity. The ethical foundation of dentistry derived from the Hippocratic promise of best interest, confidentiality, and respect for autonomy, professionalism is established through adherence to the principles of ethics: respect for autonomy (an acknowledgment that patients are free to make decisions), nonmaleficence (the fundamental principle of avoiding the potential for harm), beneficence (a consideration of the equation of weighing benefits versus risks), and justice (fairness in how burdens and benefits are distributed) [54]. this promise makes the dentist/patient relationship require significant levels of trust [55], making the dental professional obligated to maintain patient confidence, keep promises, be truthful, and consider patient values and personal preferences in treatment decisions.

2.4.2 Professionalism and social media use in regulatory bodies, associations, and institutions:

Many regulatory bodies in healthcare exhibited an emphasis on professionalism and expect that professionalism to be rooted throughout dental education and training and students should be able to exhibit professional attitudes and behavior at all times from the beginning of their training [15].

In the United Kingdom, the dental profession features self-regulation; which means that if a professional behaves in an unprofessional manner, a panel of their peers usually judges whether or not that individual should be allowed to continue practicing. The General dental council (GDC) focused on dentists' awareness of their ethical, legal, and professional responsibilities and duties by publishing 'Dental team learning outcomes for registration'. These outcomes are competencies that an individual must be able to demonstrate by the end of their training, in order to register with the GDC. The professionalism is one of the four outcome domains, and it states that " Professionalism is the knowledge, skills and attitudes/behaviors required to practice in an ethical and appropriate way, putting patients' needs first and promoting confidence in the dental team" [15]. Moreover, in 2016 GDC issued guidance on using social media for the dentist and dental student; this guidance stated their obligation to maintain and protect patients' privacy and confidentiality,

to maintain dentist-patient boundaries, and must treat colleagues with respect at all forms of communications including social media [27].

In the United States, the American Dental Education Association (ADEA) issued a statement on professionalism in dental education in 2009, to offer guidance for individual and institutional behavior in dental education, the goal is to promote professionalism throughout the dental education and practice continuum. The statement discussed six values that encompass professionalism: Competence, Fairness, Integrity, Responsibility, Respect [16]. The American Dental Association (ADA) in their 'Principles of Ethics and Code of Conduct, 2020' calls upon dentists to follow high ethical standards which have the benefit of the patient as their primary goal, and avoid personal interactions that could impair their professional judgment or risk the possibility of exploiting the confidence placed in them by a patient [49].

Furthermore, ADA issued policy regarding social media use by dentists and dental students advising them to maintain patient-dentist relationships and trust in the profession which requires them to follow ethical guidelines when communicating, whether in a personal or professional setting, including on social media [14, 56, 57]. The debate about professionalism in dentistry in the constantly changing world continues to be a hot topic among dental scientists and professional leaders.

2.5 E-professionalism

With the appearance and proliferation in everyday life, healthcare professionals find themselves in challenging situations, as they have to maintain their professionalism not only in their face-to-face interactions but also in the digital environment especially when social media was recognized as a risky space where inappropriate behaviors may be revealed to patients [58]. The rise of social media use in the healthcare field during the last years this led to the appearance of new term online professionalism, referred to as "e-professionalism" or digital professionalism which is defined as "*the behaviors and attitudes reflecting typical professionalism's examples that are manifested through social media*" [59, 60].

There are increasing concerns over the significant professional consequences for both students and professionals using these platforms. These include breaches in patient confidentiality; for example, by writing about a patient on social media this could be potentially harmful to the patients, even if the name was not mentioned but one of the public may identify the patient if enough identifying features have been provided. Similarly, unsuitable videos or images being posted on online platforms, negative comment criticizing patients, colleagues on social media reflects unprofessional conduct [8, 60, 61]. Unlike physical interaction-induced professionalism, social media may reveal personal information, for example, interests and activities that can be retained and judged by the public for an infinite period of time [62].

Considering the adverse effect of social media use on healthcare professionalism, there has been increased interest in how healthcare students behave online, and how this technology may be challenging existing professional standards. This has resulted in a new area of study, e-professionalism (digital professionalism) [63, 64]. Previous studies conducted on the perceptions of e-professionalism among dental students showed that most students were heavy users of social media with an awareness of social media guidelines, but there was disagreement on what posts were deemed unprofessional. Interestingly, the majority of undergraduate dental students have been exposed to unprofessional behavior online [60, 65]. Consequently, it has been recommended that dental undergraduates receive training in online risk management and the appropriate use of social media but have stated that more work is needed to determine the most effective way to do this [65].

2.6 E-professionalism studies in medicine and other healthcare discipline

Most health science students have access to patients' personal information that must be kept confidential, O'Sullivan *et al. ,* conducted an international study by*,* a in 8 universities in 7 countries: Fudan University (China), Tecnologico de Monterrey (Mexico), University College Dublin (Ireland), University of British Columbia (Canada), University of Nottingham (United Kingdom), University of Birmingham (United Kingdom), Hong Kong University (Hong Kong), and the

University of Melbourne (Australia). Most students surveyed from all health science disciplines were already social media users, and a significant number of students across all health science disciplines self-reported sharing clinical images and information without explicit permission, this could threaten patients confidentiality [66].

In 2008, Thompson and colleagues conducted one of the earliest studies of e-professionalism which was published under the title "The Intersection of Online Social Networking with Medical Professionalism" in this study the online profiles of all medical students and residents at the University of Florida were evaluated for the presence of any unprofessional material. This study revealed that medical students used Facebook as a social network more often, a majority of them allow the public to view their profile and a significant proportion having content that could be interpreted negatively [67], Flickinger et al. , reported that medical students considered privacy and personal-professional boundaries areas of concern when using social media [68], thus the studies concluded that instruction on preserving professional boundaries when using social media must be included in professionalism training.

In 2010, J MacDonald et al. , similar findings were reported that young medical graduates are members of Facebook yet many of them did not use the privacy options, rendering the information to be available to a wider public. This

personal information exposed could cause patients distress or affect the professional boundaries between patient and practitioner, as well as information that could bring the profession into disrespect [6]. This insufficient privacy protection might have a harmful impact on the doctor-patient relationship [69]. Moreover, Cain et al reported high social media usage among pharmacy students and many did not fully realize the issues that might arise from being overly transparent in online settings. The study had recommended the need for e-professionalism training of incoming pharmacy students [19].

Healthcare professional and students should consider the perspectives of others (faculty members, patients, and the wider public) when posting content on social media, as it was found that each group has a different level of what is acceptable on social networking sites [70]. A study that examining nursing students at a Canadian university reported that nursing students posted something they would not prefer to be seen by faculty, patients, or future employer, and almost a third of students were aware of other students who had breached patient confidentiality on Facebook [71]. Social media sites are made mainly for personal connections; however, Patient–doctor interactions may exist in this virtual space. In 2011, Bosslet et al., examined social media use and interaction with patients in a cohort of practicing physicians, resident physicians, and medical students in the United States reported that Patient–doctor interactions take place online, and are commonly started by

patients. A majority of respondents viewed these online interactions as ethically problematic [72].

2.7 E-professionalism studies in dentistry

Dental students, similar to other healthcare students are frequent users of various social media platforms, maintaining patients' confidentiality, preserving their personal and professional boundaries online and dentist-patient relationship; are the major concerns that are frequently encountered. In 2013, a Canadian study had been conducted to explore the attitudes and experiences of healthcare professional students (including dental students) using Facebook. The study found that social media use is widespread among healthcare students and almost half of the students in the study had reported either seeing their colleagues or themselves posting unprofessional material on Facebook, such as criticism of teachers/programs, posting of inappropriate photographs, and swearing. This indicated that guidelines for Facebook use would be beneficial to students dealing with being young healthcare professionals in a digital world [23]. In a school-wide assessment of social media usage by students in a US dental school, the students reported that using social media sites especially Facebook blurs the line between their personal and professional lives which was a concern for them [24].

The social media usage by dentist bring the issue of patient confidentiality and/or privacy in a study conducted in 2015 in Brazil on posting pictures of patients on Facebook exhibited that it is possible to identify situations of breach of confidentiality and/or privacy in pictures of patients which was posted by a physician or dental surgeon users and the study concluded that this issue should be addressed by educator and professional bodies across their institution [73].

In 2016, Kenny and Johnson conducted a study in a cohort of undergraduates' dental students (years 2, 3, 4) the study found that all dental students at the University were using social media, the majority of them choose to limit access to their Facebook profiles and were aware of the risks of using social media which could be attributed to professionalism course and the emphasis on GDC standards offered by the school. Another finding of this study is that students are still exposed to inappropriate content online such as sharing clinical images and they feel safe posting content as long as it is in closed groups. This study emphasized that dental students should receive practical training in using professional standards, selecting appropriate behaviors, and managing professional risks online [25].

In another study which was conducted in 2018 at the University of Central Lancashire (UK University), in this study, all first-year dental students at used various social media platforms, and some of the students observed what they consider to be an inappropriate posting, comment, or photographs such as bad

language, vulgar comments and jokes, and extreme political views and racism. Furthermore, the majority of considered friending patients on social media to be unacceptable. Some of the students admitted their inadequate understanding of what is professional and what is unprofessional to share via social media neither the possible impact on their careers. This study recommended that educators should integrate professionalism and use of social media as part of the undergraduate BDS course [74].

Similarly, in 2019 another study on dental students (years 2 and 4) at a UK University reported that 50% of respondents said they checked their social media sites multiple times a day and although students self-reported knowledge of social media guidelines set out by the GDC, however, they admit to having unprofessional content on their online profiles which they would not like an employer or patient to see, this may reflect that their attitude towards e-professionalism was complicated and more research is needed to the best way to inoculate e-professionalism in undergraduate students [60].

Furthermore, In a search which was performed on the Facebook accounts of all students in a University Dental School in Ireland exhibited that there was a concerning level of unprofessional content visible on students' Facebook profiles. [75] Neville in a content analysis of Fitness to Practice cases relating to the General Dental Council in the UK concluded that social media could be a vehicle for

unprofessionalism and recommended that dental educators incorporate social media awareness training as part of its overall program of teaching professionalism [76].

In 2021, a study of the relationship between Facebook behavior and e-professionalism among Greek dental students found most of them had a Facebook account and that their online behavior might affect patients' opinions about the dental profession. There are also the students in their clinical years that were Facebook friends with patients having discussions that are both personal and professional which highlight the issue of patient-dentist relationship. Another finding of this study is that some students used Facebook to post negative comments about the dental school, faculty members, or academic staff [77].

Some studies conducted in Saudi Arabia, informed that dental students and dental practitioners are heavy users of social media particularly WhatsApp, Snapchat, Instagram, and many of them might threaten patients' privacy and confidentiality with unprofessional material that they post online that may lead to negative perceptions of dental professionalism. The researchers recommended teaching professionalism guidelines and proper conduct online in continuing education materials to regulate dental practitioners' use of social media for sharing clinical data [78, 79].

A recent systematic review in 2021, titled "Preserving professional identities, behaviors, and values in digital professionalism using social networking sites" conducted by Guraya et al. yielded 44 articles, 5 of which belong to Dentistry. The review reported an escalating rise in the use of social media among health care professionals and students with a reciprocal rise in the literature in the prevalence of breach of patient confidentiality. In a conclusion, it is stated, "These findings call for potential educational intervention to resurrect professional virtues, behaviors, and identities of healthcare professionals and students"[80].

To the researcher's best of knowledge, by reviewing the literature, there is no one study conducted on e-professionalism of dental students in Libya. Therefore, studying this area would provide unprecedented and valuable information to understand how professionalism is perceived by dental students which would guide the teaching of professionalism within the dental curriculum at the Libyan dental schools.

Chapter 3 Aim and objectives

3.1 Aim

The current study aims to investigate dental students' social media use and their attitude and perception of digital (e-) professionalism.

3.2 Objectives

1. Explore the social media sites usage and privacy setting among dental students at the University of Benghazi.

2. To assess the attitude and perception of digital professionalism among dental students at the University of Benghazi.

3. Assess the impact of teaching digital professionalism among dental students at the University of Benghazi.

Chapter 4 Materials and methods

4.1 Study Design

A cross-sectional, comparative, study design using a self-administered questionnaire was used. This design was deemed appropriate for such types of studies where personal views and practices are sought [6, 25, 77]. This study used a paper-based questionnaire to explore the use and privacy settings among dental students in the two last academic years (4th year and interns). By comparing the responses of the two cohorts (intervention group and control group), attitude and perception of digital professionalism (e-professionalism), and the impact of teaching professionalism and ethics were assessed.

Intervention group: Intern students received the previous teaching on professionalism and ethic. The teaching of ethics and professionalism is part of the Dental Public Health course, and is provided a formal lecture which covers the following topics:

- Definition of ethics and professionalism.

- Principles of ethics.

- Duties of dentists.

- Ethics in the age of social media.

- Consent and confidentiality.

Control group: These are 4th-year students who didn't receive any previous formal teaching about professionalism.

4.2 Setting:

The study was conducted at the faculty of dentistry is one of the faculties of the University of Benghazi. This is the first college specializing in oral and dental diseases and surgery in Libya. It was established on 6/19/1974. The faculty of Dentistry of Benghazi follows the system of the full academic year of teaching in the English language. The duration of study at the faculty of Dentistry to obtain a bachelor's degree in oral and dental medicine and surgery is five academic years, followed by a training year "Internship.".

The academic years are divided as follows:

- The preparation phase lasts for one academic year.
- The pre-clinical stage is two years long and includes the first year and the second year.
- The clinical phase is two years long and includes the third and fourth years.
- The internship stage is a training stage that lasts for a full year.

4.3 Participants:

The undergraduate dental students at the faculty of dentistry, the University of Benghazi in the academic year 2020/2021 were invited to take part in the study. The total number of students registered in the 4ᵗʰ year and internship year is 602 students (256 4ᵗʰ year students and 346 interns).

4.3.1 Selection criteria

Inclusion criteria:

- Students in the 4ᵗʰ or internship year at the Dental Faculty of Benghazi University.
- Students who attended lectures and clinical classes at the time of the study.

Exclusion criteria:

- Students who didn't have social media accounts.
- Students who refused to participate in the study.
- Students who did not pass dental public health subject

4.4 Data collection:

A paper-based, self-administered questionnaire was developed and used to identify dental students pattern use of different social media platforms: ('Facebook',

'Twitter', 'Instagram', 'YouTube', 'Snapchat', 'Telegram'), their privacy setting on each platform, and their perception and attitudes towards digital professionalism (e professionalism).

4.4.1 The questionnaire:

Development of the questions was informed by previous studies [25, 72] and modified to be compatible with the Libyan culture for example: ('Publish photographs of students drinking alcohol at social events') this question was removed from the questionnaire as drinking alcohol is prohibited in Libya. Another example of this question ('I am aware of the GDC guidelines on social media) was also removed as (GDC) stands for General Dental Council which is an independent organization that regulates dentists and dental care professionals in the UK.

The questionnaire was pre-tested for clarity and understandability before distribution. Firstly, we tested the English version. The researcher tested the English version of the questionnaire in undergraduate, students were asked to highlight any words or phrases that were difficult to understand. The students reported many terms were difficult to understand in English and require translation to the Arabic language to be understood. As a result, the questionnaire was translated to the Arabic language by the researcher. The Arabic questionnaire was then pre-tested among ten undergraduate students, randomly selected, and asked to complete the questionnaire. They were asked to report any difficulty in answering the questions. The

questionnaire was well-understood among students and these questionnaires were included in the analysis. The final version of the questionnaire (Appendix I) takes 15 minutes to be completed and is comprised of a brief introduction that covers the purposes of the study, definition of digital professionalism, and statement to explain that participation is voluntary and confidential. The questionnaire had 23 questions divided into four sections covering the student's demographic data; social media sites' pattern of use and the privacy/accessibility of their social media profile; perceptions of digital professionalism; and their attitudes towards social media behaviors.

All questions were closed-ended questions. The options of the answers depend on the nature of the question. For example, the frequency of use of popular social media sites was assessed using a four-point Likert scale ('daily', 'weekly', 'occasionally', and 'not a user'). Also, questions about the privacy of social media accounts used different options to choose from ('public', 'friends only', 'special friend groups', 'don't know, 'not a user'). On the other hand, in the section of the questionnaire that inquired about students' perceptions of digital professionalism, the participants were asked to describe the behavior on 'a dichotomous scale' as professional and unprofessional. They were also asked to state how often they observed these behaviors by responding to a three-point Likert scale ('always seen', 'sometimes seen', and 'never seen'). In the fourth and final section of the

questionnaire, five statements were used to explore student's attitudes towards social media behaviors (for example, 'I am concerned about unprofessional posts made by dental students on social media) to be rated with ('agree', 'disagree', 'neither agree nor disagree').

4.4.2 Administration of the questionnaire:

The questionnaires were distributed at the start of clinical classes, during the period between March and April 2021, to ensure maximum participation. The questionnaires were handed to the students in the lecture hall and clinics during the student's break times by the researcher who was available for clarifying any questions. The questionnaire was collected immediately after they finished. The research approached the students personally or through their mentors and explained the aim of the study and confirmed the confidentiality of voluntary participation.

4.5 Data analysis

All numerical data were coded and hand-entered by one researcher into SPSS software (version 25). Descriptive statistics were used to describe the characteristics of study participants and the distributions of responses to questionnaire items. A Chi-square test was used to compare responses among the intervention and control groups. All statistical tests were conducted at p-value ≤ 0.05.

4.6 Ethical consideration:

Questionnaire completion was voluntary and anonymous. No personally identifiable information was collected, and this was mentioned at the beginning of the questionnaire and mentioned by the researcher during questionnaires distribution. Ethics approval was obtained from the research ethics committee at the faculty of Dentistry, University of Benghazi. (Appendix II)

Chapter 5 Results

5.1 Demographic characteristics of the participants

Four hundred questionnaires (400) were handed out and (394) were returned. Of these, 364 were completed and suitable for analysis, resulting in a response rate of (91%), which represents (60.4 %) of the total population of students officially registered in the 4th and internship years (602).

Table 1; Summarizes responders' characteristics. A total of 178 students were in the 4th year that is (49%) while 185 students were in their internship year that is (51%). Most students who returned the questionnaire were female (N=314, 87.2%). Respondents' age ranged between 22 and 27 years, more than half (60%) of respondents reported their parents' attained university or higher degree; (fathers, 66.1%, mothers, 62.4 %).

Table 1 Demographic characteristics of the participants

| Variables	Number(N)	Percent (%)
Year of study 4th year Internship	 178 185	 49% 51%
Gender Male Female	 46 314	 12.8% 87.2%
Father education Pre-university University or higher	 123 240	 33.9% 66.1%
Mother education Pre-university University or higher	 136 226	 37.6% 62.4%

5.2 Social media platforms pattern of usage:

5.2.1 Frequency of use
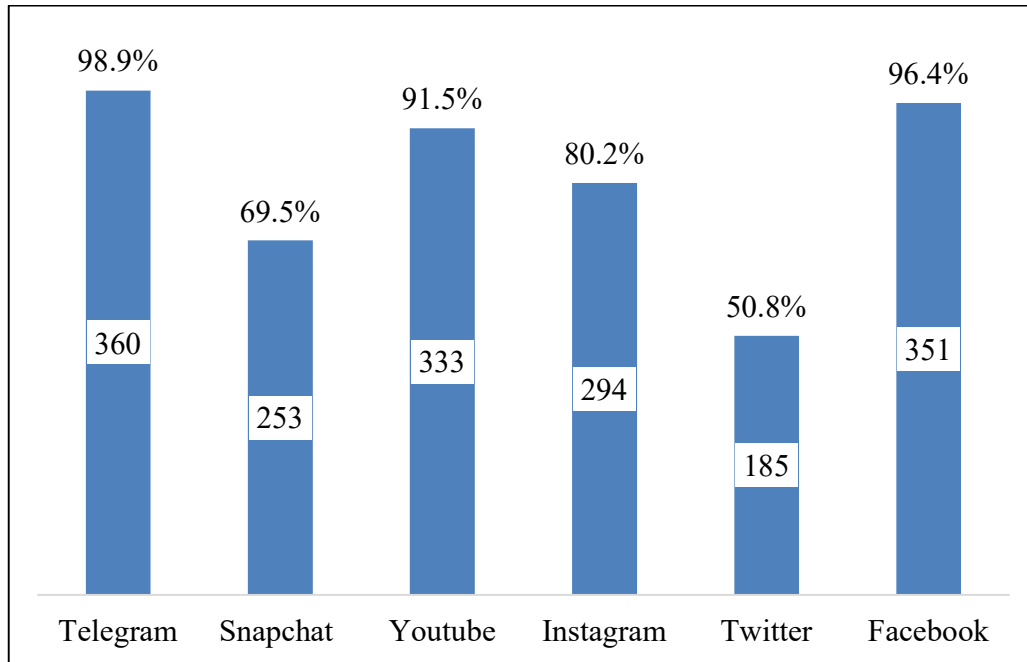
Figure 1: Social media sites used by dental students

Figure 1; Shows the proportions of dental students who used different social media platforms. Most dental students use multiple social media sites. Telegram is the most used by dental students (N=360,98.9%) followed by Facebook (N=351,96.4%) then YouTube (N=333,91.5%), Instagram (N=294,80.2%) and least sites used by dental students is Snapchat and Twitter with (N=253,69.5%), (N=185,50.8%) respectively.
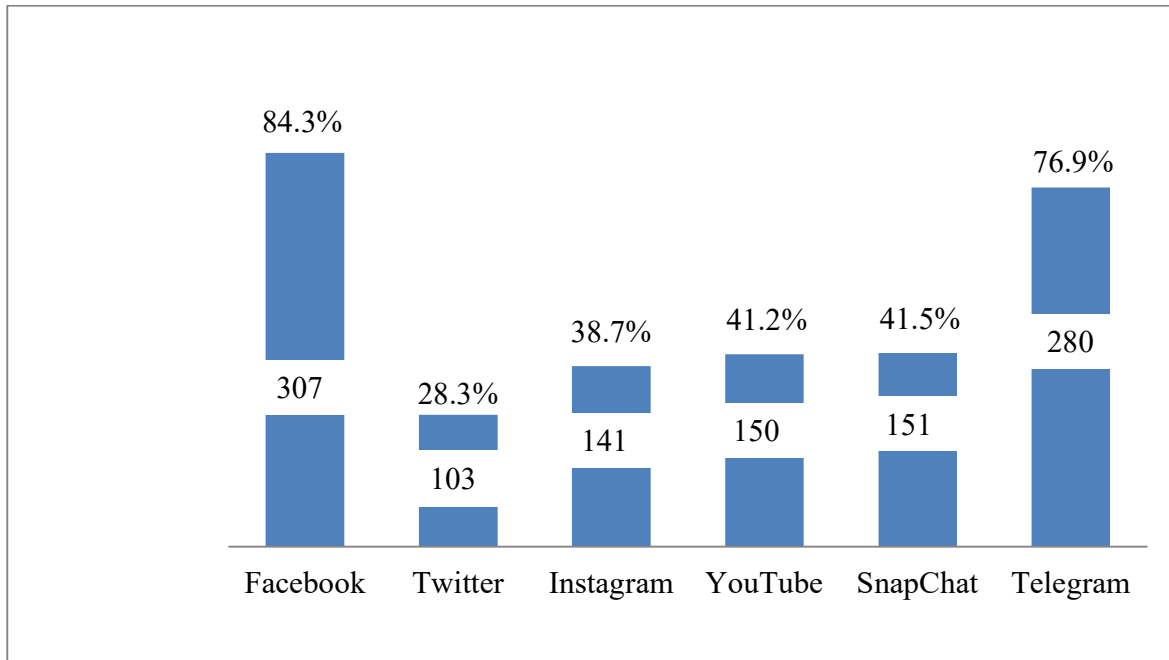
Figure 2: social media sites used daily

Figure 2; Depicts the most daily used social media platforms. Facebook is the most social media platform used on daily basis (N=307, 84%) Telegram is the second most daily used platform (N=280, 76%), while Twitter is the least daily used platform with less than a third of dental students (N=103, 28%) reported its use.

Table 2; Compares the social media usage across the two study groups. A significant difference was observed only in the use of telegram where 4th year students were more likely to use telegram on daily basis than those in the internship year (P =0.000). The use of Twitter and Instagram was also higher among 4th year students but this difference was not statistically significant. A higher but not statistically significant proportion of internship students used Snapchat.

Table 2 Social media platforms Frequency of use (Used daily) by year group

	Number(N)	Percent (%)	P-value
Facebook			0.984
4th year	150	84.3%	
Internship	157	84.9%	
Twitter			0.525
4th year	55	30.9%	
Internship	48	25%	
Instagram			0.721
4th year	73	41%	
Internship	68	36.8%	
YouTube			0.086
4th year	73	41.0%	
Internship	77	41.6%	
Snapchat		38.8%	0.519
4th year	69		
Internship	82	44.3%	
Telegram:			.000
4th year	154	86.5%	
Internship	125	67.6%	

5.2.2 Social media profiles' characteristic
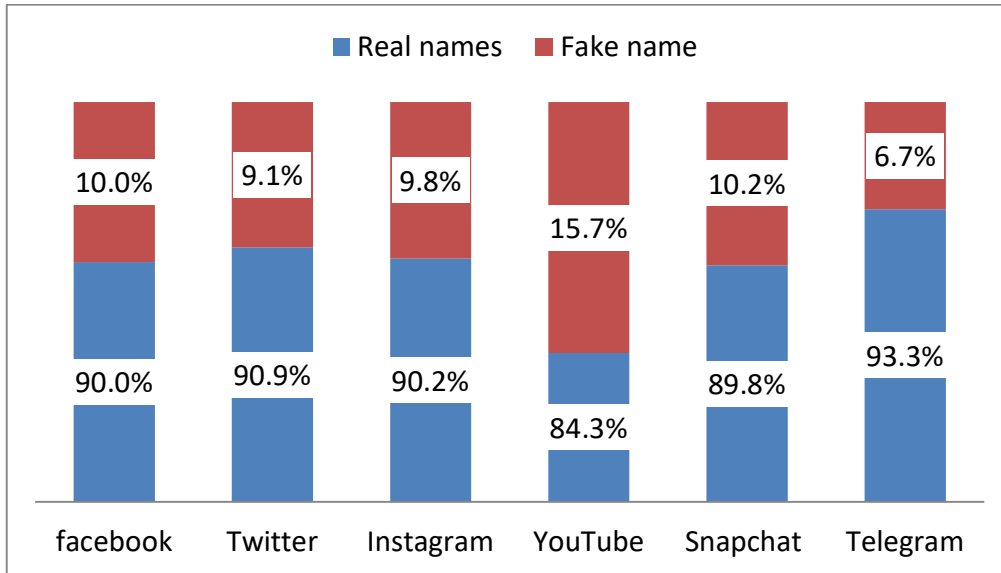
Figure 3: Social media profiles' characteristic

Figure 3 illustrates social media profiles' characteristic. It shows that the majority of dental students tend to use their real names when using different social media platforms, the most sites they use their real name on is Telegram with (N=334,93.3%) and Twitter (N=170,90.9%) then Instagram (N=268,90.2%), Facebook (N=316,90%), and this percentage slightly decreased to (N=229,89.8%) for Snapchat and (N=274,84.3%) for YouTube.

5.3 Social media platforms privacy settings
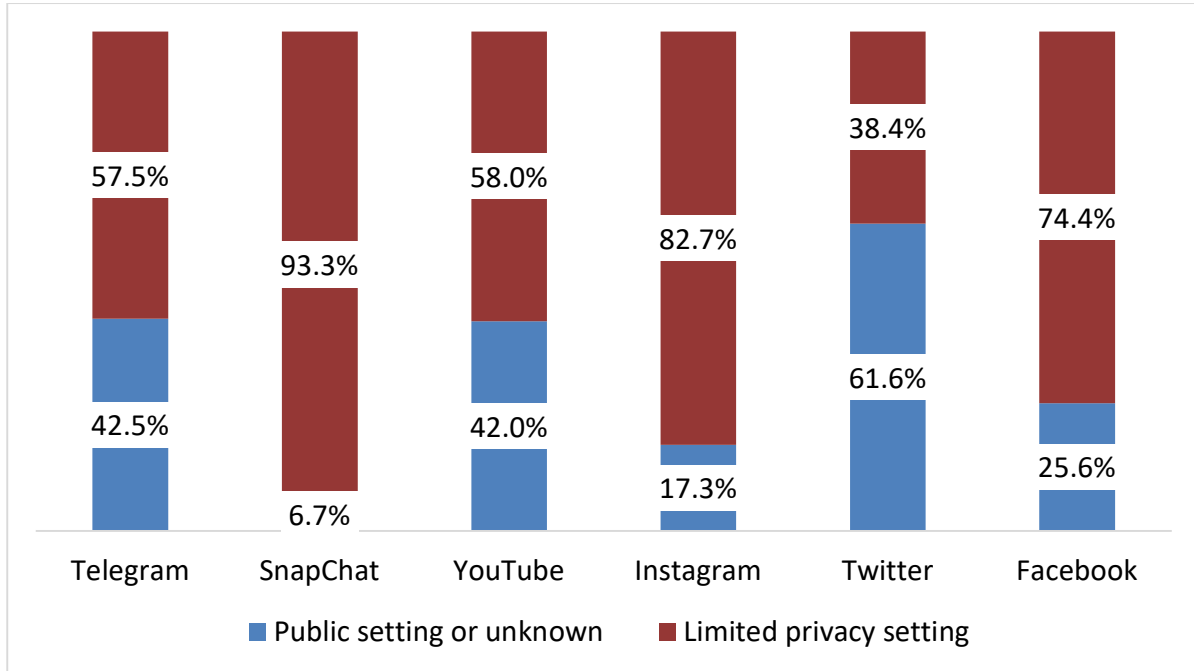
Figure 4: Social media sites privacy settings

Among students who are social media users, most use privacy settings for their accounts. Figure 4; Illustrates that almost all of Snapchat users (N=236,93.3%) limit their content on this site to friends, this percentage slightly decreases among Instagram and Facebook users with (N=243,82.7%), (N=261,74.4%) respectively. on the other hand, Twitter is the most platform that dental students have their privacy settings open to public or unknown settings (N=114,61.6%).

5.4 Dental students' perception of digital professionalism

Table 3; Demonstrates students' perception of professionalism in different online scenarios. Most of the respondents reported publishing photographs at social events and publishing photographs in a clinical setting to be professional online behaviors. These behaviors are seen sometimes by half of the students when using social media.

Most respondents (N=254,70.9%) described that Facebook or other social media posts that disclose information about the dental patient (name, photo, diagnosis) to be unprofessional. on the other hand, discussing patients' conditions or/and cases on private groups on social media only (N=44,12.2%) considered it to be unprofessional while (N=211,58.6%) described discussing patients' conditions or and cases on open groups on social media to be unprofessional behavior which more than half of the respondents saw this behavior sometimes. Less than a third of the students (N=56,15.8%) considered postings about anonymized dental patients' interaction and procedures as unprofessional and it was reported to be seen always by (N=169,48%) of respondents.

Communicating with patients on social media was described to be unprofessional behavior only (N=23,6.4%). Also, most respondents reported that interaction with clinical staff and tutors on social media to be professional with only

(N=19,5.3%) described it as unprofessional behavior. More than half of the dental students (N=189,52.4%) reported that negative comments about the teaching process, staff, or colleagues from the faculty of dentistry as unprofessional online behavior, and it was sometimes seen by (N=216,62.1%), Almost all of the respondents (N= 345,96.6%) reported that negative comments relating to people's characteristics or controversial issues (e.g. Gender, race, disability, politics) was unprofessional and it was also seen sometimes by half of the respondents (N=201,56.6%).

Table 3 Online behaviors tabulated by the proportion of students: 1) rating each behavior as unprofessional, 2) reporting how often they have seen each behavior.

	Unprofessional N (%)	Always seen	Sometimes seen N (%)	Never seen
1.Publishing photographs of dental students at social events (e.g., Parties, sporting events, meals).	72 (20.2%)	154(43.6%)	184(52.1%)	15(4.3%)
2.Publishing photographs of students in a clinical setting.	70 (19.4%)	152(43.8%)	181(52.2%)	14(4%)
3.Facebook or other social media posts that disclose information about the dental patient (name, photo, diagnosis).	254 (70.8%)	77 (21.8%)	215 (60.7%)	62(17.5%)
4.Posts describing an interaction with patients that do not reveal any identifying information. Example: posts I just completed my first filling', I did my first extraction).	56 (15.8%)	169(48.3%)	164 (46.9%)	17 (4.9%)
5.Communicating with patients on social media.	23 (6.4%)	112(32.8%)	208 (61%)	21 (6.2%)
6.Negative comments about the teaching process, staff, or colleagues from the faculty of dentistry.	190 (52.5%)	93(26.7%)	216(62.1%)	39 (11.2%)
7.Interaction with clinical staff and tutors on social media.	19 (5.3%)	123 (35.8%)	208 (60.5%)	13 (3.8%)
8.Discussing patients' conditions/cases on closed/Private groups on social media.	44 (12.2%)	108 (31%)	211(60.6%)	29 (8.3%)
9.Discussing patients' conditions/cases on open groups on social media.	211 (58.4%)	74 (20.7%)	213 (59.7%)	70 (19.6%)
10.Negative comments relating to people's characteristics or controversial issues (e.g., Gender, race, disability, politics).	346 (96.6%)	48 (13.5%)	201(56.6%)	106 (29.9%)

Table 4; Shows dental students' ratings of the different online behaviors by year group. It could be seen that students at their internship year are more likely to describe behaviors unprofessional but the only one that is significant is 'Communicating with patients on social media, 4th year students were less likely to report it as unprofessional compared to intern students (P-value = 0.026), this can be attributed that intern students had received the lecture while 4th year did not.

Table 4 Students rating online behaviors as unprofessional by year group

	4th year	Intern students	P-value
1. Publishing photographs of dental students at social events (e.g., Parties, sporting events, meals).	32 (18.3%)	40 (22.1%)	0.370
2. Publishing photographs of students at a clinical setting e.g. In white coats, name badges	30 (17.1%)	40 (21.6%)	0.283
3. Facebook or other social media posts that disclose information about the dental patient (name, photo, diagnosis)	121(69.5%)	133(72.3%)	0.568
4. Posts describing interactions with a patient that does not reveal any identifying information. Example: posts I just completed my first filling', I did my first extraction)	22(12.7%)	34 (18.8%)	0.118
5. Communicating with patients on social media	6 (3.4%)	17(9.2%)	0.026
6. Negative comments about the teaching process, staff, or colleagues from the faculty of dentistry	95 (53.7%)	94 (51.1%)	0.623
7. Interaction with clinical staff and tutors on social media	8(4.5%)	11 (6.1%)	0.519
8. Discussing patients' conditions/cases on closed/Private groups on social media	19(10.7%)	25 (13.6%)	0.426
9. Discussing patients' conditions/cases on open groups on social media	99 (56.3%)	112(60.9%)	0.374
10. Negative comments relating to people's characteristics or controversial issues (e.g., Gender, race, disability, politics)	170(97.1%)	175(96.2%)	0.604

5.5 Dental students' attitude toward digital professionalism
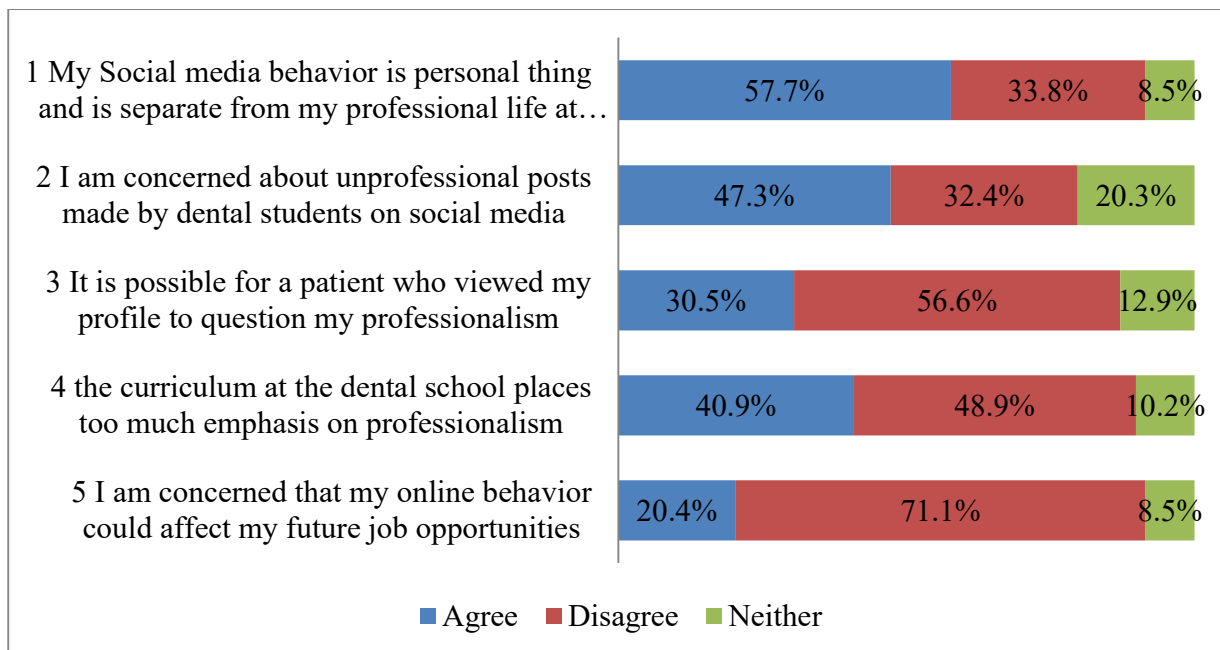
Figure 5: Dental students' attitudes toward digital professionalism.

Figure 5; Illustrates that more than half of the respondents (N=210, 57.5%) felt that their online behavior is personal and separate from their life as a dental student. While most students(N=258,71.1%) believed that their online behavior would not affect their future job opportunities. More than half (N=206,56.6 %) of students; felt that patients would not question their professionalism if they viewed their profiles, On the other hand, more than third of the (N=172,47.3%) were concerned about unprofessional posts made by dental students on social media. when asked to report if the dental school curriculum place too much emphasis on professionalism (N=149,40.9%) of the respondents agreed while (N=178,48.9%) disagreed.

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Chapter 6 Discussion

6.1 Discussion

This study was set out to explore dental students' social media use, their attitude and perception of digital professionalism, and to assess the impact of teaching digital professionalism at the University of Benghazi. To the authors' best of knowledge this is the first study of its type in the Libyan context. The study used a self-administered questionnaire for data collection from two cohorts of dental students. One of them (interns) received formal lectures on e-professionalism and the other group did not receive any information on professional behavior at all. This study found that social media sites are widely used among dental students at the University of Benghazi, who have an active presence on multiple platforms; with Telegram and Facebook, and are the most commonly used platforms. This finding is in agreement with previous studies conducted in the UK and the US. Where Facebook was found to be the most popular site among dental students [24, 60, 65]. Facebook is the most popular platform even among ordinary people. With roughly 2.89 billion monthly active users worldwide as of the second quarter of 2021, in Libya, there were 5.4 Million Facebook users in March 2020, which accounted for 78.4% of its entire population [81, 82].

Interestingly, Telegram is the 2nd most daily used platform among dental students. This could be attributed to its use as a collaborative studying tool to supplement medical and dental education which was reported by other studies [83, 84].

However, the use of Telegram decreased significantly among intern students. This observation could be attributed to the fact that telegram is used as a tool for exchanging lectures records, educational videos, and communication between students. In the faculty of Dentistry, University of Benghazi, each study year have their own Telegram channel which is run by the students themselves. In addition, the faculty administration used telegram as a tool for distance learning during the pandemic recently.

Twitter was found to be the least used by the respondents which is similar to the use of dental students in the UK [65]. It is unclear from the present study why Twitter is less popular, but it could be the case that it is less popular in the Libyan context and students' culture specifically or seen as a platform for publishing their ideas and opinions rather than a tool for communication or socializing [85]. According to a recent study among Americans, Twitter is the fifth most popular social media platform [86]. These explanations, however, remain an assumption that needs further assessment using qualitative research to explore how the Libyans view Twitter.

Most participants in this study used their real name and have a range of privacy settings on different platforms with the majority choosing to limit the audience. So that their posts could be available only to their friends. Public access was chosen by 25.6% of Facebook users compared to 7%-25% in other studies of dental undergraduates [65, 77, 87]. However, this finding should be approached with

caution since there is a risk of social desirability bias. Although this could be explained by cultural reasons, future studies should be conducted to understand why people use fake names on social media.

Regarding the effect of their social media behaviors; most the dental students in the current study believed that their online behavior would not impact their future job opportunities, while more than half worried about patients viewing their profile questioning their professionalism. This finding is similar to other studies conducted elsewhere. For example, Karveleas et al., (2021) reported that most Greek dental students felt their social media presence and attitude on Facebook might affect patients' opinions [77]. Likewise, Dobson et al., (2019) found that a considerable proportion of dental students didn't want their employer or patient to see social media profiles [60]. However, this contrast the finding of Kenny (2016) study who reported that most dental students were confident that their social media profiles would not generate questions about their professionalism, this might be attributed to multiple teaching on the appropriate behavior on social media according to GDC standard which was given to students in each year via lectures, interactive workshops, and seminars, which may account for the level of awareness reported in the study [65].

Concerning personal-professional boundaries; about half of the students in this study felt their social media behaviors are personal separate from their lives as

a dental student this contradicts the findings of a study in which 87% of dental students at UK dental school considered social media is not separate from their lives as dental students, this feeling that social media is their personal space might explain why most students in our study considered publishing photographs both at social events and clinical setting to be acceptable compared with only half of students of the UK study who considered that publishing photograph at a clinical setting to be unprofessional behavior [65].

Another unprofessional online behavior was the social interaction with academic staff on social media and negative comments toward them and the teaching process. Only 5.3% considered interaction with clinical staff and tutors on social media to be unprofessional un similar to other studies in which 32%, 53% of students from Saudi study and UK study, respectively, reported it as unprofessional behavior. Furthermore, almost half of the participants reported negative comments about the teaching process, staff or colleagues from the faculty of dentistry to be professional which is similar to the finding of Saudi study where half of the students considered critical comments about university staff, a student, or a dental colleague to be acceptable [65, 78].

Moreover, almost all students rated communicating with the patient on social media to be a professional behavior which contrasts finding of other international and regional studies in which 60%-90% of dental students thought that friending

patient on social media is not appropriate [60, 65, 78]. Students' online image can impact their professional relationships and the public view of the entire profession. Placing any controversial material including comments online could compromise the trust placed in the dental students as future professionals by patients and colleagues. All information placed online will be there permanently, even if deleted. Similarly, friending patients would be beyond the boundaries of the professional role of dentists and it is wisest to interact with patients on social media via a professional pages to maintain the professional relationship [5].

As for patient privacy and confidentiality; the majority of participants in this study identified revealing direct patient information or photographs to be unprofessional behavior which replicates the finding of other studies [60, 78]. while half of the participants reported discussing patients' conditions/cases in open social media groups as unprofessional online behavior, only 12% reported unprofessional in closed groups, which lower than the finding reported in P. Kenny's study considered that where these discussions were unprofessional (96%,76%) the for open and closed groups, respectively, same pattern is noticed students share more in closed groups than in public groups which were explained by P. Kenny; that students felt more at ease when discussions are done in a closed group as it provides a false sense of security. However, when social media there is always privacy concerns either related to the application itself even with security settings, or to the ability to

screenshot any information. It was suggested that some students may be at risk of behaving unsuitably online from a sense of security, particularly in closed groups[65].

This study's findings highlight an issue of students struggling with creating personal-professional boundaries which could affect the dentist-patient relationships as they graduate. Moreover, patients privacy and confidentiality might be compromised by sharing photographs in a clinical setting, discussing patients cases and conditions especially in closed groups which may increase the amount of information shared about their patients, and although most used some sort of privacy setting it could still be accessed by the public by various means [75]. This contradiction in the student's attitude and perception of digital professionalism might arise from the notion that these students are considered from a generation of the digital natives, who have grown up with access to the internet from a young age with the use of expressive social media had become integrated into the daily lives, providing them with an alternative space to share their day to day experiences and interactions thoughts and to say or do things that they would not do in their offline world. Therefore, they might feel social media as their private world not the concern of others, however, this is not true as more patients are using social media to search for dental professional and the public are more critical in their perception of the professionalism of students than faculty [88].

A secondary objective of this study is to investigate the effect of teaching ethics and digital professionalism in the form of a lecture on dental students' attitude and perception of e-professionalism; it was found intern students (who received teaching were more likely to rate unprofessional behaviors than 4th year students, however, it was only statistically significant regarding communicating with patients on social media. As intern students were likely to report communication with patients as unprofessional. An explanation to why students' attitudes and perceptions didn't change significantly is due to the complex nature of human behavior and teaching behavioral skills, one lecture might change their knowledge and attitude but would not be enough to change their behavior.

The pertinent literature emphasized the need to have digital professionalism awareness training and teaching e-professionalism to dental students throughout their education years to install and promote professionalism from their early years. however, there is no universally agreed-upon method for teaching e-professionalism and there is a current gap in knowledge as to how best we can deliver this for students.

6.2 Limitations

The present study has some limitations which should be discussed. First recruitment was challenging because students' attendance was irregular due to the

COVID-19 pandemic. However, the study population represents more than sixty percent of dental students targets which is considered an acceptable proportion, in addition, the sample is comprised of participants with varied characteristics in terms of gender, age, and social class. Second, the data collection was confined to one public dental school, this unavoidably limits the ability to generalize the results to all dental students in Libya, particularly those studying in private dental schools. It would be of interest to carry out this study in other dental schools across Libya. Furthermore, there are limitations that are inherent for using questionnaires such as non-response and social desirability bias, however, the questionnaire is well-accepted method for data collection and the informants were advised that the aim of the study is to explore the social media behaviors rather than judging them and also were assured about their confidentiality. The researcher tried to minimize biases that might resulted from these limitations by ensuring maximum participation and responses from the students; the questionnaire was pretested and translated to Arabic with clear wording and background information on the study and its aim. The distribution of the questionnaires at the start of clinical classes at the dental school and the students were confirmed (both verbally and in writing) that participation in the study is voluntary and respondents' information is anonymized.

Chapter 7 Conclusion and Recommendations

7.1 Conclusion

In conclusion, social media use is popular among dental students at the University of Benghazi. Most of the students are using multiple social media platforms, with Telegram and Facebook being the most used and Twitter being the least used. The majority of students use their real names and various privacy setting on social media platforms. Most dental students are not fully aware of the relationship between social media and dental professionalism students, as their attitude and perception of digital (e-) professionalism is deficient when rating online behaviors deemed unprofessional. The results show that most believed that their online behavior has no effect on their future job and is personal separate from their life as dental students. A concerning number of students fail to recognize unprofessional behaviors on social media such as negative comments, communicating with patients, sharing photographs in a clinical setting, sharing discussing and patients' information or condition even in closed groups. This implies that dental students might misbehave while using social media, perhaps harming the dentist-patients relationship and careers as they graduate. Teaching digital professionalism via a single lecture has produced slight change in students' attitude and perception of e-professionalism. however, using more than one tool is preferred (lectures, workshops, discussions...) might encourage their understanding of what might be considered as professional and unprofessional behaviors online.

7.2 Recommendations

- This study highlights the popular use of social media among dental students, which indicated the need for social media and professionalism awareness among dental undergraduates, starting when they join the dental school through their graduation to install professionalism values and behaviors into their professional identity.

- Digital professionalism awareness should put more emphasis on the importance of preserving patients' privacy, professional behaviors online to maintain patients' trust in the dental profession.

- The best tool to deliver e-professionalism teaching is an area of research that should be further explored in future research work.

- There is a need to establish guidelines and policies for the professional and ethical use of social media by the University.

- Continuous education to increase awareness of dentists about e-professionalism and its implication on the dental profession is another aspect to consider by dental education institutions and regulatory bodies.

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Appendix I: Questionnaire

دراسة عن استخدام طلبة طب الاسنان لمواقع التواصل الاجتماعي وعلاقتها بالمهنية الطبية

اسم الباحث: دكتورة اسماءالبرعصي عزيزي الطالب: نرجو منكم تعبئة الاستبيان المرفق و الذي يبحث عن مدى استخدامكم لوسائل التواصل الاجتماعي المختلفة وكيف يرى طالب طب الاسنان العلاقة بين السلوكيات المختلفة على وسائل التواصل الاجتماعي و المهنية الطبية (Professionalism): وهي مجموعة من القيم والسلوكيات والعلاقات التي تدعم ثقة الجمهور في الأطباء. ستلاحظــــــــــــــــــــون عدم وجود بيانات تحدد هوية المشاركين و ذلك حتى نمكنكم من الأجابة على الأسئلة بكل صراحة و سرية. المشاركة في هذا البحث اختيارية و ليست اجبارية.

- السنة الدراسية ◯ سنة رابعة ◯ إمتياز
- العمر................
- الجنس ◯ ذكر ◯ انثى
- مستوى تعليم الأب ◯ابتدائي ◯اعدادي ◯ثانوي ◯جامعي/فوق جامعي ◯أخرى ....
- مستوى تعليم الأم ◯ ابتدائي ◯ اعدادي ◯ثانوي ◯جامعي/فوق جامعي ◯أخرى..........

I. الأستعمال والخصوصية علي مواقع التواصل الاجتماعي الاتية:

1) كم مرة تستخدم مواقع التواصل الاجتماعي الاتية	
Facebook .1	◯ يوميا ◯ اسبوعيا ◯ أحيانا ◯ لا استخدمه
Twitter .2	◯ يوميا ◯ اسبوعيا ◯ أحيانا ◯ لا استخدمه
Instagram .3	◯ يوميا ◯ اسبوعيا ◯ أحيانا ◯ لا استخدمه
YouTube .4	◯ يوميا ◯ اسبوعيا ◯ أحيانا ◯ لا استخدمه
Snapchat .5	◯ يوميا ◯ اسبوعيا ◯ أحيانا ◯ لا استخدمه
Telegram .6	◯ يوميا ◯ اسبوعيا ◯ أحيانا ◯ لا استخدمه

	2) هل تستخدم وسائل التواصل الاجتماعي بالاسم الحقيقي أو الاسم المستعار؟
○ لا استخدمه　○ أسم مستعار　○ أسم حقيقي	Facebook .1
○ لا استخدمه　○ أسم مستعار　○ أسم حقيقي	Twitter .2
○ لا استخدمه　○ أسم مستعار　○ أسم حقيقي	Instagram .3
○ لا استخدمه　○ أسم مستعار　○ أسم حقيقي	YouTube .4
○ لا استخدمه　○ أسم مستعار　○ أسم حقيقي	Snapchat .5
○ لا استخدمه　○ أسم مستعار　○ أسم حقيقي	Telegram .6

	3) يرجى تحديد أفضل وصف لإعداد الخصوصية الخاص بك علي المواقع التالية
○ لا استخدمه　○ لا أعلم　○ مجموعات اصدقاء خاصة　○ أصدقاء فقط　○ عام	Facebook .1
○ لا استخدمه　○ لا أعلم　○ مجموعات اصدقاء خاصة　○ أصدقاء فقط　○ عام	Twitter .2
○ لا استخدمه　○ لا أعلم　○ مجموعات اصدقاء خاصة　○ أصدقاء فقط　○ عام	Instagram .3
○ لا استخدمه　○ لا أعلم　○ مجموعات اصدقاء خاصة　○ أصدقاء فقط　○ عام	YouTube .4
○ لا استخدمه　○ لا أعلم　○ مجموعات اصدقاء خاصة　○ أصدقاء فقط　○ عام	Snapchat .5
○ لا استخدمه　○ لا أعلم　○ مجموعات اصدقاء خاصة　○ أصدقاء فقط　○ عام	Telegram .6

II قيم السلوك التالي مهني او غير مهني ثم اذكر كم مرة تشاهده:

	هذا التصرف او السلوك
○ تصرف مهني ○ تصرف غير مهني. ○ أشاهده دائما ○ أشاهده أحيانا ○ لا اشاهده ابدا	1. نشر صور لطلاب طب الأسنان في المناسبات الاجتماعية (مثل الحفلات والمناسبات الرياضية والوجبات).
○ تصرف مهني ○ تصرف غير مهني. ○ أشاهده دائما ○ أشاهده أحيانا ○ لا اشاهده ابدا	2-نشر صور الطلاب في بيئة سريرية على سبيل المثال. في المعاطف البيضاء ، شارات الاسم.
○ تصرف مهني ○ تصرف غير مهني. ○ أشاهده دائما ○ أشاهده أحيانا ○ لا اشاهده ابدا	3- منشورات على وسائل التواصل الاجتماعي تكشف عن معلومات حول مريض الأسنان (الاسم ، الصورة ، التشخيص).
○ تصرف مهني ○ تصرف غير مهني. ○ أشاهده دائما ○ أشاهده أحيانا ○ لا اشاهده ابدا	4-المنشورات التي تصف التفاعل مع المريض والتي لا تكشف عن أي معلومات تعريفية. مثال: منشور"لقد أكملت اول عملية حشو اسنان او لقد اكملت اول عملية خلع.
○ تصرف مهني ○ تصرف غير مهني. ○ أشاهده دائما ○ أشاهده أحيانا ○ لا اشاهده ابدا	5- التواصل مع المرضى عبر وسائل التواصل الاجتماعي.
○ تصرف مهني ○ تصرف غير مهني. ○ أشاهده دائما ○ أشاهده أحيانا ○ لا اشاهده ابدا	6- ملاحظات سلبية على العملية التدريسية أو أعضاء هيئة التدريس أو الزملاء من كلية طب الأسنان.
○ تصرف مهني ○ تصرف غير مهني. ○ أشاهده دائما ○ أشاهده أحيانا ○ لا اشاهده ابدا	7- التفاعل مع الطاقم الطبي والمعلمين على وسائل التواصل الاجتماعي.
○ تصرف مهني ○ تصرف غير مهني. ○ أشاهده دائما ○ أشاهده أحيانا ○ لا اشاهده ابدا	8- مناقشة حالات المرضى في مجموعات مغلقة أو خاصة على وسائل التواصل الاجتماعي.
○ تصرف مهني ○ تصرف غير مهني. ○ أشاهده دائما ○ أشاهده أحيانا ○ لا اشاهده ابدا	9- مناقشة حالات المرضى في مجموعات مفتوحة على وسائل التواصل الاجتماعي.
○ تصرف مهني ○ تصرف غير مهني. ○ أشاهده دائما ○ أشاهده أحيانا ○ لا اشاهده ابدا	10 إبداء تعليقات سلبية تتعلق بخصائص الأشخاص أو القضايا المثيرة للجدل (مثل الجنس والعرق والإعاقة والسياسة).

III.   يرجي وصف رأيك في سلوكيات او التصرفات الاتية عبر وسائل التواصل الاجتماعي:

رأيك	التصرف
أوافق ◯ لا أوافق ◯ لا هذا ولا ذاك ◯	1- سلوكي على مواقع التواصل الاجتماعي أمر شخصي ومنفصل عن حياتي المهنية في كلية طب الأسنان.
أوافق ◯ لا أوافق ◯ لا هذا ولا ذاك ◯	2- أشعر بالقلق إزاء المشاركات غير المهنية التي ينشرها طلاب طب الأسنان على وسائل التواصل الاجتماعي.
أوافق ◯ لا أوافق ◯ لا هذا ولا ذاك ◯	3- من الممكن للمريض الذي شاهد حسابي الشخصي أن يشكك في احترافيتي.
أوافق ◯ لا أوافق ◯ لا هذا ولا ذاك ◯	4- يركز المنهج الدراسي في مدرسة طب الأسنان بشكل كبير على الاحتراف.
أوافق ◯ لا أوافق ◯ لا هذا ولا ذاك ◯	5- أشعر بالقلق من أن سلوكي عبر الإنترنت يمكن أن يؤثر على فرص وظيفتي المستقبلية.

Appendix II: Ethics approval

جـــامعة بنغــازي
كلية طب وجراحة الفم والأسنان

التاريخ : 26 / 9 / 2021

الرقم الإشاري : ب.ع.ج.م.ع 21./.10

لجنة اخلاقيات البحث العلمي

موافقة على اجراء بحث علمي

الى من يهمه الامر:

نحيطكم علما بان البحث المقدم من: أسماء سعد عبد الصادق البرعصي

بعنوان: " المهنة الطبية على مواقع التواصل الأجتماعي لدى طلبة الأسنان بجامعة بنغازي "

قد تحصل على موافقة لجنة اخلاقيات البحث العلمي بكلية طب وجراحة الفم والاسنان\جامعة بنغازي رقم (057)

مع فائق التقدير والاحترام

والسلام عليكم

د. أرحيم أحميدة العوامي
رئيس لجنة اخلاقيات البحث العلمي

صورة الى

الملخص العربي

أهداف البحث:

تهدف هذه الدراسة الى تقييم المهنية الطبية وأنماط استخدام وسائل التواصل الاجتماعي لدى طلبة طب الأسنان بجامعة بنغازي، وتقييم تأثير تدريس محاضرة الاحتراف المهني على مواقفهم وتصوراتهم للمهنية الطبية على مواقع التواصل الاجتماعي.

طرق البحث:

استخدمت هذه الدراسة استبيانًا ورقيًا تم تطويره وتوزيعها على طلاب طب الأسنان في العام الدراسي 2021/2020 في كلية طب الأسنان بجامعة بنغازي. ويتألف الاستبيان من أسئلة مغلقة لتحديد نمط استخدام طلاب طب الأسنان لمنصات الوسائط الاجتماعية المختلفة: (Facebook، Twitter، Instagram ، YouTube ، Snapchat ، Telegram) ، وإعدادات الخصوصية الخاصة بهم على كل منصة ، وتصوراتهم ومواقفهم تجاه المهنية الطبية لعدة مواقف علي مواقع التواصل الاجتماعي.

النتائج:

عدد الطلاب المستجيبين (N = 364) من أصل 400 طالب تم الوصول إليهم، جميعهم تقريبًا استخدموا مواقع التواصل الاجتماعي المتعددة وكان الموقع الأكثر استخدامًا Telegram بنسبة (98.9%) يليه Facebook (96.4%)، طلاب السنة الرابعة من المحتمل أن يستخدموا Telegram بشكل يومي أكثر من الطلاب في سنة الامتياز (P = 0.000). أعتبر نصف المستجيبين (57.5%) أن سلوكهم عبر الإنترنت شخصي، ومنفصل عن

حياتهم كطلاب في طب أسنان، بينما اعتقد 71.1% أن سلوكهم عبر الإنترنت لن يؤثر على فرص عملهم المستقبلية. وصف معظم الطلاب 70.9% المنشورات التي تكشف عن معلومات حول مرضى الأسنان في وسائل التواصل الاجتماعي بأنها غير مهنية. ومع ذلك، اعتبر 6.4% من الطلاب أن التواصل مع المرضى على وسائل التواصل الاجتماعي سلوك غير مهني، حيث كان طلاب السنة الرابعة أقل احتمالية للإبلاغ عن هذا السلوك باعتباره سلوكًا غير مهني مقارنة بالطلاب المتدربين (القيمة الاحتمالية = 0.026). علاوة على ذلك، أفاد 52.4% من الطلاب أن التعليقات السلبية حول عملية التدريس أو الموظفين أو الزملاء انه سلوكًا غير احترافي عبر الإنترنت.

الاستنتاجات:

هذه هي الدراسة الأولى حول استخدام وسائل التواصل الاجتماعي والمهنية الإلكترونية لطلاب طب الأسنان في السياق الليبي. وجد أن طلاب طب الأسنان يستخدموا مواقع التواصل الاجتماعي المتعددة مما يؤكد شعبية مواقع التواصل الاجتماعي في السنوات الأخيرة ويعطي أدلة ملموسة على استخدام وسائل التواصل الاجتماعي بين طلاب طب الأسنان في جامعة بنغازي، وأكثر المواقع شعبية Telegram وFacebook على التوالي. ويميل معظم الطلاب إلى استخدام أسمائهم الحقيقية عند استخدام تطبيقات الوسائط الاجتماعية واستخدام إعدادات الخصوصية للحد من جمهورهم. وعندما طلب منهم تقييم السلوكيات المختلفة عبر الإنترنت، أظهر عدد مقلق عجزًا في تقييم السلوكيات غير المهنية عبر الإنترنت ووسائل التواصل الاجتماعي.

تسلط هذه الدراسة الضوء على الحاجة إلى وضع سياسات للاستخدام المهني والأخلاقي لوسائل التواصل الاجتماعي من قبل الجامعة، وتؤكد على الحاجة إلى تضمين تدريس المهنية الطبية لجميع طلاب طب الأسنان منذ بداية التحاقهم بالجامعة لترسيخ القيم المهنية.

المهنية الطبية على مواقع التواصل الاجتماعي لدى طلبة طب الأسنان

بجامعة بنغازي

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رسالة قدمت استكمالا لمتطلبات الحصول على درجة الماجستير في صحة الأسنان العامة وطب

الأسنان الوقائي

جامعة بنغازي

كلية طب وجراحة الفم والأسنان

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