

## **Evaluating Attitudes Toward Dental Social Media Among the Iraqi Population: A Questionnaire-Based Study**

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**Aim:** The aim of the study is to assess the attitude of the Iraqi population regarding the social media pages of dental clinics.

**Material and methods:** This cross-sectional study relied on questionnaires distributed to participants. The questions included demographic information and assessed the community's attitudes toward dental clinic social media pages, as well as sought to understand participants' preferences for the type and main content of posts.

**Results:** The demographic data revealed a male-to-female ratio of 1:1, with a mean age of 39 years. More than half of the participants reported having sufficient income and had completed their undergraduate programs. Participants strongly agreed on the importance of dental social media and the responsiveness of dental staff to messages. However, there were significant negative attitudes regarding whether social media alone was sufficient to attract new patients or build trust between dentists and customers. No significant differences in attitude levels were observed across the variables. Participants indicated that the quality and cost of treatment were their primary preferences when viewing social media posts, reflecting a focus on value and affordability in their decision-making.

**Conclusion:** The negative attitudes toward dental social media have been highlighted. Dentists need to routinely evaluate and address community feedback and expectations from the clinic. Effective social media strategies are essential to achieve clinic goals.

**Keywords:** attitude, dentistry, social media, Iraqi population

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## Introduction

Social media (SM) is defined as a collection of various applications used by people, including Snapchat, Facebook, Instagram, Twitter, and YouTube.<sup>1</sup> These applications are accessed through different electronic devices, such as mobile phones, tablets, and computers. With the continuous advancement of technology, SM has gained widespread popularity and has become an integral part of daily life.<sup>2</sup>

The primary goal of SM is to enable individuals to share their news, ideas, and social events with friends, family, and coworkers across great distances through videos, images, and news in an easy and cost-effective manner.<sup>3</sup> Over time, social media has evolved and is now widely used in various fields, including education, awareness, business, and service marketing.<sup>4</sup>

In the field of dentistry, many clinics are increasingly utilizing SM platforms effectively as a promotional tool. Dentists share information about their therapeutic services, advertise special price offers, and provide other details that may encourage patients to choose their clinic.<sup>5</sup> Social media platforms are also used to understand treatment needs, improve service quality, and build strong relationships with the community.<sup>6</sup>

Through SM communication, dentists engage with patients, monitor both positive and negative reviews, and take their feedback into consideration.<sup>7</sup>

Clearly documenting patients' opinions and satisfaction regarding dental care on social media pages is a valuable step for dentists. It helps enhance and develop the use of social media, providing greater opportunities to achieve targeted goals, such as improving the clinic's reputation and attracting new patients.<sup>8</sup>

No previous study has explored the perspectives of Iraqi citizens on SM pages

of dental clinics. The current study aimed to assess the attitudes of people in Iraq toward the SM pages of dental clinics.

## Material and methods

The cross-sectional study was conducted after obtaining ethical approval (123) on April 19, 2024, from the ethical committee at Dijlah University College. The questionnaire was developed based on a previous study,<sup>9</sup> and translated to the native language (Arabic) by an expert translator fluent in both languages and familiar with the subject matter. The Arabic version of the questionnaire was evaluated for clarity by administering it to a sample of 25 native Arabic-speaking patients.

The questionnaire begins with a background explaining the aims of the study and includes a question asking participants for their voluntary consent to enroll. Participants were required to be Iraqi, aged over 18 years, and users of social media. The exclusion criteria included individuals under the age of 18 and those who did not use any social media platforms. Individuals seeking medical treatment at three main private general medical health centers in Baghdad between May 1 and June 1, 2024, were invited to participate and complete the questionnaire. These individuals visited the centers for general medical purposes, excluding dental care.

The questions were divided into three sections. The first section gathered demographic information (gender, age, educational level, and income level). The second section evaluated individual attitudes through six questions: (Q1) Do you believe that SM is an effective tool for promoting dental services? (Q2) Do you find reviews on dental clinics' SM pages helpful? (Q3) Do you think it is necessary for a dentist or dental clinic to respond to messages or comments? (Q4) Do you believe that all posts from dental clinics on

SM accurately reflect the reality of the clinic and are verified? (Q5) Do you think that using SM helps dental clinics gain patients' trust? (Q6) Do you believe that SM posts alone are sufficient to choose the right dental clinic for treatment? The response options for these questions were (Yes), (Uncertain), and (No). (Yes) responses were considered positive and given a score of one, while (Uncertain) and (No) responses received a score of zero.

The third section, composed of two questions, explored the respondents' preferences regarding the main goal and their preferred form of social media posts from dental clinics.

### Statistical analysis

The analysis, encompassing both descriptive and inferential components, utilized IBM SPSS Statistics software (version 14). Descriptive analysis encompassed the calculation of frequency, percentage, and mean  $\pm$  standard deviation. In terms of inferential analysis, a chi-square test was applied to compare the frequencies of positive and negative responses for each question. The Mann-Whitney U test was employed for comparing mean response scores among age groups and gender groups. Lastly, the Kruskal-Wallis test was utilized to compare mean response scores among qualification groups and income level groups. The significance level for all tests was established at  $p < 0.05$ .

### Results

The total number of people invited to participate in the study was 955. The final number of participants who provided consent and completed the questionnaire was 406. Table 1 presents the demographic data of the participants, showing a nearly equal distribution between males and females. The mean age of the participants, 39 years, was used to categorize them into two groups:

those below 39 years (53.7%) and those 39 years or older (46.3%). A majority of the study sample (67%) reported having sufficient income. Additionally, 51% of the respondents had completed only an undergraduate program in terms of their educational level.

**Table1: The demographic information of the responders**

Variables	
<b>Gender</b>	
Male <sup>a</sup>	202 (49.8)
Female <sup>a</sup>	204 (50.2)
<b>Age</b>	
Minimum – Maximum	19 – 65 years
Mean $\pm$ standard deviation	39 $\pm$ 10.77 years
Below 39 years <sup>a</sup>	218 (53.7)
Equal or above 39 years <sup>a</sup>	188 (46.3)
<b>Educational level</b>	
Primary <sup>a</sup>	26 (6.4)
College <sup>a</sup>	207 (51.0)
Post graduated <sup>a</sup>	173 (42.6)
<b>Income level</b>	
Not enough <sup>a</sup>	73 (18.0)
Enough <sup>a</sup>	272 (67.0)
Above enough <sup>a</sup>	61 (15.0)

<sup>a</sup> frequency (percentage)

According to the responses to the attitude questions (Table 2), Q1 received the most positive responses, with 64.8%. Meanwhile, Q4 recorded the highest frequency of negative responses, totaling 395. Statistically, the positive responses were notably high for both Q1 and Q3, while negative responses for Q4, Q5, and Q6 were significantly higher.

**Table 2: The comparison between the frequencies of positive and negative responses for attitude questions**

Question		Positive response <sub>a</sub>	Negative response <sub>a</sub>	P-value*
Q1	Do you believe that social media is an effective tool for promoting dental services?	263 (64.8)	143 (35.2)	<b>0.001</b>
Q2	Do you find reviews on dental clinics' social media pages helpful?	192 (47.3)	214 (52.7)	0.275
Q3	Do you think it is necessary for a dentist or dental clinic to respond to messages or comments?	255 (62.8)	151 (37.2)	<b>0.001</b>
Q4	Do you believe that all posts from dental clinics on social media accurately reflect the reality of the clinic and are verified?	11 (2.7)	395 (97.3)	<b>0.001</b>
Q5	Do you think that using social media helps dental clinics gain patients' trust?	138 (34.0)	268 (66.0)	<b>0.001</b>
Q6	Do you believe that social media posts alone are sufficient to choose the right dental clinic for treatment?	46 (11.3)	360 (88.7)	<b>0.001</b>

<sup>a</sup> frequency (percentage), (\*) significant at  $p < 0.05$  (bold font) by chi-square test

The findings presented in Table 3 indicate that there were no statistically significant differences in attitude levels when comparing males and females, age groups, educational levels, and income levels.

**Table 3: Comparison of the attitude mean score of the participants regarding the demographic variables.**

Variable		Response <sub>b</sub>	P-value *
Sex	Male	2.34 ± 1.203	0.18
	Female	2.12 ± 1.309	
Age	39y <	2.22 ± 1.320	0.83
	39y ≥	2.23 ± 1.192	
			P-value **
Educational level	Primary	2.58 ± 1.172	0.03
	College	2.07 ± 1.242	
	Post graduated	2.36 ± 1.276	
Income level	Not enough	2.34 ± 1.169	0.6
	Enough	2.17 ± 1.310	
	Above enough	2.34 ± 1.138	
Total		2.23 ± 1.26	

<sub>b</sub> mean ± standard deviation.

(c.) attitude levels: negative (0-3) and positive (>3-6).

(\*) significant at  $p < 0.05$  by Mann–Whitney U test.

(\*) significant at  $p < 0.05$  by Kruskal–Wallis test.

Table 4 presents the analysis of responses, showing that social media posts about dental care that emphasize the quality of treatment received the most attention from respondents (42.6%), followed by posts highlighting service costs (31%). Additionally, a significant majority of participants (83%) expressed a preference for social media posts that include pictures and videos to convey information.

**Table 4: The desires of the responders regarding the main goal and their preferred form of dental social media posts**

Content of dental social media post	
Quality of dental treatment <sub>a</sub>	173 (42.6)
Cost of dental treatment <sub>a</sub>	126 (31.0)
Material used in dental treatment <sub>a</sub>	60 (14.8)
Name of the dentist <sub>a</sub>	39 (9.6)
Location of the dental clinic <sub>a</sub>	8 (2)
The form of the dental social media post	
Picture and Video <sub>a</sub>	337 (83)
Video <sub>a</sub>	45 (11.1)
Picture <sub>a</sub>	24 (5.9)

<sub>a</sub> frequency (percentage)

## Discussion

Community attitudes toward SM in dentistry are critical, as they reflect the impact of these platforms in facilitating communication between dentists and the public, as well as their effectiveness in marketing. A positive attitude indicates successful communication, effective information sharing, and patient satisfaction, which in turn helps enhance the practice's reputation and attract new clients. Conversely, a negative attitude can undermine trust, hinder communication, and discourage people from seeking dental treatment. Therefore, it is essential that dentists understand and consider these factors to improve their online presence and maintain a positive connection with the community.<sup>10</sup>

The respondents expressed significant agreement that dental clinics should maintain a presence on SM. Previous research revealed that visits to dental clinic social media pages were notably higher among the studied communities. These visits were primarily to access information about the clinic's location, available treatments, working hours, appointment scheduling, and to read reviews and feedback.<sup>11</sup>

The level of interest in written reviews about dental clinics on social media, whether positive or negative, showed no significant difference among the participants. However, Abdullah and his colleagues (2019) stated that positive SM reviews play an important role in attracting new patients to dental clinics.<sup>12</sup> At the same time, there is growing concern about the possibility that reviews could be fake, whether positive and posted by the clinic itself, or negative, potentially as a result of competition.<sup>13</sup>

In the present study, communication between dentists or dental clinics and patients on SM was highly desired. This



outcome aligns with previous findings showing that patients feel comfortable connecting with dentists through social media. Providing good-quality and prompt responses plays a positive role in attracting new patients and maintaining the loyalty of existing ones. Pre-treatment communication through SM helps clarify dental procedures for patients, increasing trust, enhancing appreciation of services, and reducing anxiety that may arise before therapy sessions.<sup>14</sup>

The current results indicate that the presence of dental clinic platforms alone is insufficient to attract new patients and earn their trust. The decision to choose a dental clinic and trust a dentist for treatment may depend not only on SM, but also on personal experiences and recommendations from close contacts. Additionally, some institutions where patients are employed have specific dental clinics accredited as part of their health insurance programs.<sup>15</sup>

A previous study found that posting images or videos showcasing treatment results and quality in the form of (before and after) comparisons gained significant attention, particularly among female patients. This result aligns with the present findings.<sup>16</sup>

In the present study, the quality and cost of treatment emerged as the top concerns for patients in posts on dental clinics' SM platforms. A previous study similarly showed that dental patients seek high-quality treatment at minimal fees.<sup>17</sup>

The recent study reveals no difference in satisfaction between males and females regarding dental SM. While this finding aligns with a previous study,<sup>9, 18</sup> other research has shown that females are more interested and satisfied than males when interacting with dental SM.<sup>12, 19</sup> Additionally, one study found that males express greater contentment with the

profiles and posts of dental clinics on SM than females.<sup>20</sup>

The present results indicate that individuals across various age groups exhibited comparable levels of satisfaction and approval when interacting with dental-related content on SM platforms. This outcome may be attributed to similar requirements for dental SM advertising and consistent experiences with dental clinics across all age groups.<sup>21</sup> Income and educational levels also had no influence on the satisfaction of dental marketers using social media.

This study was the first to examine the attitudes of the Iraqi population regarding dental SM. A limitation of the study is that participants were not asked about their specific experiences with dental SM.

## Conclusions

SM is an effective marketing tool for dental clinics. However, the presence of some negative attitudes toward dental social media highlights the need for dentists to routinely evaluate community feedback and expectations and address them accordingly. Additionally, improving the use of SM is essential for achieving goals on these platforms.

## Transparency statement

Muhanad L Alshami affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

## Funding

The supporting source/financial relationships had no such involvement.

### Ethical statement

Ethical approval for this study was obtained in accordance with the Declaration of Helsinki.

Ethical approval (No. 123) was obtained from the ethical committee at the dentistry department of Dijlah University College on April 19, 2024.

### Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

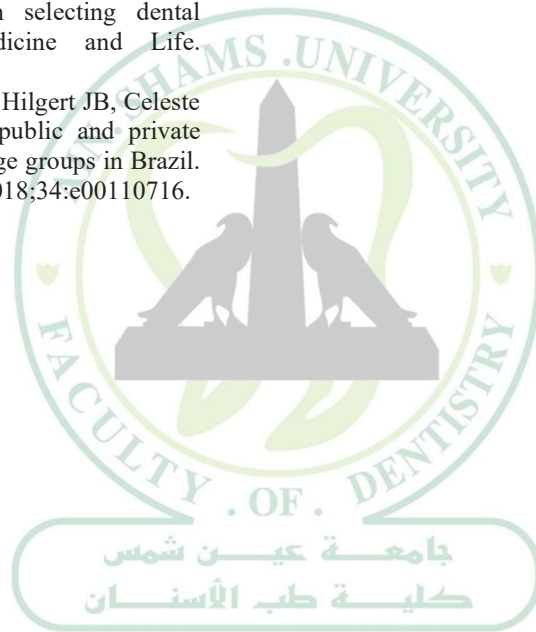
### Author Statement

All authors have read and approved the final version of the manuscript. Muhanad L Alshami had full access to all data in this study and takes complete responsibility for the integrity of the data and the accuracy of the data analysis.

### References

1. Bahabri RH, Zaidan AB. The impact of social media on dental practice promotion and professionalism amongst general dental practitioners and specialists in KSA. *Journal of Taibah University Medical Sciences*. 2021;16(3):456-60.
2. Ngai EW, Moon K-IK, Lam SS, Chin ES, Tao SS. Social media models, technologies, and applications: an academic review and case study. *Industrial Management & Data Systems*. 2015;115(5):769-802.
3. Gruzd A, Haythornthwaite C. Enabling community through social media. *Journal of medical Internet research*. 2013;15(10):e248.
4. Thapliyal K, Thapliyal M, Thapliyal D. Social media and health communication: A review of advantages, challenges, and best practices. *Emerging Technologies for Health Literacy and Medical Practice*. 2024:364-84.
5. Elgendy DM, Elgendy AA, El-Segai AAE-M. Clinical and retention assessment of soft Liner and O-ring attachment in single implant assisted mandibular overdenture: Randomized clinical Trail. *Ain Shams Dental Journal*. 2024;34(2):31-41.
6. Soliman SI, ABDEL AAL MAH. Clinical outcomes of incorporating neutral zone and CAD/CAM technology into complete denture workflow (Crossover Randomized Clinical Trial). *Ain Shams Dental Journal*. 2024;34(2):203-14.
7. Alkadhi OH, Aleissa NK, Almoharib MK, Buquayyid SA. Influence of Social Media on the Patients for Choosing the Dental Clinic-A Cross-sectional Survey. *Journal of Clinical & Diagnostic Research*. 2020;14(1).
8. Al-Khalifa KS, Al-Swuailem AS, AlSheikh R, Muazen YY, Al-Khunein YA, Halawany H, et al. The use of social media for professional purposes among dentists in Saudi Arabia. *BMC Oral Health*. 2021;21(1):1-8.
9. Freire Y, Sánchez MG, Suárez A, Joves G, Nowak M, Díaz-Flores García V. Influence of the use of social media on patients changing dental practice: a web-based questionnaire study. *BMC Oral Health*. 2023;23(1):365.
10. Kaplan AM, Haenlein M. Users of the world, unite! The challenges and opportunities of Social Media. *Business horizons*. 2010;53(1):59-68.
11. Mani SA, Uma E, John J, Nieminen P. Perceptions of professional social media interaction with patients and faculty members—a comparative survey among dental students from Malaysia and Finland. *BMC medical education*. 2023;23(1):1-9.
12. Alalawi A, Aljuaid H, Natto ZS. The effect of social media on the choice of dental patients: a cross-sectional study in the city of Jeddah, Saudi Arabia. *Patient preference and adherence*. 2019;1685-92.
13. Bambauer-Sachse S, Mangold S. Do consumers still believe what is said in online product reviews? A persuasion knowledge approach. *Journal of Retailing and Consumer Services*. 2013;20(4):373-81.
14. Sivrikaya EC, Yilmaz O, Sivrikaya P. Dentist–patient communication on dental anxiety using the social media: A randomized controlled trial. *Scandinavian Journal of Psychology*. 2021;62(6):780-6.
15. El Dalatony MM, Alshareef RI, Alkahtani AR, Alhajri SM, Alhumaidany TM, AlQarni WA, et al. Patient Satisfaction as a Determinant of Patient Loyalty to the Dentist in Dental Clinics. *Journal of Patient Experience*. 2023;10:23743735231166506.
16. AlAli AM, Nazar H. Preferences, perception and impact of using dental social media in Kuwait. *Kuwait Medical Journal*. 2023;55(2):151-8.
17. Alshami ML, Awad GD, Abdurazaq MR, Al-Rikaby HH. EVALUATION OF THE PATIENTS'SATISFACTION WITH PRIVATE DENTAL CLINICS SERVICES: A QUESTIONNAIRE-BASED STUDY.

- Wiadomosci Lekarskie (Warsaw, Poland: 1960). 2022;75(6):1658-63.
18. Parmar N, Dong L, Eisingerich AB. Connecting with your dentist on facebook: patients' and dentists' attitudes towards social media usage in dentistry. *Journal of medical Internet research*. 2018;20(6):e10109.
19. Alsaed S, Alghurairi N, Almutairi L, Alossimi A, Bin Fadhl A, Abahussain S. Factors that affect Saudi population preferences toward their dentist. *Patient preference and adherence*. 2021:2693-701.
20. Tâncu AMC, Purcărea VL, Pantea M, Imre M. Key factors correlations in selecting dental services. *Journal of Medicine and Life*. 2019;12(1):83.
21. Macarevich A, Pilotto LM, Hilgert JB, Celeste RK. User satisfaction with public and private dental services for different age groups in Brazil. *Cadernos de saude publica*. 2018;34:e00110716.



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