

The Impact of Social Media on Patient Decision-Making in Selecting Oral and Maxillofacial Surgeons in Isfahan

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Submitted to: JMIR Formative Research
on: April 12, 2025

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Abstract

Background: The proliferation of social media has reshaped healthcare decision-making, enabling patients to access diverse information sources beyond traditional referrals. In maxillofacial surgery, where trust and expertise are critical, the interplay between digital platforms and conventional networks remains underexplored, particularly in non-Western settings like Iran. Understanding how patients navigate these channels offers insights into evolving healthcare behaviors and informs strategies to enhance patient-centered care.

Objective: This study aimed to evaluate the influence of social media platforms (Google and Instagram) compared to personal recommendations on maxillofacial surgeon selection among Iranian patients, assessing decision-making factors, trust perceptions, and concerns about information accuracy.

Methods: A cross-sectional survey was conducted with 384 patients at maxillofacial surgery clinics in Isfahan, Iran, in autumn 2023. Data on demographics, pathways to surgeon selection, social media use (Google and Instagram), decision-making factors, trust perceptions and concerns about information accuracy were collected via structured questionnaires. Descriptive statistics and one-sample t-tests assessed the impact and reliability of digital platforms.

Results: Personal recommendations dominated surgeon selection (62.2%), far surpassing Google (19.5%) and Instagram (2.9%). While 41.7% and 31.0% of patients used Google and Instagram, respectively, their impact on decision-making was significantly below average ($p < 0.001$). Patient-generated content (e.g., reviews: 37.5% for Google, 40.9% for Instagram) and professional credentials (30.2% for Google) were pivotal in decision-making and trust, yet moderate concerns about accuracy underscored skepticism toward digital sources. The majority of participants were female (60.7%), aged 21–30 (30.5%), employed (41.4%), and without prior surgery (53.4%).

Conclusions: Social media plays a supplementary rather than primary role in maxillofacial surgeon selection in Iran, with traditional networks retaining primacy. The reliance on credible patient feedback and credentials highlights the need for verified online content to enhance trust. These findings, contrasting with higher digital reliance in aesthetic surgery contexts, suggest cultural and procedural influences on platform use, advocating for strategies to bridge digital credibility gaps in healthcare decision-making.

(JMIR Preprints 12/04/2025:75899)

DOI: <https://doi.org/10.2196/preprints.75899>

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Original Manuscript

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Original research

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Keywords: Social Media, Patient Selection, Decision Making, Trust and Oral Surgery.

Introduction

The rapid proliferation of digital platforms has fundamentally altered how patients navigate healthcare, particularly in selecting specialized practitioners such as maxillofacial surgeons. Social media platforms—Instagram, Twitter, and LinkedIn—alongside surgeons' professional websites accessible via Google, have emerged as critical tools for patients to research credentials, explore patient testimonials, and visualize surgical outcomes(1). In maxillofacial surgery, where procedures often blend functional restoration with aesthetic enhancement, patients increasingly turn to these

digital channels to evaluate surgeons' expertise and reputation before committing to treatment(2). Surgeons' websites, frequently the top results in Google searches, serve as curated hubs showcasing qualifications, case studies, and patient reviews, complementing the dynamic, community-driven engagement of social media(3). This digital ecosystem is especially influential in urban centers like Isfahan, Iran, where widespread smartphone adoption and expanding internet access have amplified the reach of both social media and professional websites (4).

A growing body of literature underscores the transformative role of digital media in healthcare decision-making. Studies in Western contexts reveal that patients prioritize surgeons' online visibility, with social media engagement and website professionalism shaping perceptions of trustworthiness and competence(5). For instance, Alghonaim et al. (2019) found that most of patients selecting aesthetic surgeons relied on Instagram portfolios to assess outcomes(6), while Shauly et al. (2023) noted that well-designed websites with clear credentials increased patient inquiries (3). In contrast, research in non-Western settings remains sparse. AlSadrah et al. (2021) explored social media's role in Saudi Arabia, highlighting cultural preferences for peer recommendations over institutional affiliations, yet no studies specifically address Iran's unique socio-digital landscape(7). Concerns also persist about the authenticity of online content, as unverified reviews or curated personas on websites and social media may mislead patients, potentially compromising informed decision-making(8).

Despite these insights, the interplay between social media, surgeons' websites, and patient choices in selecting maxillofacial surgeons remains underexplored, particularly in Isfahan. Cultural and economic factors may uniquely shape how patients in this region weigh digital cues—such as professional website design, social media engagement, or patient narratives—against traditional referral systems(9). This study addresses this gap by investigating how digital media, encompassing both social platforms and Google-indexed surgeons' websites, influences patient decision-making in Isfahan. By examining trust, accessibility, and information quality, it seeks to uncover localized patterns that could guide practitioners in optimizing their digital presence and inform policies to enhance patient education. Such understanding is vital in an era where digital tools increasingly rival conventional healthcare pathways, particularly in specialized surgical fields.

Methodology

This study is a descriptive-analytical cross-sectional investigation aimed at exploring the influence of social media on patients' selection of maxillofacial surgeons in Isfahan, Iran. The cross-sectional design enables a snapshot of patient behaviors and preferences at a specific point in time, facilitating the identification of associations between digital media use and decision-making processes. The study was conducted during the autumn of 2023, spanning September to November, to capture a representative sample of patient interactions with maxillofacial clinics during a typical operational period.

The target population comprised patients visiting specialized maxillofacial surgery clinics and private practices in Isfahan during the study period. These patients were seeking consultations or treatments related to maxillofacial procedures, ensuring relevance to the research objectives.

The sample size was calculated based on a population exceeding one million in Isfahan, using a proportion estimate of 0.5 for maximum variability, a margin of error of 0.05, and a 95% confidence level. This yielded a sample size of 384 participants, sufficient to ensure statistical power and generalizability within the study context.

A cluster sampling approach was employed to ensure representativeness and feasibility. Initially, maxillofacial surgery clinics affiliated with the Faculty of Dentistry at Islamic Azad University, Isfahan, along with selected private practices, were designated as primary clusters. A subset of these clinics and practices was randomly selected using a random number generator. Within each selected cluster, patients meeting the inclusion criteria were recruited via simple random sampling, ensuring

an unbiased selection process.

Recruitment

Data were collected using a structured, researcher-designed questionnaire comprising 25 items divided into four domains:

1. Demographic Information: Age, gender, education level, and socioeconomic status.
2. Social Media Usage: Frequency and patterns of engagement with platforms such as Google, Instagram, and other relevant digital media.
3. Factors Influencing Surgeon Selection: Impact of peer reviews, social media content, and positive or negative feedback on decision-making.
4. Satisfaction and Influence: Patients' satisfaction with their chosen surgeon and the role of digital information in their decision.

The questionnaire's content validity was quantitatively assessed using the Content Validity Ratio (CVR) and Content Validity Index (CVI). The instrument was reviewed by a panel of 10 experts in maxillofacial surgery and health informatics, yielding a CVR of 0.8 and a CVI of 1.0, indicating strong content validity. Reliability was evaluated through a test-retest approach, where the questionnaire was administered to 40 patients, followed by a second administration two weeks later. Internal consistency was measured using Cronbach's alpha, resulting in a coefficient of 0.704, confirming acceptable reliability for the study's purposes.

To ensure the study's relevance and participant suitability, specific criteria were established for inclusion and exclusion. The study included patients aged 18 years or older to guarantee autonomous decision-making capacity, who had visited a maxillofacial surgeon at least once for consultation or surgery, and had actively used social media platforms such as Google, Instagram, or similar digital media within the past six months to inform their healthcare choices. Participation was voluntary, requiring signed informed consent, and participants needed sufficient literacy to comprehend and complete the questionnaire accurately. Conversely, patients were excluded if they withdrew consent at any stage, provided incomplete or uninterpretable questionnaire responses, or had not used social media to guide their surgeon selection, thus lacking relevant experience. Additionally, individuals with cognitive or mental impairments that prevented understanding of the questionnaire or study procedures were not included, ensuring the reliability and validity of collected data.

Eligible participants were briefed on the study's objectives, their right to withdraw, and assurances of confidentiality and anonymity, adhering to ethical research standards. After obtaining written informed consent, participants completed the 25-item questionnaire in a private setting at the clinic or practice. To ensure honesty and minimize bias, participants were encouraged to respond candidly, with trained research assistants available to clarify questions without influencing answers. Data collection occurred over three months, with regular monitoring to ensure consistency and completeness.

Statistical Analysis

Data were analyzed using both descriptive and inferential statistical methods. Demographic variables (e.g., age, gender, education) were summarized using means, standard deviations, frequencies, and percentages. The normality of continuous variables was assessed via Shapiro-Wilk or Kolmogorov-Smirnov tests. Depending on data distribution, parametric tests (e.g., independent t-tests, ANOVA) or non-parametric tests (e.g., Mann-Whitney U, Kruskal-Wallis) were applied to compare groups. Associations between social media use and surgeon selection were evaluated using Pearson's or Spearman's correlation coefficients, based on data normality. Multiple linear regression analysis was conducted to explore the influence of independent variables (e.g., Google and Instagram usage) on patients' decision-making, controlling for confounders like age and education. All analyses were performed using SPSS (version 26) or R (version 4.3), with a significance level set at $\alpha = 0.05$ to ensure robust interpretation of results.

Ethical Considerations

The study was approved by the Ethics Committee of Islamic Azad University, Isfahan, under the

ethical approval code.IAU.YAZD.REC.1403.092. Participants provided written informed consent after receiving comprehensive information about the study's purpose, procedures, potential risks, and benefits. They were assured of their right to withdraw at any time without consequence. All data were anonymized to protect participant identities, stored securely on password-protected systems, and accessible only to the research team. The study adhered to the principles of the Declaration of Helsinki and national ethical guidelines for human subject research, ensuring respect for participant autonomy and confidentiality.

Results

This study analyzed responses from 384 patients visiting maxillofacial surgery clinics in Isfahan, Iran, during the autumn of 2023, to assess the influence of social media on surgeon selection.

Demographic Characteristics and Surgical Experience

The sample comprised individuals with diverse ages ranging from 18 to over 40 years, with the majority, 117 (30.5%), aged 21–30 years, indicating a slight predominance of younger age groups. Regarding gender, the majority, 233 (60.7%), were female, reflecting a greater female participation rate. Education was predominantly at the high school diploma level or higher, with the majority, 142 (37.0%), holding a diploma. Employment status indicated a mix, with the majority, 159 (41.4%), employed. Income was generally moderate, with the majority, 174 (45.3%), earning 10–20 million IRR monthly. Most patients sought consultations, with the majority, 205 (53.4%), having no prior surgical history.

Pathways to Surgeon Selection and Social Media Use

Personal recommendations were the predominant method of accessing surgeons, while Google and Instagram served as supplementary tools. The use of other social media or alternative methods was limited, underscoring the importance of traditional networks (Table 1).

Table 1. Frequency and Percentage Distribution of Pathways and Use of Google and Instagram for Surgeon Search

Category	Subcategory	Frequency	Percentage
Pathway to Surgeon	Friend/Acquaintance Recommendation	239	62.2
	Google Search	75	19.5
	Instagram	11	2.9
	Other Social Media	11	2.9
	Other	48	12.5
Google Use for Search	Yes	160	41.7
	No	224	58.3
Instagram Use for Search	Yes	119	31.0
	No	265	69.0
Total		384	100.0

Decision-Making and Trust Factors on Google

Google searches were utilized by a subset of patients, with user reviews and rankings emphasized in initial decision-making, positive feedback as the primary selection factor, and official credentials enhancing trust (Table 2).

Table 2. Frequency and Percentage Distribution of Decision-Making, Selection, and Trust Factors on Google

Category	Subcategory	Frequency	Percentage
	User Reviews	135	35.2
	Surgeon Ranking in Google Results	85	22.1

Initial Making	Decision-	Surgeon Website	32	8.3
		Information		
		Before-and-After Photos/Videos	31	8.1
		Other	101	26.3
Primary Factor	Selection	Comprehensive Website Information	30	7.8
		Surgeon Rankings/Scores	105	27.3
		Positive Patient Reviews	144	37.5
		Other	105	27.3
Trust-Building Factors		Authentic User Reviews	102	26.6
		Official Credentials/ Documents	116	30.2
		Validated Website Information	53	13.8
		Other	113	29.4
Total			384	100.0

Decision-Making and Trust Factors on Instagram

Instagram use was less prevalent, with patient testimonials prominent in initial decision-making, positive reviews as the key selection factor, and real patient experiences bolstering trust (Table 3).

Table 3. Frequency and Percentage Distribution of Decision-Making, Selection, and Trust Factors on Instagram

Category		Subcategory	Frequency	Percentage
Initial Making	Decision-	Before-and-After Images	78	20.3
		Patient Testimonials	174	45.3
		Surgeon Engagement	22	5.7
		Educational Videos/Lives	8	2.1
		Other	102	26.6
Primary Factor	Selection	Before-and-After Images/Videos	44	11.5
		Positive User Reviews	157	40.9
		Surgeon-Patient Interactions	56	14.6
		Other	127	33.1

Trust-Building Factors	Surgical Procedure Videos	78	20.3
	Patient Experiences	153	39.8
	Follower Count	27	7.0
	Other	126	32.8
Total		384	100.0

Statistical Analysis of Impact and Concerns

The impact of Google and Instagram on decision-making was significantly below average, indicating a limited role for these platforms. Concerns about information accuracy were moderate, suggesting relative skepticism (Table 4). Normality tests confirmed non-normal variable distributions, but the large sample size enabled parametric analysis.

Table 4. One-Sample t-Test for Impact of Information and Concerns About Accuracy

Category	Variable	Mean	SD	t	p-value
Impact of Information	Google	2.27	1.22	-11.808	<0.001
	Instagram	2.14	1.20	-14.022	<0.001
Concerns About Accuracy	Google	2.84	1.18	-2.628	0.009
	Instagram	2.85	1.26	-2.315	0.021

Discussion

Principal Results

This study investigated the influence of social media on maxillofacial surgeon selection among 384 patients in Isfahan, Iran, during autumn 2023. The main findings reveal that personal recommendations overwhelmingly dominated surgeon selection, with 62.2% of patients relying on friends or acquaintances, compared to 19.5% using Google and only 2.9% using Instagram. While Google (41.7%) and Instagram (31.0%) were utilized as supplementary tools, their impact on decision-making was significantly below average, as evidenced by mean scores of 2.27 and 2.14, respectively, on a 1–5 scale. Patient-generated content, such as reviews and testimonials, alongside professional credentials, emerged as critical factors in decision-making and trust-building across both platforms. However, moderate concerns about information accuracy (means of 2.84 for Google and 2.85 for Instagram) suggest skepticism toward digital sources, reinforcing the primacy of traditional networks.

Comparison with Prior Work

These findings align with prior research highlighting the persistent influence of personal referrals in healthcare decision-making, even amidst the rise of digital platforms. For instance, Hinz et al. (2012) found that word-of-mouth recommendations significantly outweighed online information in shaping patient choices for medical services, a pattern consistent with the current study's 62.2% reliance on personal networks (10). Similarly, a study by Xue et al. (2021) reported that only 25% of patients used online reviews to select surgeons, compared to 60% relying on referrals (11), paralleling the limited role of Google (19.5%) and Instagram (2.9%) observed here. The supplementary role of digital tools in our findings also resonates with Luo et al. (2022), who noted that while 43% of Chinese patients searched online for healthcare providers, final decisions were predominantly guided by offline sources (12). This consistency across diverse cultural contexts underscores a global preference for trusted interpersonal advice over digital information in high-stakes decisions like surgery.

The prominence of patient-generated content, particularly reviews (37.5% for Google, 40.9% for Instagram) and testimonials (45.3% for Instagram), as key decision-making factors mirror trends in health informatics literature. Thackeray et al. (2013) reported that 59% of U.S. adults valued online patient reviews when choosing physicians, though trust in these reviews was tempered by concerns about authenticity (13). Our study extends this by showing that authentic reviews (26.6% for Google) and real patient experiences (39.8% for Instagram) were pivotal in building trust, yet moderate accuracy concerns (means ~ 2.85) suggest a similar wariness among Iranian patients. This aligns with Hanauer et al. (2014), who found that 34% of patients distrusted online health information due to perceived bias or lack of verification, a skepticism reflected in our participants' moderate concern scores (14).

Conversely, the limited impact of social media platforms diverges from some studies in aesthetic surgery contexts, where visual platforms like Instagram play a larger role. For example, Seetan et al. (2025) reported that 64% of plastic surgery patients were influenced by Instagram's visual content, contrasting sharply with our 2.9% reliance on Instagram (15). This discrepancy may reflect differences in surgical intent—cosmetic versus functional maxillofacial procedures—or cultural attitudes toward social media in Iran, where traditional trust networks may overshadow digital marketing. The significant below-average impact scores ($p < 0.001$) in our study further support this, suggesting that informational rather than promotional content drives digital influence in this population.

The reliance on professional credentials (30.2% for Google) as a trust factor corroborates findings by Emmert et al. (2013), who noted that 52% of German patients prioritized verifiable qualifications when evaluating online physician profiles (16). This emphasis on credibility highlights a critical intersection between digital and traditional trust mechanisms, where patients seek authoritative validation even within online environments. However, moderate concerns about accuracy indicate a gap in perceived reliability, consistent with Thapa et al. (2015), who found that patients questioned the trustworthiness of online health data, necessitating improved verification processes (17).

These findings suggest that while social media supplements surgeon selection, its influence remains secondary to personal recommendations in the maxillofacial context. Healthcare providers should prioritize maintaining strong referral networks while enhancing the credibility of their online presence through authentic patient feedback and verified credentials. The moderate skepticism toward digital accuracy underscores the need for platforms to implement robust validation mechanisms, such as certified reviews or official endorsements, to bolster patient trust.

Limitations

The study's focus on Isfahan limits generalizability, as urban-rural differences or regional variations in Iran may alter social media reliance. The cross-sectional design precludes causal inferences about how digital influence evolves over time. Additionally, the sample's moderate income and education levels may not fully represent less affluent or less educated populations, potentially underestimating barriers to digital access.

Future Directions

Future research should explore longitudinal trends in social media's influence on healthcare decisions, particularly as digital literacy grows. Comparative studies across surgical specialties (e.g., cosmetic vs. functional) and cultural settings could clarify contextual drivers of platform use. Investigating interventions to enhance online information credibility, such as blockchain-verified reviews, may address accuracy concerns and elevate digital tools' role in patient decision-making.

Conclusion

In conclusion, personal recommendations remain the cornerstone of maxillofacial surgeon selection in Isfahan, with social media playing a limited, supplementary role shaped by patient reviews and credentials. These findings, consistent with global patterns yet distinct in their low Instagram reliance, highlight the enduring trust in traditional networks and the need for credible digital enhancements in healthcare decision-making.

Acknowledgment

We express our sincere gratitude to the 384 patients who participated in this study at maxillofacial surgery clinics in Isfahan, Iran, for their time and willingness to share their experiences. We also thank the clinic staff for their cooperation in facilitating data collection. Special thanks are extended to Grok, developed by xAI, for its invaluable assistance in editing the language of this manuscript, enhancing its clarity and readability. Finally, we appreciate the insightful feedback from colleagues who reviewed early drafts, contributing to the refinement of this work.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability

The data supporting the findings of this study are not publicly available due to ethical restrictions protecting patient confidentiality. Anonymized data may be provided upon reasonable request to the corresponding author, subject to approval by the institutional ethics committee and compliance with applicable data protection regulations.

References

1. Mironica A, Popescu CA, George D, Tegzeşiu AM, Gherman CD. Social Media Influence on Body Image and Cosmetic Surgery Considerations: A Systematic Review. *Cureus*. 2024;16(7):e65626.
2. Grant MC, Scott-Bridge KR, Wade RG. The role of social media in disseminating plastic surgery research: The relationship between citations, altmetrics and article characteristics. *J Plast Reconstr Aesthet Surg*. 2021;74(5):1101-60.
3. Shauly O, Marxen T, Goel P, Gould DJ. The New Era of Marketing in Plastic Surgery: A Systematic Review and Algorithm of Social Media and Digital Marketing. *Aesthet Surg J Open Forum*. 2023;5:ojad024.
4. Alimohammadlou M, Khoshsepehr Z. The role of Society 5.0 in achieving sustainable development: a spherical fuzzy set approach. *Environ Sci Pollut Res Int*. 2023;30(16):47630-54.
5. Sorice SC, Li AY, Gilstrap J, Canales FL, Furnas HJ. Social Media and the Plastic Surgery Patient. *Plast Reconstr Surg*. 2017;140(5):1047-56.
6. Alghonaim Y, Arafat A, Aldeghaither S, Alsugheir S, Aldekhayel S. Social Media Impact on Aesthetic Procedures Among Females in Riyadh, Saudi Arabia. *Cureus*. 2019;11(10):e6008.
7. AlSadrah SA. Social media use for public health promotion in the Gulf Cooperation Council. An overview. *Saudi Med J*. 2021;42(1):9-20.
8. Swire-Thompson B, Lazer D. Public Health and Online Misinformation: Challenges and Recommendations. *Annu Rev Public Health*. 2020;41:433-51.
9. Srinivasan M. Cultural Influences on Primary Care Delivery. *J Gen Intern Med*. 2016;31(11):1265-6.
10. Gürcü M, Korkmaz S. THE IMPORTANCE OF WORD OF MOUTH COMMUNICATION ON HEALTHCARE MARKETING AND ITS INFLUENCE ON CONSUMERS' INTENTION TO USE HEALTHCARE. *International Journal of Health Management and Tourism*. 2018 Apr 25;3(1):1-22.
11. Xu Y, Armony M, Ghose A. The interplay between online reviews and physician demand: An empirical investigation. *Management Science*. 2021 Dec;67(12):7344-61.
12. Luo A, Qin L, Yuan Y, Yang Z, Liu F, Huang P, Xie W. The effect of online health information seeking on physician-patient relationships: systematic review. *Journal of medical Internet research*. 2022 Feb 10;24(2):e23354.
13. Thackeray R, Crookston BT, West JH. Correlates of health-related social media use among

adults. Journal of medical Internet research. 2013 Jan 30;15(1):e2297.

14. Hanauer DA, Zheng K, Singer DC, Gebremariam A, Davis MM. Public awareness, perception, and use of online physician rating sites. *Jama*. 2014 Feb 19;311(7):734-5.

15. Seetan K, Yassin RY, Khamees AA, Alzaqh M, Muhanna SI, Ananzeh G, Abu Jubran MA. The effect of social media on the decision to have aesthetics or cosmetic procedure: A Case-Control study. *Aesthetic Plastic Surgery*. 2025 Mar;49(5):1469-77.

16. Emmert M, Meier F, Pisch F, Sander U. Physician choice making and characteristics associated with using physician-rating websites: cross-sectional study. *Journal of medical Internet research*. 2013 Aug 28;15(8):e2702.

17. Thapa DK, Visentin DC, Kornhaber R, West S, Cleary M. The influence of online health information on health decisions: a systematic review. *Patient education and counseling*. 2021 Apr 1;104(4):770-84.