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Influence of internet use on the dentist–patient relationship and oral health decision-making: A cross-sectional study

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Abstract

Background: The widespread availability of internet-based information has transformed how individuals seek and interpret oral health content. Patients increasingly consult search engines, dental websites, and social media before and after dental visits. While this trend enhances autonomy and engagement, it also introduces risks of misinformation, misinterpretation, and unrealistic expectations that may influence communication and trust within the dentist–patient relationship. Understanding how both groups perceive these digital influences is essential to support effective communication and evidence-based care; therefore, this study aimed to assess and compare the perceptions of dentists and patients regarding the impact of internet-based oral health information on communication, trust, and decision-making in dental practice.

Materials and Methods: A descriptive cross-sectional study was conducted among 100 dentists and 100 patients aged above 15 years in Chennai between May and July 2024. Data were collected using a structured, English-language questionnaire consisting of seven items. Convenient sampling was employed among eligible participants who provided informed consent. Sociodemographic details were recorded, and responses were categorized as “Agree” or “Disagree” for descriptive analysis.

Results: All 200 participants completed the survey. Patients demonstrated a more favorable perception of online oral health information than dentists. While 45% of patients agreed that the internet is a useful source of oral health information, only 38% of dentists shared this view. Similar proportions reported that online content influenced their thinking regarding oral health (patients 35.5%, dentists 34%). Communication-related perceptions differed: 39.5% of patients believed their dentist was willing to discuss online information, whereas 27.5% of dentists felt such discussions were burdensome. Both groups showed comparable views regarding guidance, with 38% of dentists and 37.5% of patients stating that dentists modify or guide patients based on online information. Concerns about misinterpretation were expressed by 34% of dentists and 37.5% of patients. More patients reported adhering to professional advice after consulting online information (41.5%) than dentists believed their patients did (33.5%). Perceived threat of the internet to the dentist–patient relationship remained low in both groups (dentists 28%, patients 23.5%).

Conclusion: Dentists and patients recognize the growing influence of online health information on oral health behaviors and communication. Patients tend to rely more positively on digital sources, while dentists express caution regarding misinformation and communication challenges. Enhancing digital health literacy, encouraging open dialogue, and guiding patients toward credible online information may strengthen trust, improve compliance, and support a more effective therapeutic partnership in the digital era.

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Keywords: Internet; Oral health information; Patient–dentist relationship; Misinformation; Digital health literacy; Cross-sectional study

1. Introduction

Oral health is closely linked to general health, well-being, and overall quality of life. As dentistry increasingly emphasizes prevention, patient awareness and participation have become essential elements of effective care. In parallel, the rapid expansion of internet access has transformed how individuals search for, interpret, and use health information. With digital resources readily available through smartphones, search engines, and social media, many people now turn to the internet for preliminary guidance on oral symptoms, treatment options, and dental procedures [1]. This shift in information-seeking behavior has influenced how patients form expectations and engage with dental professionals.

Online platforms offer an attractive source of information due to their convenience, anonymity, and the vast variety of content available. Patients frequently consult the internet both before visiting a dentist and after receiving advice, using digital content to compare procedures, read reviews, or understand terminology [2]. This trend reflects a broader movement toward patient autonomy, where individuals prefer to gather background knowledge before making health-related decisions. In many cases, such information helps reduce dental anxiety, promotes preventive practices, and enables more meaningful communication with clinicians [3].

However, the reliability of internet-based oral health information remains a concern. A large portion of online content is unregulated, commercially motivated, or produced by non-professionals. As a result, patients may encounter contradictory, incomplete, or misleading material that can contribute to confusion, unnecessary worry, or unrealistic expectations [4]. Misinterpretation of online information may lead individuals to question professional advice, engage in inappropriate self-care, or delay seeking necessary dental treatment [5]. For dentists, addressing misinformation or correcting preconceived ideas can prolong consultations and complicate clinical decision-making.

The rise of digital information has therefore introduced new challenges into the dentist–patient relationship. Some dentists perceive online-influenced discussions as an added communication burden, while others view them as opportunities to educate patients and reinforce evidence-based practice [6]. At the same time, many patients believe that the information they find online is helpful and expect their dentists to acknowledge and discuss it openly. These differing expectations can affect trust, communication, and treatment acceptance during dental visits.

In India, especially in urban and digitally active regions such as Chennai, internet usage for health information is becoming increasingly common. Yet, research comparing the perceptions of patients and dentists regarding online oral health information remains limited. Existing studies often consider only one group, making it unclear whether patients and dentists share similar experiences or hold contrasting views about the influence of the internet on oral health decisions [7]. Understanding these perspectives is important for improving communication strategies, guiding patients toward credible sources, and ensuring that online information supports rather than undermines dental care.

Given these evolving trends, there is a need to explore how both patients and dentists perceive the usefulness, reliability, and overall impact of internet-based oral health information within clinical practice. This study therefore aims to assess and compare the views of dentists and patients regarding how online oral health information influences their thinking, communication patterns, and decision-making during dental consultations.

2. Material and Methodology

This study employed a descriptive cross-sectional design to assess and compare the perceptions of dentists and patients regarding the influence of internet-based oral health information. The survey was conducted in private dental clinics and urban community settings across Chennai between May 2024 and July 2024.

2.1. Study Population and Sampling

A total of 200 participants were included, comprising 100 dentists and 100 patients. Dentists were recruited from private clinics and hospital-based dental departments, while patients were selected from private dental practices located in urban areas. A convenient sampling technique was used to enroll participants who were available and met the eligibility criteria at the time of data collection.

2.2. Inclusion and Exclusion Criteria

Participants were eligible if they were above 15 years of age, able to understand English, and provided voluntary informed consent. Individuals below 15 years of age or those unable to comprehend English were excluded from the study.

2.3. Data Collection Tool

Data were collected using a structured, self-administered questionnaire comprising seven closed-ended items. The questionnaire assessed participants' perceptions of:

- The usefulness of the internet for oral health information,
- Changes in oral health thinking influenced by online content,
- Communication with dentists regarding internet information,
- Guidance received or provided about online content,
- Misinterpretation of internet information,
- Adherence to dentist's advice after using the internet, and
- Perceived threat of the internet to the dentist-patient relationship.

Responses were recorded in a dichotomous format as "Agree" or "Disagree." In addition, demographic details including name, age, and gender were documented.

2.4. Data Collection Procedure

Dentists were approached personally in their respective clinical settings and invited to participate. Patients attending the selected private dental clinics during the study period were randomly approached in the waiting area. After explaining the purpose of the study, participants willing to take part were provided with the questionnaire in English. The survey required approximately 5–7 minutes to complete. Data collection spanned a three-month period.

2.5. Ethical Considerations

Participation was entirely voluntary. All participants were informed about the study objectives, assured of confidentiality, and informed that no personal identifiers would be used in reporting the results. Completion and return of the questionnaire were considered as implied consent.

3. Result

A total of 200 participants—100 dentists and 100 patients—completed the survey. Overall, patients exhibited a more positive attitude toward online oral health information compared to dentists. Nearly half of the patients (45%) agreed that the internet is a useful source of oral health information, whereas only 38% of dentists shared this opinion. A similar proportion of both groups reported that online information had influenced their thinking about oral health, with 35.5% of patients and 34% of dentists agreeing. In terms of communication, 39.5% of patients believed their dentist was willing to discuss information obtained from the internet, while 27.5% of dentists felt that such discussions placed an additional burden on consultation time.

Guidance patterns were comparable across both groups, with 38% of dentists and 37.5% of patients acknowledging that dentists modify or guide patients based on online information. Concerns about misinterpretation were noted by 34% of dentists and 37.5% of patients. Regarding treatment adherence, 41.5% of patients reported following their dentist's advice even after consulting the internet, compared to dentists' perception of patient adherence (33.5%).

Table 1 Dentist Responses

Question	Agree n=200 (%)	Disagree n=200 (%)
The internet is the useful source of information on the oral health for patients	76 (38%)	24 (12%)
You have experienced changes in the patients' thinking about oral health as a result of online information	68 (34%)	32 (16%)
Having to take time to talk to patient about information that they have obtained from the internet is a burden	55 (27.5%)	45 (22.5%)

I have modified/guided my patients in the use of oral health information obtained from the internet	75 (37.5%)	25 (12.5%)
Patients are likely to misinterpret information on the oral health gained from the internet	68 (34%)	32 (16%)
Your patients followed your advice after he/she began using internet	67 (33.5%)	33 (16.5%)
Internet represents a threat to dentist–patient relationship	56 (28%)	44 (22%)

Finally, only a minority in both groups perceived the internet as a threat to the dentist–patient relationship, with 28% of dentists and 23.5% of patients agreeing with this statement. Overall, the findings indicate moderate awareness and influence of internet-based oral health information, with patients consistently demonstrating higher acceptance and reliance on digital content than dentists.

Table 2 Patient Responses

Question	Agree n=200 (%)	Disagree n=200 (%)
The internet is the useful source of information on the oral health for me	90 (45%)	10 (5%)
I have experienced changes in my thinking about oral health as a result of online information	71 (35.5%)	29 (14.5%)
I believe my dentist is willing to discuss online information with me	79 (39.5%)	21 (10%)
I feel my dentist has modified/guided me on the oral health information obtained from the internet	76 (38%)	24 (12%)
I feel I have misinterpreted information on the oral health gained from the internet	75 (37.5%)	25 (12.5%)
I followed dentist’s advice after I began using internet	83 (41.5%)	17 (8.5%)
Internet represents a threat to dentist–patient relationship	74 (23.5%)	26 (13%)

4. Discussion

The present study compared the perceptions of dentists and patients regarding the influence of internet-based oral health information on their attitudes, communication, and decision-making. The findings demonstrate clear differences between the two groups, with patients showing a more favorable view of online information. This trend reflects broader digital changes in healthcare, where the internet has become an easily accessible tool for self-education and preliminary diagnosis, often shaping patient expectations even before professional consultation (1,2).

In this study, nearly half of the patients (45%) agreed that the internet is a useful source of oral health information, compared with 38% of dentists. This difference aligns with previous studies reporting that patients tend to perceive online information as empowering, convenient, and helpful in understanding dental symptoms and treatment options (3,4). Dentists, however, often view online content more critically, primarily due to concerns regarding its accuracy, credibility, and potential to mislead patients (5). Similar observations have been reported in other studies, where clinicians expressed reservations about commercial bias, misinformation, and the difficulty patients face in evaluating the reliability of digital sources (6).

A comparable proportion of patients (35.5%) and dentists (34%) reported that internet information had influenced their thinking about oral health. This suggests that online content not only shapes patient perceptions but also indirectly influences dentists by exposing them to emerging trends and patient expectations. Studies have shown that dental professionals themselves occasionally refer to online resources for updates, guidelines, and peer insights, indicating that the digital environment affects both sides of the dental encounter (7,8).

Differences became evident in communication-related perceptions. While 39.5% of patients believed their dentist was willing to discuss online information, only 27.5% of dentists felt such discussions were burdensome. This mismatch has also been documented in earlier research, where patients expected dentists to validate or clarify the information they

found online, whereas dentists reported spending additional time correcting misconceptions or addressing unrealistic expectations (9,10). Such communication gaps may lead to tension or dissatisfaction if not appropriately managed.

Concerns about misinterpretation of online content were noted by both groups, with slightly higher agreement among patients (37.5%) than dentists (34%). This finding is consistent with studies showing that individuals with limited digital health literacy frequently misinterpret complex or promotional online material, leading to confusion or inappropriate self-treatment attempts (11). Despite this, many patients may still rely heavily on online content due to its accessibility and persuasive presentation through social media and video platforms (12).

Adherence patterns also revealed notable differences. Patients reported higher adherence to professional advice even after consulting the internet (41.5%) than dentists perceived (33.5%). Similar findings have been observed in earlier studies indicating that, although patients seek online information, they generally value professional guidance and follow dentists' recommendations when communication is clear and supportive (13,14). This reinforces the idea that online information often functions as a supplement rather than a substitute for professional dental advice.

Importantly, both dentists and patients in this study showed relatively low concern about the internet posing a threat to the dentist-patient relationship. Only one-fourth of each group agreed with this statement. Evidence from previous literature similarly indicates that constructive discussion of online information can strengthen rapport, promote shared decision-making, and build trust when dentists adopt an open and nonjudgmental communication style (15,16).

Overall, the results highlight the growing integration of online information into oral healthcare. Patients generally view internet resources positively, while dentists remain cautious yet adaptable. These findings underscore the need to enhance digital health literacy, encourage open dialogue about online sources, and guide patients toward evidence-based digital content. Strengthening these areas may reduce misinformation, improve treatment adherence, and support a more collaborative dentist-patient relationship in an increasingly digital environment.

Limitations

This study has several limitations that should be considered when interpreting the findings. The use of convenient sampling may have introduced selection bias, limiting the generalizability of the results to a wider population. The sample size was relatively small and restricted to one metropolitan region, which may not accurately represent the perceptions of dentists and patients in other geographic or socioeconomic settings. Additionally, the study relied entirely on self-reported data, which are subject to recall bias and socially desirable responses. The questionnaire consisted of closed-ended items, restricting the depth of participants' perspectives and preventing exploration of nuanced attitudes toward online information. Furthermore, the study did not assess participants' level of digital health literacy, which could significantly influence their ability to interpret online oral health information. Finally, the descriptive nature of the analysis, without advanced statistical tests, limits the ability to identify associations or predictive factors related to internet use and its perceived impact.

Recommendations

Based on the findings, several recommendations can be proposed to strengthen communication and promote responsible use of online oral health information. Dentists should consider incorporating brief patient education on how to evaluate credible online sources and guide individuals toward reputable websites or evidence-based digital platforms. Dental clinics may benefit from creating simple informational materials—either printed or digital—that list trustworthy portals for oral health content, thereby reducing the likelihood of misinformation. Public health programs and community outreach initiatives should integrate digital health literacy training to help individuals critically assess online content and make informed decisions. Future research should involve larger, more diverse samples and employ validated tools to assess digital health literacy, as well as more detailed statistical analyses to explore the relationship between online information use and patient behaviors. Additionally, qualitative or mixed-methods studies could provide deeper insight into how patients interpret and apply online dental information in real-life contexts. Continuous professional development programs for dentists should also emphasize effective communication strategies for addressing internet-influenced patient concerns in an empathetic and evidence-based manner.

5. Conclusion

The present study highlights the growing influence of internet-based oral health information on both patients and dentists. Patients were generally more positive about the usefulness of online information and more likely to integrate it into their oral health decision-making. Dentists, while acknowledging its relevance, expressed concerns about

misinformation and the added communication challenges it creates during consultations. Despite these differences, both groups demonstrated a willingness to engage with online content and did not view the internet as a major threat to the dentist–patient relationship. The findings emphasize the importance of fostering digital health literacy, encouraging open discussion of online sources, and guiding patients toward credible information. Strengthening communication strategies may enhance trust, support evidence-based practice, and improve oral health outcomes in the digital age.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that they have no conflict of interest.

Statement of ethical approval

This study involved minimal-risk, anonymous, voluntary questionnaire responses from adult participants. According to institutional guidelines, formal Ethical Committee approval was not required for this type of research.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study. Participation was voluntary, and anonymity was maintained.

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