

Evaluating The Influence Of Social Media On Public Cognizance And Compliance With Oral Hygiene Practices: A Cross-Sectional Survey In The General Population

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Abstract

Background / Aim

This study aimed to evaluate the awareness and impact of social media on oral hygiene maintenance among the general public. With the increasing use of platforms such as Instagram and YouTube for health-related information, the research sought to determine whether such exposure influences public knowledge, trust, and oral care practices.

Methodology

A structured questionnaire-based survey was administered to 102 respondents from the general population. The questionnaire explored four domains: Exposure to oral hygiene-related content on social media, Trust in the reliability of such information, Influence on daily oral hygiene practices (brushing, flossing, etc.), Preferences for advice from licensed dental professionals versus social media influencers.

Data were analysed using descriptive statistics to summarize response patterns and Chi-square tests to identify associations between exposure to social media and awareness levels.

Results

A majority of participants reported encountering oral hygiene-related content on platforms such as Instagram and YouTube. While some respondents admitted gaining awareness and adopting new practices, many revealed that such content did not significantly improve brushing or flossing techniques : Trust in dental influencers was reported as moderate, A large proportion of respondents preferred scientifically validated content from licensed dentists. Statistical analysis revealed significant associations between exposure to social media content and higher awareness levels ($p < 0.05$).

Conclusion

Social media is an effective tool for raising public awareness regarding oral hygiene; however, it does not necessarily translate into tangible improvements in oral hygiene practices. To maximize its utility, social media platforms should prioritize dissemination of scientifically accurate, dentist-verified information. Such integration of professional validation may enhance public trust and encourage better oral care practices.

Keywords: Oral hygiene, social media, awareness, public health, dental education

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I. Introduction

Oral hygiene maintenance is a key determinant of dental and systemic health, with inadequate practices contributing to caries, gingivitis, periodontal disease, and an increased risk of systemic conditions such as cardiovascular and metabolic disorders [1]. Effective self-care, including tooth-brushing, flossing, and routine dental check-ups, plays a central role in preventing disease and promoting quality of life.

In the digital era, social media platforms such as YouTube, Instagram, Facebook, and WhatsApp have emerged as widely used sources of health information, including oral health content [2,3]. The reach and accessibility of these platforms have created new opportunities for oral health promotion and public awareness campaigns. Several studies have demonstrated positive effects: targeted interventions via social media have successfully improved oral-health knowledge, attitudes, and even clinical indices among diverse populations [4,5]. For example, structured WhatsApp-based education programs have been shown to enhance oral hygiene behaviours, while Instagram and YouTube campaigns have increased awareness of preventive strategies [3,6].

However, the benefits of social media are counterbalanced by notable drawbacks. The accuracy and quality of freely available content remain inconsistent, with many videos and posts prioritizing promotional or influencer-driven messaging over evidence-based education [7]. Systematic reviews of YouTube and Instagram content on oral hygiene highlight the risk of misinformation, incomplete advice, and lack of professional oversight [6,8]. Moreover, high user engagement (likes, shares, views) does not necessarily correlate with scientific reliability, meaning that misleading information can spread more effectively than accurate content [7]. This creates challenges for both the public, who may unknowingly adopt ineffective practices, and for dental professionals, who must address misconceptions in clinical practice.

Disparities in digital access and health literacy further complicate the influence of social media on oral hygiene. Younger populations tend to benefit more from digital campaigns, while older or socioeconomically disadvantaged groups may have limited access or be more vulnerable to misinformation [9]. These limitations underscore the importance of assessing not only the reach of social media but also the extent to which the general public is aware of, trusts, and benefits from such platforms in relation to oral hygiene practices.

This study therefore aims to assess the awareness of social media on oral hygiene maintenance among the general public through a cross-sectional survey, providing insights into both the opportunities and challenges of integrating social media into oral health promotion strategies.

II. Materials And Methods

A cross- sectional survey was conducted using a 25- questions online questionnaire covering awareness, knowledge and attitude. The sample included only general public. Statistical analysis was performed using SPSS, Version 30.0.0. Descriptive statistics (frequency and percentage) were used to present the data. The Chi-Square test of independence was conducted to examine associations between categorical variables. A significance level of $p < 0.05$ was adopted for all tests.

III. Result

Results showed that the majority of respondents (90.2%) had encountered oral hygiene content on social media, with Instagram (59.8%) and YouTube (31.4%) being the most common platforms. More than half (52%) reported that such content influenced them to improve their oral hygiene practices, while 36.3% had purchased

oral hygiene products after exposure. Dentist or influencer videos were considered the most influential (57.8%), compared with before-and-after results, product reviews, and tutorials. Although 61.8% of participants expressed the need for more scientifically accurate information, trust in influencers was moderate, with 63.7% sometimes trusting their advice. Social media showed modest impact on behavioural changes, with 15.7% of respondents reporting improved brushing frequency and 40.2% reporting slight improvement in technique, though 59.8% already followed good routines. Only 23.5% adopted trending oral hygiene practices. Furthermore, 47.1% occasionally verified the credibility of content, and 66% agreed that some practices promoted online could be harmful without professional guidance. Overall, 60.4% of respondents believed that social media is an effective platform for promoting oral health awareness.

It shows strong evidence that social media serves as a powerful tool for raising awareness of oral hygiene practices, particularly through platforms like Instagram and YouTube. It shows strong potential to positively influence knowledge, attitudes, and even some behaviors; however, the inconsistent quality of information, partial trust in influencers, and risks of misinformation remain significant challenges. It shows strong indication that the public values scientifically accurate and professionally guided content, highlighting the need for dental professionals to actively engage with social media platforms. Strengthening the accuracy, credibility, and reach of online oral health education can maximize the benefits of social media while minimizing its risks, ultimately supporting better oral health outcomes in the general public.

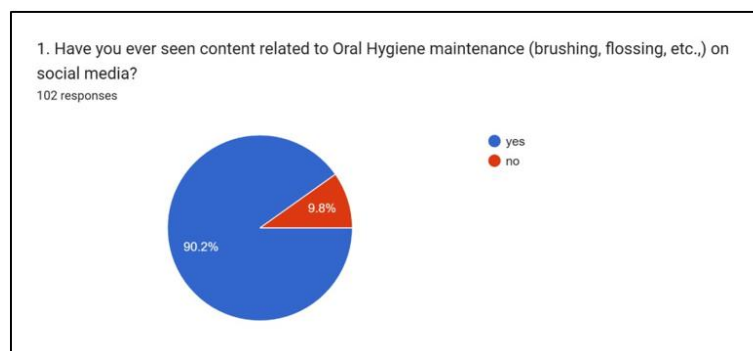


Fig 1: Among the 102 respondents, 90.2% answered Yes while 9.8% answered No.

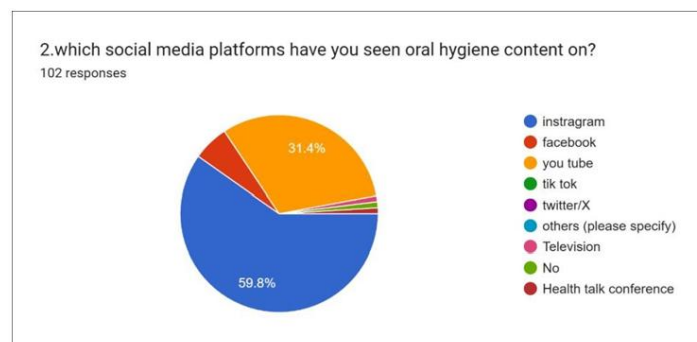


Fig 2 : Among the 102 respondents, Instagram (59.8%) emerged as the most common platform for oral health awareness, followed by YouTube (31.4%) as the second most popular source. Facebook contributed a smaller share, while other platforms such as TikTok, Twitter/X, health talks, and television had minimal use.

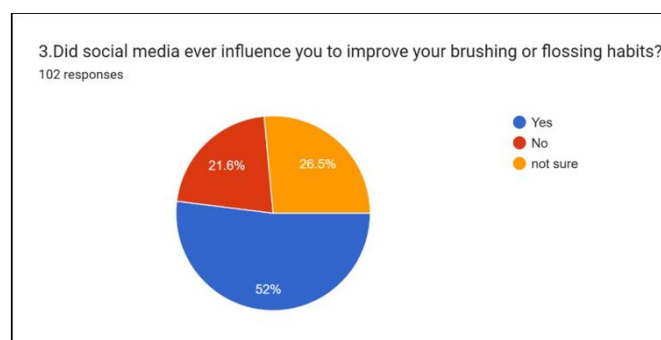


Fig 3 : Among 102 respondents, (52%) answered “Yes,” 22 (21.6%) answered “No,” and 27 (26.5%) were “Not sure.”

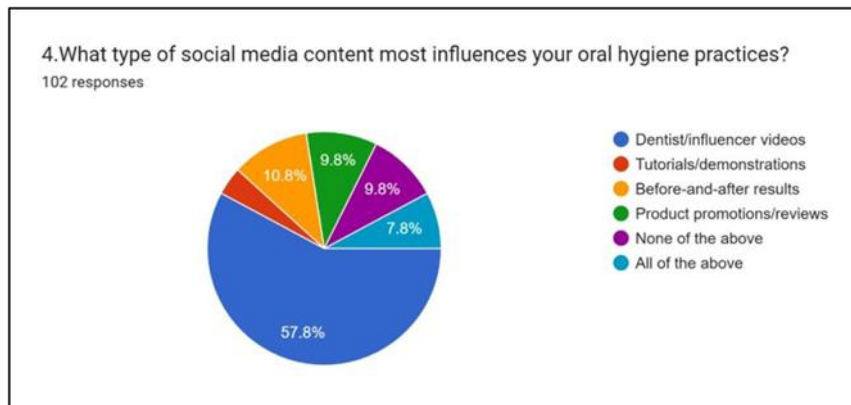


Fig 4 : Among the 102 respondents, the majority (57.8%, 59 respondents) reported that dentist or influencer videos were the most influential content type. A smaller proportion (10.8%, 11 respondents) were influenced by before-and-after results, while 9.8% (10 respondents) each were influenced by product promotions/reviews and none of the above. Additionally, 7.8% (8 respondents) indicated that all of the above influenced them, whereas only 4% (4 respondents) considered tutorials or demonstrations influential, making them the least impactful content type.

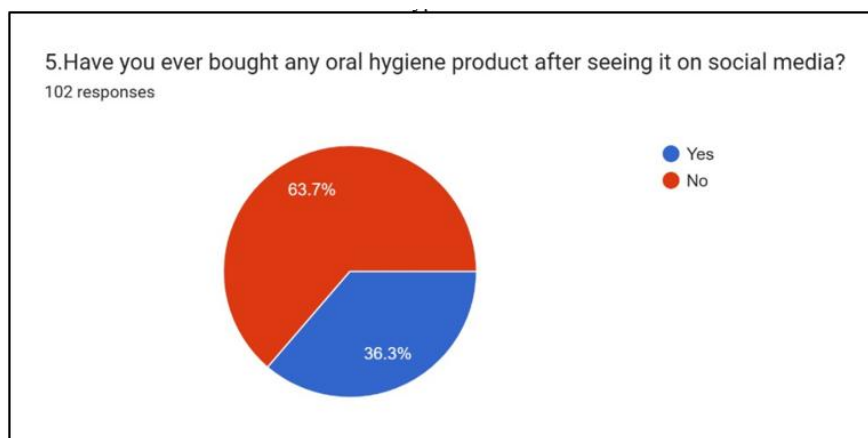


Fig 5 : Out of 102 respondents, 37 (36.3%) reported that they had purchased an oral hygiene product after seeing it on social media, while the majority, 65 respondents (63.7%), stated that they had not made any such purchase.

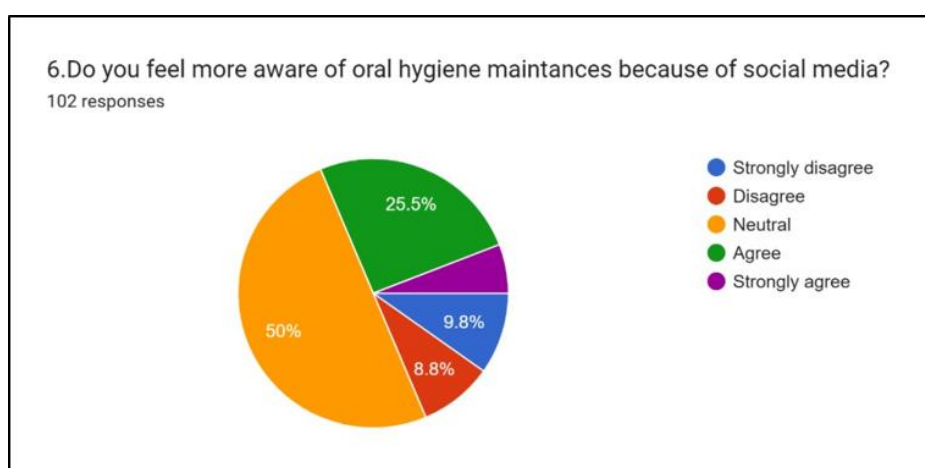


Fig 6 : Out of 102 respondents, half of them (50%, 51 people) remained neutral about whether social media increased their awareness of oral hygiene maintenance. Meanwhile, 25.5% (26 people) agreed and 6% (6 people) strongly agreed. On the other hand, 8.8% (9 people) disagreed and 9.8% (10 people) strongly disagreed

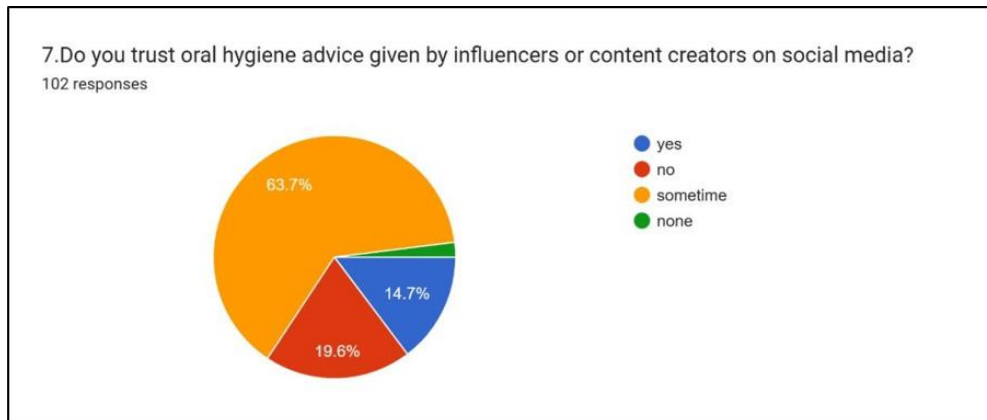


Fig 7 : Out of 102 respondents, the majority (63.7%, 65 people) stated that they sometimes trust oral hygiene advice from influencers or content creators on social media. Meanwhile, 14.7% (15 people) said yes, 19.6% (20 people) said no, and only 2% (2 people) reported that they do not trust them at all.

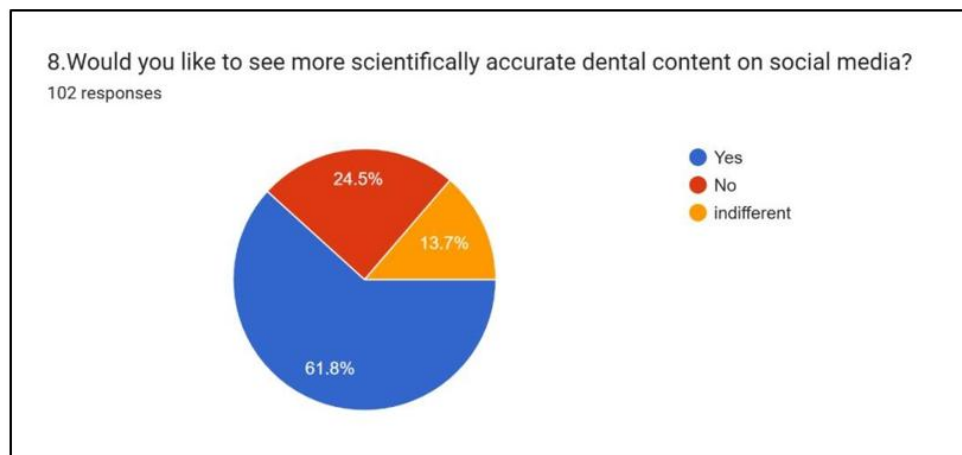


Fig 8 : Out of 102 respondents, the majority (61.8%, 63 people) expressed interest in seeing more scientifically accurate dental content on social media. Meanwhile, 24.5% (25 people) said no, and 13.7% (14 people) remained indifferent.

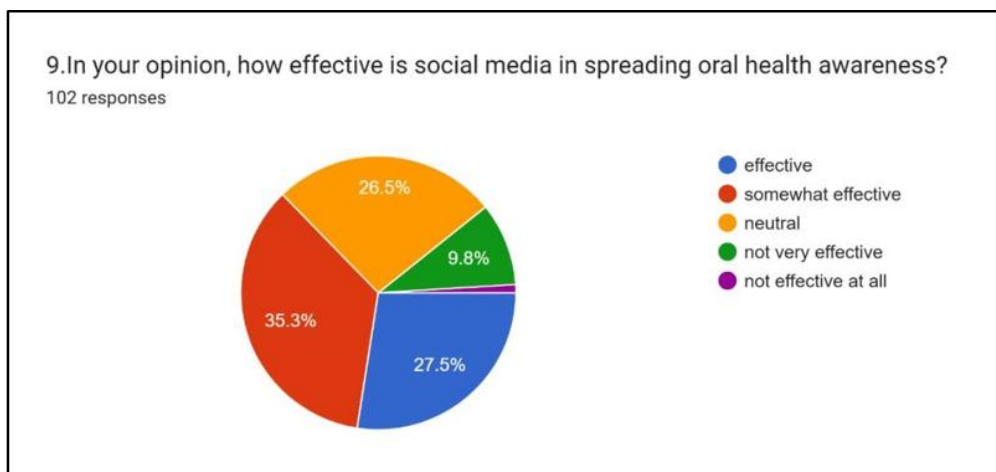


Fig 9 : Among 102 respondents, 27.5% (28 respondents) found the measure effective, while 33.5% (36 respondents) considered it somewhat effective. 26.5% (27 respondents) remained neutral. Additionally, 9.8% (10 respondents) felt it was not very effective, and 3% (3 respondents) believed it was not effective at all.

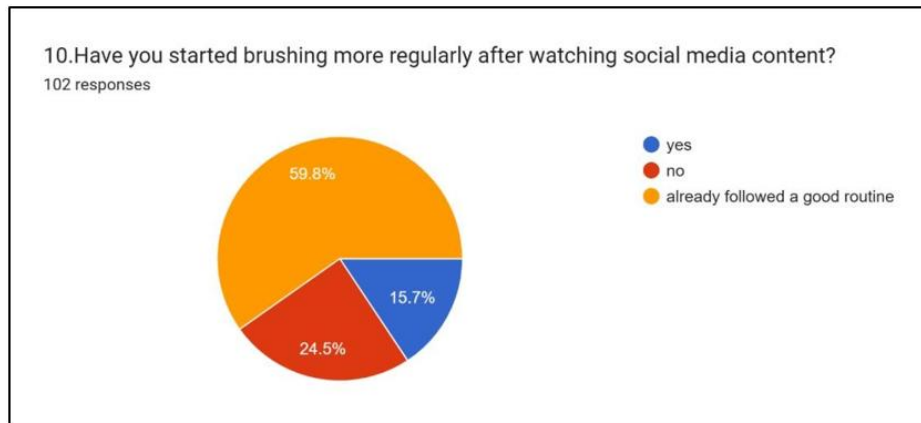


Fig 10 : Among 102 respondents, 15.7% (16 respondents) reported that they started brushing more regularly after watching social media content, while 24.5% (25 respondents) said no. The majority, 59.8% (61 respondents), indicated they already followed a good brushing routine.

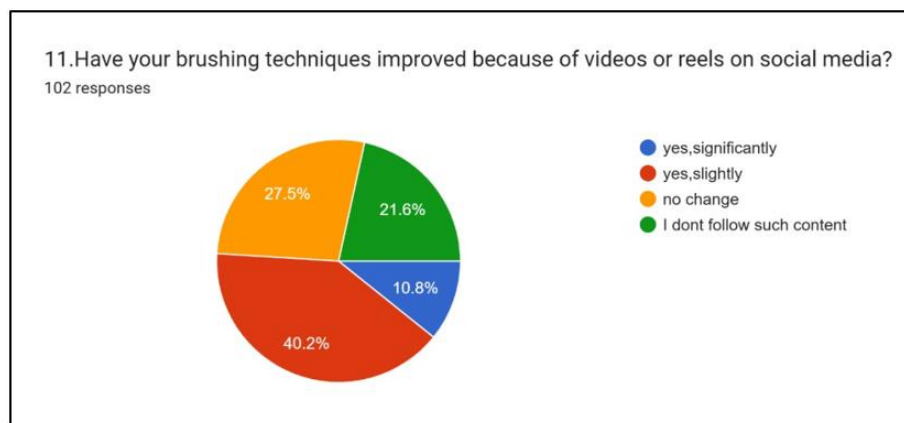


Fig 11 : Among 102 respondents, 10.8% (11 respondents) reported their brushing techniques improved significantly after watching social media content, while 40.2% (41 respondents) saw slight improvement. 27.5% (28 respondents) noticed no change, and 21.6% (22 respondents) do not follow such content.

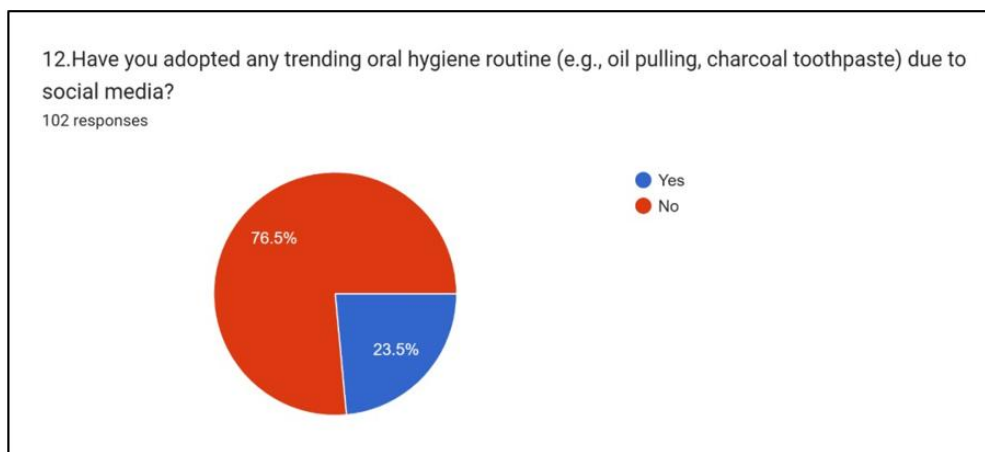


Fig 12 : Among 102 respondents, 23.5% (24 respondents) adopted a trending oral hygiene routine from social media, while the majority, 76.5% (78 respondents), did not follow any such trends.

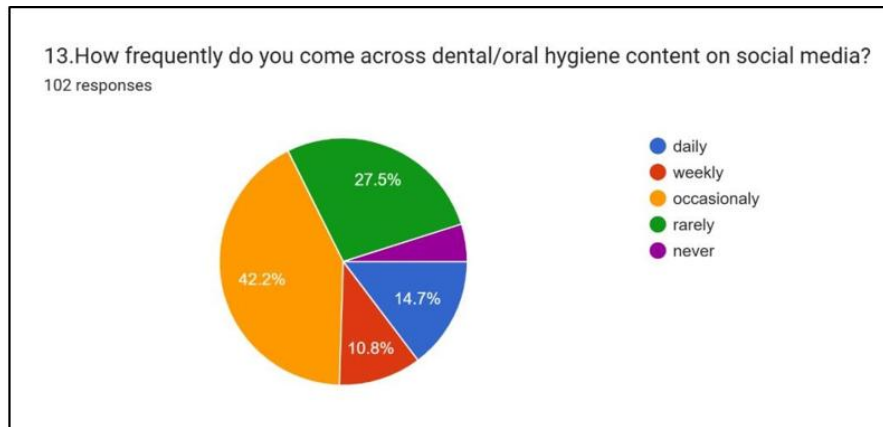


Fig 13 : Among 102 respondents, 42.2% (43 people) come across dental or oral hygiene content on social media occasionally, while 21.6% (22 people) see it rarely. 14.7% (15 people) encounter it daily, 10.8% (11 people) weekly, and 4.9% (5 people) never come across such content.

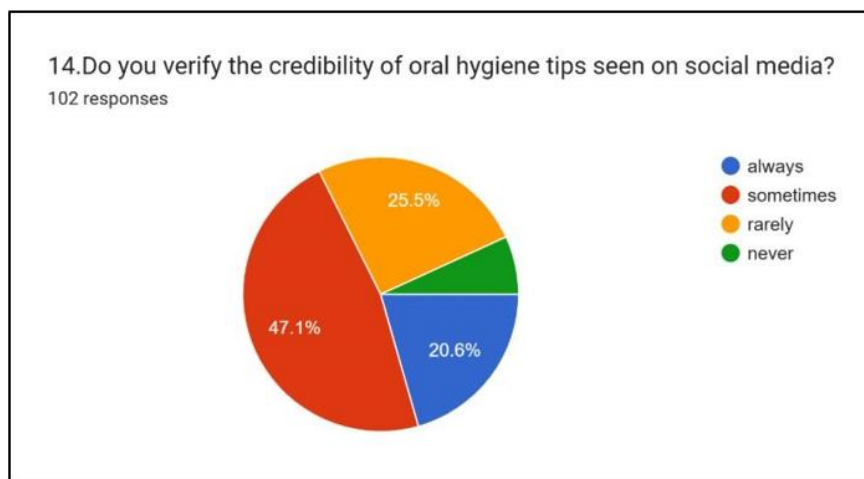


Fig 14 : Among 102 respondents, 47.1% (48 people) sometimes verify the credibility of oral hygiene tips on social media, while 25.5% (26 people) do so rarely. 20.6% (21 people) always check, and 6.8% (7 people) never verify such information

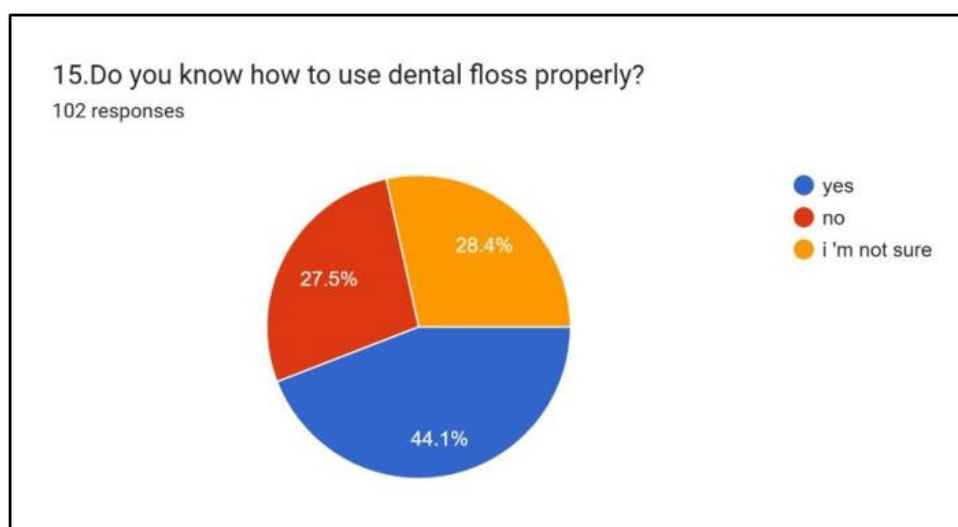


Fig 15 : Among 102 respondents, 44.1% (45 people) reported knowing how to use dental floss properly, while 27.5% (28 people) said they do not know. Additionally, 28.4% (29 people) were unsure about their ability to use dental floss correctly.

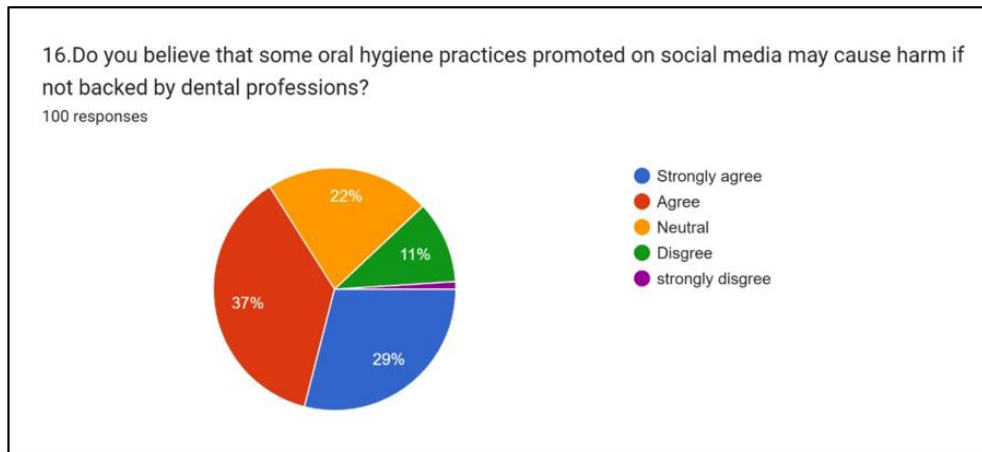


Fig 16 : Among 100 respondents, 37% (37 people) agreed and 29% (29 people) strongly agreed that some oral hygiene practices promoted on social media may cause harm if not backed by dental professionals. Meanwhile, 22% (22 people) remained neutral, 11% (11 people) disagreed, and 1% (1 person) strongly disagreed.

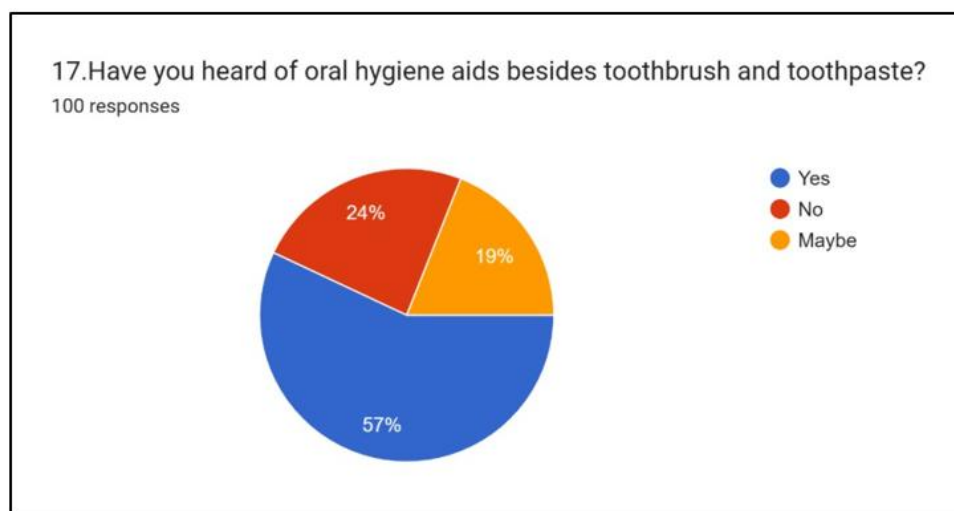


Fig 17 : Among 100 respondents, 57% (57 people) have heard of oral hygiene aids besides toothbrush and toothpaste, while 24% (24 people) said no, and 19% (19 people) were unsure.

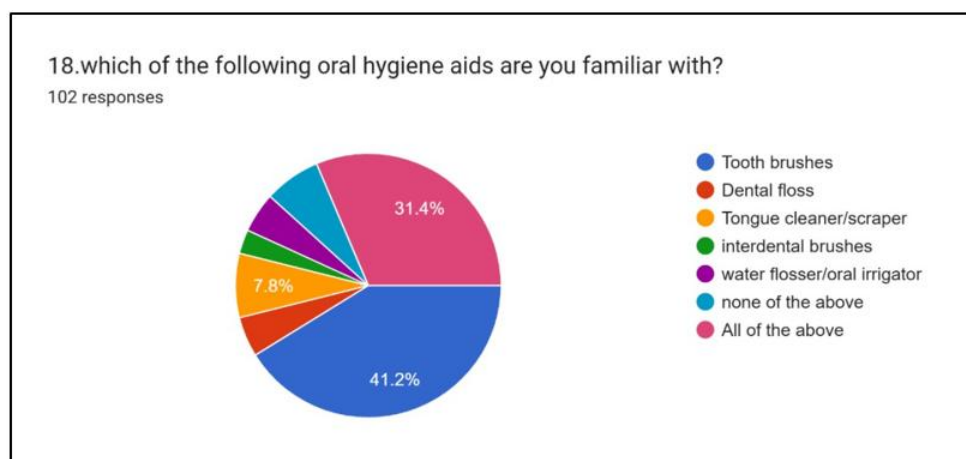


Fig 18 : Among 102 respondents, 41.2% (42 people) were familiar with toothbrushes and 31.4% (32 people) with dental floss. 7.8% (8 people) knew about tongue cleaners/scrapers, while 3.9% (4 people) were aware of interdental brushes and another 3.9% (4 people) of water flossers/oral irrigators. Additionally, 5.9% (6 people) selected all of the above.

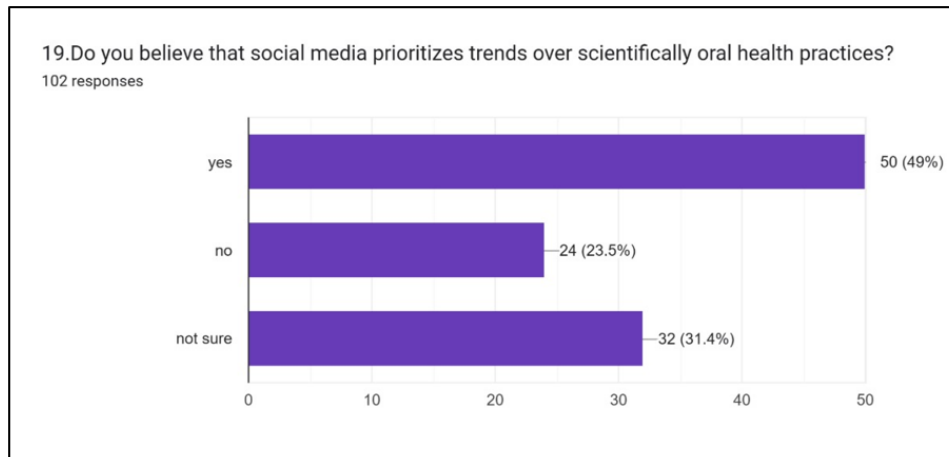


Fig 19 : Among 102 respondents, 49% (50 people) believe social media prioritizes trends over scientifically proven oral health practices, while 23.5% (24 people) disagree and 31.4% (32 people) are unsure

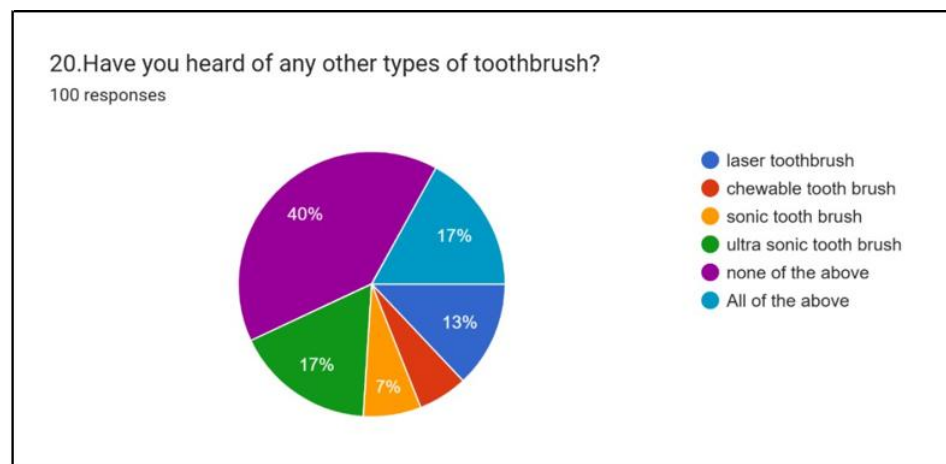


Fig 20 : Among 102 respondents, 40% were not familiar with any advanced toothbrush types. Meanwhile, 13% knew about laser toothbrushes, 7% each knew about chewable, sonic, and ultrasonic toothbrushes, and 1% selected all of the above.

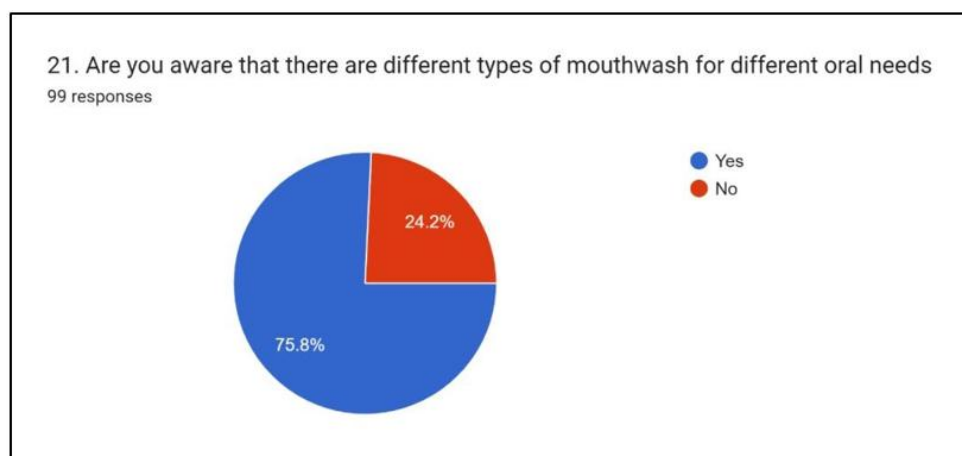


Fig 21 : Among 99 respondents, 75.8% (approximately 75 people) were aware that there are different types of mouthwash for different oral needs, while 24.2% (approximately 24 people) were not aware.

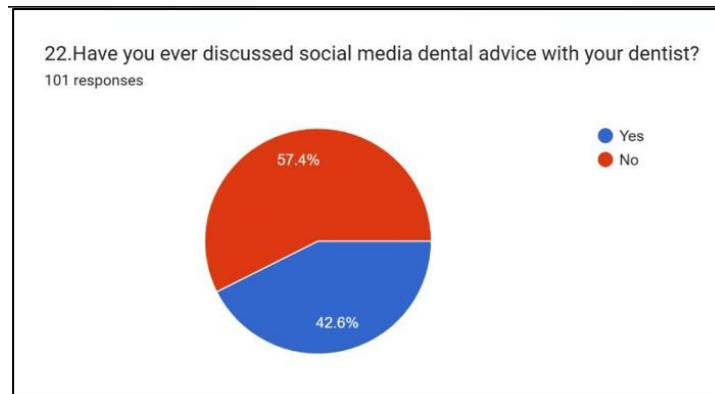


Fig 22 : Among 101 respondents, 42.6% (approximately 43 people) reported discussing social media dental advice with their dentist, while 57.4% (approximately 58 people) had never done so.

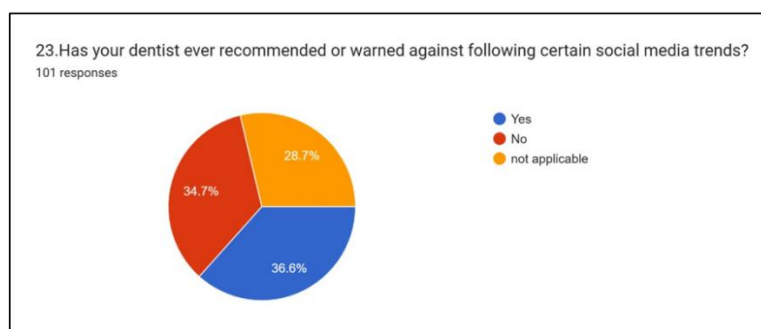


Fig 23 : Among 101 respondents, 36.6% (about 37 people) said their dentist has recommended or warned against following certain social media trends, 34.7% (about 35 people) said no, and 28.7% (about 29 people) stated it was not applicable to them.

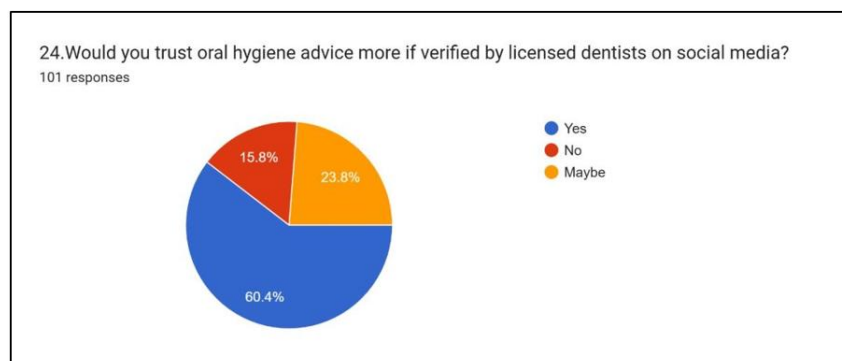


Fig 24 : Among 101 respondents, 59.4% (about 60 people) said they would trust oral hygiene advice shared by licensed dentists on social media, 27.7% (about 28 people) were unsure, and 12.9% (about 13 people) said they would not trust such advice.

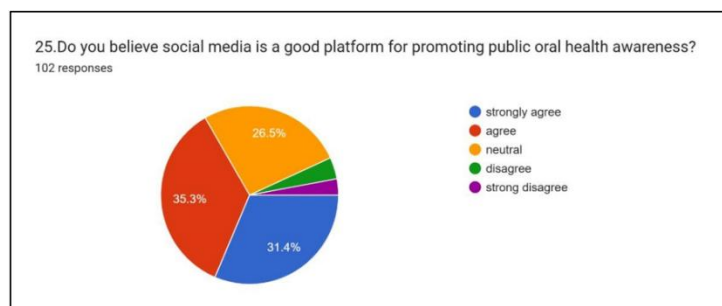


Fig 25 : Among 102 respondents, 60.4% (about 61 people) believe social media is an effective platform for promoting public oral health awareness, 23.3% (about 24 people) responded "maybe," and 15.8% (about 16 people) said no.

IV. Discussion

The present cross-sectional survey highlights the influence of social media on oral hygiene awareness among the general public. Results showed that 90.2% of participants encountered oral hygiene content online, mainly through Instagram (59.8%) and YouTube (31.4%). This aligns with Aldhuwayhi et al. [10], who found Instagram to be a dominant platform for oral health promotion, particularly for consumer-driven dental content. Similarly, Singh et al. [11] observed that YouTube has become a widely accessed source of oral health information, although the quality of such content varies considerably.

Our findings demonstrate that 52% of respondents reported improving their oral hygiene practices due to social media, while 36.3% purchased oral hygiene products after exposure. Comparable evidence was reported by Chaffee et al. [12], where WhatsApp-based interventions significantly improved oral health knowledge and practices, and Yadav et al. [13], whose systematic review concluded that structured social media interventions improved oral hygiene indices across populations. This suggests that interactive and visually appealing platforms can positively influence awareness and certain behaviors.

However, the present study also reflects gaps between awareness and sustained behavior change. Only 15.7% of respondents reported brushing more regularly, and 40.2% reported slight improvement in brushing technique. This limited behavioral translation mirrors findings from systematic reviews [14], which highlight that while knowledge acquisition is consistently improved, the effect on long-term oral hygiene practices is modest.

Trust emerged as a critical issue. While 63.7% of participants reported “sometimes” trusting influencers, 66% agreed that following unverified trends could be harmful. This concern is strongly supported by Basch et al. [15], who demonstrated that popular YouTube oral health videos often attracted high engagement despite containing incomplete or misleading information. Likewise, Singh et al. [16] confirmed that the majority of YouTube videos on oral hygiene lacked scientific accuracy or professional validation. These findings underscore the risk of misinformation spreading more rapidly than credible advice.

At the same time, this study highlights a public demand for credibility, as 61.8% of respondents expressed the need for more scientifically accurate content, and 59.4% reported they would trust dental advice from licensed dentists on social media. Similar observations were made by Al-Khudairi et al. [17], who found that patients increasingly consider dentists’ online presence when selecting providers, and Ghai [18], who emphasized that integrating social media into dental education and practice strengthens professional credibility and public trust.

Taken together, the evidence shows that social media is a double-edged sword: it provides opportunities for widespread oral health promotion but carries risks when unverified information dominates. The present findings support prior literature that recommends integrating dental professionals into digital platforms to ensure accuracy, improve public trust, and enhance the long-term impact of online oral health campaigns.

V. Conclusion

This study demonstrated that social media plays a significant role in raising awareness of oral hygiene practices among the general public, with Instagram and YouTube identified as the most commonly used platforms. More than half of the respondents reported that social media influenced their oral hygiene awareness and behaviors, and over one-third admitted to purchasing oral hygiene products based on online content. These findings support earlier evidence that social media interventions can positively impact knowledge and attitudes toward oral health.

At the same time, the study highlighted notable challenges. Despite high exposure to content, only a minority of participants reported improvements in brushing frequency or technique, indicating that awareness does not always translate into sustained behavior change. Furthermore, trust in influencers was only moderate, and two-thirds of participants acknowledged potential harm from unverified social media practices, consistent with prior studies identifying misinformation as a key limitation of online platforms.

Importantly, most respondents expressed a preference for scientifically accurate, professionally guided content, with nearly 60% indicating trust in licensed dentists’ advice on social media. This reflects growing public demand for credible digital health communication and reinforces the call for greater involvement of dental professionals in social media-based oral health promotion.

In conclusion, this study shows that while social media has strong potential as an effective awareness tool for oral hygiene, its true impact depends on improving content accuracy, addressing misinformation, and integrating professional oversight. Strengthening evidence-based, dentist-verified content on social platforms may maximize their benefits and contribute to more sustainable improvements in oral health behaviors.

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