

Oral health promotion on social media: Perceptions of Malaysian young adults

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ABSTRACT

Background: Over the years, social media (SM) has become a powerful tool for communication and health promotion, enabling health professionals to connect with wider audiences in real time. However, there is a lack of qualitative data to understand end users' perspectives on what is effective and what may require improvement. **Purpose:** This study aimed to explore preferences, reactions, and perceived impacts of oral health (OH) promotion on SM among Malaysian young adults. **Methods:** This qualitative study involved in-depth interviews with young adults aged 20–35 years. Purposive sampling was used to ensure diverse representation across several states in Malaysia. Twenty interviews were recorded and transcribed verbatim. Data were coded and analyzed thematically using Atlas.ti software. Three main themes—preferences, reactions, and perceived impacts—and seven sub-themes emerged from the analysis. **Results:** The young adults expressed positive views regarding OH promotion activities on SM. Most participants preferred visually appealing OH content, such as short videos and infographics, delivered in simple terms in the national language, and presented by health professionals. Although some participants identified as silent readers who did not actively engage with OH-related content, most believed that SM interventions had positively influenced their OH knowledge, attitudes, and behaviors. **Conclusion:** Most participants had positive perceptions of OH promotion through SM interventions, with some expressing clear content preferences. These findings may support the development of more effective OH promotion strategies in Malaysia that better align with user expectations.

Keywords: health promotion; qualitative; social media; young adults; medicine

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INTRODUCTION

Social media (SM) is among the most common activities among internet users, with the majority checking their SM pages daily. There are currently 5.04 billion active SM users globally, with young adults being the predominant users.¹ Young adults are particularly engaged on platforms such as Instagram, WhatsApp, TikTok, and Facebook, where they spend a substantial amount of time consuming, creating, and sharing content.² Some of the main advantages of using SM for health promotion include its ability to make health information more accessible, sharable, and personalized; to enable a supportive environment; and to influence health policy.³

Unlike traditional methods of oral health (OH) promotion, such as distributing pamphlets or holding community seminars, SM platforms can reach a wider audience and provide real-time access and interaction. They also allow users to share multimedia resources, release news, provide live streams, engage in chats, create content, and promote activities to the target audience.⁴

With these interactive features, SM offers healthcare professionals innovative ways to engage with the public through visually appealing content in various formats, including podcasts, photos, infographics, and videos.⁴ SM platforms also enable users to comment, like, share, and engage with content, fostering greater community participation and feedback. This interactive nature supports

the formation of communities of practice where individuals can share experiences, offer mutual support, and encourage one another toward better health practices.⁵

Many health organizations have therefore leveraged SM for health promotion, including within dentistry. For example, the World Dental Federation (FDI), representing over one million dentists worldwide, has recognized SM's potential to promote OH. The organization regularly creates and shares educational content on its SM platforms, including Facebook, Twitter, and Instagram. FDI also launched SM challenges during World Oral Health Day, encouraging people to share photos or videos of their participation along with OH pledges using specific hashtags, resulting in viral campaigns that increased awareness and engagement.⁶ However, evaluation of such campaigns remains limited.

Some studies have examined the role of SM in health promotion,^{7–9} but these have mostly relied on quantitative data, focusing on metrics such as likes, shares, and comments to measure engagement. There remains a substantial gap in qualitative data, limiting understanding of how these OH campaigns affect individual engagement and behavior. In Malaysia, the Ministry of Health and dental schools have made efforts to integrate SM into OH promotion, but there is limited qualitative evidence regarding its impact on young adults. Additionally, it is debated whether low engagement metrics indicate poor effectiveness of SM interventions.

Gaining deeper insight through qualitative research is essential to complement previous quantitative findings and better assess the value of these initiatives. Therefore, this study aimed to explore preference, reaction, and perceived impact of OH promotion using SM among Malaysian young adults.

MATERIALS AND METHODS

This study received ethical approval from the Faculty of Dentistry, Medical Ethics Committee, Universiti Malaya (DF CO2305/0043 (P)) and the Medical Research and

Ethics Committee, Ministry of Health, Malaysia. The reporting of this study followed the Consolidated Criteria for Reporting Qualitative Research checklist.¹⁰

This qualitative study involved in-depth interviews with active SM users among young adults in Malaysia. Purposive sampling was used, and participants were recruited from seven states across Malaysia to ensure diverse representation. Recruitment was carried out through Facebook and Instagram posts on researcher-created accounts, WhatsApp groups, and word-of-mouth recommendations.

Inclusion criteria were: active SM users (defined as having accessed or posted on SM within the past 24 hours), aged between 20 to 35 years, Malaysian citizens, and able to converse in Malay or English. Exclusion criteria included individuals with speech impediments, those who did not consent to participate, and oral healthcare professionals.

An interview topic guide was developed and piloted prior to the main data collection. Semi-structured in-depth interviews were conducted via online platforms (Microsoft Teams or Google Meet) by a female postgraduate student trained in interviewing techniques and qualitative research. Informed consent was obtained via Google Form before the interviews. During the ice-breaking session, participants were introduced to the research overview, objectives, interview process, and significance of the study.

Participants were asked a series of questions about their preferences regarding OH promotion activities on SM, their reactions to OH information, and the perceived impact of such activities (Table 1). They were encouraged to respond honestly. Interviews were conducted in either Malay or English, based on participants' preferences, and lasted between 45 and 60 minutes. Data collection continued until data saturation was achieved. All interviews were audio-recorded, and field notes were taken during the sessions.

The audio recordings were transcribed verbatim by a bilingual transcriber. Data coding and analysis were performed using Atlas.ti version 24 software. Thematic analysis was utilized to examine the perspectives of the participants. Open coding was carried out using the software to capture key points from the interviews, ensuring no

Table 1. Topic guide for interview

Main questions	Probing questions
Opening question	
• What is your opinion on using social media for oral health promotion?	• Can you elaborate on this aspect?
• Who would you prefer to deliver the information?	• Any example? Any experience?
• What characteristics of social media prompted you to engage with it?	• What is your preferred content—text, photos, infographics, videos, or animation? Any preferences for specific language? Can you elaborate?
• How do you usually react to oral health information on social media, particularly the ones that interest you?	• Do you read/like/share/comment/save?
• Does oral health information that you gain on social media influence you?	• Describe any oral health knowledge you have gained from social media. Can you elaborate on how it affects your attitude and behavior toward oral health?
Closing questions	
• Is there anything else you would like to discuss about oral health promotion on social media?	
• Do you have anything more to add?	

valuable data were missed. The initial coding structure was developed by the primary researcher, with input from the second researcher, until a refined final version of the coding tree was produced. Similar codes were grouped into sub-themes and themes that were relevant to the study objectives. These steps were repeated until all transcripts had been analyzed. Selected quotes were used to illustrate the identified themes and sub-themes. Where appropriate, quotes from participants' statements were translated into English.

RESULTS

A total of 20 young adult SM users participated in this qualitative study. Data reached saturation at the 17th interview, and additional interviews were conducted to confirm that no new insights emerged from participants. There was an equal number of male and female participants ($n = 10$), with a mean age of 26.3 years. The majority were aged between 20 to 25 years ($n = 10$), followed by 26 to 30 years ($n = 5$) and 31 to 35 years ($n = 5$).

Participants were from various states within Peninsular Malaysia, namely Pahang, Kuala Lumpur, Selangor, Kelantan, Perlis, Johor, and Terengganu. These states were selected to represent the Central, East Coast, Northern, and Southern regions. In terms of ethnicity, most participants were Malay ($n = 8$), followed by Chinese ($n = 7$) and Indian ($n = 5$). A range of educational backgrounds was also observed among the participants (Figure 1).

The analysis revealed three main themes regarding participants' interaction with OH promotion on SM: (1) Preference for content format and delivery methods; (2) Engagement behaviors with OH information; and (3) Perceived effects of SM-based OH promotion. Each theme included two to three sub-themes, as summarized in Table 2.

For Theme 1 (preference), concerning the video and infographic format, most participants preferred visually engaging presentations for OH-related content, such as videos, infographics and animations, over text-heavy formats. Some participants highlighted features that made videos more appealing, such as concise presentation, real-life cases, demonstrations, and animations.

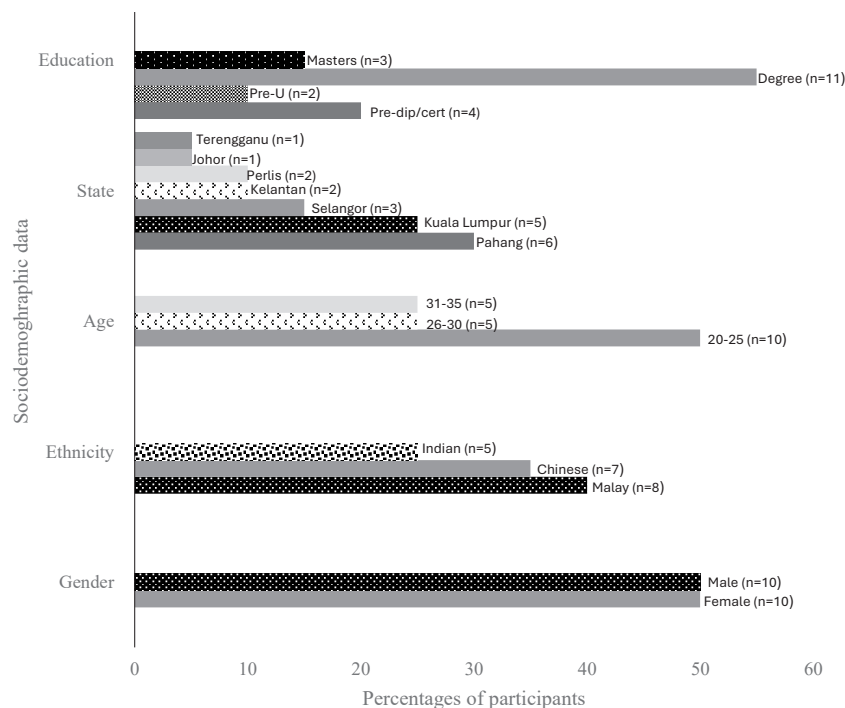


Figure 1. Participants' demographic characteristics.

Table 2. Themes and sub-themes

Themes	Sub-themes
1) Preference	1.1) Video and infographic format 1.2) Simple term and national language 1.3) Preferred sources of oral health information
2) Reaction	2.1) Passive and lack of engagement 2.2) Active reaction and engagement
3) Perceived impact	3.1) Increase oral health knowledge and awareness 3.2) Improve oral health attitude and behavior

"I am more on video. I do read sometimes (smirks), but it's not too much... Usually, I choose things that are easy for us to understand." (P5)

"The psychology behind marketing is like people are lazy to read. I think I would say, for my personal opinion, I will look at more infographic kinds of information, rather than to read a lot." (P8)

"I also like video or short video from the doctor. This is to feel more engaged in the act. To feel the empathy from the doctor, you know. I appreciate it more when we can find the doctor explaining personally the disease or treatment." (P1)

Some responses indicated a preference for infographics over videos. Participants often cited concerns about video duration and its impact on their ability to concentrate. A few also expressed a preference for combined formats.

"I prefer more infographics. Easy for me to understand everything. Sometimes, in video presentations, I skip to the main part. Then, quickly go to another post. Let's say if the promotion (on oral health) is done, for example, by TikTok or Reels on Instagram, then moving animation must be great. I would say it's a combination sort of thing. You put words and explain the things themselves, so sometimes it would be great as well ...if it's about symptoms, then you use some animation." (P9)

Regarding the terms and preferred language for disseminating OH information, responses were nearly equally divided between Malay and English. As Malaysia is a multicultural country, most participants advocated for content in the Malay language, whereas others suggested bilingual content, noting it was more widely accepted and better understood by the general population.

"I think for Malaysians, Malay is the best language. I know that the majority of Malaysians understand Bahasa Melayu (Malay), so that would be the best language to use, but between English and Malay, I'll go for Malay because that's the easiest language in Malaysia." (P10)

"Actually, I'm okay with dual languages, which are English or Malay. Nowadays many videos can be read by the subtitles. For example, the videos are in English so maybe there are subtitles with Malay, if the video is mainly in Malay so they can supply them with English (subtitles) so that anyone can understand because I think most people do understand English. In general, Malaysian people can understand either of these languages." (P11)

Participants also emphasized a preference for simple terms over medical jargon or scientific terminology. They believed that simple language improves comprehension and makes the topic more relatable.

"I like simple words or simple terms that are easier for the general population to understand, rather than using very hard words or scientific-specific words." (P16)

"The usage of simple languages is the best. However, I understand that certain things have to be in a certain way, but of course, disclaimer for the general public itself. So as simple as possible because I think what you want is to reach people, right?" (P9)

Most participants preferred individuals with a medical or dental background to disseminate OH information on SM platforms. This preference was based on the belief that such individuals could explain topics in greater detail, given their education and background in the health profession.

"I think I prefer someone who has a dental background because they know a lot, because they study, and they have the experience." (P10)

"So, if it's me, I prefer if the doctor explains it, if possible, explained with the pictures so that we clearly understand what the doctor is telling." (P11)

In contrast, two participants expressed that they did not have a specific preference regarding who shared OH information, as long as the content was presented in an engaging and understandable way.

"Whoever explains that it doesn't matter as long as he has a clear presentation. I don't care about their background or who delivers it. But it's more (important) when people take responsibility (when sharing)." (P2)

Meanwhile, for Theme 2, regarding reactions to OH information, some participants admitted to responding passively, merely consuming content on SM without further engagement. A few described themselves as silent readers. Some participants reported making conscious decisions to engage with SM content through actions such as liking, commenting, and sharing. Others said they refrained from commenting due to a fear of being judged for their opinions.

"I will just read it. I will not comment on anything. That's just me... I'm the type who is Haaa... a silent reader." (P6)

"Usually, I'll like it. It is rare for me to comment and share the information. In my perception, when commenting on the posts, others who see the information will also read the comments (the risk of being judged). Some people do read the comments, right? So, I feel I'm not so comfortable with that." (P11)

"No, no, I don't like to engage with other people's things (content)... and I don't like to share. I try to avoid leaving any trace, because (yeah) the algorithm will track my activity. I refrain from liking other people's content to remain anonymous." (P16)

Although only a few participants cited passive engagement with health-related content, others reported being actively involved with SM posts, particularly when the content was relevant to them. Some mentioned leaving comments, tagging friends, and exploring links provided in the posts. Sharing health information was the most frequently mentioned form of engagement, often done to help others seeking similar information.

"Usually I will leave a comment, I like, and I leave a comment if something that interests me." (P10)

"I use Messenger or FB (Facebook) Messenger. But let's say the person that I want to share with doesn't have Facebook or Instagram, then probably I will use WhatsApp or Telegram. Okay, (yeah)... But if they are on the same platform, I will just share it there." (P8)

"I might share it with people who are also seeking the same information like me, such as friends, who are also interested in knowing that topic, right? If I find useful information, I may share it." (P3)

In addition, participants reported engaging in other forms of reactions, including saving links or content and bookmarking information. This action was taken primarily to allow the information to be referred to or used in the future.

"I generally bookmark it. I mean, if I need to refer back on certain things, I have saved them for my own use." (P9)

"For me, I don't really download it, I just save on social media for myself. What I have saved, I'll look back at it if it's the information I want to know, find, or practice." (P5)

"If you look at the settings, if it's like allowing you to bookmark, I bookmarked. If not ((chuckles)), copy the link, send it to my own WhatsApp." (P2)

Lastly, regarding the perceived impact of OH promotion through SM (Theme 3), most participants agreed that such promotion can increase their awareness and knowledge of specific topics. Three participants acknowledged that they initially lacked sufficient knowledge of OH but gained new insights from the information encountered on SM.

"Yup (expression), it improves our knowledge on particular issues. So, in the future, if we or someone around us encounters such issues, we'll be better equipped to explain...or we know about the risk of the treatment or other aspects." (P11)

"As normal people (individuals), we may not have in-depth knowledge about health or dental details, so in terms of increasing our understanding about it, yes, it helps." (P14)

"Yes, it's increased my awareness as well as my knowledge on a certain topic." (P17)

Participants also emphasized the impact of SM on their OH attitudes and behaviors. These changes were categorized into three areas: self-adaptation, discussion with others, and seeking further treatment. In terms of self-adaptation, participants described modifying their oral hygiene routines, such as the type of toothbrush used, the frequency and duration of brushing, and the incorporation of flossing.

"Okay, I switched to the extra soft toothbrush, which is the latest one I have encountered. Of course, I'm like...now every time after eating, I make sure to remove everything. I pay attention to reaching out to the teeth that are hard to clean. And using thread. What's that called? Floss, right?" (P1)

"Because before (previously), I didn't floss and I brushed only once a day. Another thing about the type of toothbrush to use. I used to use the medium one, then when the doctor said it (on social media) may cause receding gum, okay, I had to change it." (P4)

Some participants mentioned discussing the information they encountered on SM with others, including friends or family members. Additionally, several expressed an intention to seek further professional treatment or

consultation based on the content they had seen on these platforms.

"There is discussion. If it's like a small talk (chitchat), then it will hit the topic, you know? It's like that person is facing the same things we are facing. We can share it when we see them." (P3)

"For example, people are more aware of anything they don't know much about yet. In my case, I don't even care about scaling. But they show how people who haven't scaled for many years, (unintelligible) straightaway feel like getting scaling treatment." (P4)

DISCUSSION

This qualitative analysis provided valuable insights into how young adults interact with and respond to OH information on SM. Most study participants expressed a homogeneous preference for educational content delivered in an attractive, relatable, and informative manner using simple language. Similar preferences have been reported in previous studies on OH education, whether through SM campaigns or conventional materials, such as leaflets, across various populations.^{11,12}

Additionally, visually rich presentations, such as infographics, were also highly valued. These findings align with a recent study that found the average attention span among young adults to be 76 seconds.¹³ They tend to comprehend information more effectively when presented with images or videos rather than text alone.¹⁴ Evidence also suggests that two-minute videos can foster more favorable attitudes and stronger engagement among viewers.¹⁵ This is supported by the popularity of short-form video features on platforms such as Instagram Reels and YouTube Shorts, which make sharing such content easier. Creating visually appealing informational content that captures attention on SM is not an easy task. The average dentist may lack the time or expertise needed to develop such content, highlighting the importance of collaboration with creative teams to produce effective OH materials.

Effective videos and infographics also rely on clear language. Participants appreciated the use of simple messages in the national language for health education. Some suggested that bilingual captions could further enhance comprehension and accessibility. This also reflects cultural sensitivity and respect for linguistic diversity within the Malaysian population, which may help increase public acceptance of health promotion initiatives. However, the use of complex language in health communication can cause confusion or misinterpretation, making it suitable only for specific audiences, such as those with higher educational backgrounds. In contrast, when content is delivered in clear, easy-to-understand language, a wider audience can benefit and engage with the messages.¹⁶ This highlights the importance of carefully curating educational content for the target population, not only in terms of language but also in terms of cultural relevance.

This study found that most participants preferred to view OH-related content shared by professionals. This finding further underscores the importance of SM presence among healthcare professionals, including dentists, and their role in health promotion. From a public perspective, healthcare professionals can disseminate accurate, evidence-based information and help counter the widespread misinformation prevalent on SM.⁵ By engaging on platforms such as Facebook, Instagram, YouTube, and TikTok, dentists can build trust and rapport with younger audiences, making them more likely to understand common OH problems and seek professional advice and services.

Studies have reported that some dental practitioners tend to use SM primarily for personal networking, whereas those in private practice often leverage it for professional use, OH promotion, and marketing.^{5,17} The lack of SM presence from professional accounts may stem from perceived risks and ethical challenges, such as privacy concerns, misinformation, and online harassment.¹⁸ Additionally, stakeholder engagement in adolescent health promotion media is limited. Only the health sector and NGOs are fully committed, whereas other players either overlap or dismiss their importance.¹⁹ Targeted training for healthcare professionals could help address these challenges, enabling them to use SM platforms more effectively for disseminating awareness campaigns and promoting collective action toward improved OH practices and overall well-being.^{3,4}

The preference for professional content on SM aligns with broader trends in digital engagement. SM has transformed consumers from passive viewers into active participants, allowing them to generate substantial content through interaction.^{20,21} The reactions of young adults to OH promotion on SM in this study reflected both active and passive engagement. Active responses included liking, sharing, and commenting, often driven by content that resonated with their interests or experiences. In contrast, a significant portion of the audience engaged passively as “lurkers,” consuming content without visibly interacting.²²

Despite their low visible engagement, these silent readers still benefited from the content. Findings from this study revealed additional forms of user interaction, such as bookmarking, saving, downloading, screenshotting, and discussions across other platforms, that are often not captured by quantitative metrics. Therefore, standard indicators such as likes, shares, and comments may not fully reflect the impact of educational content on health knowledge or behavior.

Passive participants may also experience a sense of social debt, feeling obligated to contribute to the community eventually, although this is not always fulfilled.²² They often hold altruistic intentions, such as wanting to help others by recommending positive experiences, but are less likely to act on them compared with more active users. With proper motivation and encouragement, these lurkers have

the potential to become more engaged contributors.^{22,23} Combining strategies that support both active and passive engagement may enhance the effectiveness of OH promotion on SM.

Based on the interview findings, OH promotion on SM appears to impact users positively by improving their awareness and knowledge, helping them become better equipped to manage their OH conditions. The findings support data from previous studies on the self-reported impact of SM in enhancing OH literacy and knowledge, empowering individuals to make informed decisions about their oral hygiene practices and overall well-being.^{24,25} This may be attributed to the functionality of SM platforms, which transform them into more engaging tools for disseminating OH information and raising awareness compared with conventional methods such as posters among target audiences.²⁵ Studies have shown that the constant availability and frequent exposure to OH content on SM can lead to behavior change among users.^{26,27} Specific content elements, messaging strategies, and persuasive techniques used in social marketing can be integrated into health promotion to empower and motivate people to adopt healthier behaviors.²⁸ One study also reported that authentic experiences shared on SM—including personal stories and persuasive techniques such as storytelling, endorsements from credible sources, and appeals to social norms—can influence public perceptions and encourage the adoption of recommended health behaviors, including positive OH practices.⁵

This study has several limitations. First, social desirability bias may occur when participants respond in ways that conform to perceived norms. Efforts were made to minimize this bias by carefully framing questions, building rapport, and encouraging honest responses. Second, online interviews may present limitations such as technical issues, reduced attention, and difficulty interpreting non-verbal cues.²⁹ Nevertheless, this method was chosen to accommodate participant preferences and logistical feasibility. Additionally, interpretive bias may have influenced data interpretation. However, data triangulation using interview transcripts, field notes, and collaborative interpretation among the research team was employed to minimize researcher bias.³⁰ Finally, the nature of qualitative research limits the generalizability of findings beyond the studied population.

Findings from this study are valuable for further refining OH promotion strategies in Malaysia to better reflect user preferences. They are also beneficial for dental professionals seeking to improve their SM presence and enhance the design of OH educational materials shared on SM. Additionally, this study lays a foundation for future research using larger-scale quantitative or longitudinal methods. Future studies should include a broader age range of participants, including non-SM users, to gain a more comprehensive understanding of how OH promotion can be improved across diverse segments of the population.

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