

## The Trend of Children's Dental Health Information-Seeking Behaviors on Social Media: A narrative review

Pindobilowo<sup>1,2</sup>, Taufan Bramantoro<sup>3\*</sup>, Dini Setyowati<sup>3</sup>

1. Doctoral Study Program, Faculty of Dental Medicine, Universitas Airlangga, Surabaya-Indonesia.

2. Dental Public Health Department, Faculty of Dentistry, Universitas Prof. Dr. Moestopo (Beragama), Jakarta-Indonesia.

3. Dental Public Health Department, Faculty of Dental Medicine, Universitas Airlangga, Surabaya-Indonesia.

### Abstract

The growth in social media use and the increase in children's dental health information on social media may facilitate behavior change and improve children's dental health outcomes. Children's dental health information-seeking behaviors are the way in which parents seek information about their children's dental health. Social media has recently become the primary source of information for parents with varying information needs about children's dental health.

Parents with certain children's dental health concerns can receive informational support on social media for making children's dental health-related decisions. They may learn from the experience of other parents with the same concern, including details of diagnosis, self-medication, treatment options, and recommended dentists and dental clinics. However, rapid information transmission on social media may lead to an increased volume of misinformation. This evidence calls for efforts to combat misinformation on social media and improve parents' ability to find reliable children's dental health information sources on social media.

This article highlights the use of social media to search for children's dental health information has been increasing. Concerning the quality of information on social media, parents need to evaluate information found on social media before deciding on their children's dental health.

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### Introduction

Digital communication media has been a necessity of people's lives. The use of social media is a part of digital communication which is currently very popular in the world.<sup>1</sup> There are the top 10 countries that are most active in using social media in 2018, namely China 777 million users, USA 274.1 million users, India 346.3 million users, Brazil 125.9 million users, Japan 105.4 million users, Indonesia 123 million users, Russia 96, 6 million users, Germany 62.7 million users, Mexico 80.4 million users and Nigeria 84, 3 million users.<sup>2</sup> At this time social media is used as the most widely used channel by everyone in this world to get information including dental and

oral health information. Social media means to be able to interact with each other's between individuals by creating, sharing, and exchanging information and ideas through words, images, and videos in a network and virtual community.<sup>3</sup>

Therefore, social media is also used as a means to convey messages about dental and oral health. It can be used as a preventive measure and as a form of dental and oral health behavior.<sup>4</sup> In the era of Web 2.0 or Health 2.0 or Medicine 2.0, people rely on the internet as a source of health information, especially dental and oral health. Popular social media at this time have proven effective in disseminating health information to support health promotion efforts and can be searched online such as YouTube, Facebook, MySpace, Twitter, and Second Life, image sharing, mobile technology and blogs.<sup>4-6</sup>

Based on World Health Organization (WHO) data, the prevalence rate of dental caries at the age of 5 years is 51.2% and the average DMF-T at the age of 5 years is 8.1. Data from WHO also found that 60% -90% of dental caries

#### \*Corresponding author:

Taufan Bramantoro,  
Dental Public Health Department, Faculty of Dental Medicine,  
Universitas Airlangga, Surabaya, Indonesia,  
E-mail: [taufan-b@fkg.unair.ac.id](mailto:taufan-b@fkg.unair.ac.id)

still occur at school age. According to these data, the problem of dental and oral disease in children is still an unsolved phenomenon. According to experts, social media can also be used as a channel in dental and oral health education.<sup>7</sup> The progress of digital communication has an impact on the use of social media in the community, especially among parents of users, namely mothers who have children.

The mother's role is very important to maintain the oral health of the children. Mothers must have knowledge about children's dental and oral health.<sup>8</sup> Mother's knowledge about dental and oral health in children can be obtained through social media. They can choose social media that suits their children's dental and oral health needs.<sup>9,10</sup> The purpose of this review is to discuss trends in information seeking behavior related to children's dental health on social media.

#### **Contribution of social media to dental and oral health education**

Social media is a growing and dynamic application. Social media is an internet-based application using Web 2.0 technology, where users can carry out activities by searching and exchanging information including dental and oral health information. 39% of online health information seekers by people around the world use social media. They can post comments related to their own health, collect health information, and join groups related to health, especially oral health. The use of social media refers not only to reducing health-related costs but also to improving the quality of health care. Social media has been proven to be an intervention for dental and oral health problems in the community. It can effectively provide knowledge, change wrong health behavior, and can be used as correct health behavior for the community.<sup>11</sup>

Social media Health has advantages, namely: social media is very quick to provide the latest information on health problems, social media involves the public or many people. Information can be disseminated quickly, and social media can be a source of emergency health information. People can quickly take preventive action.<sup>12</sup>

Social media on the provision of health care in the United States, and there are opportunities and challenges related to technology, especially in the field of dental

education.<sup>13</sup>

This program provides encouragement to improve public health, including by promoting dental and oral health. Various kinds of social media, namely YouTube, Facebook, Instagram, Twitter, Google, snap chat, and others can be accessed by millions of people every day around the world. The use of social media in finding dental and oral health information does not need to be expensive, can use digital communication tools, namely Android phones, and can be accessed anywhere and anytime.<sup>14</sup> Dental and oral health professionals In the world, there has been a lot of research on the use of social media for dental and oral health.<sup>13</sup> They have found that the increased use of dental and oral health social media technology can actually change communication patterns about oral health and care topics around the world.<sup>15</sup>

Researchers around the world strongly support this statement and they find similar things, including there is an increase in social support by the community regarding dental and oral health through internet-based social networks, produce the latest information on dental and oral health in accordance with the needs of the community, and there is an increase in the dissemination of dental and oral health information regarding the promotion of dental and oral health.<sup>7</sup>

#### **The role of parents as users of social media for children's oral health**

At this time, there are more channels for dental and oral health information, namely on television, radio, and one of them is social media. Mothers are users of social media for children's dental and oral health. The role of mothers in maintaining the health of children's teeth and mouth is very important. Mothers should be given knowledge about how to prevent disease, and children's dental and oral health. Mothers can make decisions to improve the health and well-being of their children. Mothers have a role in improving healthy living behaviors, such as the habit of brushing your teeth twice a day with fluoride toothpaste, controlling sugary diets, and seeking regular visits to the dentist.<sup>16</sup> This can be an incentive for mothers to seek information on their children's dental and oral health through social media. The use of social media by parents, especially mothers in seeking health information for their children, is very limited. Based on this

review there are questions: How do parents seek information on dental and oral health? children through social media? What can motivate parents to use social media to seek dental and oral health information? How can parents understand through social media about dental and oral health information?<sup>9</sup>

There is a significant difference regarding the intervention of educational videos that were shown by parents to their children with knowledge and attitudes in maintaining dental and oral hygiene.<sup>8</sup> Mothers who use social media for children's dental and oral health try to find information according to their needs and are supported by their motivation. They have awareness in maintaining dental and oral health in their children. This can give them motivation in seeking health information on one of them through social media. Social media has become a trend in society today, because all information is contained in these channels. User's parents can choose the social media platform they want. The selection of the social media platform is based on environmental factors, information needs by users, and the creativity of the content contained in the social media. The uniqueness of social media is that users can exchange experiences and information along with existing data and evidence. The users can discuss and gain new knowledge. In addition, users can directly consult with dental and oral health practitioners who are competent in their fields. Parents of users, especially mothers, also feel weaknesses or obstacles in finding information on children's dental and oral health on social media. A problem with users' parents, namely that there was a difference in information from one content to another, thus creating doubts among users on the truth and accuracy of the information. Sometimes there are also differences of opinion between one user and another. There is also debate and confusion for other users. These weaknesses and obstacles can be overcome by making good and correct content by those who have dental and oral health competencies and presenting information in an attractive package equipped with evidence in the form of accurate data such as pictures, graphs and tables as well as input from experts who competent.<sup>8,9,17</sup>

## **The world's most popular dental and oral health social media**

### **YouTube**

YouTube is a social media that provides a free online video streaming service that allows users to view, upload and post ratings/comments on posted videos. YouTube usually contains video clips of films, TV, and videos made by the users themselves. Currently, YouTube social media is an online video provider site that is widely used in the USA and even controls 43% of the market. YouTube is still the favorite social media platform. It is recorded that there are 2.56 billion YouTube users as of January 2022. It can be estimated that there are as many as 20 hours of duration uploaded to YouTube every minute with 6 billion views. In this case, the social media youtube already has more than 1 billion users and in this case almost 70% of users in the world do activities on YouTube with hundreds of hours of views. Based on research, researchers show the potential power stored by YouTube for personal health decision making. Parents of users can search for information on their child's dental and oral health. Parents of users can immediately practice ways to take care of their children's teeth and mouth.<sup>14,18,19</sup>

### **WhatsApp**

WhatsApp is a mobile technology application that has voice services, sending videos and text messages. In 2019, WhatsApp had occupied the most popular social media in the world. WhatsApp provides two-way communication or it can be more direct or indirect. WhatsApp was chosen as digital native as the easiest social media to use because it can be directly connected only by using a phone number in the WhatsApp application. Currently, many cellphones through WhatsApp have cameras to take pictures or short videos that can be viewed on the cellphone, downloaded to a computer, or transmitted to other people. Parents of users can also receive information on their child's dental and oral health via WhatsApp. Usually, they have a WhatsApp group so they become a community. Parents, especially mothers, can also exchange information through WhatsApp groups or through other users. They can increase their knowledge about children's dental and oral health. There were as many as 2 billion users doing activities on the WhatsApp application on a monthly basis. In this case the penetration power of this application is very strong in the USA market.<sup>5,18</sup>

### Facebook

Facebook is the most used social media in the world every day. Social media allows people to interact with each other. users can use a content to provide the latest information. Therefore, Facebook has become a very popular social media used at this time. Facebook can provide a direct and personalized way to deliver programs, products, and information including dental and oral health information. On Facebook, there are also many communities related to health, including dental and oral health. Mothers of users have often used this social media and Facebook makes it easy to get information on children's dental and oral health. Mothers of users can also interact with each other, by exchanging information and experiences regarding dental and oral health. Mother users can directly ask dental professionals and other users. In addition to China, the use of Facebook is still very popular in the world. Mothers of users can also interact with other users around the world. By 2021 Facebook users will have 2.9 billion active users. Facebook users create an average of 90 pieces of content every month. There is also a Facebook page that discusses specifically about health services, public health professionals and others.<sup>14</sup>

### Instagram

Instagram is a social media that provides photo and video sharing. Instagram users can take photos, do digital filters and share these photos or videos to various social media including Instagram itself. For mothers as users of child health social media, this application can also be used as an information channel because Instagram usually contains photos, short videos as well as reviews about dental and oral health. They can also interact with each other in messages or in the comments provided. Although the information on Instagram is not as complete as YouTube, WhatsApp and Facebook, users can get the latest information equipped with data in the form of photos and videos. Mothers can quickly understand the knowledge of children's dental and oral health. The most Instagram users are in the Asia Pacific region, reaching 893 million people in 2021, followed by Europe and South America with 338 million people and 289 million people, respectively. Indonesia is the largest Instagram user in Asia Pacific, with 700 million active users. According to Business of Apps data, global Instagram users

have reached 1.96 billion people in the first quarter of 2022. That number increased 1.67 percent from the previous quarter which was still 1.92 billion people.<sup>18,20,21</sup>

### TikTok

TikTok is the latest social media and is among the most popular in the world in 2021 and 2022. TikTok is an application that displays short videos that are packed with creativity and interest. This social media is a channel that can provide information related to health, especially dental and oral health and is very suitable for young people or parents who are still young. However, because the content of TikTok videos is very short, health information including children's dental and oral health often does not meet the standards. There are differences of opinion regarding information on TikTok between healthcare professionals and users alike. Therefore, it is recommended that the user's mother should be able to use TikTok video content regarding children's dental and oral health carefully. The involvement of health workers in creating video content on TikTok is very much needed by users in finding information about children's dental and oral health. According to Business of Apps data, there are 1.4 billion monthly active users (MAU) of the short video application in the world as of the first quarter of 2022. This figure is an increase of 15.34 percent from the previous quarter of 1.2 billion users. The number of TikTok MAUs also increased by 72.17% compared to the previous year. In the first quarter of 2021, there were only 812 million TikTok users in the world. The majority or 313 million users of the TikTok application will be in the Asia Pacific region in 2021. Latin America and Europe are followed by 188 million users and 158 million users, respectively. Meanwhile, 35% of TikTok users globally are aged 20-29 years. Then, the percentage of users aged 10-19 years and 30-39 years is 28% and 18%, respectively.<sup>22</sup>

### Weaknesses and barriers to dental and oral health social media

In previous studies, it was found that there was an effective use of social media in health promotion efforts, with the aim of increasing understanding and providing support to the community for healthy behavior, but behind the success of social media in exchanging information, there are also weaknesses. International publications have found several weaknesses and barriers to social media used in

health promotion efforts, including: <sup>8,9,23-25</sup>

There are studies conducted in several developing countries showing that information seekers are more passive than active. The information disseminated is not entirely accessible to the public and there is a lack of public access that is not connected to the network. Health information obtained through the Web quickly and easily can cause an imbalance of information, because all parties enter information even though they do not have competence in the health sector. of the information contained in social media is identified as fake and inaccurate news, causing public confusion and can contribute to negative public health behavior and can result in poor health. Health professionals are less able to master the use of social media because of their limited ability to manage social media-based health information There is a lack of interaction between information seekers and health professional. People are not interested in visiting the site, which results in the unsustainability of health promotion programs on social media. Many users make comments on social media based only on assumptions. There are differences of opinion between one user and another. There are also debates and create confusion for other users.

### Conclusions

At this time, social media has become a popular channel. The use of social media at this time is increasing. Social media is a very useful information channel and has become a basic need of society. One of them that is currently needed by the community is information on children's dental and oral health. Mothers have a major role in maintaining the health of their children's teeth and mouth. Therefore, mothers must be provided with sufficient knowledge about children's dental and oral health. Social media is the right channel for pregnant mothers to get information on dental and oral health for early childhood. Today's popular dental and oral health social media are YouTube, Whatsapp, Facebook, Instagram, and TikTok.

Social media currently has a very large number of users in the world and has become a trend among people in the world. Social media also has weaknesses. It becomes an obstacle in obtaining information on dental and oral health by the user's mother. Seeing this phenomenon, mothers of users must be able to choose the

right social media, namely accurate information and according to the needs of early childhood. Mothers can gain knowledge so as to improve dental and oral health of early childhood.

### Declaration of Interest

The authors report no conflict of interest.

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