

# Effects of Social Media on People's Tendency Toward Aesthetic Dental Treatments

Saeed Madihi <sup>a</sup>, Zahra Ghorbani <sup>b</sup>, Farzaneh Farrokhi<sup>c</sup>, Ahmad Hasani<sup>d</sup>

<sup>a</sup>Doctor of Dental Surgery, School of Dentistry, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

<sup>b</sup>Associate Professor, Dept. of Community Oral Health, School of Dentistry, Shahid Beheshti University of Medical Sciences, Tehran, Iran

<sup>c</sup>Phd Student of Dental Public Health, Dept. of Community Oral Health, School of Dentistry, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

<sup>d</sup>Doctor of Dental Surgery, School of Dentistry, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Correspondence to Zahra Ghorbani (email: dryaszgh@yahoo.com).

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**Objectives** This study aimed to investigate the impact of social media on people's tendency toward aesthetic dental treatments in Iran.

**Methods** This cross-sectional study was performed on 410 individuals, including dentists or dental students and laypeople, who were selected via convenience sampling. A questionnaire, consisting of sociodemographic characteristics, frequency of social media use, tendency toward aesthetic dental treatments, and factors affecting people's decisions, was completed for data collection. This online questionnaire was created using the Porsline<sup>®</sup> website and posted on social media. The collected data were analyzed in SPSS version 21, using Chi-square test. A P-value less than 0.05 was considered statistically significant.

**Results** Of 410 participants, 157 (38.3%) were dentists or dental students. Only 38.2% of the participants in the dentist group were willing to receive aesthetic dental treatments, whereas laypeople were significantly more inclined to receive such treatments (69.2%) ( $P < 0.001$ ). Almost half of people who used social media platforms several times a day and also 71.8% of people who used social media once a day or less showed tendency toward aesthetic dental treatments ( $P = 0.01$ ).

**Conclusion** Based on the results, the time spent on social media was not significantly associated with people's tendency to receive aesthetic dental treatments. Also, dentists were less interested in such treatments for themselves.

**Keywords** Social media; Dental aesthetics; Dentistry; Cosmetic; Social networking

## Introduction

Online social media platforms are applications used by people to share information, personal experiences, and lifestyle. Initially, these platforms focused on large-scale, one-way dissemination of information through personal websites and webpages.<sup>1-2</sup> However, today, people can have their personal accounts, where they have the opportunity to communicate with the others and share their personal experiences through mobile applications.<sup>3,4</sup>

Studies suggest that social media platforms account for more than 30% of people's online time. In 2022, the most commonly visited social media applications and websites around the world were Facebook, YouTube, Twitter, and Instagram. Nonetheless, there are many other social media platforms.<sup>5,6</sup> Of 268 million people living in the Middle East, 213 million use the Internet, that is, approximately 80% of the total population. Also, out of 85 million Iranians, nearly 78 million people use the Internet (almost 91% of the total population). Considering the high number of social media users, these platforms can play an important role in changing people's lifestyle.<sup>7,8</sup>

Today, in different countries, social media agencies are competing to attract more customers. Cosmetic and aesthetic companies, especially in the field of dentistry, are no exception to this competition.<sup>3,9,10</sup> Although many dentists dismiss the use of social media in their clinics, it can have a positive impact on their marketing and may be an ideal platform for receiving feedback from their patients about the treatments received.<sup>8</sup> With the development of media platforms, demands for cosmetic dental treatments

has also increased, as people are interested in improving their smile aesthetics.<sup>11</sup> The influence of social media on people's decisions to choose cosmetic dental treatments should not be ignored.<sup>12</sup> Several studies have described the significant effects of popular social media applications on the demand for aesthetic treatments, especially veneer treatments.<sup>13</sup> Therefore, it is important to use these platforms to promote oral health behaviors and achieve optimal dental health.<sup>14</sup>

According to previous studies, people with an aesthetic dental appearance often commit to good oral and dental hygiene to preserve their dental aesthetics.<sup>15</sup> Given the increasing use of social networks among laypeople from different age and educational groups, besides the impact of social media on the choice of dental treatments<sup>11</sup>, the present study aimed to investigate the effects of social media on people's tendency to undergo aesthetic dental treatments in Iran.

## Methods and Materials

This cross-sectional study was conducted in Iran during July-August 2022, using an online questionnaire to evaluate the impact of social media on people's tendency to undergo aesthetic dental treatments. In order to estimate the proportion of people who are interested in receiving aesthetic dental treatments, we considered this proportion to be around  $p = 60\%$  and estimated it with 95% CI in our population and had an error around  $d = 5\%$ ; therefore,  $N = 369$  was needed for this study ( $N = z^2 p(1-p)/d^2$ ). Since we considered that maybe 10% of people do not fill the

questionnaires completely, the sample size was increased to be 410 ( $369/(1-0.1)=410$ ).

The online questionnaire was viewed by 740 people and completed by 410 of them (response rate= 55%), including 157 dentists or dental students and other participants who were selected among laypeople. The inclusion criteria were the use of any social media platform and age above 18 years. The questionnaire was extracted from a recent study in Saudi Arabia<sup>16</sup>, that was translated into Farsi and reviewed by five dental public health faculty members regarding its relevance to the Iranian culture and language. The validity and reliability of the Original questionnaire of Rosenberg questionnaire were evaluated in a previous study.<sup>17</sup>

The online questionnaire used in this study included the participants' demographic data, such as sex, age, and level of education (i.e., university education, high school diploma, or less), and inquired if the respondent had an active account in any of the social media platforms. To evaluate the pervasiveness of using social media as a reliable source of information about aesthetic dental treatments, dental clinics, and practitioners, data were collected by asking the following question: "Do you trust the information you receive from social media about dentistry and treatment options?". Positive responses indicated the respondent's trust, while negative responses indicated their lack of trust. Additionally, the effectiveness of dental clinic advertisements in social media on the patients' willingness to visit certain aesthetic dental professionals was evaluated by asking the following question: "Would you go to a dentist by seeing before-and-after photos on social media?".

The last section of the online questionnaire evaluated the impact of families, friends, and celebrities on the patient's choice of certain aesthetic dental treatments, dental clinics, and practitioners. In this section, the following questions were addressed: "If you saw a friend or family member with a new smile on social media, would you ask about the cosmetic dentist or the dental clinic they were treated in?" and "Would you choose a dental clinic, or a dentist based on an advertisement by a celebrity on social media?". The questionnaire was created on Porsline<sup>®</sup> website (<https://www.porsline.ir/>) and sent to the participants via Instagram, Telegram, and WhatsApp channels.

The collected data were analyzed in SPSS Version 21. Chi-square test was used for statistical analysis, and a P-value of less than 0.05 was considered statistically significant.

#### *Ethical Considerations*

This study was approved by the Research Ethics Committee of the Dental School, Shahid Beheshti University of Medical Sciences, Tehran, Iran (IR.SBMU.DRC.REC.1400.132). The informed consent

form was on the first page of the online questionnaire. Regarding the confidentiality of data, the questionnaires remained anonymous, and a code was assigned to each one.

## Results

Of 410 participants evaluated in this study, 38.3% were dentists or dental students (60% female), and 61.7% were laypeople (62.5% female). In terms of age, 67.3% and 49% of the participants in the dentist and laypeople groups were in the age range of 18-25 years, respectively. The majority of the participants (81.2%) used social media platforms several times a day, while others (18.8%) used social media once a day or less (Table 1).

Variables	No. (%)
<b>Sex</b>	
Male	158 (38.6)
Female	252 (61.4)
<b>Age (years)</b>	
18-25	231 (56.3)
26-45	151 (36.8)
46-65	28 (6.9)
<b>Frequency of social media account use</b>	
Several times a day	333 (81.2)
Once a day or less	77 (18.8)
<b>Education</b>	
High school diploma or lower	101 (24.6)
University education	309 (75.4)

Instagram (72.6%), followed by WhatsApp (66.5%), Telegram (56.6%), YouTube (14.8%), and Twitter (8%), were the most used social media applications. As shown in Table 2, most of the participants (66.4%) who relied on the available information on social media about dentistry were interested in aesthetic dental treatments, while 52.9% of participants who did not trust such information sought aesthetic dental treatments ( $P<0.05$ ).

Among participants who chose their dentists based on celebrities' recommendations, 79.2% tended to receive aesthetic treatments, while only 54.1% of participants who did not rely on these recommendations were willing to receive cosmetic dental treatments ( $P<0.05$ ). Moreover, 61.4% of participants who asked their relatives with a history of aesthetic dental treatments about these procedures tended to receive the same treatment. On the other hand, only 45.2% of participants who did not ask their relatives about their cosmetic treatments sought cosmetic dental services ( $P<0.05$ ).

More than half of participants who used social media several times a day were willing to have aesthetic dental treatments. The results showed that people who used social media once or less than once a day were significantly more eager to receive such services ( $P<0.05$ ). The majority of the

dentists were not interested in aesthetic dental treatments for themselves, while the laypeople showed major interest in these treatments ( $P < 0.001$ ).

Considering the reliability of advertisements for aesthetic dental treatments on social media, most of the participants (62.1%) relied on their own personal experience, while

others relied on the number of comments (20.1%), photos posted on social media (12.9%), and number of followers (4.9%). Also, a significant number of participants (62.9%) who did not follow a dentist or dental clinic on social media were willing to receive aesthetic dental treatments ( $P < 0.05$ ).

**Table 2-** Percentage of participants seeking aesthetic dental services in different (N=410)

Questions	No. (%)	Willingness to receive aesthetic dental treatments, No. (%)	P-value
Are you a dentist or a dental student?			
Yes	157 (38.3)	60 (38.2)	<0.001
No	253 (61.7)	175 (69.2)	
Do you trust the information you receive from social media about dentistry and dental treatment options?			
Yes	134 (32.6)	89 (66.4)	<0.05
No	276 (67.3)	146 (52.9)	
Would you go to a dentist because you saw before-and-after photos on social media?			
Yes	149 (36.3)	88 (59.1)	0.59
No	261 (63.7)	147 (56.3)	
Would you choose a dental clinic or dentist based on an advertisement by a celebrity on social media?			
Yes	53 (13)	42 (79.2)	<0.05
No	357 (87)	193 (54.1)	
If you saw a friend or family member with a new smile on social media, would you ask about the cosmetic dentist or the dental clinic they were treated in?			
Yes	306 (74.6)	188 (61.4)	<0.05
No	104 (25.4)	47 (45.2)	
How often do you use social media platforms?			
Several times a day	332 (81)	179 (53.9)	<0.05
Once a day or less	78 (19)	56 (71.8)	
Do you follow dentists/dental clinics on social media?			
Yes	213 (52)	111 (52.1)	<0.05
No	197 (48)	124 (62.9)	

## Discussion

This study aimed to investigate the impact of social media on the desire of different people in the community to receive aesthetic dental treatments. Since this study was based on the data collected by an online questionnaire, the results can only be generalized to the users of cyberspace in Iran.

Today, social media, where service providers can advertise their services and products, is one of the most important means to attract customers. Service providers' advertisements and information on social media platforms can influence different aspects of people's lives and attract them toward a service.<sup>13</sup> The majority of the participants in

the present study were females. The greater use of social media by women has also been reported in previous studies.<sup>18, 19</sup> Besides, the majority of the participants were 18-25 years old in the current research, similar to a study by Alalawi et al.<sup>2</sup> Statistics suggest that the most commonly used social media platforms in Iran are Instagram and WhatsApp, followed by Telegram, YouTube, and Twitter.<sup>14</sup> However, this order of use is not consistent with the universal popularity of these applications<sup>16</sup>, which may be attributed to the limited accessibility and filtering of some applications in Iran at the time of the study.

The majority of the participants in the current study asked their relatives, who had received aesthetic dental

treatments, about their cosmetic dentists, which is in line with previous studies.<sup>14, 19</sup> Regarding the perceived reliability of cosmetic dentistry advertisements, most of the participants trusted personal experiences, and the number of comments, followers, and photos published on social media had less impact on gaining their trust.<sup>14</sup>

One-third of the participants in the present study trusted the information they received from social media about dentistry and dental treatment options. Contrary to a previous study in which more than half of the participants relied on this type of information; this discrepancy can be related to the contexts of these studies and social media regulation policies in different countries.<sup>16, 20</sup> Additionally, a significant number of participants who trusted the information they received from social media about dentistry, were willing to receive aesthetic dental treatments. Therefore, if people trust the content published on social media, they may show increased tendency to receive the recommended aesthetic services. In a similar study, more than half of the participants visited a dentist because of viewing before-and-after treatment photos, whereas in our study, only a minority of the participants visited a dentist after viewing such photos; this finding may be related to the lower confidence of our samples in the information provided on social media about dental treatments.<sup>16</sup>

It is noteworthy that most of the dentists who participated in this study were not willing to receive aesthetic dental treatments, while the majority of laypeople were willing to receive such treatments. Dentists may be more informed about the disadvantages of aesthetic treatments in the long run, resulting in their lower tendency to seek such services. Nevertheless, this finding is not consistent with a previous study from Saudi Arabia, which showed that students of health sciences were more influenced by social media to visit cosmetic dentists for a Hollywood Smile procedure as compared to students from other fields.<sup>18</sup>

Remarkably, in the present study, the frequency of using social media was not significantly associated with people's desire to receive aesthetic treatments. According to a study by the Australian Society of Orthodontists (ASO), social media does not always have a positive effect on people's views on dental treatments. In other words, social media

can have negative effects as well, and people who follow the social media information related to dentistry more than others are likely to be aware of the disadvantages of dental treatments; therefore, they are less interested in aesthetic dental treatments.<sup>13</sup>

One of the potential biases of the present study could be selection bias, which might limit the generalizability of our findings. The unequal sex distribution of the participants was another factor contributing to potential bias. Besides, the percentage of people willing to receive aesthetic procedures might have been overestimated, as the topic of this study could raise people's interest in seeking this type of services. Also, since online questionnaires were used in this study, people who did not use social media networks were not included. Finally, the cross-sectional design of this study might be a limitation, as it did not allow us to determine the temporality of the variable under study. Finally, more appropriate regulations need to be developed to monitor social media platforms. Additionally, in future studies, a questionnaire needs to be prepared for individuals who do not use social media, and a similar study should be replicated on a larger sample size.

## Conclusion

Social media played an important role in people's lives and demands for aesthetic dental treatments. However, dentists showed less interest in aesthetic dental treatments for themselves compared to laypeople. People showed low levels of trust and confidence in the information available on social media, and a higher frequency of social media use did not necessarily have a direct impact on increasing demands for aesthetic dental treatments.

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## Conflict of Interest

No Conflict of Interest Declared ■

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