

INFLUENCE OF SOCIAL MEDIA TOWARDS AESTHETIC DENTISTRY: PERSPECTIVE OF PATIENTS IN UKM KL DENTAL CLINIC

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Abstract

Social media is a platform that allows people to search for information on the internet. This study was carried out to evaluate the influence of social media on a patient's choice of aesthetic dental treatment at the Universiti Kebangsaan Malaysia Kuala Lumpur (UKM KL). A cross-sectional study was conducted by collecting data via an online, electronic-based questionnaire. This study involved 266 respondents, with the age range of 18–40 years old. The questionnaire involved four sections; the demographic data, the usage of social media in accessing aesthetic dentistry, the influence of social media on patients choice of aesthetic dental treatment, and the demand for aesthetic dental treatment that are influenced by the social media. Most of the respondents felt that their most used social media platform is WhatsApp (50.8%). About 60.5% of respondents used social media as their first choice of method for obtaining information on aesthetic dental treatment. 155 out of 266 respondents (58.3%) trusted the information that they obtained from social media about dentistry and treatment options. Teeth whitening was the most desired aesthetic treatment among all others, which were selected by 159 out of 266 respondents (59.8%). In conclusion, the most used social media platform among patients at UKM KL is WhatsApp. Social media has been shown to influence patients' choice of aesthetic dental treatment, as most of the patients utilized social media to obtain information on aesthetic dentistry. Teeth whitening was the most common choice of aesthetic dental treatment, regardless of the age group of the respondents.

Keywords: Aesthetic Dentistry, Dental, Social Media, Teeth Whitening

Introduction

Social media is an interactive platform that allows people to share their thoughts and ideas as well as for searching information. Social media is also being used as a platform for online discussion with other individuals who have the same interests through a virtual community and network (1). People usually use their electronic devices, such as smartphones, iPads, or laptops, to access social media platforms via web applications or downloaded services. Facebook, YouTube, WhatsApp, Instagram, Messenger, and Telegram are among the social platforms with a minimum of 100 million active users (2).

Dentistry has evolved over the years, moving forward from merely treating pain and oral diseases to providing elective aesthetic treatments (3). Aesthetic dentistry is not a special

discipline, but it involves all specialty areas, from preventive and restorative dentistry to prosthodontics, orthodontics, and periodontics, as well as oral and maxillofacial surgery with functional and biological considerations. The main goal is to improve the appearance of the face, teeth and smiles in the most natural and aesthetic manner. Each patient's specific needs should be taken into account when tailoring the goal (4).

Nowadays, with the world changing, it is undeniable that, with the improvement and advancement of technology, treatment modalities and facilities are steadily enhanced. More aesthetic dental materials and novel techniques and technologies have contributed to the advancement of the science and art of aesthetic dentistry in meeting all the demands of patients. There is a large amount of

aesthetic dentistry information available on social media that may influence users perspective towards aesthetic dental treatment (5). However, there is limited research on the impact of social media in aesthetic dentistry, and more studies should be conducted (6). Hence, in our study, we aim to investigate the impact of social media from an aesthetic dentistry perspective and determine the demands of aesthetic dental treatment among the patients at the UKM KL Dental Clinic.

Based on the study by Al Awdah et al. (7), social media has greatly affected people in Saudi Arabia and the Arabian Gulf region. More than half of the subjects (53%) agreed that dentists should communicate with people through social media. 66.2% of the subjects will search for information about aesthetic dental treatment via social media, and 55% of the subjects trusted the information that they obtained from social media. The majority of subjects (75.1%) admitted to being affected by written experiences and criticism about dental care on social media.

A study done at Jordan University of Science and Technology that assessed the usage of social media for medical information among medical and dental students found that most of the students (59.3%) did not consider social media as a trusted source, with the belief that social media imposes opinions and comments that are not scientific facts and are, moreover, unreliable (8). Another study showed that more than half of the participants (51.27%) would search for and obtain information about aesthetic dentistry through social media. Female participants had a greater desire for aesthetic treatment than male participants (9).

The aim of the study was to assess the influence of social media on patients' perspective and choice of aesthetic dental treatment among patients at the UKM KL dental clinic. An evaluation of social media's dependence on aesthetic dentistry information is also part of the study. The specific objectives of our study were to determine the most commonly used social media platform among patients in UKM KL, to assess the influence of social media on patients in choosing aesthetic dental treatment in UKM KL, and to determine the most common choice of aesthetic dental treatment among patients in UKM KL.

Material and Methods

This study was a cross-sectional study with an online-based questionnaire. The questionnaire was constructed using Google Forms, developed in English, and then translated into Malay to obtain more respondents. The validated questions were adapted from previous studies (7-9).

Content validation was done by two dental lecturers (orthodontists) from UKM and Universiti Sains Islam Malaysia (USIM), and face validation was conducted on ten random people who were not included in the study for clarity and to avoid ambiguity. The content validation of the questionnaire was conducted using both English version and Malay-translated version.

Patients attending the undergraduate UKM dental clinic were given the questionnaire. The questionnaire is comprised of closed-ended questions with predefined answers and was divided into four sections: demographic data (age, gender, race, region, and educational level), usage of social media in accessing information in aesthetic dentistry, influence of social media towards patients in choosing aesthetic dental treatment, and demand for aesthetic dental treatment influenced by social media. The subjects that involved in this study were from UKM KL dental clinic, the patients who received dental treatment between October 25, 2022 and February 25, 2023. Patients who met the inclusion criteria, aged between 18 and 40 years old, users of any social media applications, and obtained dental information from social media were recruited.

The sample size was calculated using the sample size calculator (Raosoft, Inc.). Sample sizes were calculated based on the confidence levels of 95% with a margin of 5% and a dropout rate of 10%. The data entry and data analysis were done using the Statistical Package for Social Science (SPSS) software version 27 (IBM Corp., Armonk, N.Y., USA). The participant's demographic information, the most commonly used social media platform, their social media usage, their perspective on social media influence on aesthetic dental treatment information, and the most common choice of aesthetic dental treatment were represented in frequencies and percentages. A Pearson chi-square test was used to establish the relationship between two categorical variables. A value of $p < 0.05$ was considered statistically significant.

Results

There were 266 patients who participated in this study. Table 1 showed almost two-thirds of the respondents were female (62.4%) and one-third were male (37.6%). The age group with the most responses was 18–25 years old (50.8%). The majority of the respondents were Malay (70.7%), and most of the respondents had a bachelor's degree (63.2%).

The most common social media platforms used are shown in Table 2. The most commonly used social media platform is WhatsApp (50.8%), followed by Instagram (33.1%), Facebook (15.4%), and Snapchat (0.8%). Based on gender, the most commonly used social media platform among males and females was WhatsApp, at 50.0% and 51.2%, respectively, followed by Instagram with 27.0% male and 36.7% female users. There were no statistical differences between the two groups ($p = 0.092$). With regards to the relationship between the age group and the social media platform that was most commonly used, the findings showed that respondents from the age group 18–25 years old used WhatsApp (47.4%) the most, followed by Instagram (43.0%). In comparison, respondents from the older age group (33–40 years old) used WhatsApp the most (48.4%), followed by Facebook (31.3%). The finding showed that the differences among the age groups were statistically

Table 1: Demographic data

Variable		Frequency (n)	Percentage (%)
Gender	Male	100	37.6
	Female	166	62.4
	Total	266	100.0
Age	18-25 years old	135	50.8
	26-32 years old	67	25.2
	33-40 years old	64	24.1
	Total	266	100.0
Race	Malay	188	70.7
	Chinese	57	21.4
	Indian	16	6.0
	Other	5	1.9
	Total	266	100.0
Place of Residence	Rural	38	14.3
	Urban	228	85.7
	Total	266	100.0
Level of education	Middle school	9	3.4
	High school	70	26.3
	Bachelor	168	63.2
	Master	18	6.8
	Ph.D.	1	0.4
	Total	266	100.0

significant ($p < 0.001$). Furthermore, WhatsApp was the most used social media platform among all education levels. However, the result of the relationship between the level of education and the type of social media platform used revealed no statistical difference ($p = 0.077$).

Table 3 showed that 92% of the respondents used two or more social media applications, whereas 6.8% of the respondents used only one application and 1.5% of the respondents did not use any application. In addition, the results also revealed that half of the respondents (50%) spent 3-5 hours on social media daily on average.

An average of more than five hours was spent by nearly a quarter of respondents (20.7%). 50.8% of the respondents use social media “sometimes” to look for dental-related information. Another small percentage, 8.3% of the respondents, “never” used social media to inquire about dental information.

The impact of social media on the perception of aesthetic dental treatment among patients is shown in Table 4. 60.5% of the respondents used social media as their first choice of method to obtain information on aesthetic dental treatment. More than half of the respondents (155 respondents, 58.3%) trusted the information that they obtained from social media on dentistry and treatment options. Furthermore, 54.5% of the respondents agreed that their decision would be affected by the activity of the dentist’s or dental clinic’s account on social media, whereas 45.5% of the respondents would not be affected. The majority of the respondents (66.9%) would visit the dental clinic that they have visited/browsed on social media.

Table 2: Distribution of the most commonly used social media platform by percentage

Variable	Most commonly used social media platform				P-value	
	Facebook n (%)	WhatsApp n (%)	Snapchat n (%)	Instagram n (%)		
Respondents	41 (15.4%)	135 (50.8%)	2 (0.8%)	88 (33.1%)		
Gender	Male	22 (22.0%)	50 (50.0%)	1 (1.0%)	27 (27.0%)	0.092
	Female	19 (11.4%)	85 (51.2%)	1 (0.6%)	61 (36.7%)	
Age	18-25 years old	11 (8.1%)	64 (47.4%)	2 (1.5%)	58 (43.0%)	< 0.001
	26-32 years old	10 (14.9%)	40 (59.7%)	0 (0.0%)	17 (25.4%)	
	33-40 years old	20 (31.3%)	31 (48.4%)	0 (0.0%)	13 (20.3%)	
Level of education	Middle school	2 (22.2%)	5 (55.6%)	0 (0.0%)	2 (22.2%)	0.077
	High school	20 (28.6%)	35 (50.0%)	0 (0.0%)	15 (21.4%)	
	Bachelor	16 (9.5%)	84 (50.0%)	2 (1.2%)	66 (39.3%)	
	Master	3 (16.7%)	10 (55.6%)	0 (0.0%)	5 (27.8%)	
	Ph.D.	0 (0.0%)	1 (100.0%)	0 (0.0%)	0 (0.0%)	

Table 3: Social media usage of the respondents

Questions	Frequency (%)	
How many social media applications do you use?	I don't use any	4 (1.5%)
	One application	18 (6.8%)
	Two applications or more	244 (91.7%)
On average, how many hours do you spend on social media per day?	Less than 3 hours	78 (29.3%)
	3-5 hours	133 (50.0%)
	More than 5 hours	55 (20.7%)
I use social media to inquire dental information	Never did	22 (8.3%)
	Rarely	59 (22.2%)
	Sometimes	135 (50.8%)
	I use it a lot	50 (18.8%)

Table 4: The Impact of Social Media on the Perception of Aesthetic Dental Treatment

Questions	Frequency (%)	
	Yes	No
If you want to get information about an aesthetic dental treatment or clinic, is social media your first choice for information?	161 (60.5%)	105 (39.5%)
Do you trust the information you get from social media about dentistry and treatment options?	155 (58.3%)	111 (41.7%)
Is your decision of choosing a dentist or dental clinic affected by the activity of their account?	145 (54.5%)	121 (45.5%)
Would you visit a dental clinic because you visited or read their page on social media sites?	178 (66.9%)	88 (33.1%)

The results of the relationship between age groups, aesthetic treatment desired, and the source of aesthetic dental treatment they chose are shown in Table 5. More than half of the participants from the age group of 18–25 years old preferred teeth whitening and orthodontic treatment among all the aesthetic treatments, which were 64.4% ($p = 0.288$) and 53.3% ($p < 0.001$), respectively. In comparison, participants from the 33–40 years of age preferred teeth whitening and dental crowns, which were 54.7% ($p = 0.288$) and 29.7% ($p = 0.003$), respectively. On the other hand, the middle age group (26–32 years old) had similar results to the younger age group (18–25 years old), as they preferred teeth whitening (55.2% ($p = 0.288$)) and orthodontic treatment (46.3% ($p < 0.001$)).

Overall, regardless of age groups, teeth whitening was the most desired aesthetic treatment (59.8%), followed by orthodontic treatment (44.4%). There were no statistical differences for teeth whitening among the age groups, but a significant difference was reported for orthodontic treatment ($p < 0.001$) among the age groups. Furthermore, dentists were the most common option (44.7%) to find information about the available dental aesthetic treatments, followed by friends (27.8%) and social media (27.4%).

Discussion

The usage of social media among healthcare providers as well as among patients is increasing (10-12). This study targeted the population of UKM KL patients. Based on the results, most of the respondents had more than two social media accounts and spent 3-5 hours on social media daily. A study from the USA also showed that 70% of people have at least one social media account, and all these social network users normally interact on social media for an average of more than 2.4 hours a day (13, 14). The reported result is in line with our study. Hence, this might suggest that social media is a good approach for obtaining information and could strongly affects the perspective of patients in different aspects.

The most commonly used social media site is WhatsApp (50.8%), with no statistically significant differences between males and females ($p = 0.092$). WhatsApp is the most commonly used social media platform among the age groups 18-25 years old (47.4%) and 33-40 years old (28.8%). This finding is in agreement with the social media statistics of Malaysia 2022; WhatsApp is the most used social media platform with 93.2% of total Malaysian users (15).

The study by Hamm et al. (10) reported that a high percentage of the population uses the Internet as a platform to access health-related information. According to our study, almost 58.3% of the respondents trust the information about dentistry and the treatment options disseminated on social media. Additionally, 54.5% of the respondents would be influenced by the activities of dentists or dental clinic accounts on social media in making their decision when selecting a dentist or dental clinic. These findings showed the role of social media in influencing perceptions and choices regarding health-related information, including dental health.

The result revealed that the younger age group (18-25 years old) preferred teeth whitening (64.4%) and orthodontic treatment (53.3%) among other aesthetic dental treatments. Parallel findings from another study also revealed that tooth whitening was the most desired aesthetic dental treatment (9). This underscores a consistent trend in the preference for teeth whitening within the specific age range and emphasizes its current popularity as a desired aesthetic dental procedure.

Dentists were the most preferred option (44.7%) over friends and social media to inquire about available

Table 5: Percentage of desired aesthetic treatment in different age group and source of information about aesthetic dental treatment

Variable	Age Groups (%)			Total N (%)	P-value
	18-25 years old	26-32 years old	33-40 years old		
Which treatments do you desire?					
Teeth whitening	87 (64.4%)	37 (55.2%)	35 (54.7%)	159 (59.8%)	0.288
Orthodontic treatment	72 (53.3%)	31 (46.3%)	15 (23.4%)	118 (44.4%)	< 0.001
Tooth-coloured fillings	22 (16.3%)	14 (20.9%)	14 (21.9%)	50 (18.8%)	0.564
Dental crowns	17 (12.6%)	20 (29.9%)	19 (29.7%)	56 (21.2%)	0.003
Dental implants	10 (7.4%)	11 (16.4%)	16 (25.0%)	37 (13.9%)	0.003
Dental reshaping	23 (17.0%)	24 (35.8%)	13 (20.3%)	60 (22.6%)	0.010
How did you find out about the available dental aesthetic treatments?					
My dentist	61 (45.2%)	23 (34.3%)	35 (54.7%)	119 (44.7%)	0.223
Friends	36 (26.7%)	23 (34.3%)	15 (23.4%)	74 (27.8%)	
Social media	38 (28.1%)	21 (31.3%)	14 (21.9%)	73 (27.4%)	

aesthetic dental treatment. This suggests that patients in UKM KL still have the awareness of seeking professional advice rather than believing information given by friends or from social media. However, there is a high tendency to seek medical and dental information from social media nowadays, worldwide (7).

There were a few limitations in this study that can be addressed in future research. This study only targeted patients aged between 18 and 40 years old and was restricted to patients attending UKM KL, which cannot reflect the general public population. Hence, a multi-centre study would be better representing the general population. Second, the questions in our study only assessed the influence of social media on aesthetic dentistry; however, we did not have accurate parameters to measure how social media could affect the perspective of the respondents. Therefore, future studies that could formulate a parameter that can measure how much social media can affect our lives, in the field of aesthetic dentistry in particular, or in other fields are warranted. Third, the subject from this study were patients who had an ongoing aesthetic dental treatment at UKM. Hence, to minimized the biased on the selection of treatment option, patients who have not received treatment at UKM should also be considered as the subjects of the study.

Conclusion

WhatsApp is the most popular social networking platform among patients at UKM KL without regard for the gender, age or educational attainment. Social media has great potential in influencing patients perspective on aesthetic dental treatment. Teeth whitening was the most common choice of aesthetic dental treatment. Due to the high influence of social media usage among patients, healthcare

professionals should utilize social media as an effective approach for sharing medical and dental information to educate the public.

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Competing interests

We declared that we have no competing interests.

Ethical Clearance

We obtained approval from The Universiti Kebangsaan Malaysia (UKM) Institutional Review Board for Research and Ethics (UKM PPI/111/8/JEP-2022-292).

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