

Effect of Social Media on Patient's Perception of Dental Aesthetics in Kanpur City

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Abstract

Introduction: Social media became an influential tool that affects people's way of communication and became a significant source of information for the society. The study aimed to evaluate the impact of social media on patients seeking aesthetic dental treatment.

Materials and methods: The study employed a large-scale online survey of 1940 patients attending and/or seeking dental treatment at Rama dental college and private clinics of Kanpur city. The targeted age of participants ranged from 18 years and above. The study data were collected using a three-part questionnaire.

Results: More than half of the patients were females in both groups (52.7%). The majority of patients used social media for communication and entertainment purposes. It was also found that the most popular platform used by patients was Snapchat (71.1%), followed by Instagram (66.9%). A lot of patients did not like their teeth appearance (38.5%). Moreover, patients preferred to have "bleaching" as an aesthetic treatment to improve their smiles (63.8%).

Conclusion: The impact of social media can be considered as high. Patients are influenced by social media applications and are seeking aesthetic treatment as an outcome. It is the responsibility of dentists to educate patients about the best treatment options.

Keywords: Social media, dental aesthetics

Introduction

Media" refers to any instrument or means of social communications. Therefore, social media and networks, which existed long before the Internet, are tools or strategies to facilitate relationships and communications between groups of people with similar interests. Global access to the Internet became possible in the end of the 1990s. In 1996, 66% of all Internet users were Americans; in 2016, 89% were from other countries.[1] Such increase has resulted in the development of online social media and networks, a phenomenon of communications that also has behavioural, economic and political repercussions.

Social media platforms have been widely used as tools for publishing a variety of content on the web. Using social media, it is possible, among other things, to establish relationships with other people with similar interests. A large part of this interactivity takes place through social media. [2, 3] Social media is defined in many ways. [4] Most definitions encompass the following, 'Social media is user generated content that is shared over the internet via

technologies that promote engagement, sharing and collaboration'. [5]

The first online social network that followed the model seen today was Friendster (2002). Since then, several new ones have been created, and a number of others have disappeared, such as Orkut (2004-2014). The most popular today are Facebook (2004, which opened to the public only in 2006), YouTube (2005), Twitter (2006), WhatsApp (2009), Instagram (2011). [6,7] LinkedIn and Twitter. It also includes YouTube, blogs, customer reviews and wikis. Ninety-three percent of teens and young adults age 12 to 29 are online. Eighty-one percent of adults age 30 to 49 and 70% of adults age 50 to 64 are online. [7] These numbers continually grow each year.

In the area of healthcare, in addition to great interactivity based on discussion groups, social media affords closer personal contact and cooperation between users and organizations, resulting in a greater exchange of content and experiences. Social media has begun to spread across the medical field, and nowadays, patients take it as a source of information. It is considered a useful tool for the

dentist and the patient. [8] Patients look for dental information, follow and connect with dentists, and write about their experience through social media. Dentists should know how to get patients' attention to dental problems and their treatments by posting cases on social media in a simple manner that the people easily understand. This will encourage patients to seek dental treatment and raise their awareness about the actual treatments and their benefits.

Materials and Methods

A cross-sectional, analytical study was carried out amongst patients seeking dental treatment in Kanpur City, after seeking permission from the institutional ethical committee. The questionnaire was distributed to the patients seeking dental treatment at Rama Dental College Hospital and Research Centre, Kanpur as well as private clinics. The study sample consisted of total 1940 patients in which 50 percent were from the dental college and 50 percent from the private clinics.

Inclusion criteria:

Patients aged between 18 years and above visiting Rama Dental College and private dental clinics for their treatment.

Exclusion criteria:

Geriatric patients more than 60 years and paediatric patients below the age of 18 years were excluded from the study

For test-retest reliability, 10 individuals were asked to complete the survey, and then they repeated the survey a second time after a one-week period. A pretested questionnaire was used for data collection that had three parts: (a) socio-demographic data, (b) patients' satisfaction of their current dentition from the aesthetic view, and (c) questions regarding social media applications and their usage related to dental purposes.

There were a total of 28 questions, with an estimated time to complete the survey to be around 5–10 minutes. Consent e-forms were then provided and distributed electronically to all participants. Questionnaires were distributed and collected either in person using electronic tablets or were sent via WhatsApp application messages. Data was analyzed using the Statistical Package for Social Sciences, version 23 (SPSS Inc., Chicago, IL, USA). Categorical variables were presented as numbers and percentages. Continuous variables were measured using mean and standard deviation. Pearson's chi-

square test was used to find an association between categorical variables. A p value less than 0.05 was considered statistically significant.

Results

The analysis included a total response from 1940 participants from Rama Dental College (50%) and private dental clinics (50%). The sociodemographic characteristics showed that 52.7% were females, 32% belonged to 18–25 years, 57% were married, 77.6% were Indian citizens, 49.2% had a graduate level of education, and 43.6% belonged to medical sectors. When we assessed the satisfaction about the shape and colour of their natural teeth, 38.5% reported that they did not like them. Among this, 29.5% (n = 220) reported that this dislike was after following a dental/dentist account or page on social media. The most common aesthetic dental treatment preferred to be done is bleaching (63.8%) followed by orthodontics (39.4%), crowns (30%), and veneers (21.2%). The most common reason to choose the above aesthetic dental treatment was recommendation from family and friends (76.2%), whereas only 12.7% mentioned it as "social media" impact, and 5.1% did this due to "followers and like" for the dental or dentist's account or page on social media. It was reported by 51.6% that a 'specialist or consultant' did the treatment, and 59.5% were satisfied with this treatment. When we analyzed the relationship between these two, it was found that participants were comparatively more satisfied with the treatment that is performed by a specialist or consultants (57.3%) than that done by the general dentist (42.7%), which showed a statistical significance ($p < 0.001$) (Figure 1).

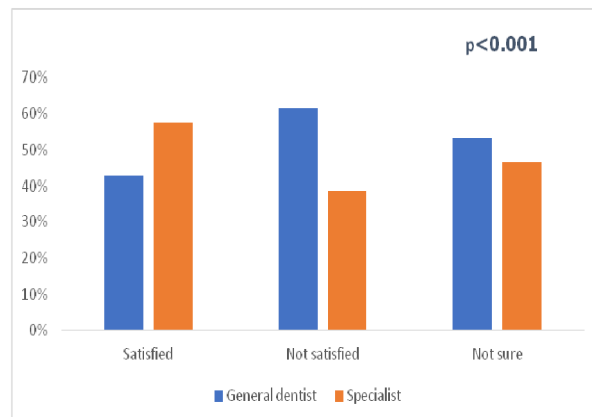


Figure 1: Relationship between satisfaction about treatment done and the person performed it (n=740).

The most common aspect of the teeth that participants were dissatisfied with was chipped or broken teeth (50%), followed by tooth shape (38.7%), gum health (37.1%), and tooth colour (33.9%), where 91.9% (n =114) reported that they would attempt for another treatment for its correction shown in table 1.

Table1: Baseline characteristics of the participants.

| | | <i>N</i> | % |
|----------------------------------|----------------------|----------|------|
| Gender | Male | 918 | 47.3 |
| | Female | 1022 | 52.7 |
| Age | 18-25 | 620 | 32 |
| | 26-35 | 412 | 21.2 |
| | 36-45 | 430 | 22.2 |
| | >45 | 478 | 24.6 |
| Social status | Single | 770 | 39.7 |
| | Married | 1106 | 57.0 |
| | Divorced | 64 | 3.3 |
| Nationality | Indian | 1706 | 87.6 |
| | Non-Indian | 234 | 12.4 |
| Educational qualification | No primary education | 10 | 0.5 |
| | High School | 688 | 35.5 |
| | Diploma | 158 | 8.1 |
| | Bachelor Degree | 954 | 49.2 |
| | Masters/ PhD | 130 | 6.7 |
| Job Sectors | Medical | 846 | 43.6 |
| | Engineering | 364 | 18.8 |
| | Educational | 212 | 10.9 |
| | Fashion and business | 202 | 10.4 |
| | Accounting | 164 | 8.5 |
| | Others | 152 | 7.8 |
| Income | <100000 INR | 376 | 19.4 |
| | 50000-100000 | 516 | 26.6 |
| | <50000 | 330 | 17 |
| | No Salary | 718 | 37 |

It was believed by a majority of the participants (79.7%) that dental prosthesis is not lifelong. When we asked participants' perception about the life expectancy of veneers and crowns, 47.8% believed that it is less than 10 years, whereas only 23% mentioned it as more than 10 years. The practices related to social media usage showed 92.1% used social media (SM), where Instagram (71.1%) was the commonly used one and 86.7% of them used social media daily. The most common purpose for its usage was for 'communication' (77.6%), and it was found that only 36.6% followed a dental or dentist's account on social media (Table 2).

Table 2: Satisfaction and attitudes about dental aesthetics

| | | <i>n</i> | % |
|--|---|----------|------|
| Likes the shape/colour of your current teeth (n=1940) | -Agree | 578 | 29.8 |
| | -Disagree | 746 | 38.5 |
| | -Not sure | 616 | 31.8 |
| If does not like the teeth, it was after following dental accounts/public figures in social media (n=746) | -Agree | 220 | 29.5 |
| | -Disagree | 292 | 39.1 |
| | -Not sure | 234 | 31.4 |
| Aesthetic dental treatment likes to be done for your teeth (n=746) | -Orthodontic | 294 | 39.4 |
| | -Bleaching | 476 | 63.8 |
| | -Crown | 224 | 30.0 |
| | -Veneers | 158 | 21.2 |
| | -Crown Lengthening surgery | 70 | 9.4 |
| | -Filler injection for the face | 38 | 5.1 |
| | -Botox injection | 28 | 3.8 |
| | -Others | 24 | 3.2 |
| Did dental consultation for the aesthetic problem (n=1940) | Yes | 950 | 49.0 |
| | No | 990 | 51.0 |
| Did aesthetic dental treatment in the past 5 years (n=1940) | Yes | 740 | 38.1 |
| | No | 1200 | 61.9 |
| Types of aesthetic dental treatment done (n=740) | -Bleaching | 34 | 4.6 |
| | -Veneers | 236 | 31.9 |
| | -Crown | 292 | 39.5 |
| | -Crown Lengthening surgery | 30 | 4.1 |
| | -Orthodontics | 240 | 32.4 |
| | -Filler injection for the face | 10 | 1.4 |
| | -Botox injection | 14 | 1.9 |
| Reasons made to choose the above aesthetic dental treatment (n = 740) | -Recommendation from family and friends | 564 | 76.2 |
| | -Social media | 94 | 12.7 |
| | -Special offers | 114 | 15.4 |
| | -Followers and likes | 38 | 5.1 |
| | -Certificates and awards of the dentist | 66 | 8.9 |
| | -Quality of before/after pictures | 78 | 10.5 |
| Person who did aesthetic dental treatment (n = 740) | General dentist | 358 | 48.4 |
| | Specialist/consultant | 382 | 51.6 |
| You are satisfied with your dental treatment you had done (n = 740) | Satisfied | 440 | 59.5 |
| | Not satisfied | 124 | 16.8 |
| | Not sure | 176 | 23.8 |
| Aspect of teeth that did not give satisfaction (n =124) | Tooth shape | 48 | 38.7 |
| | Tooth colour | 42 | 33.9 |
| | Chipped or broken teeth | 62 | 50 |
| | Bulky teeth | 20 | 16.1 |
| | Gum health | 46 | 37.1 |
| | Oral smell | 34 | 27.4 |
| | Effect on facial profile | 12 | 9.7 |
| Attempt another treatment to correct it (n = 124) | Yes | 114 | 91.9 |
| | No | 10 | 8.1 |

The usage of social media was comparatively more seen in females (94.1%), participants aged 18–25 years (98.1%), who were single (97.1%), participants who had educational qualification at the graduate level (94.5%), and whose profession was engineering (95.6%) than others ($p < 0.001$).

Table 3: Perception about dental prosthesis

| | Responses | N | % |
|---|-----------|------|------|
| Think that the dental prosthesis is for life | Yes | 372 | 19.2 |
| | No | 1546 | 79.7 |
| | Not sure | 22 | 1.1 |
| Life expectancy of veneers and crowns | <10 years | 928 | 47.8 |
| | 10 years | 566 | 29.2 |
| | >10 years | 446 | 23.0 |

When we assessed the pattern of social media usage between two genders, participants who followed dentists'/dental accounts in social media were comparatively females (43%, $p < 0.001$), aged 18–25 years (47.4%, $p < 0.001$), those who had bachelor degree (38.6%, $p = 0.040$), and those who belonged to the medical sector (41.2%) more than others. When asked whether the dental content in social media is accurate or not, participants aged 26–35 years (11.1%, $p = 0.015$) those who had diplomas (14.9% $p < 0.001$), and those from the educational sector (10.8%, $p < 0.001$) comparatively more agreed that it is accurate than others. When participants were asked whether the photos of the dental treatment outcome (before/after) encourage patients to seek treatment, females (57%, $p = 0.006$), participants aged 26–35 years (60.1%, $p < 0.001$), participants with the education of high school level (58.3%, $p = 0.001$), and those who belonged to the medical sector (56%, $p = 0.019$) were the ones who agreed comparatively more to this than others (Table 4).

Table 4: Practices related to social media use.

| | | N | % |
|---|---------------|------|------|
| Use any social media app | Yes | 1786 | 92.1 |
| | No | 154 | 7.9 |
| Type of social media apps used (n = 1786) | Instagram | 1194 | 66.9 |
| | Snapchat | 1270 | 71.1 |
| | Facebook | 456 | 25.5 |
| | Twitter | 1014 | 56.8 |
| Frequency of its usage (n = 1786) | Daily | 1548 | 86.7 |
| | Monthly | 30 | 1.7 |
| | Rarely | 140 | 7.8 |
| | Weekly | 68 | 3.8 |
| Purpose of its usage | Communication | 1386 | 77.6 |
| | Entertainment | 1274 | 71.3 |
| | Education | 1082 | 60.6 |
| | Advertisement | 338 | 18.9 |
| Follow any dental or/and dentist account | Yes | 654 | 36.6 |
| | No | 1132 | 63.4 |
| All dental contents present in social media are accurate | Agree | 134 | 7.5 |
| | Disagree | 784 | 43.9 |
| | Not sure | 868 | 48.6 |

| Photos of the dental treatment outcome (before/after) encourage patients to seek treatment | | | |
|---|----------|-----|------|
| | Agree | 966 | 54.1 |
| | Disagree | 194 | 10.9 |
| | Not sure | 626 | 35.1 |

Discussion

Technology is spreading rapidly throughout the field of dentistry. The use of the internet in some form has almost become a standard for a dental practice to function. Not surprisingly most practices using the internet have websites, but almost half of responding practices are using social media. The results of the survey show that dentists use social media as much or more than the medical field. [9]

Social media has become a very influential tool that affects our communication and relationships with people, and like every other tool, it has its pros and cons. The use of Social media in the medical field has grown exponentially and has become one of the main sources of information for the patient. In fact, it is considered a useful tool for the dentist and the patient; even though the patients use social media in their personal lives, we still do not know enough about their attitudes and what they expect from its interactions. [10]

The current study shows that social media marketing for dentists is more useful compared to traditional marketing practices. Studies show that most of the dentists recommended the usage of social media by their colleagues because it had a significant effect on their career, and the majority had a positive effect on their dental practice. [11,12] In our study, younger age groups were more frequent users of social media, and the majority was females because it affected their choices, especially in the aesthetic field and different kinds of treatments. At the present time, aesthetic dental treatment has become a priority for most of the population, but not all patients know what the causes might be and parameters that affect the appearance of the smile, dental arch characteristics, dentogingival, and dentilabial. [13] Smile aesthetics have a huge effect on patient satisfaction and patient expectations in the ongoing treatment. [14]

According to study done among dental students, females were more concerned and critical about dental aesthetics, with hypodontia being the most distracting feature of a smile when assessing its beauty, followed by a gingival smile, a reversed occlusal plane, and dental crowding. [15] study done in Saudi Arabia reported that 98% of the participants had at least one account on social media, 81% used it

daily, and 66% of patients used it as a source of information.[16] Another study was done in one of the dental schools in the United Kingdom to examine social media use, perceptions, and attitudes towards social media and the survey in the study reported that most of the participants were using social media at least once a week; more than one application and a majority had an idea about how can social media affect their dental practice positively.[17] Dentists may be unable to take advantage of social media activities that benefit both dentists and patients due to a lack of understanding of patients' attitudes toward utilizing social media for dental treatment purposes. Dental practitioners may also face problems managing their professional image and relationships with patients as a result of widespread and rapid access to information. [18, 19]

Some concerns, such as after-clinic care and dental anxiety, can be addressed via social networks. Dental anxiety is a serious issue in dentistry, which often causes depression, sleep disorders, an unwillingness to establish intimate interpersonal relationships, and difficulty at workplaces.

Conclusion

Social media has become a priority among the patients and has developed very quickly. It has also become an important tool in most of our daily life needs such as communication, education, entertainment, and healthcare. The impact of social media on Kanpur population can be considered high; people are influenced by social media and are seeking dental aesthetic care.

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