

**Assessment of an awareness among the patients about dental implant as a treatment option for the replacement of missing teeth**

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**Conflicts of Interest:** Nil

**Abstract**

**Aim:** To evaluate the awareness of dental implant as a treatment option among the patients visited to Siddhpur Dental College and Hospital as well as to evaluate the level of information amongst them.

**Methodology:** The cross-sectional survey was conducted among the patients visited to Siddhpur Dental College and Hospital by giving them self-explanatory questionnaires. Among 216 patients, 192 patients were included in the study.

**Results:** The result showed 44% awareness about dental implant among the patients. Among 44% awareness in the participants, 61% awareness can be seen among the age-group A. (18 to 40 years)

**Conclusion:** From this study, it can be observed that there is lack of awareness about dental implant in the population. This implies that people need education and motivation to help them to understand the need for replacement of missing teeth with dental implant.

**Keywords:** Dental implant, awareness, questionnaire

**Introduction**

The face is widely regarded as a symbol of self-image and the smile is as a window into one’s personality. *Facial appearance has important social and psychological effects on the human personality.* The loss of natural teeth is associated with functional, cosmetic and psychological morbidities since long time. *As teeth form an integral part of facial esthetics, their placement should be compatible with facial features at the same time should be functional and esthetically pleasing.*<sup>1</sup>

Many treatment alternatives are available for replacement of missing teeth like removable partial dentures, fixed partial dentures and dental implant. As implant dentistry becomes popular with year by year, there is need to assess its awareness in the general population.<sup>2</sup>

Lack information is available to the patients regarding the dental implant as a treatment option to replace the missing teeth especially in North Gujarat population. Therefore, there is a need to understand its awareness in the population of North Gujarat.

### Aim and Objectives

- To evaluate the awareness of dental implant as a treatment option among the population of North Gujarat
- To evaluate the level of information among the population about the same

### Methodology

The cross-sectional survey was conducted among the patients visited to the Siddhpur Dental College and Hospital by giving them self-explanatory questionnaires, which were printed in Gujarati language to improve the understanding of the patients.

The questionnaire was consisted of questions related to demographic variables, questions to find out the awareness of the patients regarding dental implant and to evaluate the level of information about the dental implants.

The patients above the age of 18 years and who were willing to fill the questionnaire included in the study while the patients below the age of 18 years and who were not willing to fill the questionnaire excluded from the study. Mentally retarded patients, medically compromised patients, seriously ill patients, pregnant females were also excluded. Written consent forms were also obtained. Among 216 patients, 192 were included in the study.

To obtain detailed demographic information, the participants were divided according to the gender, age, and education.

### ◎ According to the gender

- A. Male
- B. Female

### ◎ According to various age-groups

- A. 18 to 40 years
- B. 41 to 60 years
- C. Above 60 years

### ◎ According to various education level

- A. Graduate / Postgraduate
- B. Up to Std.12
- C. Up to Std.10
- D. Uneducated

Completed questionnaires were coded and data about the distribution of responses of the participants to various questions related to their information on dental implants were tabulated. Distribution of responses was examined using frequencies and percentage. Statistical analysis was done by using Pearson Chi-square test.

### Data and Results

The results of the study showed 44% awareness in the patients with slight increase in male while 56% patients were unaware about the dental implant. (Table-I)

P Value - 0.487

GENDER	A (AWARE)	B (NOT AWARE)	TOTAL
MALE	46.8%	57.2%	100%
FEMALE	38.8%	61.2%	100%
TOTAL	44%	56%	100%

Table 1: Genderwise Awareness about Dental Implant

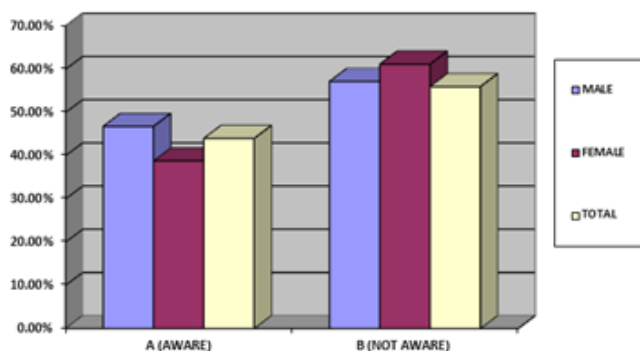


Figure 1: Genderwise Awareness about Dental Implant  
Awareness was seen more in age-group A (18 to 40 years) as shown in Table-2

P Value - 0.001

AGE-GROUP	A(AWARE)	B( NOT AWARE)	TOTAL
A(18 TO 40 YEARS)	60.9%	39.1%	100%
B(41 TO 60 YEARS)	30.3%	69.3%	100%
C(ABOVE 60 YEARS)	27.3%	72.5%	100%
TOTAL	44%	56%	100%

Table 2: Awareness of Dental Implant According To the Various Age-Groups.

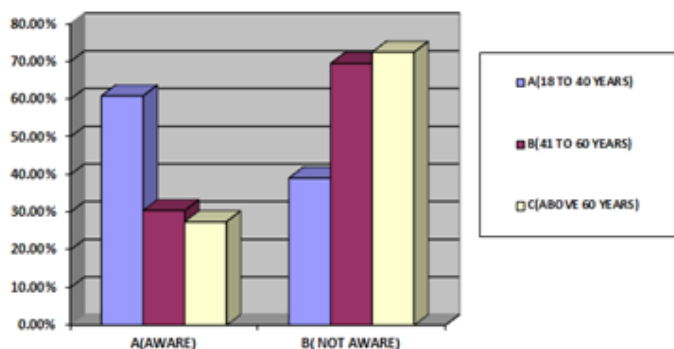


Figure 2: Awareness of Dental Implant According To the Various Age-Groups

Awareness about the dental implant according to the different education level is shown in Table- 3.

P Value - 0.073

EDUCATION	A (AWARE)	B(NOT AWARE)	TOTAL
A (GRADUATE/POST-GRADUATE)	53.8%	46.2%	100%
B (UPTO STD -12)	42.9%	57.1%	100%
C (UPTO STD- 10)	36.8%	62.2%	100%
D (UNEDUCATED)	60.0%	40.0%	100%
TOTAL	44.0%	56.0%	100%

Table 3: Awareness of Dental Implant According To the Different Level of Education

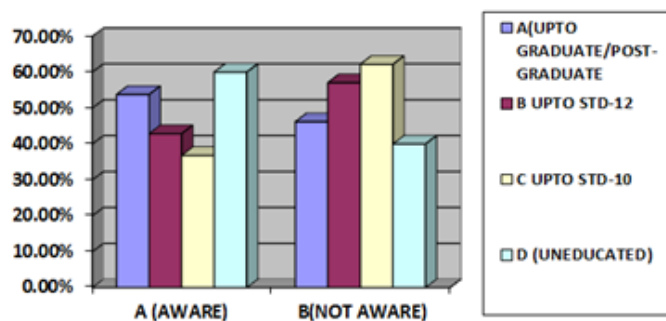


Figure 3: Awareness of Dental Implant According To the Different Level of Education

The results also showed only 44.7% participants wanted to get the additional information. About 54.8% of the participants were ready to restore their missing teeth with implant based treatment options. 60% of the participants did not know about the anchorage and the longevity of the dental implant. Most of the patients reported the biggest disadvantage of dental implant treatment is its high cost. 80% of the participants thought that the dental implant needs special care.

### Discussion

Dental Implant seems to be a successful substitute for missing teeth. Dental implant treatment has been forefront of clinical dental practice for over a decade now. Lack information is available to the patients regarding the dental implant as a treatment modality to replace the missing teeth especially in North Gujarat Population. Therefore, the complete information on implant treatment

must be provided to guide the patients in the choice of the most appropriate option.

Conducting survey for collection of information about dental implant is not an uncommon. Survey reports of several countries and different areas present different awareness levels. In present study, a survey was conducted among the North Gujarat population about the awareness of dental implant treatment. Only 44% had heard about dental implant treatment for replacement of missing teeth.

In present study, the total awareness about dental implant was 44%, which is much higher than the 23.24% reported in previous study conducted by Chaudhary et al.<sup>3</sup> (2010), 15.91% reported in study done by Satpathy A et al.<sup>4</sup> (2011). The study conducted by Suprakash B et al.<sup>5</sup> (2013) reported 33.3% and Gharpure AS et al.<sup>2</sup> (2019) showed 32.5% awareness, which is lower than the present study. The findings of present study is similar to that reported in studies conducted by Shah RJ et al.<sup>6</sup> (2015) and Devraj CG et al.<sup>7</sup> (2015)

However, the findings are lower than the studies done by Zimmer et al.<sup>8</sup> (1992) in American population, Berge<sup>9</sup> (2000) in Norway population and Tepper et al.<sup>10</sup> (2003) in Austrian population which reported the level of awareness as 77%, 70% and 72% respectively.

It can be so because India is still a developing country and people having low level of education. At the same time, the dental implant is yet to become as popular in the India than the European and American countries.

In this study, there is slight difference in the awareness among the male and female. A slight percentage of increase in awareness is seen in males may be because of they are more connected to the outside world. The study done by Divya et al<sup>11</sup> (2016) also reported no significant difference between male and female while Reddy RN et

al<sup>12</sup> (2016) reported marginal significant difference between male and female.

Among 44% of awareness in the participants, 61% awareness can be seen among the age-group A (18 to 40 years) as they are more inquisitive and use more internet and social media that help them in gaining more knowledge about different things. The similar result was reported in study done by Shah RJ et al<sup>6</sup> (2014) in age group 16 to 30 years, Divya et al<sup>11</sup> in age-group below 35 years and Devraj CG et al<sup>7</sup> (2015) in age-group of 15 to 30 years.

The awareness was not significant for any particular group of education.

60% of the participants did not know about the anchorage and the longevity of the dental implant. Most of the patients reported the biggest disadvantage of dental implant treatment is its high cost that is similar as reported by Tepper et al.<sup>9</sup> (2003), Shah RJ et al.<sup>6</sup> (2014), Divya et al.<sup>11</sup> (2016), and Abouonq et al.<sup>13</sup> (2017) This is one of the major causes preventing them in opting dental implant treatment. 80% of the participants thought that the dental implant needs special care. The results also showed that only 44.7 % participants wanted to get additional information that is lower than the study reported by Gharpure AS et al.<sup>5</sup>, which showed 67.49%. It also reported that 55% of the participants were ready to restore their missing teeth with dental implant based treatment options.

The results of this study are so because this survey was performed as a pilot study in a limited population in a short period, further detailed survey will be done with more number of patients and with wide area for research.

### Summary and Conclusion

- ☉ From this study, it is observed that 44% patients were aware with slight increase percentage in male while 56% patients were unaware about the dental

implant. It showed lack of awareness about dental implant in North Gujarat population.

- ⊙ This implies that people of North Gujarat need education and motivation to help them to understand the need for replacement of missing teeth with dental implant.
- ⊙ Thus, the further research will be done by including wide area of North Gujarat.

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