

To Compare Knowledge and Awareness towards Dental Implants among Individuals Residing in Gurukul and Khokhara Areas of Ahmedabad City: A Questionnaire Based Study

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ABSTRACT

Background: The aim of this study was to attain information and compare the level of awareness for dental implants as a treatment option, the knowledge about tooth replacement as a whole and attitude towards it among the individuals residing in Gurukul and Khokhara areas of Ahmedabad city.

Materials and Method: A questionnaire-based study was conducted amongst 192 participants each in Gurukul and Khokhara areas of Ahmedabad city over a period of 2 months. A self-explanatory questionnaire with informed consent was given to the participants above the age of 18 years.

Statistical analysis: The collected data were analysed by using SPSS 20 software. Tests of association between variables were conducted using the chi-square test, with the level of statistical significance set as $p < 0.05$.

Results: Out of 384 participants, 184 participants in Gurukul area and 190 participants in Khokhara area, had heard about dental implants. For most of them, dentist being the main source of information (50.54% in Gurukul area and 46.84% in Khokhara area) followed by friends 22.83% in Gurukul area and patients 32.11% in Khokhara area. Among them, 78.26% participants in Gurukul area and 65.26% participants in Khokhara area were willing to undergo the treatment if needed.

Conclusion: The survey concluded that an acceptable number of patients had heard of dental implants as a treatment option for replacing missing teeth, with dentists being the main source of information.

Keywords: Awareness, dental implants, Ahmedabad.

INTRODUCTION

Dental Implant is a successful treatment modality for replacing a single tooth or multiple teeth. It also prevents the natural teeth contrary to fixed partial denture therapy. Comfort level is high in implant and also gives better aesthetic results. Although it is not a very common treatment plan as compared to a fixed partial denture or removable dentures

because of lack of awareness among patients and its relatively high cost.^[1] Despite the high success rate, choice of implants as a treatment option is relatively limited among the sub-urban and rural population of India. Lack of information, awareness, cost of the treatment, and apprehension toward surgical procedures could be one of the several possible

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reasons that deter patients from opting for dental implants.^[2]

Implant treatment is an increasingly popular treatment option with a high success rate. Recently, it has become the focus of the patients' interest hence for a dentist, it is vital to assess their level of knowledge with regards to dental implants and whether their perception of dental implants does, in fact, reflect reality in order to guide patients who do not have the education or background knowledge to make an informed decision between implant-supported dentures and removable dentures.^[3,4,5] Overall aspiration for improved oral health-related quality of life has become truth after the arrival of dental implants.

A survey by Zimmer et al. demonstrated a high awareness rate as well as a generally positive attitude toward oral implant therapy. A study by Salonen from Finland has shown that the level of awareness of implant treatment among selected groups was 29%, and Best from Australia has shown that the awareness rate was 64%. Other surveys from Saudi Arabia and Austria reported that the patients' awareness rates were 64.4% and 79% respectively.^[6] Knowing what the patients know about implants helps to match the patients' expectations with what can realistically be achieved to ward off a negative image of implant dentists caused by a communications gap and by consumer discontent.^[7]

Even though dental implants as a treatment modality are getting popular nowadays, however people still are partially knowledgeable about dental implants as a tooth replacement option. Economic status, exposure to an urban area, educational environment and societal influence may be few of the hindrance factors in accepting dental implant as a treatment option. Hence, there is a need to study knowledge and awareness and towards dental implants among people residing in two different areas of an urban city.

This survey is based on a survey done by DR. KHYATI BAROT, under the guidance of DR. BELA DAVE about "Awareness and attitude of patients regarding dental implants as a treatment modality at Kalol town, Gujarat" ^[8]

MATERIALS AND METHOD

A questionnaire-based survey was conducted among 384 participants, 192 each residing in Gurukul and Khokhara areas of Ahmedabad city, Gujarat over a period of 2 months from November 2019 to January 2020. All the participants who were willing to give informed consent and above the age of 18 years were included. A self-explanatory questionnaire was designed to assess the patient's knowledge and awareness about dental implants. The questionnaire of 11 MCQs was handed over to the participants by the principal investigator. They were informed about the aims and objectives of the study. A questionnaire was prepared both in English and Gujarati (local language) to get a better understanding of questions by the participants.

Questionnaire

Patient's name: _____

Gender: Male / Female

Age: a. 21-40 years

b. 41-60 years

c. 60-80 years

d. 80 years & above

Education: a. illiterate

b. Up to high school

c. Up to graduation

d. Up to post graduation and above

1. Do you have any missing teeth? Yes/ no

2. If yes what is the cause of it?

a. extraction

b. shedding

c. congenitally missing

d. don't know

3. Have you heard of Dental Implants? Yes / no

4. Do you know that implants can be used for replacement of missing teeth? Yes / No

5. What were your first sources of information about implants?

a. Newspaper/television

b. Dentist

c. Friends

d. Patients

6. Where do you think dental implants are placed?

a. In the jawbone

b. In the gums

c. In / on the neighbouring teeth

d. Don't know

7. What do you think is the main advantage of dental implants as compared to other tooth-

replacement modalities like removable/fixed partial denture?

- a. Aesthetics; looks nicer
 - b. More conservative; does not require any adjacent tooth reduction
 - c. Longevity; lasts longer
 - d. No additional advantage
8. Do you feel that dental implants require additional oral hygiene maintenance and care?
- a. No, are cleaned like natural teeth
 - b. Yes, need more care than natural teeth
 - c. No, need less care than natural teeth
 - d. Do not know
9. How long do you think a dental implant does last?
- a. 5 years
 - b. 10 years
 - c. Up to 20 years
 - d. Lifetime
10. Up to which amount are you prepared to pay as an additional payment for implant?
- a. Rs. 6000-10000
 - b. Rs. 10000-15000
 - c. Rs. 15000-20000
 - d. Rs. 20000-25000
11. Would you like to get implant treatment if needed? Yes / No

STATISTICAL ANALYSIS

The collected data were analysed by using IBM SPSS version 20. Descriptive statistics were employed, and results were presented as percentages. Tests of association between variables were conducted using chi-square test, with the level of statistical significance set as $p < 0.05$.

RESULTS

All the 384 questionnaires were collected and analysed. Demographic data of the patients (**Table 1**) out of total participants, 115(59.9%) were males, and 77(40.1%) were females in Gurukul area; 97(50.5%) were males, and 97(49.5%) were females in Khokhara area. Nearly 75-80% of the participants were in the age group of 21 to 40 years in both areas. Participant's education status was also included in our demographic data. Almost 75% of the participants completed higher education (graduation).

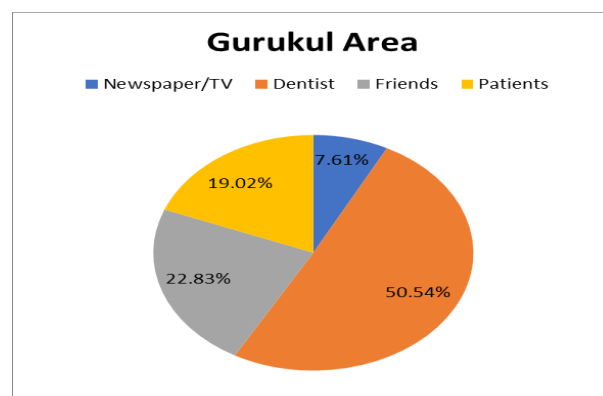
Table 1: Demographic variable of the study

Demographic Variable	Factor	Gurukul Area (n=192)	Khokhara Area (n=192)
		No (%)	No (%)
Gender	Male	115(59.9)	97(50.5)
	Female	77(40.1)	95(49.5)
Age (Years)	21-40	151(78.6)	156(81.2)
	41-60	38(19.8)	34(17.7)
	61-80	3(1.6)	2(1.1)
	81 & above	0(0.0)	0(0.0)
Education	Illiterate	0(0.0)	0(0.0)
	Up to high school	30(15.6)	30(15.6)
	Up to graduation	141(73.4)	153(79.7)
	Up to PG and above	21(11.0)	9(4.7)

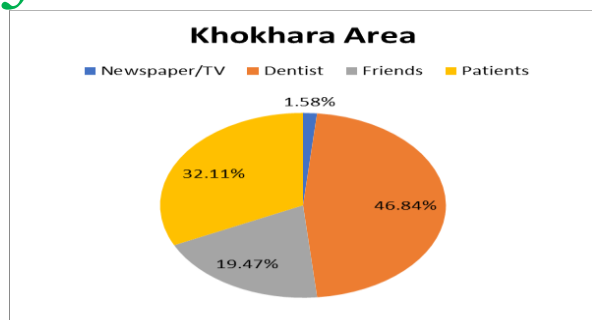
Out of 384 participants, 184 participants in Gurukul area and 190 participants in Khokhara area, had heard about dental implants (**Table 2**). For most of them, dentist is the main source of information (50.54% in Gurukul area and 46.84% in Khokhara area) followed by friends 22.83% in Gurukul area and patients 32.11% in Khokhara area. (**Graph 1 & 2**)

Table 2: Awareness regarding dental implants.

Have you heard of Dental Implants?	Area		Total
	Gurukul	Khokhara	
Yes	184	190	374
No	8	2	10
Total	192	192	384

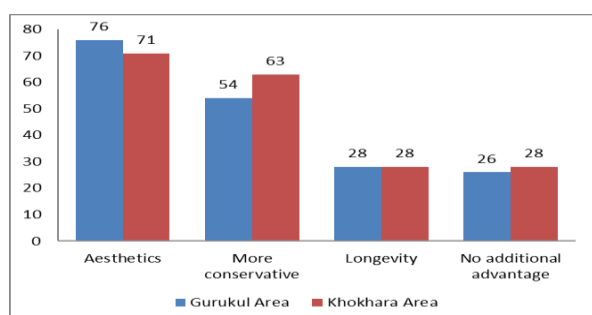


Graph 1: Source of information of dental implants in Gurukul Area.



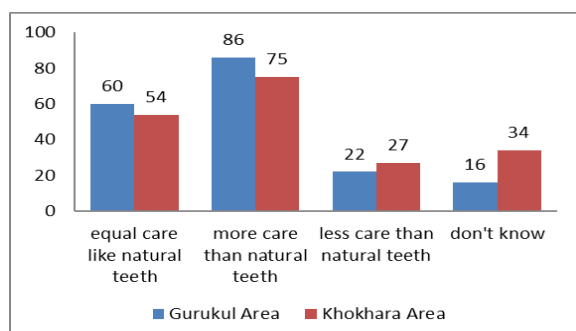
Graph 2: Source of information of dental implants in Khokhara Area.

According to this study, 76 participants in Gurukul area and 71 participants in Khokhara area believed that the main advantage of dental implants as compared to other tooth replacement modalities like removable or fixed partial denture was aesthetics; while 54 participants in Gurukul area and 63 participants in Khokhara area felt that implants were more conservative as compared to other tooth replacement modalities. **(Graph 3)**



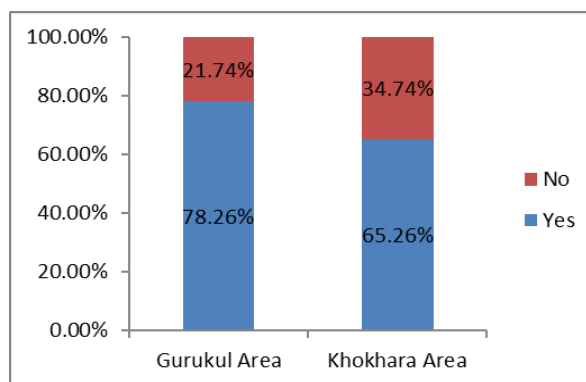
Graph 3: Main advantage of dental implants.

When patients were asked about oral hygiene maintenance and care required for the dental implants, 86 participants in Gurukul area, and 75 participants in Khokhara area believed that implants require more care than natural teeth. **(Graph 4)**



Graph 4: oral hygiene maintenance and care required for dental implants.

Also, 78.26% participants in Gurukul area and 65.26% participants in Khokhara area were willing to opt for dental implants while remaining refused the dental implants and wanted to go for alternative options. **(Graph 5)**



Graph 5: Acceptance of implant as a treatment modality

DISCUSSION

Dental implant treatment has been at the forefront of clinical dental practice for over a decade now. With an increasing success rate of dental implant treatment, more patients are opting implants as a premier choice for replacement of missing teeth. Around one million dental implants are inserted each year, worldwide. However, information which is available to the patients regarding the procedure and its success is often fragmentary.

This survey noticed that 95.83% of the subjects in the Gurukul area and 98.95% in Khokhara area were aware of dental implants. However, the findings were comparable to the studies conducted by Zimmer et al., (1992), Berge, (2000), and Tepper et al., (2003) which reported the level of awareness as 77%, 70.1% and 72%, respectively. (9,10,11) Whereas Chowdhary R et al. had shown lower results among Indian population (2010) & Suprakash et al. (2013) also showed lower results.(12,13)

According to Pommer et al., in Austria, there was, over the course of 5 years, a dramatic escalation in the interest of implant treatment. At the time of the second survey (2008), 79% of participants

expressed a desire for implant treatment in comparison with 56% in the first survey (2003).⁽¹⁴⁾

A survey from Sweden in 1999, reported a histrionic rise in interest of implant treatment to 95% over a period of 10 years. Zimmer et al. in 1992 demonstrated a high awareness rate as well as a generally positive attitude toward oral Implantology.

Dental professionals were the most common source of information about dental implants (50.54% in Gurukul area and 46.84% in Khokhara area). This finding was similar to study done by Johany SA et al. (2010), Choudhary et al. (2010), Saha A et al. (2013) which also stated that most of the people got to know about implants by the dental professionals. However, studies conducted by Zimmer et al., (1992), showed that media was found to be the main source of information about dental implants. Similarly, Berge (2000) and Best (1993) also observed media as first source followed by dentists.^(15,16)

In a survey conducted in Ahmedabad city, Gujarat 69.35% had heard about dental implants from dentists.⁽¹⁷⁾ The study results reveal that patients in India get to know about the treatment modality only when they visit a dental office as compared to other countries where media plays an important role.

When the question was asked about maintenance and care of implants, 44.79% participants in Gurukul area and 39.06% in Khokhara area, feel that implants need more oral hygiene maintenance and care compared to natural teeth.

When the question was asked about acceptance of implant as a treatment modality, 78.26% participants in Gurukul area and 65.26% participants in Khokhara area agreed to get implant treatment if needed.

CONCLUSION

The survey concluded that an acceptable number of patients had heard of dental implants as a treatment option for replacing missing teeth, with dentists being the main source of information thus indicating the importance of clinicians in spreading awareness among common people. As most of the participants agreed to get implant treatment in

future if needed, more and more awareness should be spread, and emphasis should be laid on the advantages of a dental implant as a treatment modality.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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