

Knowledge and awareness of dental implants as a treatment choice for the restoration of missing teeth in Sabarkantha district

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Abstract

Aim and objectives: There are lack of knowledge and awareness present in the people of Sabarkantha district of Gujarat. The aim and objectives of the study are to evaluate the knowledge, awareness, sources of knowledge and willingness for the dental implant as a treatment choice for the restoration of missing teeth in the population of Sabarkantha district of Gujarat.

Methodology: From 416 patients, 112 patients from Sabarkantha district were selected. They were asked to fill the details according to the questionnaire and data about their responses was calculated. Statistical analysis was done by Pearson Chi Square Test.

Results: Around Forty nine percent of participants knew about the dental implant treatment. From this, the age group A and B showed more amount of knowledge and awareness with the slight difference between males

and females. Approximately thirty seven% of patients were willing for the replacement of missing teeth with the treatment of dental implants.

Conclusion: We concluded that lack of knowledge and awareness present in the population. Therefore, the patients were given the information about the dental implant treatment.

Keywords: Knowledge, Willingness, Dental Implant

Introduction

Loss of natural dentition is a disease that causes problems related to mastication, phonetics, aesthetics and psychology of the patients.^[1] The goal of modern dentistry is to restore the patient to normal function, speech, health, and aesthetics regardless of the atrophy, disease, or injury of the stomatognathic system.^[2]

There are many treatment options available for missing teeth restoration like removable partial dentures, fixed partial dentures, and dental implants. Dental implants are used for the missing teeth restoration increasingly since the osseointegration concept has been accepted.^[3]

Dental implants are becoming popular in many areas of the country. So knowledge about it should be given to the population to guide them in selection of proper option for restoration of missing teeth. The present study aims to evaluate the knowledge, awareness, the details of their sources of information and willingness for the treatment of dental implant.

Subjects and Methods

From 416 patients visited to Siddhpur Dental College and Hospital and a trust based hospital, Himmat Nagar, 112 patients from the Sabarkantha district was selected. They were adult patients who were willing to fill the questionnaire form and having at least a single missing tooth for the present study. We excluded the patients who were below eighteen years of age, not willing to fill the questionnaire form, mentally retarded as well as medically compromised. We got the written consent forms from the patients. Ethical approval certificate was also taken from the institutional ethics committee.

We used questionnaire form as a research tool that was made in the Gujarati language for the proper understanding of the patients for the present study. The questionnaire form was comprised of different questions about the personal information, knowledge, awareness, sources of information and willingness for the dental implant treatment. The participants were asked to fill the details according to the questionnaire forms. Then we grouped the participants according to their age, gender, and occupation. The patients were also given the information in Gujarati language about dental implant treatment that helps them in the choice about a proper

treatment option for missing teeth replacement. The data from the responses given by the participants was tabulated by using MS Excel Program and counted by using their frequencies and percentages. The Pearson Chi-square test was done for statistical analysis.

Results

The results stated 49.1% of the patients have knowledge and awareness about the dental implant while 50.9% of patients do not know about the dental implant as a treatment option for the restoration of missing teeth. There was slight difference in knowledge and awareness in gender (Table-1). More percentage of knowledge and awareness was seen in age group A (18 to 40 years) and age group B (41 to 60 years) as shown in Table-2. There were no significant association among education groups (Table-3) and occupation groups (Table-4). Around thirty seven percent participants were willing to go for dental implant treatment (Table-5).

Only 5.2 percent participants have taken the dental implant treatment whereas 25.7% participants knew the person who has taken the dental implant treatment. Almost around seventy percent participants stated dental implant treatment was not affordable by them and it required special hygienic care and maintenance.

Discussion

Sabarkantha district is located in the area of North Gujarat. Here, basically the population is occupied with farming as a main profession. So, people are having comparatively low level of education, low level of knowledge and awareness about the replacement of missing teeth especially by the dental implant treatment. There is a need of the provision of proper education to the patients about the dental implant arises to help them in choosing the most reliable option for the restoration of missing teeth.

Many authors did different studies in different areas worldwide by using various tools like questionnaire forms and interviews. In our study, we used self-explanatory questionnaire form as a study tool comprising of various questions. Among 416 patients, 112 patients who were from the Sabarkantha district were selected in the present study. From them, 49.1% of patients having knowledge and awareness about dental implant treatment for restoration of missing teeth which is quite higher than the earlier studies carried out by Chaudhary et al, Bhat AM et al, Kumar S et al, and Satpathy A et al in the Indian population in various states. [3],[4],[5],[6] It can be so as these studies were carried out earlier around a decade.

Baqar et al, Kelala-Kazadi E et al and Gbadebo OS et al stated less percent of awareness in their studies in Karachi population, Congolese population and Nigerians respectively. [7],[8],[9] However, there was much lower per cent of knowledge and awareness present in our study than the studies carried out by Pommer et al in Austrians, Zimmer et al. in Americans, Berge TI in Norwegians, Tepper, et al again in Austrians and Abounq et al in Saudi Arabians. The knowledge and awareness stated by them is 79, 77, 72, 70, and 60.44 percent respectively. [10],[11],[12],[13],[14] Our India is still a developing country and we are still lacking in education as compared to the foreign countries.

Similar to most of the previous studies, this study also reported a marginal difference in the awareness between males and females. Our study reported more awareness in the age group A and B, that is similar to the studies done by Devraj CG et al, Shah RJ et al and Divya et al. [15],[16],[17] The reason for that may be the inquisitiveness and enthusiasm of the younger generations.

Like the present study, most of the studies marked dentist as a main source of information about the dental

implant treatment. [5],[9],[10],[13],[14],[16],[18],[19],[20] Previous studies done by Baqar A et al, Alajlan A et al and Al-Johani et al. marked friends and relatives as the main source of information of the dental implants. [7],[21],[22] Berge et al reported News media as a major source of information for their awareness and knowledge. [12] Around thirty per cent participants said that the dental implant treatment is not affordable due to its high cost. Many earlier studies stated the high cost as a major disadvantage of the dental implant treatment. [4],[5],[8],[14],[15],[18],[23]

Only around 37.3% of patients were willing for restoration of their missing teeth with dental implant treatment. Previous studies done by Suprakash et al, Devraj CG et al and Kaurani P et al showed similar results accordingly. [15],[19],[24] In contrast to this finding, findings reported in the studies done by Bhat AM et al, Satpathy et al, Pommer et al, Tepper et al, Shah RJ et al, Gharpure et al and Shakshi et al, cited quite higher per cent of willingness to go for the dental implant treatment. [4],[6],[10],[13],[16],[18],[23]

The findings of the present study have been influenced by the inclusion of less number of subjects and period of short time. Further studies can be carried out by involvement of wide area of research with more number of subjects. Various counseling centres should be opened by the Government to enhance the knowledge of the population regarding the restoration of missing teeth. By taking this kind of steps, we can improve the nutritional status and quality of life of the patients

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Legend Tables

Table 1: Knowledge and awareness of dental implant in gender
(P-Value: 3.040)

Gender	Participants having knowledge about dental implant treatment		Participants do not have knowledge about dental implant treatment		Total	
	n	%	n	%	n	%
Male	n=43	54.4%	n=36	45.6%	n=79	100%
Female	n=12	36.4%	n=21	63.6 %	n=33	100%
Total	n=55	49.1%	n=57	50.9%	n=112	100%

Table 2: Knowledge and awareness of dental implant in different age groups
(P-Value: 2.874)

Age group	Participants having knowledge about dental implant treatment		Participants do not have knowledge about dental implant treatment		Total	
	n	%	n	%	n	%
A - From 18 to 40 years	n= 22	56.4%	n=17	43.6%	n=39	100%
B - From 41 to 60 years	n=28	49.1%	n=29	50.9%	n=57	100%
C - 61 years and above	n=5	31.2%	n=11	68.8%	n=16	100%
Total	n=55	49.1%	n=57	50.9%	n=112	100%

Table 3: Knowledge and awareness of dental implant in different education groups

(P Value: 6.109)

Education groups	Participants having knowledge about dental implant treatment		Participants do not have knowledge about dental implant treatment		Total	
A-Graduate/ Postgraduate	n= 5	83.3%	n=1	16.7%	n=6	100%
B -Up to Standard 12	n=23	56.1%	n=18	43.9%	n=41	100%
C - Up to Standard 10	n=26	43.3%	n=34	56.7%	n=60	100%
D -Uneducated	n=01	20.0%	n=04	80.0%	n=05	100%
Total	n=55	49.1%	n=57	50.9%	n=112	100%

Table 4: Knowledge and awareness of dental implant in different occupation groups

(P Value – 4.167)

Occupation groups	Participants having knowledge about dental implant treatment		Participants do not have knowledge about dental implant treatment		Total	
A -Employed/Professional	n=14	48.3%	n=15	51.7%	n=29	100%
B - Businessman	n=16	66.7%	n=08	33.3%	n=24	100%
C -Farmer	n=14	43.8%	n=18	56.2%	n=32	100%
D -Unemployed/ Housewife	n=10	40.0%	n=15	60.0%	n=25	100%
E -Retired	n=01	50.0%	n=01	50.0%	n=02	100%
Total	n=55	49.1%	n=57	50.9%	n=112	100%

Table 5: Willingness of the participants to go for dental implant treatment

(P- Value: 0.091)

Participants showing willingness		Participants do not show willingness		Total	
n=42	37.3%	n=70	62.7%	n=112	100%