

# Recognition, Acknowledgement and Outlook of the Indian Public Towards Dental Implant

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## **Abstract:-**

### ➤ **Introduction:**

Dental implants are artificial tooth roots used to support a restoration for a missing tooth or teeth, helping to stop or prevent jawbone loss. Considered as a cosmetic form of dentistry, implantation procedure is categorized as a form of prosthetic dentistry. The aim of the study was to assess public awareness and their knowledge towards dental implants through web-based survey.

### ➤ **Materials and Methods:**

A questionnaire web-based survey consisting of 20 questions on dental implant were conducted and assessed using percentage among 200 participants.

### ➤ **Results:**

Out of 200 participants, 56% selected dental implant as their replacement for missing teeth and source of information was mostly from dentist. 63.5% of participants willing to know more regarding dental implant treatment.

### ➤ **Conclusion:**

Most of the participants have heard about dental implant, found it affordable and preferred implant as a treatment option. However, more knowledge and understanding should be provided by the dentist as many participants considered fear, longer duration, need for surgery and expensive all the reasons to avoid implant treatment resulting as the major disadvantage in this survey.

**Keywords:-** Dental Implant, Awareness, Knowledge, Attitude.

## **I. INTRODUCTION**

From an early era to the present age regarding restorative dentistry, replacement of the missing teeth is considered as a crucial aspect of oral rehabilitation.<sup>1</sup> The loss of teeth occurs due to several factors including trauma, decay, various diseases influencing the functional, psychological and cosmetic aspect of an individual. In order to alleviate these problems, various methods including conventional methods of replacement by removable partial denture, fixed partial denture or a combination of both were implemented to replace the lost dentition as a resemblance to the natural teeth.<sup>6</sup> However each of these methods had their own set of indications, contraindications, advantages and disadvantages resulting in unsatisfactory results in patients.

In order to overcome these unsatisfactory results caused by the conventional methods, the use of dental implants to replace the lost natural teeth was introduced and is implemented as a flourished replacement option leading to widespread acceptance within dental professionals.<sup>3,5</sup> Dental implant is an artificial root inserted surgically into the jaws to serve as a replacement for the missing teeth or as a support for complete denture.<sup>3,4</sup> Considering its durability and functional efficacy, dental implants rightly serve their purpose in relation to aesthetics furthermore providing complete satisfaction to the patients.<sup>6,2</sup> An increase in the prevalence rate of success of implant in relation to its rehabilitation of partially or complete denture is seen on a yearly basis. Various studies have been conducted in different countries resulting in varied levels of awareness, knowledge and attitude towards dental implant.<sup>3</sup>

India is still regarded as a developing country with people not having much awareness and knowledge about dental implant as a treatment option.<sup>3</sup> Hence the aim of the study is to assess the knowledge, attitude and awareness regarding dental implant among the Indian public using web based survey.<sup>5</sup>

**II. MATERIALS AND METHODOLOGY:**

A web-based questionnaire survey (prepared in Google forms software) composing of 20 questions was conducted. The questionnaire was designed to assess the level of knowledge, source of information, and attitude of dental patients regarding using dental implants for replacing missing teeth. Then the google form link was circulated through social media such as WhatsApp messenger and Instagram. Questionnaire was written in simple English to get better understanding of the questions by the respondents. All the respondents were notified about the aims and objectives of the study through their mail ID.

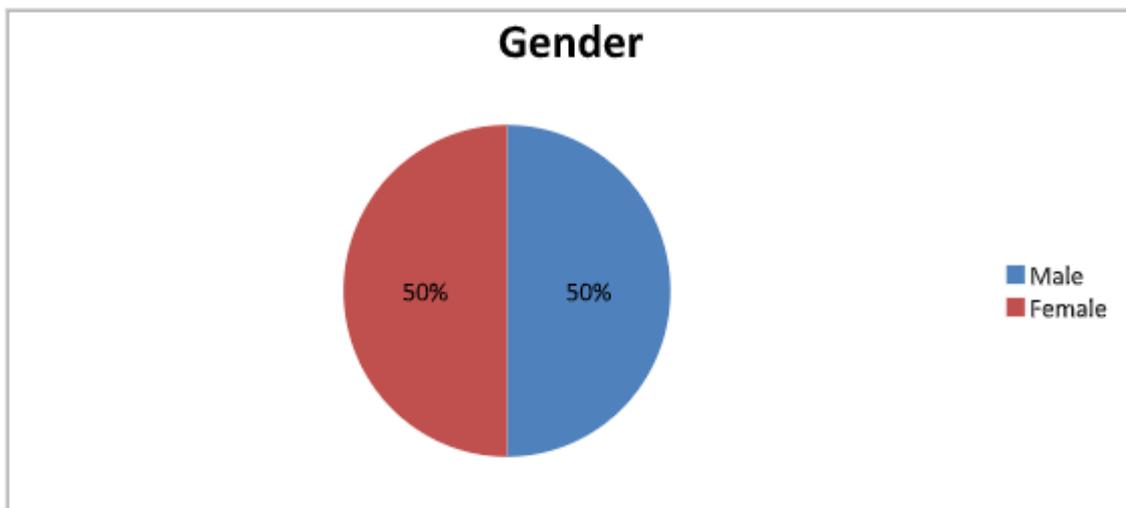
The data obtained from an online form helped in ease of data collection, recording, and maintenance of data for statistical analysis and were available instantly which could be easily transferred into specialized statistical software or

spread sheets for further analysis. Inclusion criteria were Persons aged between 20 to 60 years and Well educated (computer knowledge).

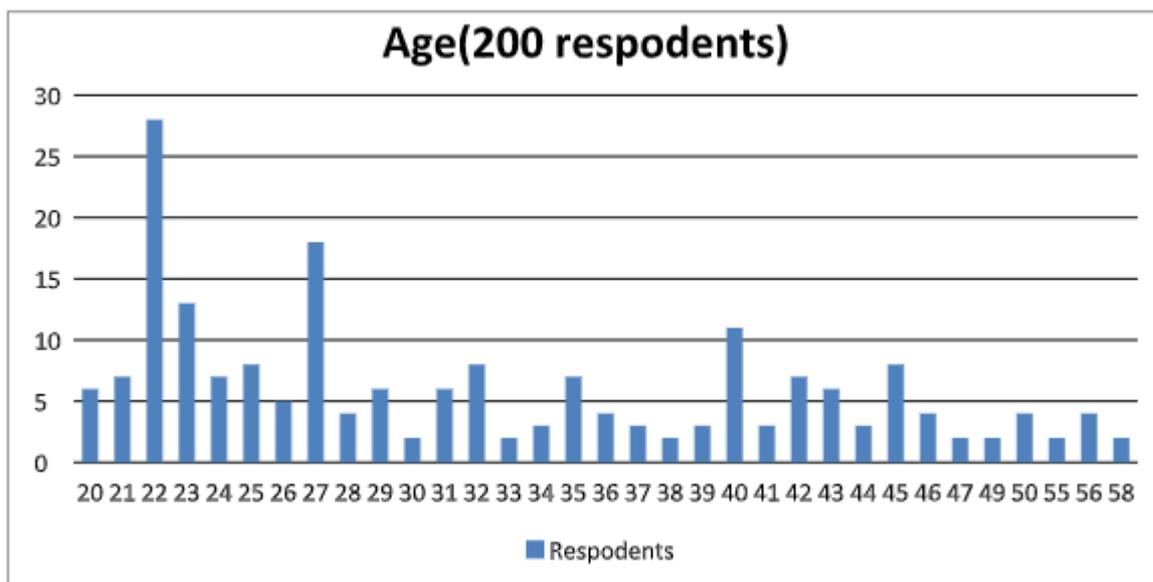
The study was started on 17<sup>th</sup> August 2020 and the link was kept open to accept the responses for one week. People were asked to complete and submit their responses. It took about 5-7 minutes to complete the survey. Total of 200 responses were received with willingness. Descriptive statistics were generated to review the responses.

**III. RESULT:**

Accordingly,a study was conducted to assess the “knowledge, awareness and attitude of dental implant among public”. A total of 200 respondents were collected of age [fig-1] ranged from 20-58 years of which 100 (50.0%) were female and 100 (50.0%) were male [fig-2].



[Fig 1]



[Fig 2]

When the question about “if they have missing teeth?” 30.5% respondents have missing teeth. Regarding the option to replace the missing teeth, 56% chooses implant as their replacement and they have mentioned their source of information was mostly from dentist.

43% respondents were moderately well informed about the dental implant with 22.5% poorly informed. When if needed 59.5% respondents are ready to undergo implant treatment and 43.5% of respondents think that dental implant is placed on jaws, 30% of them do not know where the dental implants are placed.

Regarding insurance coverage for dental implant, 45% of respondents think that they need insurance coverage for dental implant and 44% respondents think that dental insurance is available in other countries.

Reason for refusing the implant treatment, 33% found reason as expensive and 32.5% found the reason as fear for the treatment. When asked about oral habits alter the success rate of implant treatment, most people around 52.5% agreed with the question. And 63.5% of people think special care and hygiene measures should be taken. 57.5% respondents think implant treatment is better than removable / fixed prosthesis.

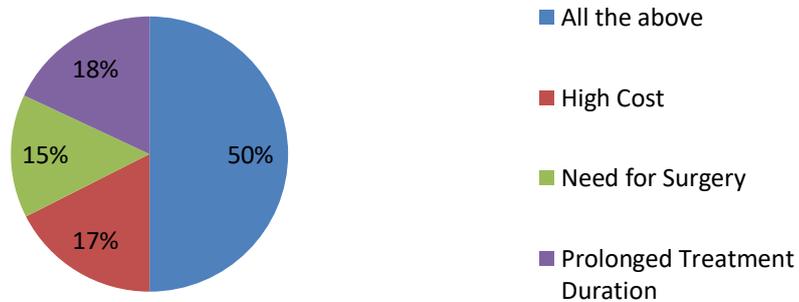
Questions	Option	Frequency	Percentage%
	1. Do you have a missing teeth?		
	No	139	69.5
	Yes	61	30.5
	Total	200	100
2. Do you think it is necessary to replace the missing teeth?			
	Maybe	30	15
	No	29	14.5
	Yes	141	70.5
	Total	200	100
3. What would be your option to replace the missing teeth?			
	Fixed Partial Denture	70	35
	Implant	112	56
	Removable Partial Denture	18	9
	Total	200	100
4. From where have you heard about dental implant			
	Dentist	90	45
	Dentist, Family and Relatives	10	5
	Dentist, Family, Relatives and Media	3	1.5
	Dentist and Media	3	1.5
	Family and Relatives	58	29
	Family, Relatives and Media	5	2.5
	Media	31	15.5
	Total	200	100
5. How well are you informed about dental implant?			
	Moderately well	86	43
	Not at all	10	5
	Poor	45	22.5
	Very well	59	29.5
	Total	200	100
6. Are you willing to undergo dental implant treatment if needed?			
	Maybe	49	24.5
	No	32	16
	Yes	119	59.5
	Total	200	100
7. Where do you think dental implant is placed?			
	Don't know	60	30
	Gums	45	22.5

	Jaws	87	43.5
	On the Adjacent Teeth	8	4
	Total	200	100
8. Do you consider implant treatment as an option for missing teeth?	Maybe	60	30
	No	12	6
	Yes	128	64
	Total	200	100
9. Do you think insurance coverage is needed for dental implant?	Maybe	69	34.5
	No	41	20.5
	Yes	90	45
	Total	200	100
10. Do you think dental insurance is available in other countries?	May be	96	48
	No	16	8
	Yes	88	44
	Total	200	100
11. What is your reason for refusing implant treatment?	Expensive	66	33
	Fear	65	32.5
	Other Issues	34	17
	Prolonged Treatment Duration	35	17.5
	Total	200	100
12. Do you think oral habits alter the success rate of implant treatment?	Maybe	72	36
	No	23	11.5
	Yes	105	52.5
	Total	200	100
13. Do you think special care and hygiene measures should be taken?	Maybe	44	22
	No	29	14.5
	Yes	127	63.5
	Total	200	100
14. Do you think implant treatment is better than removable/fixed partial?	Maybe	69	34.5
	No	16	8
	Yes	115	57.5
	Total		

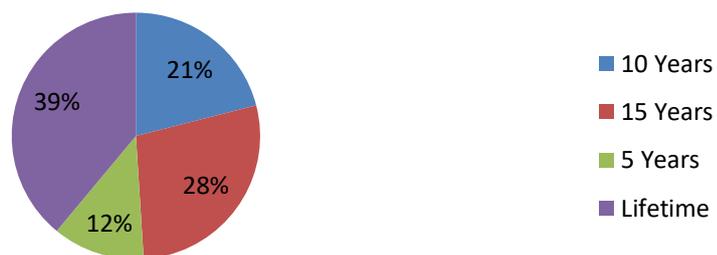
### What do you think is the biggest advantage of dental implant?



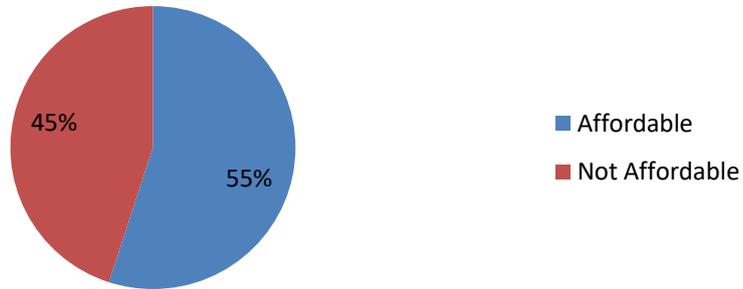
### What do you think is the biggest disadvantage of dental implant?



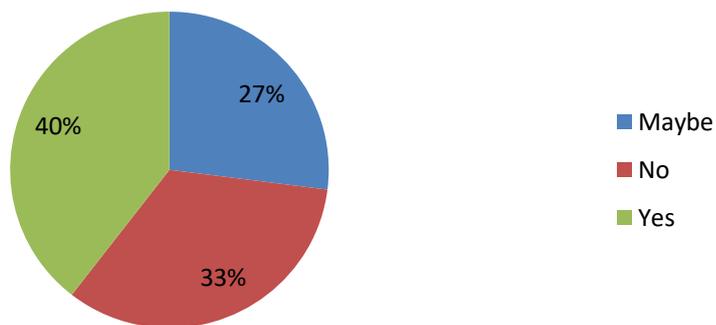
### How long do you think dental implant last for?



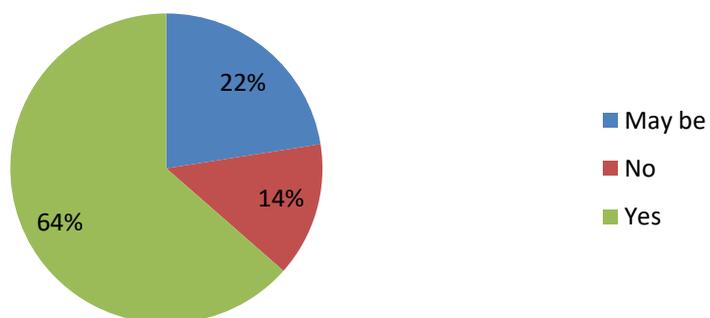
### How would you rate the charges involved in this procedure?



### Are you afraid of dental implant treatment procedure?



### Are you willing to know more regarding dental implant treatment?



#### IV. DISCUSSION

For better wellbeing and life quality of an individual, an adequate dentition is considered as one of the most prime factors till date. Edentulism being a major problem worldwide is broadly classified into partial edentulism and complete edentulism which has three major modalities of treatment namely by -removable prosthesis, fixed prosthesis and dental implant.<sup>7</sup>With an increase in the success rate of implant as a treatment option for replacement, dental implant is becoming one of the foremost choice for replacement and paving its way of acceptability in the society.<sup>3</sup> Various studies have been conducted proving the efficacy of implant therapy.<sup>2</sup>

Recently a new method of survey analysis has paved its way for easy and better analysis known as web-based-survey or online analysis which consist of a collection of large volumes of information which are self-administered by electronic sets consisting of web-based questions which does not require any additional data entry to process a feedback.<sup>7</sup> Therefore a web based survey technique was conducted to assess the knowledge, attitude and awareness regarding dental implant among public.

Basically, this survey provides information about the awareness, knowledge and attitude of dental implant as an alternative to replace the missing tooth in the form of web based questionnaire among the participants.<sup>7</sup> According to this survey conducted, the main source of information about implant to an individual are dentist stating a 45% followed by their family and relatives and media which was similar to the results found by Suprakash *et al*<sup>8</sup>. The response to how well were they informed about implant gave varied results stating about 43% knew only moderately well ,30% knew very well whereas 22% had poor knowledge and 5% having no idea at all which is contrary to the results reported by Kumar RC *et al*<sup>3</sup> where about 53.12% weren't informed

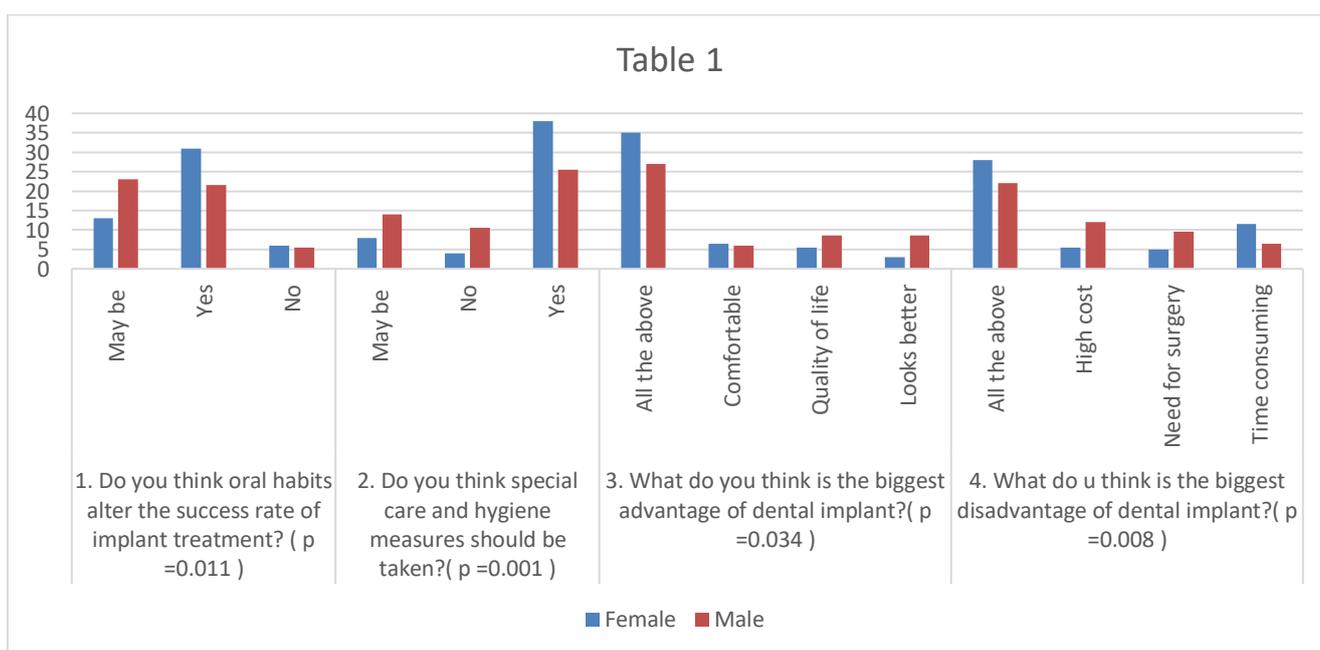
about implants and 12.50% very well knew about dental implant as a replacement option.

Considering implant as a treatment option for replacement of teeth this study reported about 64% willing to opt implant as an option, 30% not exactly sure and 6% not willing implant as a treatment option at all. This shows most of them are aware of implant as a better treatment option when compared to other means available for treatment.

When asked about what option would they consider to replace the missing teeth about 56% reported implant, 35% fixed partial denture and 9% removable partial denture which was found quite similar to the study by Kumar RC *et al*<sup>3</sup> where 72.54% were willing to opt for implant as a treatment option and rest opting for an alternative as an option.

Majority of the population around 64% preferred to know more about dental implant treatment, followed by 22% not sure and 14% not willing to know about it. This was found quite similar to the results produced by studies conducted by Singh SK *et al*<sup>7</sup> where 87.5% preferred to learn more about dental implant as a treatment procedure.

Regarding oral hygiene measures and special care towards implant , in the present study 64 % responded yes that special care should be taken(female=38%, male=25.5%) while 22%(female=8%,male=14%) weren't sure whether special care is necessary or not and 14%(female=4%,male=10.5% responded with a no meaning that it doesn't require any special care at all which was found opposite to the studies done by Abdulrahman Alajlan *et al*<sup>4</sup>. A significant difference was observed between male and female in response to this (p=0.011) is seen in table 1.



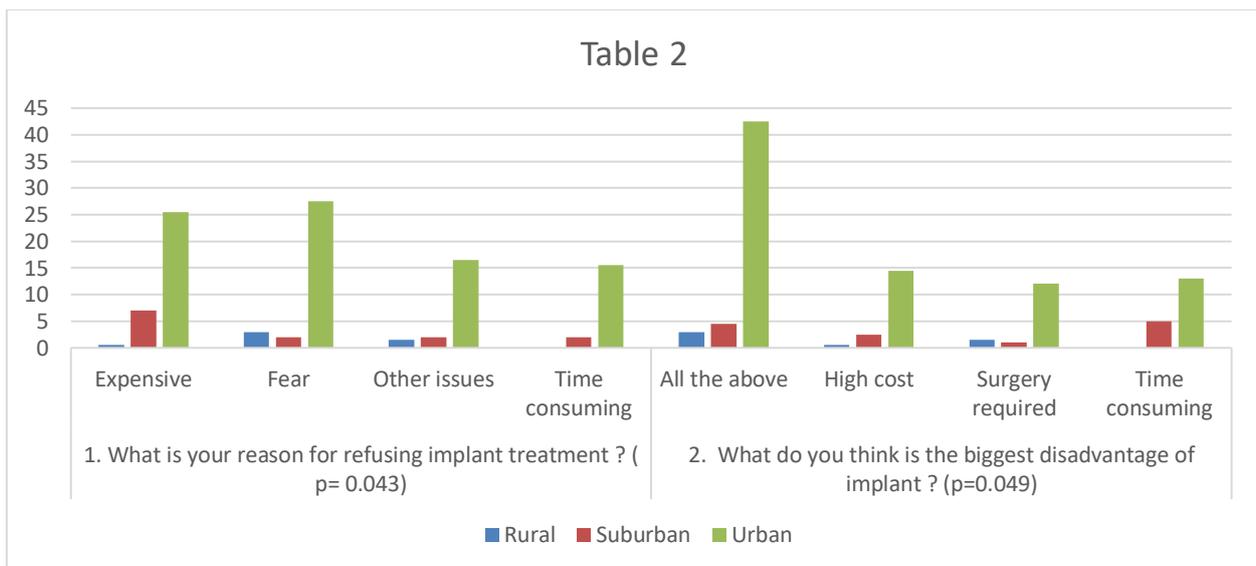
In the present study when questioned about the biggest advantage considered, about 14% (female=5.5%,male=8.5%) responded improved quality of life, 12% (female=3%,male=8.5%) felt esthetics, 12% (female=6.5%,male=6%) felt comfortable and it is better in function while the rest 62% (female=35%,male=27%) considered all the above factors advantageous. Considering these results were found opposite to the findings of the studies conducted by Kumar S *et al*<sup>10</sup>, Kumar R C *et al*<sup>3</sup> and Siddique E A *et al*<sup>16</sup> where fixed nature of the implant was chosen by majority followed by better aesthetics, comfort and function. A significance difference was seen between both male and female (p=0.034) as a response to this question.

When asked about the disadvantage concerning implant as a treatment option 18% (female=11.5%,male=6.5%) responded prolonged duration time, 15% (female=5%,male=9.5%) felt need for surgery, 17% (female=5.5%,male=12) felt high cost while the rest majority that is 50% (female=28%,male=22%) considered all the above options as a hindrance to choose implant. these results were found opposite to the results seen in the studies conducted by Kumar S *et al*<sup>10</sup>, S.A Alanaziet

al<sup>11</sup>, Kota *et al*<sup>17</sup> and Ghani F *et al*<sup>15</sup> where in these studies high cost was considered as a major reason followed by need for surgery, long duration time and fear. A significant difference is seen between male and female response to this (p=0.008) in table 1.

When questioned whether oral habits alter the success rate of implant about 53% (female=31,male=21.5) agreed, 36% (female=13%,male=23%) weren't sure about it and 11% (female=6%,male=5.5%) said no and giving a significant p value between both male and female that is p value=0.011

Table 1 explains level of knowledge, awareness and attitude of both the genders Male and Female towards dental implant as a treatment option showing significant difference in each question showing a greater response from female than male whereas table 2 explains the level of knowledge, awareness and attitude among rural, sub urban and urban population where it is significantly observed that urban population have answered better and have better knowledge towards dental implant, also giving significant p values to each question in both the tables present.



When questioned about the reason for refusing dental implant about 33% (rural=0.5%,suburban=7%,urban=25.5%) felt it was expensive, 32% (rural=3%,suburban=2%,urban=27.5%) have fear of implant, 18% (rural=0%,suburban=2%,urban=15.5%) felt due to longer duration and 17% (rural=1.5%,sub urban=2,urban=16.5%) had other issues with a significant p value=0.043 as observed in table 2. When questioned regarding the disadvantage of dental implant among rural, sub-urban and urban population about 18% (rural=0%,sub urban=5%,urban=13%) felt due to longer time, 15% (rural=1.5%,sub urban=1.5%,urban=12%) felt due to need of surgery, 17% (rural=0.5%,sub urban=2.5%,urban=14.5%) felt it was costly and 50% (rural=3%,sub urban=4.5%,urban=42.5%) preferred all the above reasons as their option with a significant p value=0.049.

**V. CONCLUSION**

To conclude with this survey, we found satisfactory results regarding knowledge, awareness, and attitude of an individual towards dental implant. Most of the participants preferred implant as a treatment option also being well informed majority wise by their dentist. However, more knowledge and understanding should be provided by the dentist as many participants considered fear, longer duration, need for surgery and expensive all the reasons to avoid implant treatment resulting as the major disadvantage in this survey. the study also demonstrated that there is an association between different population and different gender roles in relation to the knowledge, awareness, and attitude towards dental implant as a treatment option.

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