

Comparative Evaluation of Awareness of Tooth Supported and Implant Supported Prosthesis among Nalgonda Population

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Abstract

Statement of problem: The choice to replace missing teeth among patients suffering from an edentulous condition is always preferred with a fixed treatment option. The two major options among the fixed prosthetic treatment are tooth supported prosthesis and implant supported prosthesis. There has always been a need to assess the level of awareness and understanding about both the options of fixed prosthetic treatment among the rural group of Nalgonda population. **Aim and objective:** The aim of this study is to evaluate the awareness, expectations level of knowledge among the dental patients regarding fixed treatment options to replace missing teeth. **Material and Methodology:** 153 patients Indian adults referred to Kamineni institute of dental sciences, Narketpally, Nalgonda district, Telangana state, India were presented with a questionnaire including 13 questions regarding level of information and awareness about fixed treatment options. The data were collected and statistically analysed with Chi-square test. **Results:** Among 153 patients almost 99% of the screened study group were aware that missing teeth could be replaced by fixed treatment options. Out of which, 60% of the information regarding tooth and implant supported denture were received from doctors, 15% from friends, 14% from media and 11% from family. Knowledge related to the validity for both the types of treatment options, 27% and 50% were unaware of tooth supported and implant supported prosthesis respectively. Further, the opinion for restoring the missing teeth, 90% of the population felt the necessity for replacing the missing teeth whereas 10% were not interested to restore the missing teeth. **Conclusion:** The general awareness level of fixed prosthesis are satisfactory and however there is need for more awareness to know the validity, advantages, disadvantages and effectiveness of each fixed treatment options when compared with each other.

Keywords: Dental implant awareness, tooth supported bridges, survey in Nalgonda population.

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INTRODUCTION

In today's practice of dentistry there are multiple options for replacing the missing teeth including fixed partial dentures, removable partial dentures and dental implants. Given as a choice to the patient, fixed dentures have always been a better choice than the removable dentures. Although several prosthodontic options for the replacement of missing teeth are available, some researchers have highlighted that the acceptability of these options depend on the patient's education, economy, cultural background as well as the age [1]. The methods discussed for evaluating the need for prosthetic management of partially dentate patients include the patients' demand

for treatment and the objective oral status of the patients [2].

The present study was conducted in an institution which is involved in both undergraduate and postgraduate dental education with an attached teaching hospital, the findings provide an accurate picture of the patients seeking treatment from a tertiary care dental hospital. The findings of this study will help to identify the level of awareness, attitudes and demand with regard to prosthodontic treatment options in partially dentate patients as the treatment options available in the private sector have also increased. We also attempted to identify the importance, advantages, and disadvantages level of understanding about fixed prosthodontic treatment options.

Aim

The aim of this study is to evaluate the awareness, expectations level of knowledge among the dental patients regarding fixed treatment options to replace missing teeth.

Objectives

- To determine and identify patient's knowledge regarding dental implants
- To determine and identify patient's knowledge regarding tooth supported fixed prosthesis.
- To compare the patients awareness regarding tooth supported
- To compare the patients awareness regarding implant supported prosthesis.

METHODOLOGY

A survey study was carried out with a sample population of 200 patients presenting to the Outpatient Department of Kamineni institute of Dental Sciences, Narketpally. Ethical clearance was obtained from the Kamineni institute of Dental Sciences, Narketpally. Committee prior to the initiation of the study. They had the following inclusion and exclusion criterias.

Inclusion Criteria

- Age group of 20 – 70
- Qualification ranging under primary to university
- Patients visiting Kamineni institute dental sciences.

Exclusion Criteria

- Below 20yrs of age group
- Patients who have refused to answer the questions.

The study was designed to screen 200 patients who had visited the out patient department of prosthodontics and who were interested in fixed replacement of teeth. Out of which 153 patients were selected for study. A standardized questionnaire with 12 questions was developed to assess the dental patients awareness, expectations and level of knowledge about tooth supported prosthesis and implant supported prosthesis. Questionnaire also included demographic data such as age, sex, qualification. A pilot survey was conducted to examine the efficiency of questionnaire on 153 patients.

Questionnaire comprised the following questions:

Age

Gender:

Qualification:

Are you aware about different types of fixed teeth replacement?

Are you aware about dental implants as an option to replace missing teeth?

Are you aware about tooth supported prosthesis to replace the missing teeth?

If YES where did u get the information from?

a) Friends b) family c) doctor d) others

If NO where do you want the information from on fixed replacement of missing teeth?

- Are you aware of the biggest disadvantage of tooth supported fixed prosthesis?
- Are you aware of the biggest disadvantage of implant supported fixed prosthesis?
- Are you aware of How long a tooth supported prosthesis will last?
- If YES, how long do you think tooth supported prosthesis will last?
a) 5yrs b) 10yrs c) Life time
- Are you aware How long an implant supported prosthesis will last?

If YES How long do you think an implant supported prosthesis will last?

a) 5yrs b) 10yrs c) Life time

- Which among the fixed prosthesis need more care?
- a) Teeth supported Implant supported
- Do you know someone undergone either of the two treatments?
- Are you satisfied with fixed prosthetic treatment?

If YES which of these?

a) Implant supported b) Tooth supported

- Would you go ahead and restore missing teeth?

If YES which of these?

a) Implant supported b) Tooth supported

- Do you feel implant treatment is expensive compared to tooth supported prosthesis?

The answers obtained from the questionnaire were scored and graded according to the level of satisfaction of the patient. The data obtained were subjected to statistical analysis of chi square test.

RESULTS

The first question when asked regarding the awareness of different types of fixed replacement of teeth, all most 99% of the screened study group were aware that missing teeth could be replaced by fixed treatment option, but among them 50% were aware about implants .

The next question was regarding the source of information about various fixed treatment options. When calculated as percentage 60% of the information regarding tooth and implant supported denture were received from doctors, 15% from friends, 14% from media and 11% from family (Graph-1).

The third question was related to comparison between implant denture and tooth supported bridges as treatment options. Among 153 patients 91 patients were aware about implant treatment options and 9% were totally unaware about the same. Further, 71% were aware about tooth supported bridges and 29% were not aware about it (Graph-2).

On comparing the knowledge about the disadvantages regarding implant and tooth supported prosthesis among the Nalgonda population, only 37% and 24 % were aware of implant and tooth supported prosthesis respectively. The remaining population among the study group were unaware about the options (Graph-3).

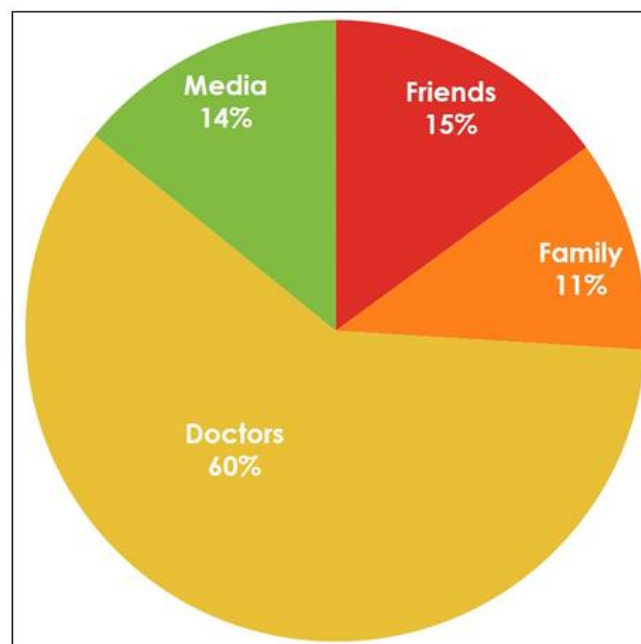
Knowledge related to the validity for both the types of treatment options, 27% and 50% were unaware of tooth supported and implant supported prosthesis respectively. Further, 21% of the study group found that estimated validity for tooth supported prosthesis is 10years, 70% estimated it to be for 5years and 9% for a life time (Graph 4 &5). It was found that, of the study

group, 34% estimated the validity for implant supported prosthesis would be for 5years, 42% felt it would be around 10years and 24% estimated that the prosthesis would last for life time (Graph-6).

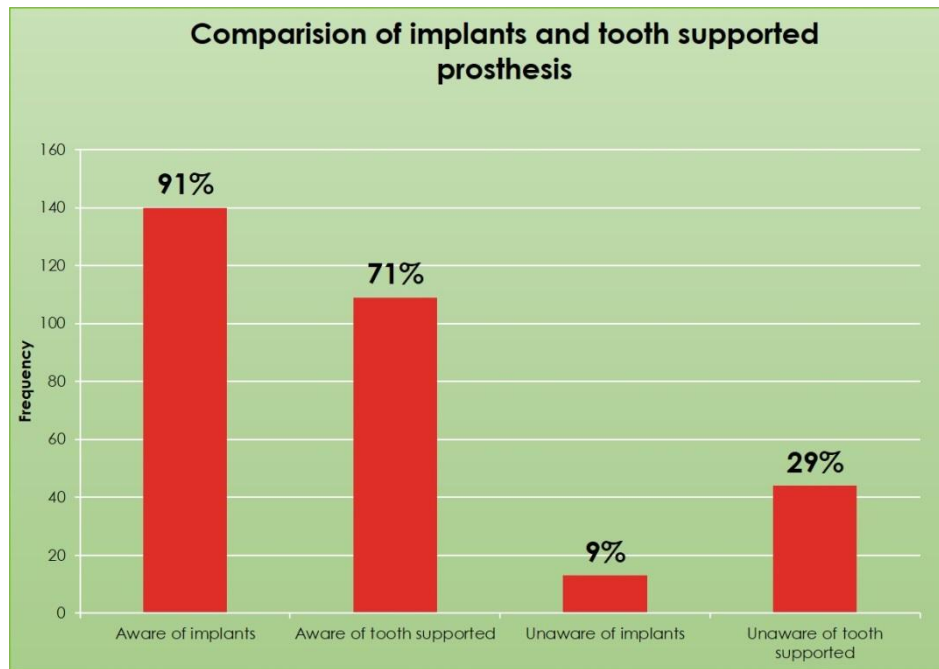
Next, among the study group, concern about which prosthetic treatment require more care, 77% of the study group opt for tooth supported prosthesis while 33% answered implants require more care. Coming to the opinion for restoring the missing teeth, 90% of the population felt the necessity for replacing the missing teeth whereas 10% were not interested to restore the missing teeth.

Equal priority for both tooth supported and implant supported prosthetic treatment were given when preference was asked regarding the treatment options to restore their teeth.

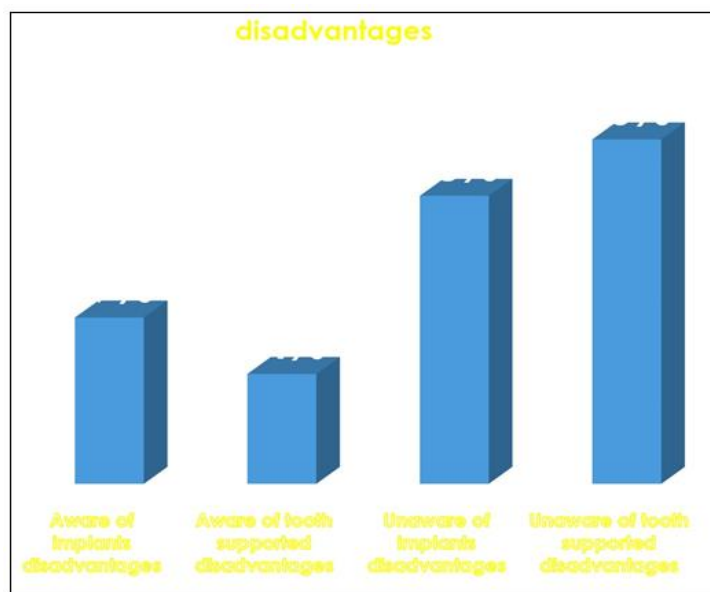
Overall among the study population who were selected for the study, 90% felt that implant supported prosthesis would be expensive than tooth supported prosthesis.



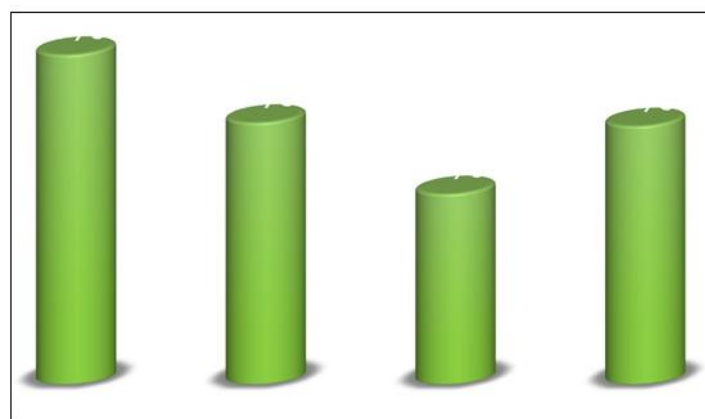
Graph-1:



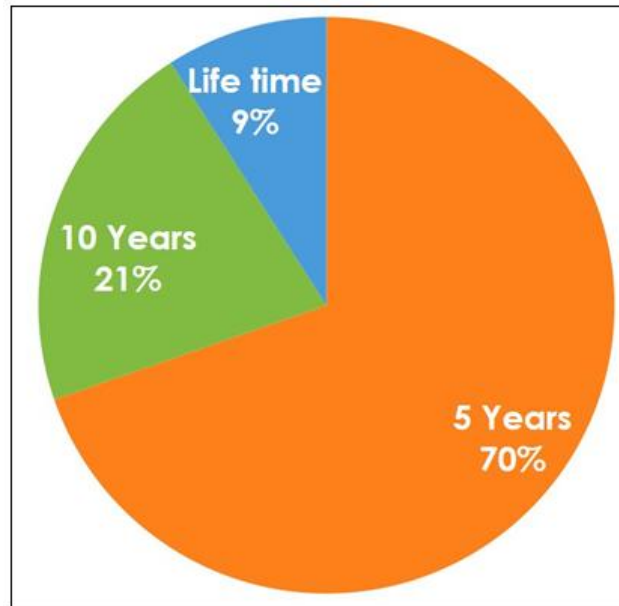
Graph-2:



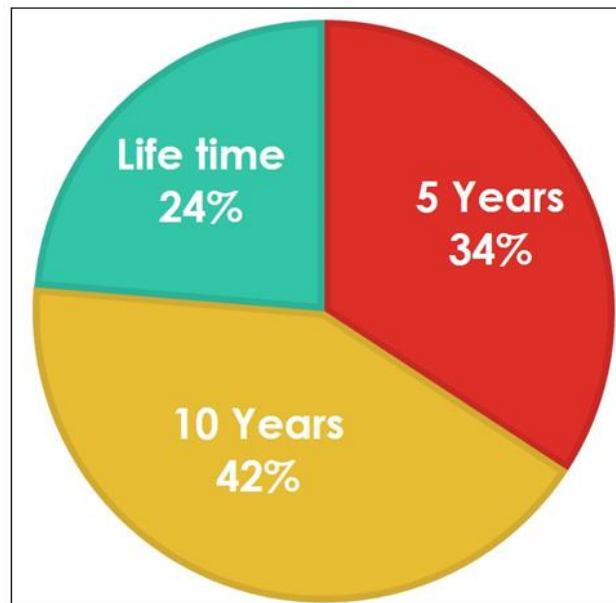
Graph-3:



Graph-4:



Graph-5:



Graph-6:

DISCUSSION

The needs and preferences of patients in getting their missing teeth replaced continues to battle dentist in India. Hence this study was conducted to overcome this scarcity related to the knowledge and preferences of patients to prosthetic dental therapy.

In this study, a total of 153 patients (111 males and 42 females) were asked about their treatment preferences, motivational factors and the reasons for opting the type of treatment. The data obtained from the questionnaire was subjected to scoring. The data was analysed and subjected to descriptive statistics using chi square with significant value kept under 0.05.

A total of 78.7% males and 75.3% females in our study were aware of different fixed treatment options. These similar sorts of findings were also documented in a study conducted by Prabhu N *et al.*, [3]. In this study the female gender was less aware about the different treatment options as well as they experienced partially edentulous state for a longer period than the male.

Fixed treatment is an increasingly popular treatment as it is more comfortable and convenient with regards to function and maintenance for the patients when compared to the use of removable prosthesis. The perspective and outlook of the population towards the intricacies involved with fixed prosthodontic treatment is less known, hence this study was conducted to

understand the knowledge regarding fixed dental treatment in Nalgonda population

It was noted that among 153 patients who were chosen for the study, 91% patients were aware about implant supported while 71% were aware about tooth supported prosthesis. However, the factors such as high level of education coupled with reasonably higher income and age can influence the findings of research.

Further to speak about the disadvantage of each fixed prosthetic treatment options 63% and 86% patients were totally unaware about disadvantages of tooth supported fixed prosthesis and implant supported fixed prosthesis respectively. 42% of screened population assumed that the validity of implant supported fixed prosthesis would be 10 years, 21% of the population predicted that the validity of tooth supported fixed prosthesis would be 10 years.

24% of population assumed that implants were for a life time survival. Only 9% of the population felt that tooth supported fixed prosthesis would last for life time.

Another observation found in this study was in contrast to the studies mentioned in the literature [4].

The male population had a higher level of knowledge when compared to female. This probably would have been due to low level of education and their exposure to social awareness

Further 75% were aware how to maintain tooth supported bridge but only 35% of the people aware of implant supported prosthesis. However the choice of opting for a fixed prosthesis be it for implant or tooth supported, they are almost same but 70% of population felt that implant supported fixed prosthesis is expensive. Multiple studies have been conducted through out the globe, which focused on the same issue and determined the extent of knowledge of general public. It has to be acknowledged that the major factor in selecting dental implants as treatment option is the high cost which was also noted in the other related studies [5-8].

The overall results suggest that there is a need to create awareness in the sub population of Telangana especially the female population regarding the fixed prosthesis treatment

Limitation of the study

However the limitation of the study was the small sample size which is actually not the representative sample of Nalgonda population. Another issue that could have affected the result was that the study was conducted in Kamineni Institute of Dental Sciences which is a teaching dental hospital and large majority of patients get treated who belong to low income population Hence the satisfactory rate in the

fixed treatment (expense) was more with tooth supported than implant supported

CONCLUSIONS

- In the above study conducted, both the group of genders were aware of fixed prosthetic treatment
- The satisfactory rate with regards to maintainance, expenses and function was more with tooth supported prosthesis than implant supported prosthesis.
- The general awareness level of fixed prosthesis are satisfactory and however there is need for more awareness to know the validity, advantages, disadvantages and effectiveness of each fixed treatment options when compared with each other.
- There is a need for more dental education programs to improve the level of understanding pertaining to the implant supported and tooth supported fixed prosthesis.
- The satisfactory rate in the fixed treatment was more with tooth supported than implant supported
- Hence dental education programs especially emphasis on fixed treatment option maintainance and post operative care would help in creating awareness and motivation to undergo fixed prosthetic treatment in people belonging to Nalgonda district.

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