

# Awareness and knowledge of various treatment options for replacement of missing teeth in patients at Dental College and General Hospital – A questionnaire-based original study

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## ABSTRACT

**Background:** Partial or complete absence of teeth is one of the most common reasons for which the patients visit dental professionals. Mainly prosthodontic treatment procedures are broadly divided into two groups which are removable prosthesis and the fixed prosthesis. Since the success rate of implants is higher therefore there is increase in the procedures of implant placement in the clinical set ups. And the patients who underwent implant treatment has accepted the implant supported denture as the replacement option of the natural missing teeth. But still there is lack of evidence regarding the people awareness towards implants.

**Aim:** Evaluate awareness and knowledge of various treatment options for replacement of missing teeth in patients at Dental College and Hospital

**Methods and Materials:** The study was conducted from January 2020 to March 2021 among patients who were attending clinics for dental problems. The descriptive cross-sectional hospital study was carried out among 360 adult male and female patients who attended outpatient dental clinics. This study comprised patients who were missing teeth, were over the age of 18, and were willing to participate. Patients who did not have missing teeth or who refused to participate were not included in the study. The questionnaire was not designed for a specific set of patients, but rather for all patients in general to examine their knowledge and awareness about tooth replacement. All of the patients who took part in the trial were given a validated questionnaire.

**Results:** It was observed that patient were aware about removable partial denture and fixed partial denture but the awareness was low towards the dental implants. The most common reason for such lack of awareness towards implants was patients were having very less information about dental implants and high cost of implants

**Conclusion:** It can be concluded from this study that patient were aware about removable partial denture and fixed partial denture but the awareness was low towards the dental implants.

**Keywords:** Awareness, Prosthesis, Questionnaire

## INTRODUCTION

Good oral health is directly associated with quality of life and overall human well being. Some of the very frequently observed conditions of the oral cavity are found to have effect on human normal health and life quality. It is observed that due to several oral problems people are visiting dentists. Partial or complete absence of teeth is one of the most common reasons for which the patients visit dental professionals. There are several complications of tooth loss such as impairment of speech, mastication, loss of aesthetics and loss of facial support.<sup>1,2</sup>

There are also other problems associated with the loss of tooth. There is increased psychological stress in these people and reduced interaction within the community due to the feeling of low self confidence produced as a

result of wearing denture. It is very necessary that such edentulous patients should their lost teeth replaced as early as possible to reduce these complications. It is very important that lost teeth be replaced quickly because there can be problems related to occlusion due to delay in the teeth replacement. Most common reasons for such occlusion problems is supraeruption of the teeth present in opposite arch and mesial and distal drifting of the teeth adjacent to the edentulous area in the same arch.<sup>3,4</sup>

Once patient is provided with new prosthesis then there is need of adaptation and acceptance of that prosthesis in the patient oral cavity. This is affected by several factors like attitude of patient towards the prosthodontic treatment and other factors like psychological factors, prosthodontic factors and anatomical factors. The success of the prosthesis is governed by this acceptance and adaptation of patient. If prosthodontics is concerned then their main work is to restore the function of oral cavity hampered by loss of tooth which they achieve by carrying outpatient rehabilitation after tooth loss.<sup>5,6</sup>

But the major concern for any prosthodontist is the analysis of the demand, requirement and use of prosthodontic treatment in many conditions. This is because there is lack of concrete guidelines to analyse these factors like demand, requirement and use of the prosthodontic treatment. It has been observed that people belonging to low income group and less literacy rate despite having poor dental status don't think to go for dental and prosthodontics treatment because they are unable to bear the costs of treatment.<sup>7,8</sup>

The range of prosthodontic treatment is broad as it includes all form of treatments starting from replacement of absent teeth in normal edentulous patients and ending on the complete restructuring of the severely dentured teeth upto the form which is able to carry the functions properly like natural teeth. Mainly the prosthodontic treatment procedures are broadly divided into two groups which are removable prosthesis and the fixed prosthesis. If removable prosthesis are concerned then there are two different reactions from the patients. Some patients are completely not able to accept the removable dentures while some patients do accept these prosthesis but they feel a lot of problems in using these dentures.<sup>9,10</sup>

Several patients feel the problems of inadequate retention of the removable denture, mastication problems and speech problems despite of being provided with best quality prosthesis. In recent years several other restorative treatment alternatives have been available. Among new restorative treatment options implants have emerged as the most accepted and successful treatment option for missing teeth. This is because implants has given better results as it provide better retention, better stability, better efficiency of function, and improved life.<sup>11</sup> Since the success rate of implants is higher therefore there is increase in the procedures of implant placement in the clinical set ups. And the patients who underwent implant treatment has accepted the implant supported denture as the replacement option of the natural missing teeth. But still there is lack of evidence regarding the peoples awareness towards implants.<sup>12,13</sup>

This study was performed with the objective of assessment of knowledge and awareness of the patients about the different prosthodontic treatment options for missing teeth at tertiary level dental college and hospital.

## **MATERIALS AND METHODS**

The study was conducted from January 2020 to March 2021 among patients who were attending clinics for dental problems.

### **Study Sample Size**

The descriptive cross-sectional hospital study was carried out among 360 adult male and female patients who attended outpatient dental clinics.

### **Inclusion and Exclusion Criteria**

This study comprised patients who were missing teeth, were over the age of 18, and were willing to participate. Patients who did not have missing teeth or who refused to participate were not included in the study.

### **Questionnaire**

The questionnaire was not designed for a specific set of patients, but rather for all patients in general to examine their knowledge and awareness about tooth replacement. All of the patients who took part in the trial were given a validated questionnaire. This included inquiries into the necessity for tooth replacement, as well as knowledge of fixed partial dentures, removable partial dentures, complete dentures, and implants. The data was tabulated and statistically evaluated, and the results were acquired with the help of SPSS software.

## **RESULTS**

Among the participants in the study 43% were males and 57% participants were females. ( Table 1 and Graph 1). When there was analysis about the patients opinion regarding the replacement of natural tooth then it was found that 31 percent patients were not willing to replace their natural missing tooth while 69 percent were willing to replace their natural missing tooth. The findings were statistically significant with  $p \text{ value} \leq 0.05$  ( Table 2 and Graph 2).

As far as the reason for not replacing teeth among the patients was concerned it was found that most common reason for not replacing teeth was that patient feel there is no need to replace the natural missing teeth. Another most common reason was that patients didn't know the various treatment options and which one will be better for them. ( Table 3 and Graph 3).

When patients were inquired about the awareness about the removable partial denture then 59 % patients were aware about the removable partial denture while 41 percent were not aware about that. The difference was statistically non significant. ( Table 4, Graph 4)

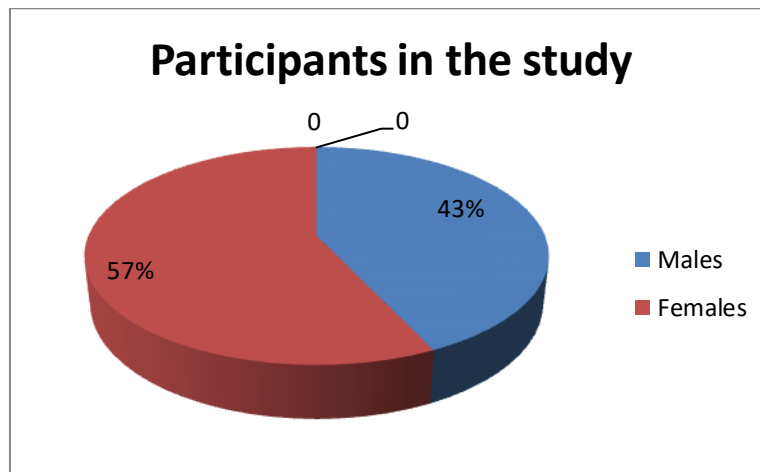
In our study it was found that 52% patients were not aware about fixed partial denture while 48 percent patients were about fixed partial dentures. The differences were not statistically significant. ( Table 5, Graph 5)

In our study it was observed that 67 percent of the patients were not aware about dental implants while 33 percent patients were not aware about dental implants. The difference was statistically significant.  $p \leq 0.05$ . ( Table 6, Graph 6)

In this study awareness of patients about the different types of prosthodontic treatments were evaluated. It was observed that patient were aware about removable partial denture and fixed partial denture but the awareness was low towards the dental implants. The most common reason for such lack of awareness towards implants was patients were having very less information about dental implants.

Table 1 : Participants in the study

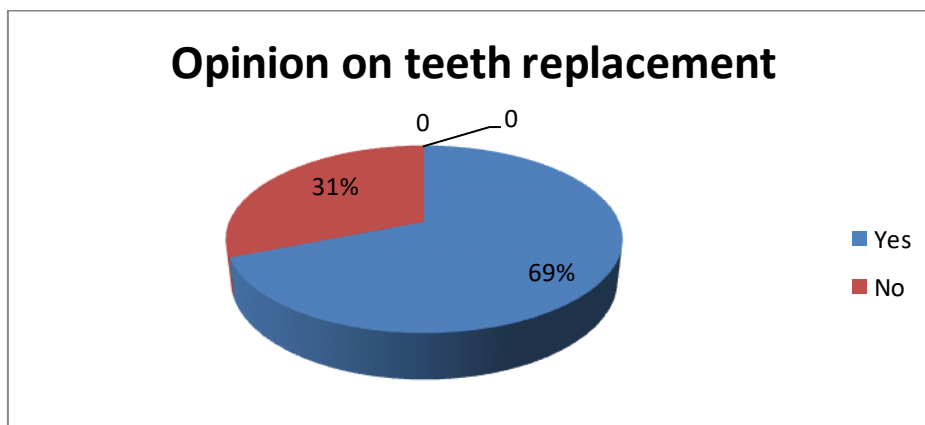
Gender	Percentage (%)	P value
Male	43	0.07
Female	57	



Graph 1: Participants in the study

Table 2: Opinion on teeth replacement

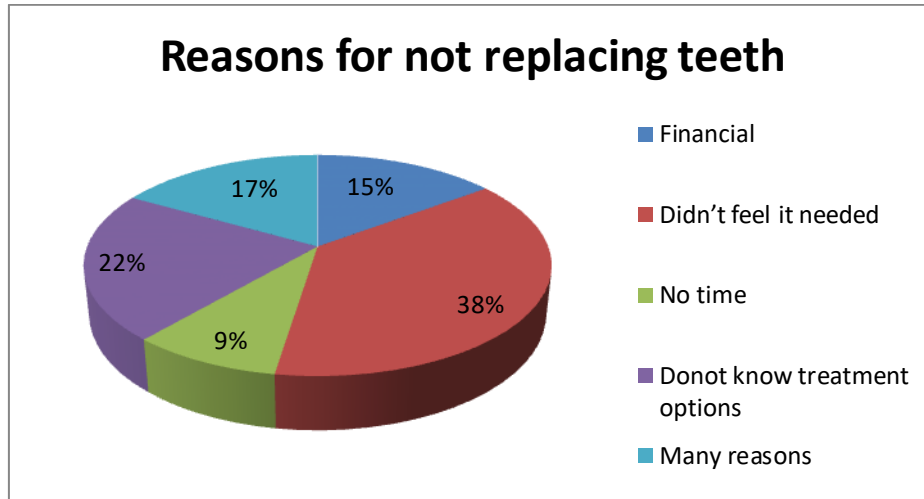
Opinion	Percentage (%)	P value
Yes	69	0.04
No	31	



Graph 2: Patients opinion regarding replacement of natural missing tooth

Table 3: Reasons for not replacing teeth

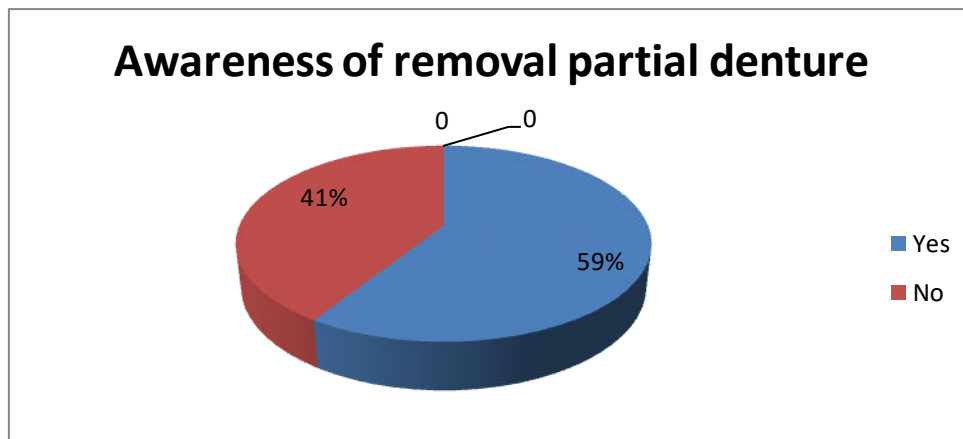
Reason	Percentage (%)	P value
Financial	15	0.03
Didn't feel it needed	38	
No time	09	
Didn't know treatment options	22	
Many reasons	17	



Graph 3: Reasons for not replacing the natural missing tooth

Table 4: Awareness of removal partial denture

Awareness present	Percentage (%)	P value
Yes	59	0.08
No	41	



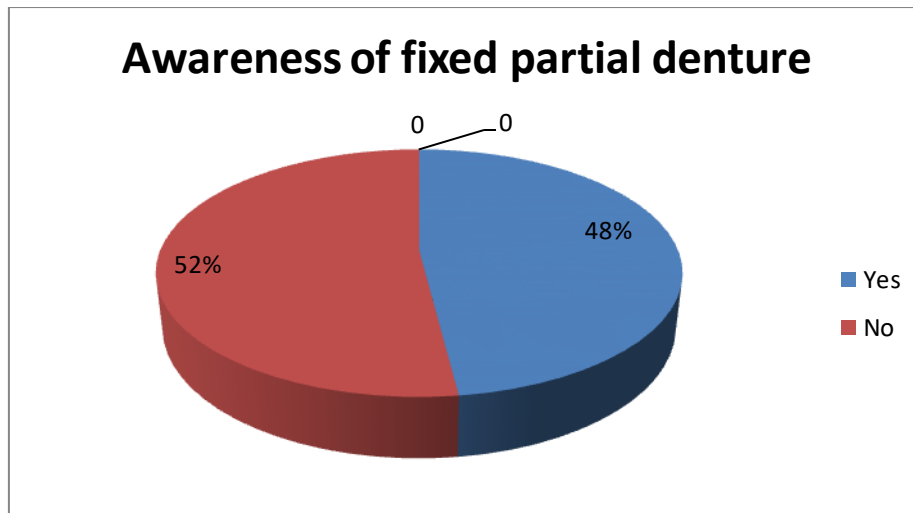
Graph 4: Patients awareness regarding removable partial denture

Table 5: Awareness of fixed partial denture

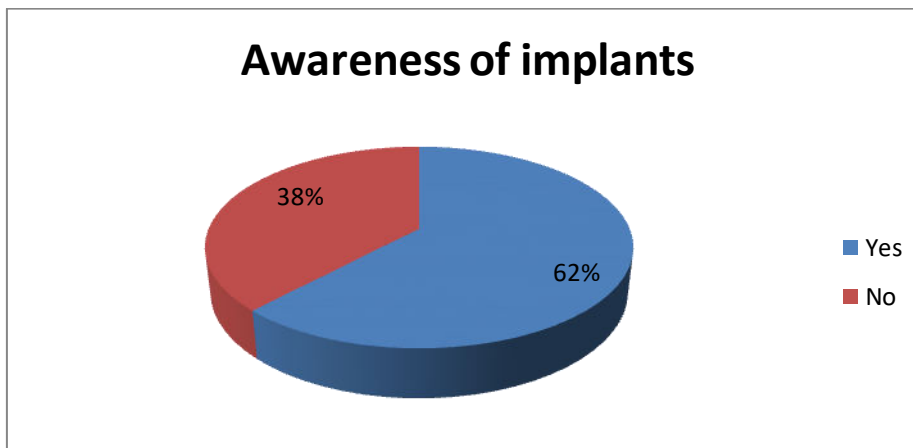
Awareness present	Percentage (%)	P value
Yes	48	0.09
No	52	

Table 6: Awareness of implants

Awareness present	Percentage (%)	P value
Yes	67	0.03
No	33	



Graph 5: Patients awareness about the fixed partial denture.



Graph 6: Awareness of patients towards dental implants

## DISCUSSION

Partial or complete absence of teeth is one of the most common reasons for which the patients visit dental professionals. There are several complications of tooth loss such as impairment of speech, mastication, loss of aesthetics and loss of facial support. There are also other problems associated with the loss of tooth. There is increased psychological stress in these people and reduced interaction within the community due to the feeling of low self confidence produced as a result of wearing denture. It is very necessary that such edentulous patients should their lost teeth replaced as early as possible to reduce these complications. It is very important that lost teeth be replaced quickly because there can be problems related to occlusion due to delay in the teeth replacement.<sup>14,15</sup>

This study was performed with the objective of assessment of knowledge and awareness of the patients about the different prosthodontic treatment options for missing teeth at a tertiary level dental college and hospital. In our study when there was analysis about the patients opinion regarding the replacement of natural tooth then it was found that 31 percent patients were not willing to replace their natural missing tooth while 69 percent were willing to replace their natural missing tooth. The findings were statistically significant with  $p \text{ value} \leq 0.05$ . The results are in accordance with several other studies in different study populations.<sup>16,17</sup>

The success of the prosthesis is governed by this acceptance and adaptation of patient. If prosthodontics is concerned then their main work is to restore the function of oral cavity hampered by loss of tooth which they achieve by carrying out patient rehabilitation after tooth loss. But the major concern for any prosthodontist is the analysis of the demand, requirement and use of prosthodontic treatment in many conditions. This is because there is lack of concrete guidelines to analyse these factors like demand, requirement and use of the prosthodontic treatment. It has been observed that people belonging to low income group and less literacy rate despite having poor dental status does not think to go for dental and prosthodontics treatment because they are unable to bear the costs of treatment.<sup>18,19</sup>

In our study as far as the reason for not replacing teeth among the patients was concerned it was found that most common reason for not replacing teeth was that patient feel there is no need to replace the natural missing teeth.

Another most common reason was that patients didn't know the various treatment options and which one will be better for them. When patients were inquired about the awareness about the removable partial denture then 59% patients were aware about the removable partial denture while 41 percent were not aware about that. The difference was statistically non significant. Some previous studies were found to have results not in accordance with this study. The reason for this difference can be difference in the method of analysing the awareness.<sup>20</sup>

There is increased psychological stress in these people and reduced interaction within the community due to the feeling of low self confidence produced as a result of wearing denture. It is very necessary that such edentulous patients should have their lost teeth replaced as early as possible to reduce these complications. It is very important that lost teeth be replaced quickly because there can be problems related to occlusion due to delay in the teeth replacement. Most common reasons for such occlusion problems is supra eruption of the teeth present in opposite arch and mesial and distal drifting of the teeth adjacent to the edentulous area in the same arch. Once patient is provided with new prosthesis then there is need of adaptation and acceptance of that prosthesis in the patient oral cavity. This is affected by several factors like attitude of patient towards the prosthodontic treatment and other factors like psychological factors, prosthodontic factors and anatomical factors.<sup>21</sup>

In our study it was found that 52% patients were not aware about fixed partial denture while 48 percent patients were about fixed partial dentures. The differences were not statistically significant. In our study it was observed that 67 percent of the patients were not aware about dental implants while 33 percent patients were not aware about dental implants. The difference was statistically significant.  $p \leq 0.05$ .

Among new restorative treatment options implants have emerged as the most accepted and successful treatment option for missing teeth. This is because implants has given better results as it provide better retention, better stability, better efficiency of function, and improved life. Since the success rate of implants is higher therefore there is increase in the procedures of implant placement in the clinical set ups. And the patients who underwent implant treatment has accepted the implant supported denture as the replacement option of the natural missing teeth. But still there is lack of evidence regarding the people awareness towards implants.<sup>22</sup>

In this study awareness of patients about the different types of prosthodontic treatments were evaluated. It was observed that patient were aware about removable partial denture and fixed partial denture but the awareness was low towards the dental implants. The most common reason for such lack of awareness towards implants was patients were having very less information about dental implants.

Therefore education community programmes should be carried out to create awareness about the dental implants. Moreover there should be community dental programmes where some patients should be provided with dental implants and educate the other people.

## CONCLUSION

It can be concluded from this study that patient were aware about removable partial denture and fixed partial denture but the awareness was low towards the dental implants. The most common reason for such lack of awareness towards implants was patients were having very less information about dental implants and high cost of implants.

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