

## Knowledge and Awareness on Rehabilitation of Missing Tooth in Partially and Complete Edentulous Population a Questionnaire Survey

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### ABSTRACT:

**Background:** Various types of edentulism that can exist in a patient and it refers to a state in which a single tooth or many teeth are absent. This is often known as partial edentulism or semi-edentulism. It is necessary to evaluate the edentulous areas of patient and also to determine the number of the missing teeth. It is of prime importance to identify the reason as to know why most of the patients fail to replace their edentulous spaces in oral activity.

**Objective:** The aim of the study was to assess the knowledge and awareness among the population about the need for replacement of missing teeth in partially edentulous subjects.

**Materials and Methods:** A questionnaire-based survey comprising of 21 questions to assess the knowledge of replacing missing teeth in partially edentulous subjects was structured. The survey was conducted among 200 subjects.

**Results:** 70 % of the subjects neglected prosthodontics treatment as they felt the treatment was very expensive. Another main factor that the study revealed was that around 90% of these subjects were unaware of the drawbacks of failure to replace the extracted teeth.

**Conclusion:** The present study has concluded that the level of awareness among the people for the need of tooth replacement had been significantly low. It was evident from the study that it is required to emphasize on the replacement of teeth and also to bring in the innovative methods in order to demonstrate this need.

**KEYWORDS:** Awareness, Edentulism, Knowledge, Missing tooth, Partial Edentulism.

### INTRODUCTION:

Various types of edentulism can exist in a patient. Edentulism refers to a state in which a single tooth or teeth are absent. It is often referred as partial edentulism or semi-edentulism.<sup>1</sup> It is necessary to evaluate the edentulous areas of patient and determine the number of missing teeth.<sup>2</sup> Several classifications were introduced to enhance this process. This makes the communication between the professionals easier while discussing the cases.<sup>3,4</sup> Main features

of the classification included evaluation of tooth borne or tooth-tissue borne removable partial denture (RPD), immediate visualization of missing teeth and it serves as a guide in order to design the prosthesis. The classifications establish a relationship between the edentulous spaces and the remaining natural dentition of patient.<sup>5</sup> The rehabilitation options for long span partially edentulous patient with multiple missing teeth include RPD with attachment, conventional cast partial denture, fixed partial denture (FPD) or implant retained prosthesis. The responsibility of dental practitioner in order to diagnose and also recommend the best replacement option for patient.<sup>6</sup> Besides, implants as a fixed replacement option, it is essential to provide the other fixed replacements post evaluation of the periodontium.<sup>7</sup> It is also essential that patient's oral hygiene is to be assessed when such treatments are indicated.<sup>8</sup> Sometimes the cast partial dentures are avoided due to presence of metal being visible in oral cavity.<sup>9</sup> The aim of the present study is to assess the knowledge and awareness among the population regarding the need for the replacement of missing teeth when partially edentulous.

### **MATERIALS AND METHODS:**

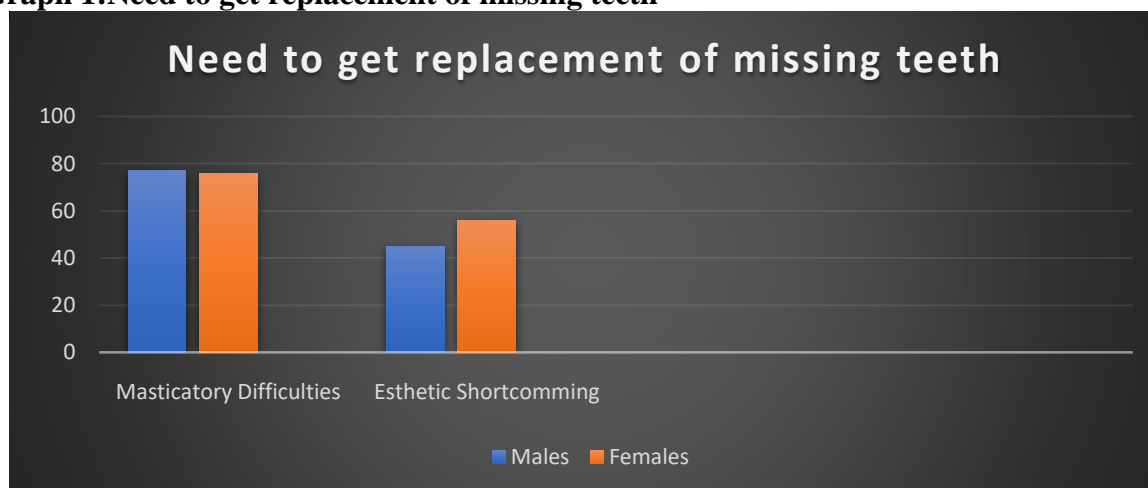
The targeted group for this study was 200 subjects with more than one tooth missing. The exclusion criteria are: a) extracted 18, 28, 38, and 48, b) subject had fixed or removable prosthesis. The subjects between age range of 20 and 50 were included for this study. Both male and female patients were included in the study. Each of these subjects was provided with a questionnaire, structured in English for better perception of the questionnaire. The questions were 21 in number. The survey comprised of questions on when their teeth/tooth were removed, were they informed about the replacement options, knowledge on replacement of teeth, any replacement treatment they tried but failed or any discomfort due to edentulous spaces, oral hygiene level and so on. The responses were collected and the results of this study were obtained.

### **RESULTS:**

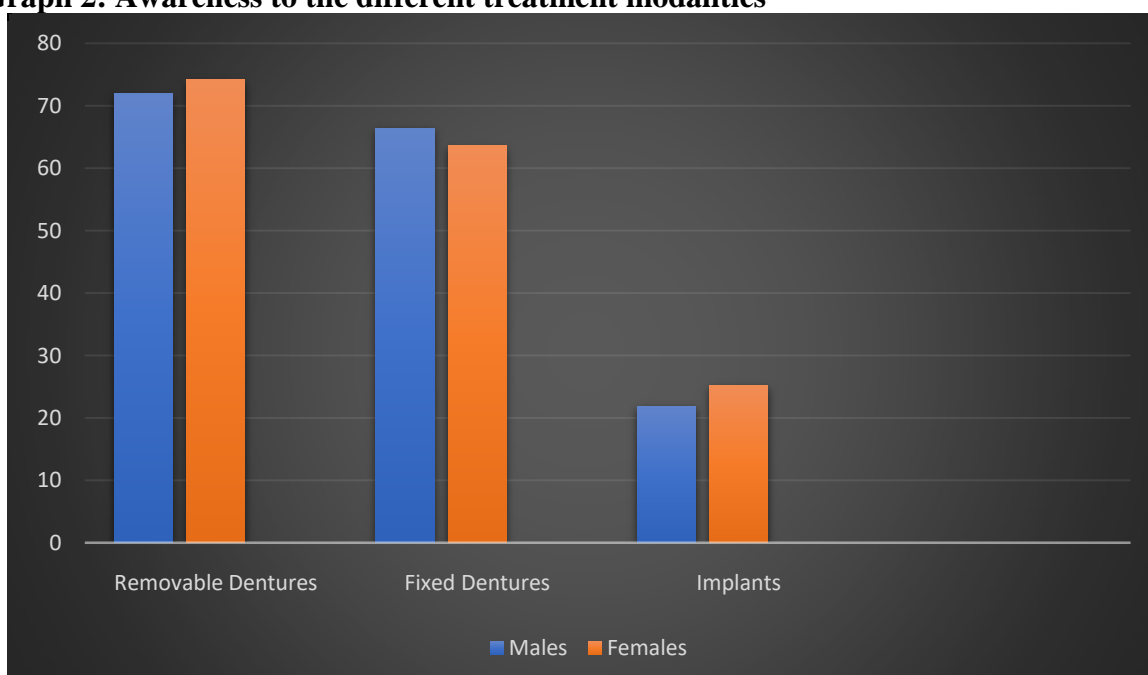
On the basis of this study, it is been proven that patients were unaware of the drawbacks of not having replaced their teeth. It was surprising when the study revealed that only 6% of the targeted population were aware of the various disadvantages of not replacing teeth that were extracted. This reveals the poor awareness among subjects with edentulous spaces regarding the need to replace them. Most of the subjects were females and about 38% of them had not replaced their missing teeth. When the number of missing teeth was evaluated, nearly 46% of the subjects were present with only a single missing tooth. Mostly, the reasons stated for removal were deep caries, failed root canal treatment, periodontally compromised, and accidents. While nearly 29% had at least five teeth missing, there was over 29% showing almost more than five missing teeth. The subjects were asked to state if they had difficulty in mastication and/or if they felt that their esthetics were compromised, (Graph 1). As far as awareness of all modes of prosthodontic treatment were concerned (Graph 2), most of the men and women were aware of the removable and fixed denture. Only around one fourth of the subjects were aware of the implants as a mode of prosthodontic rehabilitation. Moreover, most of the men and women seemed to prefer the fixed denture to implants and even removable dentures. (Graph 3). Most women felt that loss of teeth led to loss of esthetics while men felt that their masticatory capabilities had been compromised. A majority of 58% of the patients had undergone extraction of teeth in the past 4 years. Assessing the bone quality in the remaining subjects, it seemed compromised in those individuals with an extraction time period of more than 12 years. Approximately 78% of patients complained about the discomfort, particularly during the eating due to edentulism. Aesthetic discomforts were complained by those who had missing anterior teeth. Nearly 23%

of these subjects had undertaken temporary replacement options. Unfortunately, most of the treatments were a failure due to the patient's disinterest and weak prosthesis's weak retention. Thus, 23% of subjects discontinued their treatment. The dentists who had performed these extractions had provided the information to the subjects regarding the cost and varying treatment options. However, only 19% of the clinicians had failed to provide the information in regard to the need for replacement as well as the replacement of teeth options. 70 % subjects neglected the treatment, as they felt the treatment was very expensive. Another key finding of the study was that 94% of the subjects were unaware of the drawbacks of failure to replace the extracted teeth. There could be two reason for this, that is either the dentist would have failed to mention the harmful causes or the subject would have been uninterested for replacement due to financial issues. Irrespective of the findings of the survey, it is evident that the people with partial edentulism have poor knowledge on the importance of replacing their missing teeth. Thereby, newer methods must be incorporated by the dentists in order to provide the patients with a better understanding for restoring the missing teeth.

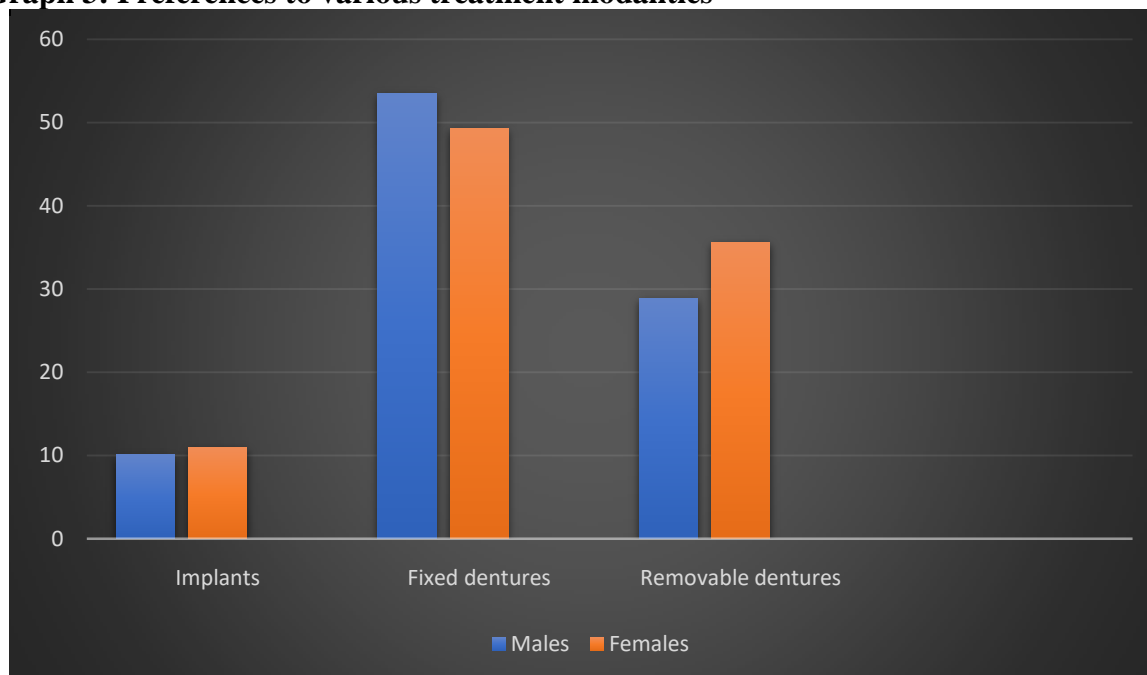
**Graph 1:Need to get replacement of missing teeth**



**Graph 2: Awareness to the different treatment modalities**



**Graph 3: Preferences to various treatment modalities**



## DISCUSSION:

Numerous factors because of edentulism may be because of caries, periodontal disease, infection, trauma, malignancies or failed endodontic treatments which may indirectly cause harm to the existing dentition. This also hampers the well-being of the patient. Petridis *et al.*<sup>10</sup> in his study reported that apart from the loss of teeth and supra eruption of the opposing teeth, he also observed some positional changes in the tooth adjacent to the extracted site. It indicated the migratory movement of the teeth. Moreover, Kini and Muliya<sup>11</sup> identified that the supra eruptive movements can exist even when the coronal tissue of the opposing teeth is broken down. Teeth loss can also cause facial asymmetry. Study by Matins-Junior and Marques<sup>12</sup> showed that the premature loss of a lower right deciduous canine in an 8-year-old patient resulted in a deviation of lower arch from midline to the affected side just as in the study by Tallgren *et al.*<sup>13</sup> which observed that facial collapse in patients with teeth and the alveolar bone loss. Lack of teeth has affected patients even systemically, causing them to alter their dietary requirements. Thereby they eventually end up taking the fluids and lose out on nutrition needed for human body.<sup>14</sup> Many times in order to overcome the chewing difficulty, people over-prepare their food, making it lose all its potentially nutrients.<sup>15</sup> Some studies have also demonstrated that even a single tooth loss can cause more damage too. It was reported by Rosenstiel *et al.*<sup>16</sup> that failure to replace a posterior missing tooth may disrupt the balance in the stomatognathic relation and can also trigger the chains of adverse reaction such as rotation, drifting or super eruption of teeth. Ineffective mastication, altered speech, loss of self-confidence, feeling of bereavement and concern about appearance are quite when people tend to neglect the need to replace their missing teeth. In some cases, even completely edentulous patients tend to avoid the treatment, which affects their food intake resulting in improper food intake and low nutritional status. Beside the functional, social, and the psychology toll on the patients, they still seem to neglect the treatment. This could be due to poor awareness that failure to replace the missing teeth can also further deteriorate the remaining dentition.<sup>17</sup> Prosthetic replacement of the missing teeth is an important element of dental care. Patients with a single missing tooth can be treated with RPDs. The prosthetic replacement of the missing teeth is an important element of the dental care. Oral health is always an inseparable part of general health and awareness plays a key

role in determining the oral health of individual. Poor oral health and loss of teeth, especially complete loss or edentulism, are equivalent to dental death.<sup>18</sup> Thereby, tooth loss causes the residual ridge resorption leading to a decreased masticatory function affecting the dietary intake, nutritional status, and also feeling of old age, hence compromising the general health. The knowledge and attitude of the patient toward the replacement of teeth should be assessed in order to educate the patient accordingly and also to improve the patient compliance with the acceptance of prosthesis.<sup>19</sup> The estimation of the treatment requirement is also an important component in the oral health-care planning. It is possible to assess future treatment needs and demands for services with this information. Moreover, the need for dental prosthesis varies from patient to patient and depends on their age, sex, occupation, socioeconomic background, and literacy. Rehabilitative treatment is successful only when the patients are motivated and also made aware of the various prosthodontic treatments available, its use and maintenance.

### CONCLUSION:

When the dentists impart knowledge to the patients about the replacement needs for missing teeth with more pictorial methods and graphics, it will register faster and better in the patient's mind. Moreover, the finances for treatment can also be modified by introducing payments by instalments, price drops, etc., which may serve beneficial to the patients having low socioeconomic status. Along with the replacement treatments, patients must also be educated about the maintenance proper oral hygiene habits for the longevity of the dental treatment done to restore the missing teeth. Hence, dental practitioner can impart the knowledge effectively to make the difference.

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