

KAP on Status of Partially Edentulous Among Adolescents in Rural Areas (Thiruvallur District)

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ABSTRACT

Loss of some teeth is called partial edentulism. Those who have lost teeth are edentulous whereas those who have not lost teeth called dentate by comparison. People who are living in rural areas may follow a form of health care based on ancient traditions, beliefs, and cultural habits. Edentulism affects approximately 158 million people globally as of 2010 (2.3% of the population). It is more common in women at 2.7% compared to the male rate of 1.9%. Partial edentulism is an indication of unhealthy dental practices in society and attitude toward dental and oral care. The aim of this study was to assess the knowledge, attitude and perception on status of partially Edentulous among adolescents in rural areas in Thiruvallur District. A cross-sectional study was done by conducting a survey consisting of 10 questions prepared to assess the awareness of partial edentulism and tooth replacement among adolescents. A total of 100 participants aged between 17 and 21 years in rural districts of Thiruvallur. The data were statistically analyzed. It was seen that 75% of participants were aware of the partial edentulism and can be treated. 40% of participants agreed to undergo prosthodontics treatment and rest of 25% were not aware of such treatment, and 56% of them have not undergone any treatment due to their financial issue, clinical fear. The present study concluded that the prevalence of partial edentulism among the study population was high. So, they need community-based oral health programs to increase awareness and reduce the risk of tooth loss and make them aware of prosthodontics rehabilitation among the people, and also they should be educated about the need for prosthodontics treatments

Key words: Partial edentulous, Edentulousness, Dentate, Rehabilitations, Oral health programs

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INTRODUCTION

Loss of some teeth is said to be partial edentulism, whereas loss of all teeth is called complete edentulism. People who have lost teeth are edentulous whereas those who have not lost teeth called dentate by comparison. Partial edentulousness is a dental arch in which one or more but not all natural teeth are missing. Generally the cause may be due to dental caries, periodontal disease, traumatic injuries, impactions, and supernumerary teeth, neoplastic and cystic lesion [1-3].

Partial edentulism has several drawbacks to the subjects including clinical challenges and

lifestyle compromises [4,5]. Clinically, partial edentulism results in drifting and tilting of adjacent teeth, supra eruption of opposing teeth, speech alteration, changes in facial appearance and temporomandibular disorders etc. . Also, the loss and continuing degradation of the alveolar bone, the adjacent teeth and also the supporting structures will influence the difficulty to achieve an adequate restoration in a partially edentulous patient [6]. Edentulism or tooth loss affects you much more than inability to chew and digest the food properly. It has serious social, psychological and emotional consequences, which impacts the quality of life, self-image and self-esteem.

On lifestyle compromises, partial edentulism restricts intake of food, leads to weight loss. Further, it leads to lack of self-confidence, which may adversely affect the quality of life and lead to psychological dissatisfaction. There are various classification of partial edentulous arches. The

possible combination of partial edentulism is more than 60,000 depending on their incidence in maxillary and mandibular arches [7]. The primary aim of the classification is to facilitate the communication about the combination of missing teeth to edentulous ridges among students, dental practitioners and laboratory techniques [8-10].

Partial edentulism is one of the important and widely studied topics in dentistry. The pattern has been evaluated in many selected populations and also in different countries. Several studies have analyzed the correlation between partial edentulism and its influencing factors like socio-economic parameters, age, gender, etc. Few more studies also have analyzed the awareness among the subjects to replace the missing teeth [11-13]. Surveying of RPDs, patients visiting clinics, clinical records and population in a particular locality have been the most common method of evaluation of partial edentulism. Most commonly, studies have been done by recording patient details through questionnaire and then by clinical examination [14].

Previously our department has published extensive research on various aspects of prosthetic dentistry [15-25], this vast research experience has inspired us to do this survey. The aim of this survey is to assess the awareness of treatment options for partial edentulism among the rural population in Thiruvallur district and to educate them about the need for accepting prosthodontics treatment for partial edentulism.

MATERIALS AND METHODS

This was a survey based study and was conducted in an online portal, survey planet. The survey was circulated among adolescents in rural areas in Thiruvallur district. This is a questionnaire based survey. The survey is conducted for 100 individuals through a link by survey planet. Adolescents were included in this survey and the results were statistically analyzed. The first set of questionnaire is based on their age, gender and their knowledge about tooth loss. The second set of questionnaire is on their difficulties in speech, pronunciation and their food habits. The third set of questionnaire is whether they are willing to undergo any implantation process and their opinion about replacement. After the collection of all data, statistical analysis was done on SPSS

software version 2.0 by IBM and the chi square test was done to assess the significance of the study.

RESULT AND DISCUSSION

In this study 17 years of age were found to be more prevalent in partially edentulous when compared to other groups (Figure 1) with male predilection (Figure 2). The cause was found to be tooth decay than nutritional deficiency (Figure 3). Nearly 75% of the participants answered that partial edentulism can be treated (Figure 4) and they know the remedial treatment for the partial edentulism (69%) (Figure 5). Mostly 78% agreed

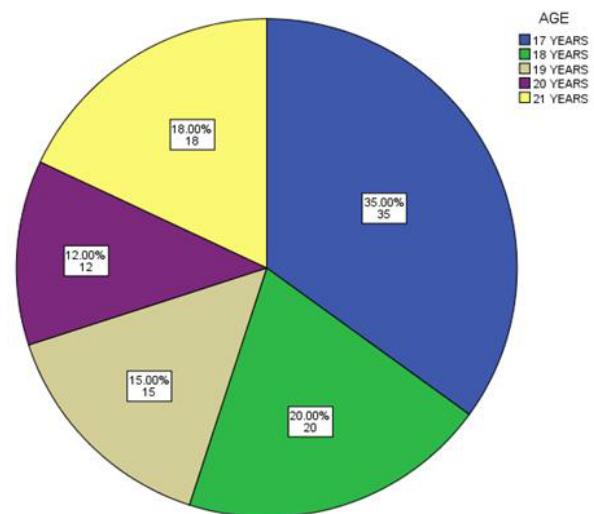


Figure 1: Pie chart shows the age of partial edentulous patients. Blue color denotes 17 years of age. Green color denotes 18 years of age. Brown colour denotes 19 years of age. Violet colour represents 20 years of age. Yellow color denotes 21 years of age. Partial edentulism were more prevalent among 17 years of age (35%).

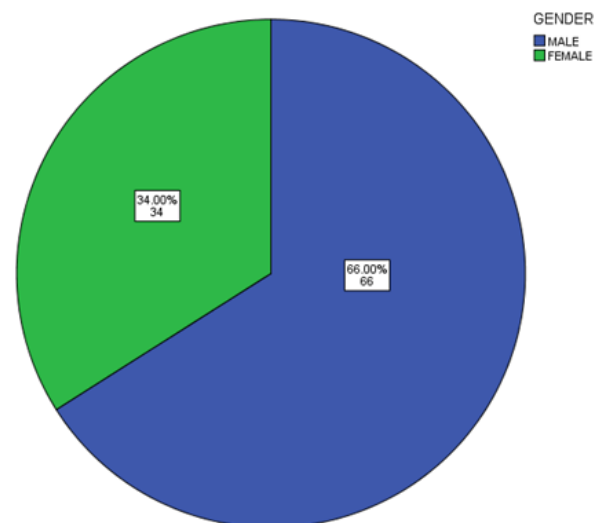


Figure 2: Pie chart shows the distribution of gender in partial edentulous patients. Green colour denotes females. Blue colour denotes males. It is evident that males (66%) were more prevalent than females (34%).

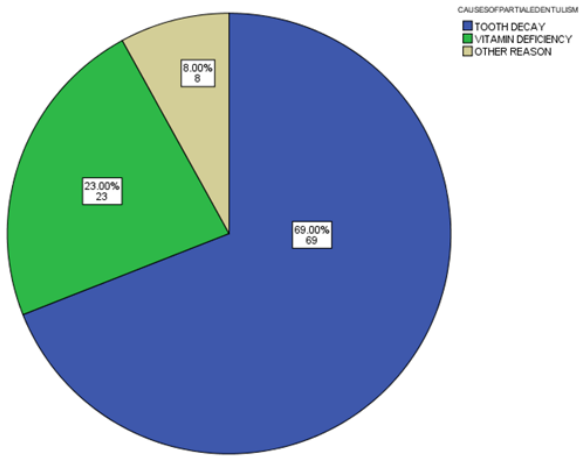


Figure 3: Pie chart shows the frequency distribution of the statement, what are the causes for partial edentulous?. Blue colour denotes the tooth decay. Green colour denotes vitamin deficiency. Brown colour denotes other reasons. Tooth decay was found to be the major cause for partial edentulous (69%).

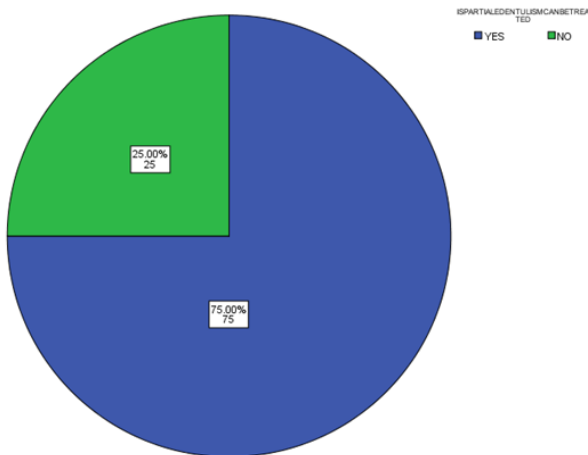


Figure 4: Pie chart shows the frequency distribution of the statement, Is partial edentulism can be treated? Blue colour denotes for yes. Green colour denotes for no. Nearly 75% of the patients answered it can be treated.

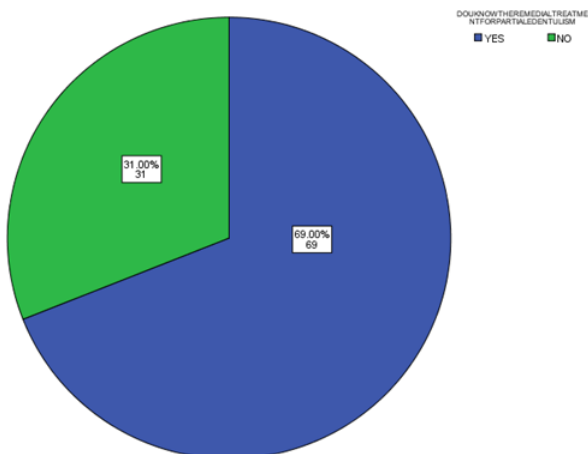


Figure 5: Pie chart shows the frequency distribution of the statement, Do you know the remedial treatment for partial edentulism?. Blue colour denotes yes. Green colour denotes no. Mostly 69% of the population answered for yes.

to undergo prosthodontics treatment (Figure 6). Most of them were not undergoing any treatment

due to financial issues, and fear of pain and some of them answered that they are unaware of the prosthodontics treatment (Figure 7). 78% of the participants brush once a day (Figure 8). Nearly 84% of the participants found difficulty while eating (Figure 9). By associating the age and causes for partial edentulous, It was found that tooth decay was the most common cause with more prevalent in 17 years of age (Figure 10). Pearson chi square value=119.710; p value=0.00; hence statistically significant.

Edentulism results when one or more teeth are missing, or removed due to any injury or some other diseases which occur in the oral cavity. With full edentulism, all teeth present in the oral cavity are lost, in cases of partial edentulism, one or more teeth are missing. In this study 17 years of age were found to be more prevalent in

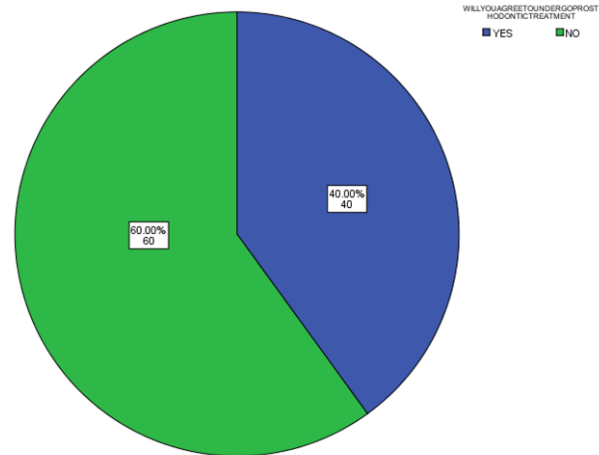


Figure 6: Pie chart shows the frequency distribution of the statement; will you agree to undergo prosthodontics treatment? Blue colour denotes yes. Green colour denotes no. Mostly 40% agreed to undergo prosthodontics treatment.

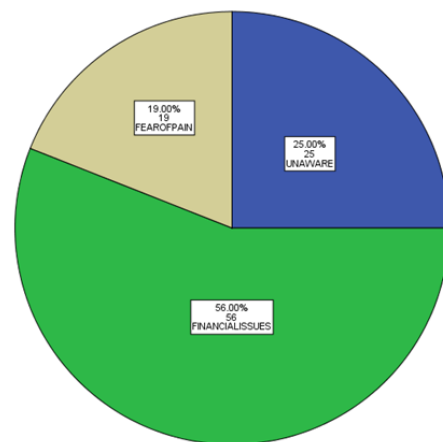


Figure 7: Pie chart shows the frequency distribution of the statement, the reasons for not undergoing the treatment? Blue colour denotes that 25% of the participants were unaware. Green colour denotes that 56% of the participants had financial issues and Brown colour denotes 19% of the participants answered fear of pain and rest 25% were not aware of it.

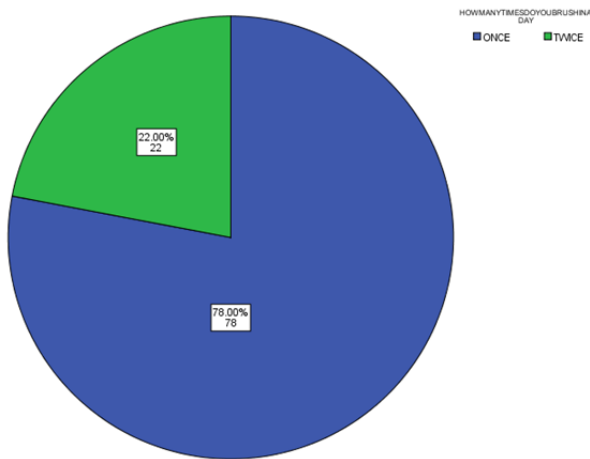


Figure 8: Pie chart shows the frequency distribution of the statement, How many times do you brush?. Blue colour denotes once a day. Green colour denotes twice a day. Nearly 78% of the participants brush once a day.

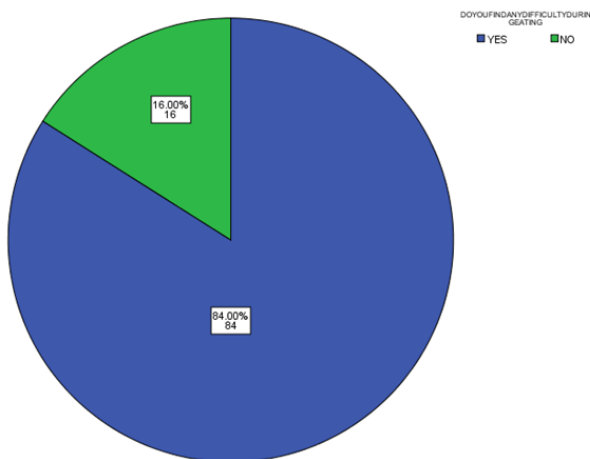


Figure 9: Pie chart shows the frequency distribution of the statement Do you find any difficulty during eating? Blue colour denotes yes and green colour denotes no. 84% of the participants found it difficult while eating.

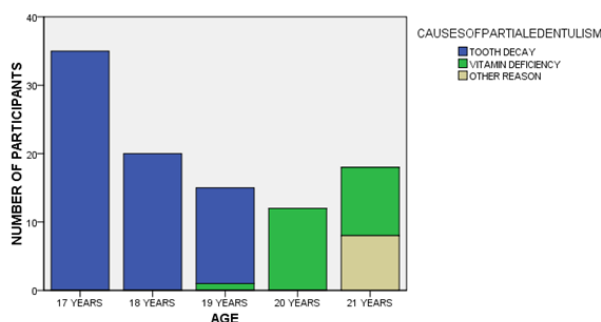


Figure 10: Bar graph shows the association between age and causes for partial edentulism. Blue colour denotes tooth decay. The x axis denotes the age of the patients and y axis denotes the number of participants. Brown colour represents other reasons. Green colour denotes vitamin deficiency. It was found that tooth decay was the most common cause among partial edentulism among the participants followed by vitamin deficiency. Pearson chi square value = 119.710; p value = 0.00 ; hence statistically significant.

partially edentulous when compared to other age groups (Figure 1) with Male predilection (Figure 2). The cause was found to be tooth decay than

nutritional deficiency (Figure 3). Many studies have consistently shown that the major cause for tooth loss is due to the role of some specific oral diseases like dental caries and periodontal disease [26].

Nearly 75% of the participants answered that partial edentulism can be treated (Figure 4) and they know the remedial treatment for it (69%) (Figure 5). Mostly 78% agreed to undergo prosthodontics treatment (Figure 6). Most of them were not undergoing any treatment due to financial issues, and fear of pain and some of them answered that they are unaware of the prosthodontics treatment (Figure 7). Partial edentulism depends on socio-economic parameters like family income, education, occupation, etc. Partial edentulism decreases in the employed group. The lower income group people could not afford the treatment procedures due to their financial issues that would have saved their questionable teeth, but they might have opted for extraction instead of prosthetic treatment. Less educated people were not aware about oral health care. People with better employment status are more concerned about their aesthetics and oral health and they opt for dental treatment [13,27].

78% of the participants brush once a day (figure 8)). Nearly 84% of the participants found difficulty while eating (Figure 9). It was found that tooth decay was the most common cause among partial edentulism among the participants followed by vitamin deficiency (Figure 10). The primary purpose of using RPDs classification is to simplify the description of potential combinations of teeth to ridges. Edentulism or tooth loss affects much more in ability to chew and properly digest food. It has serious social, psychological and emotional consequences, impacting your quality of life ,self-image and self-esteem [7,28].

Socio economic parameters have direct influence on the replacement of missing teeth; It is evident that due to lack of motivation it was found to be the most common reason for not seeking dental treatment [29]. According to a study done by Judy et al., it was evident that partial edentulism were more common among males than females [30]. Some studies have analyzed the correlation between partial edentulism and factors such as educational status and socioeconomic statuses

[31]. The study conducted by D'Souza et al., in which the partial edentulism was correlated with various sociodemographic factors [32,13]. The study conducted by Sapkota et al. in his study correlated the employment status, and studied the prevalence and awareness of tooth replacement among people [33].

CONCLUSION

The prevalence of partial edentulism in the study population from rural (Thiruvallur area) is relatively high. The awareness about rehabilitation of partial edentulous state is also inadequate. Hence, more awareness on partial edentulism and treatment programmes need to be initiated to address this concern.

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CONFLICT OF INTEREST

There were no conflicts of interest as declared by the authors.

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