



Age Group Preferring Temporary Partial Dentures

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ABSTRACT

The aim of the study is to evaluate the age group preferring temporary partial dentures in Saveetha Dental College. A total of 3725 patient records with partial edentulism diagnosis were selected in this study. The data was imported using SPSS analysis software. Analysed by Chi-square test, p value obtained is 0.518 which is not significant, ($p < 0.05$). Out of the 3725 patients, 3285 (88.19%) were with Temporary partial Denture and 440 (11.81%) were without temporary partial denture. 909 patients were with temporary partial denture and 126 were without temporary partial denture in the age group of 41-50 years. From this study, we can debut that, age groups of 41-50 years show more preference for wearing TPD. 51-60 years of age were the second most preferring in having TPD. The least preferential were the age group of 18-20 years. The records were formulated into an excel sheet. Within the limits of the study, the most common prevalence is the age group of 41-50 years. These are the records in Saveetha Dental College. Further studies should be conducted for a better understanding of the preference of partial edentulism in the Indian subcontinent.

ARTICLE HISTORY

Received February 12 2020,
Accepted March 10, 2020
Published August 05, 2020

KEYWORDS

abutment, diseases,
edentulism, partial
dentures, periodontitis.

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INTRODUCTION

Tooth loss has a major impact on biologic, social and psychological levels of the oral health related subjects of life. The prevalence of tooth loss has decreased considerably in many countries in the past years.[1],[2]. Tooth loss is being observed across all age groups and the main factor for that is dental caries (83%) followed by periodontal diseases[3],[4,5].

Decline in edentulous patients is seen to be a reflection of the improvement in the oral health of the population[6,7]. It is also considered to be a sign of success for preventive measures by the health care system[8].

It has been said that there are more than quite 60000 possible combinations of partial edentulism patterns in both maxillary and mandibular arches, hence it's logical to analyse and classify partially edentulous arches that have common characteristics and to facilitate communication among different dental professionals[9–11].

Modern dentistry expresses the preservation of natural teeth, which leads to an ongoing decrease in the number of complete dentures and in increase of partial dentures.[12]. Replacement of missing teeth is a common patient need and it should be achieved by means that reduce the risks and problems involved[13].

Of all these factors, removable partial dentures properly and correctly designed must be able to restore and enable the functions of phonetics, mastication, enhance appearance and aesthetics, preserve the remaining teeth and supporting tissues around the teeth of the patient and generally contribute to the normal function of the stomato-gnathic system[14].

Partial dentures must ensure the biomechanical support, retention and stability. The outcome of the quality of a dental prosthesis depends on meticulous intra-oral examinations, diagnosis, proper planning, and execution to obtain the best retention and stability properties of the prosthesis. Previously we have focused our research on various invitro and invivo studies. [15–34] We have currently shifted our focus to this retrospective analysis.[35–37]. Hence, the aim of the present study is to assess the preference for temporary partial dentures by partially edentulous patients of various age groups in the Saveetha Dental College.

MATERIALS AND METHODS

In this study, records in the department of Prosthodontics, Saveetha Dental College, Chennai were extracted from Jun2019-Mar2020. Records from software DIAS with a clinical diagnosis of partial edentulism were selected. They were classified based on age and treatment. The data of patients with and without TPDs was extracted into

an excel sheet and formulated. It was then analysed using SPSS software using descriptive statistical methods (means, standard deviation, percentages), chi-square test. The records were set in a logical order. They were classified as nominal data. Based on that, the results for the study were conducted.

RESULTS AND DISCUSSION

Out of the 3725 patients, 3285(88.19%) were temporary partial Denture and 440(11.81%) were without temporary partial denture.[Figure 1] 909 patients were wearing temporary partial dentures and 126 were without temporary partial dentures in the age group of 41-50 years. 51-60 years of age group showed the second most preference in having TPDs. The least preference rate was in the age group of 18-20 years. [Figure 2] Hence, patients in the age group of 41-50 years showed high preference for TPDs in Saveetha Dental College. The results are made into bar charts and analysed by chi-square tests.

Studies demonstrated similar trends to the study done by us. [38],[13]. Gender has been one of the main factors analysed by various authors. Most of the authors have concluded with their studies that there is no significant gender correlation with occurrence of partial edentulism[39][40],[41]. In addition, various research have reported that men have more awareness of restoration than women. As men are more exposed, they have more prevalence of seeking for partial dentures[42].

Another study has observed that men are more prone to partial edentulousness in maxillary posterior area and women in mandibular posterior area[43]. It is observed that females are more edentulous compared to males but at the same time, opt for the higher level of replacement of missing teeth[44–46]. This might be due to their dependency on the male-gendered community to receive a dental treatment to save their teeth. However, women are more conscious and aware of their appearance, which explains their preference for replacement of missing teeth[47,48].

Many studies have consistently shown the role of specific disease like dental caries and periodontal disease as a major cause of tooth loss[49],[50]. The elderly are a unique group of people which contribute to an important part of the general population with an increase in the growing number of elderly, there is likewise more concern regarding their health and quality of life[51]. The elderly are more subject to tooth loss since the likelihood of the tooth loss increases with age as a result of the cumulative effects of caries, periodontal disease, trauma and dental treatment[52]. The result of our study findings of a previous study where more of the elderly were partially edentulous.

The molars have been concluded to be the most commonly missing teeth, which could be caused by high vulnerability of these teeth to both periodontal disease and dental caries[53]. However, in the mandible it was observed that more of the anterior teeth were missing. The World Health Organisation has a revelation of the goal on the minimum number of teeth to meet functional demand for the elderly.

The number of partial denture wearers was low but was higher among those aged 80years (10%) than at age 70 (6%), while implant treatment was about 13% in previous studies.[54]

Further studies should be conducted for a better understanding of the prevalence of partial edentulism in the Indian subcontinent. Prevention and awareness of deleterious habits that leads to tooth loss and periodontal diseases should be made.

CONCLUSION:

From the results of this current study, it can be concluded that patients in the middle aged group have greater preference for TPDs when compared to younger and senile patients. It can be deduced that irrespective of the age, partially edentulous patients demand TPDs rather than being left untreated. A greater awareness regarding proper dental hygiene and timely replacement of missing teeth needs to be stressed among the general public.

AUTHOR CONTRIBUTIONS

Author 1(S Sivaharini), carried out the retrospective study by collecting data and drafted the manuscript after performing the necessary statistical analysis. Author 2(Dr. Rakshagan) aided in conception of the topic, has participated in the study design, statistical analysis and has supervised in preparation of the manuscript. Author 3(Dr. Vivek Narayan) has participated in the study design, and has coordinated in developing the manuscript. All the authors have discussed the results among themselves and contributed to the final manuscript.

CONFLICT OF INTEREST

None declared.

FUNDING

Self.

ETHICAL CLEARANCE

It is taken from "Saveetha Institute Human Ethical Committee" (Ethical Approval Number-SDC/SIHEC/2020/DIASDATA/0619-0320)

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Age Group Preferring Temporary Partial Dentures

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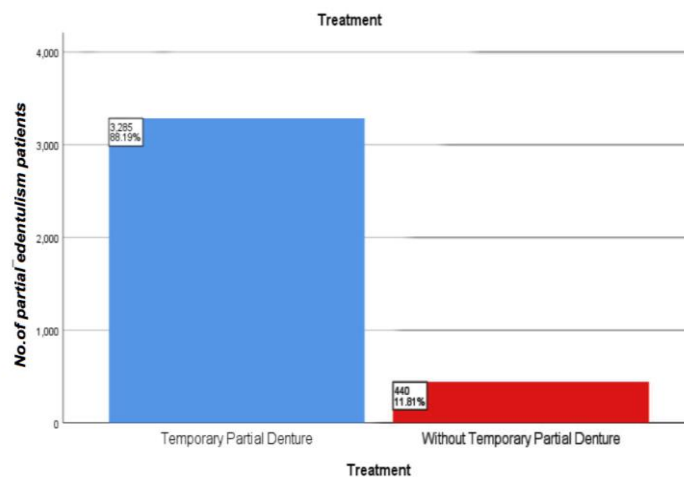


Figure 1: This graph represents the distribution of no. of TPD patients and no. of partial denture patients without TPD. X axis denotes the age group and Y axis denotes the no. of partially edentulous patients. Blue denotes the patients with TPD and red denotes patients without TPD. It shows that 3285 (88.19%) patients had TPD treatment and 440 (11.81%) did not undergo TPD treatment.

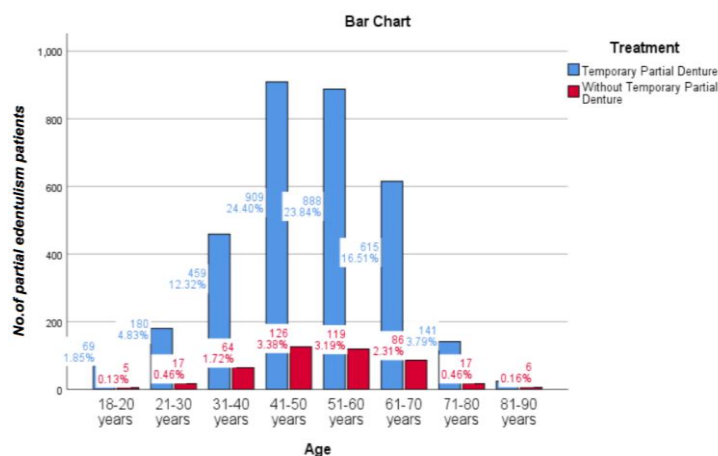


Figure 2: This graph represents the patients of age group with and without TPD. X axis denotes the age group and Y axis denotes the no. of partially edentulous patients. Blue denotes the patients with TPD, and red denotes the patients without TPD. Age groups of 41-50 years showed more preference in wearing TPDs than the other group. Analysed by chi-square test, p value obtained is 0.513, which is not significant, ($p < 0.05$). Though it is statistically not significant, we found that the majority (23.84%) of patients underwent TPD treatment in the age group of 41-50 years.