



**STATUS OF PARTIAL EDENTULISM AND ITS RESTORATION:  
A STUDY IN THE AGE GROUP OF 30 -60YEARS AMONG THE URBAN POPULATION**

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**ABSTRACT**

**Background:** Partial edentulous is a dental arch in which one or more but not all natural teeth are missing. Generally it occurs by carries or periodontal problems, traumatic injuries and cystic lesions. Partial edentulous leads to several drawback to the subjects including clinical challenges and lifestyle compromises. Clinically partial edentualism results in drifting and tilting of adjacent teeth, supra eruption of opposing teeth, altered speech, changes in facial appearance and temporal mandibular disorders.

**Aim and Objective:** To find the status of partial edentulism and its restoration which is a cross sectional study in the age group of 30-60yrs among the urban population of Chennai. The objective of the study is to find out the frequency of partially edentulism. Its arch distribution status and awareness to restore among a population sample aged 30-60yrs using a self administered questionnaire.

**Methods:** In this study, a survey and a patient examination method was proposed. The population for the study comprised of people between 30-60 years of age belonging to urban places. As the study is planned to be a descriptive one, it is proposed to take 10 % of the total population through cluster sampling method. Each cluster consisted of group of people from various age groups such as 30-40 yrs, 41-50yrs and 51-60yrs.

**Results:** Among the population examined 47% of them were males and 53% of them are females. The study included people from the age group 30-40 years is 13%, 41-50 years is 33%, 51-60 years is 54%. Dental caries (66%) was the major causes for partial edentulism. From this survey, it is seen that people who declined prosthodontic treatment due to lack of knowledge is 47%, due to fear is 24%, economic reason is 2% and other reasons include 27%.

**Conclusion:** The Prevalence of status of partial edentulous in the state population of urban areas of Chennai is relatively high. The awareness about rehabilitation of partial edentulous state is also inadequate. Hence, more awareness and treatment program has to be initiated to address this concern.

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**INTRODUCTION**

Edentulism is defined as the absence or complete loss of all natural dentition (teeth). While tooth loss has long been considered an inevitable part of the ageing process, significant changes in oral disease patterns have occurred in the twentieth century relative to the rate of edentulism in the United States. Until the mid-twentieth century, much of dental care was devoted to tooth extraction. Prevention of dental decay was unknown, and attempts to restore cavities were often painful.

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Tooth loss results from dental decay, gum disease (periodontitis), or accident. It can also reflect attitudes of the patient or provider, accessibility to dental care, or prevailing societal attitudes regarding oral health care. Edentulism is considerably less prevalent in higher than lower socioeconomic segments of the population.

Risk factors for edentulism include socioeconomic status, income, education level, and smoking. Edentulous individuals have been identified as being at greater risk for cardiovascular disease than are dentate individuals. Retention of fewer teeth in older adults has been correlated with poorer health, in contrast to greater tooth retention among people of the same age who report better general health. Replacement of missing teeth has historically focused on the fabrication of complete dentures. Materials used in the earliest dentures ranged from

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carved ivory to animal bones. Often the results were only slightly better than being completely edentulous from a functional and an aesthetic view. Since the 1980s, the use of dental implants has begun to show promise for improving the retention of artificial teeth among those individuals healthy enough to be considered viable candidates.

Partial edentulism is the condition where in only few teeth of the dental arch are missing. This can be restored by using partial dentures or implants. Partial 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%.

*The present study was conducted with following aims and objectives:*

- To find out the frequency of partial edentulism and its arch distribution status.
- Awareness to replace it.
- Ratio of removable to fixed among the restored cases.
- Gender difference in partial edentulism.

## MATERIALS AND METHODS

An area based, cross sectional, epidemiological study on randomly selected population to determine the prevalence of partial edentulous patients in relation to age, gender and socioeconomic factors residing in the Anna Nagar and Aadhar area of Chennai was chosen. A total of 150 subjects were selected. The informed consent of each patient was taken prior to recording oral health. Subjects were selected on the basis of oral examination only. The criteria for selection of subjects in the study were:

- Individuals should be between age groups 30-60yrs only.
- Only permanent dentition was considered.
- Third molar were excluded in the study.
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### Questionnaire pro-forma

A self administered questionnaire which sought inquiries related to sociodemographic factors which included name, age, sex, educational qualification, monthly income, reasons for edentulism (trauma, dental caries, periodontal disease, tobacco smoking, alcohol consumption, diabetes, hypertension, hyper/hypothyroidism, etc..) was prepared. Next part of the questionnaire elicited information regarding duration of partial edentulism with/without treatment, how often patient visits a dentist and why the teeth/tooth was not restored.

The questionnaire consisted of (1) information about the participants like name, age, and sex. (2) reasons for loss of teeth such as caries, periodontal diseases were recorded. (3) Duration of the patient with treatment or without treatment was analysed. (4) The type of prosthetics whether removable or fixed were examined. (5) Oral hygiene practices like visiting the dentist was questioned. (6) The reason for the participants decline to the prosthetics such as lack of knowledge, fear, economic reasons were also examined. The questionnaire was conducted personally for each person

who agreed to participate in the study in the form of an interview which appeared like normal conversation to allow for introduction and exploration of ideas deeply.

## RESULT AND DISCUSSION

Out of the 150 subjects 80 were male and 70 were females. The incidence of partial edentulism among the surveyed group was 23 % with no significant gender based difference in the frequency of its occurrence.

Among the population examined 47% of them were males and 53% of them are females. The study included people from different age groups 30-40 yrs is 13%, 41-50 yrs is 33%, and 51-60 yrs is 54%. Dental caries (66%) was the major causes for partial edentulism. From this survey, it has been seen that people who decline prosthodontic treatment due to lack of knowledge 47%, due to fear is 24% Lack of awareness to go for rehabilitation was seen in both groups. However, female subjects showed more awareness than men did. All the subjects preferred to undergo fixed partial denture treatment rather than removable options. All the restored subjects (both men and women) preferred fixed dentures than the removable ones. Another important finding of this study was the predominance of maxillary posterior edentulism in men and mandibular posterior edentulism in women.

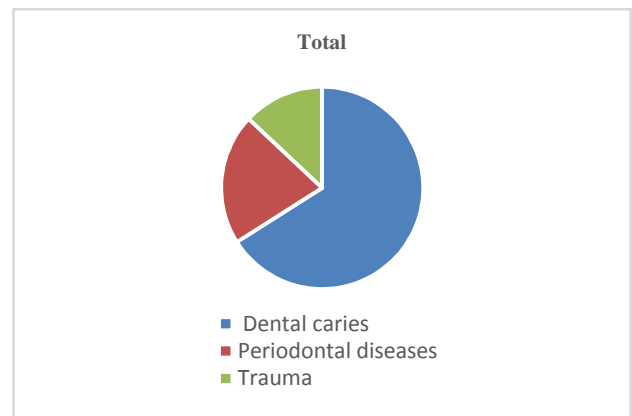


Figure 1

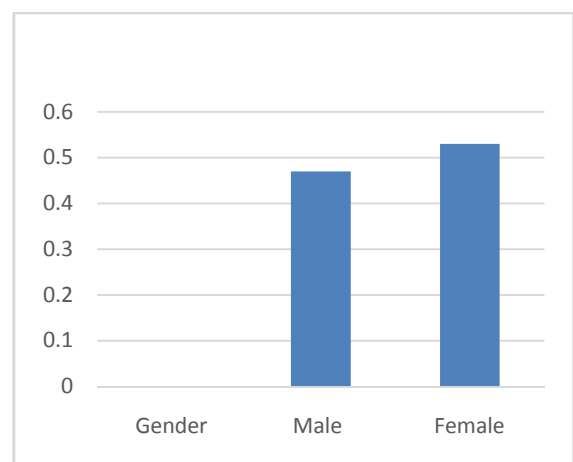


Figure 2

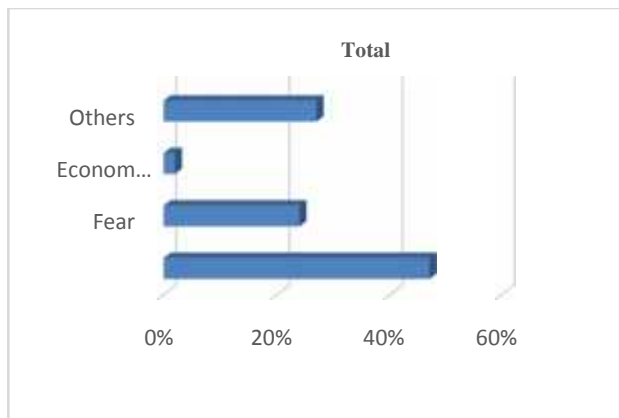


Figure 3

Dolan *et al* conducted a study about risk indicators of edentulism, partial tooth loss and prosthetic status among black and white middle aged and older adults through interview and dental examination. They concluded that people who had poor general health was significantly associated with edentulism and the blacks were less likely to receive prosthetic crowns. AL-Dwairi also conducted a study on frequency of partial edentulism and removable denture construction among Jordanians. This study investigated the frequency of different classes of patterns of partial edentulism and the most frequently used design components of conventional cobalt–chromium RPD constructed for patients. Though cross sectional surveys provide information on the extent and demographic distribution of tooth loss at one time, such survey cannot estimate trends in tooth loss. Detection of trends in a population requires longitudinal studies during which the same individuals are observed on more than one occasion.

## CONCLUSION

The loss of teeth can lead a patient to seek care for functional reasons as they notice a diminished function to a level that is unacceptable to them. The level at which a patient finds function to be unacceptable varies among individuals. This variability increases with accelerating tooth loss. Also, the aesthetic impact of tooth loss can be highly significant and may be more of a concern to a patient than loss of function. The finding of this survey justify the greater need to educate the younger generation regarding the importance of tooth/teeth, treatment of diseased tooth/teeth and also to replace the same in-case if it has to be extracted due to any reasons.

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