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### Original Article

## An Epidemiological Study of Analysis of Partially Edentulism in Study Group

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#### ABSTRACT:

**Introduction-** There could be various reasons for tooth loss among which; caries, periodontal diseases, and trauma. The present study was conducted to determine the partially edentulism in study population. **Materials & Methods:** The present study was conducted on 620 patients of both genders. General information such as name, age, gender etc. was recorded. All patients were assessed for partially edentulism on the basis of age, gender and Kennedy's classification. **Results-** Out of 620 patients, males were 370 and females were 250. The difference was non-significant (P= 0.1). Age group 20-30 years had 40 males and 25 females, 30-40 years had 60 males and 35 females, 40-50 years had 75 males and 40 females, 50-60 years had 85 males and 50 females and >60 years had 110 males and 100 females. The difference was significant (P= 0.01). Edentulism was on the basis of Kennedy's classification. It was seen in maxilla as class I (120), class II (100), class III (75) and class IV (40). In mandible, as class I (140), class II (105), class III (5) and class IV (35). The difference was significant (P= 0.01). **Conclusion-** Males had higher number of edentulousness than females. Age group >60 years had higher number of patients. Kennedy's class I was the predominant type.

**Key words-** Edentulism, Kennedy's, Maxilla.

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### INTRODUCTION

An edentulous space can be called a gap in the dental arch which could've been occupied by one or more teeth. It can be complete or partial. A dental arch in which one or more but not all natural teeth are missing is partial edentulousness. There could be various reasons for tooth loss among which; caries, periodontal diseases, and trauma are the ones commonly enlisted. Many studies have stated caries as the main cause for tooth loss; however, periodontal diseases have also been cited to be contributing factor to tooth loss in children as well as adults.<sup>1</sup>

Oral health has a huge contribution towards the quality of life. Loss of teeth and compromised oral health negatively affect the diet and nutrition of an individual. This ultimately results in poor general health and also denies them the pleasure of taking food of their choice. Partial edentulism leads to clinical challenges and lifestyle compromises. Clinically, it results in drifting and tilting of adjacent teeth,

supra-eruption of opposing teeth, altered speech, changes in facial appearance, and temporomandibular disorders.<sup>2</sup> Furthermore, 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.<sup>3</sup> Pattern of tooth loss is a clear indicator of levels of oral hygiene, dental health awareness, the magnitude of dental problems, and the management. There are also studies which have analyzed the treatment needs and awareness regarding edentulousness in the screened populations. Education is an important factor associated with the awareness of dental disease and its treatment needs. Some studies have stated that patients with lower levels of education status exhibited higher risk of becoming completely edentulous.<sup>4</sup> The present study was conducted to determine the partially edentulism in study population.

**MATERIALS & METHODS**

The present study was conducted in the department of Prosthodontics. It comprised of 620 patients of both genders. All were informed regarding the study and written consent was obtained. Ethical clearance was obtained before the study. General information such as name, age, gender etc.

was recorded. All patients were assessed for partially edentulism on the basis of age, gender and Kennedy’s classification. Results were tabulated and subjected to statistical analysis using chi-square test. P value less than 0.05 was considered significant.

**RESULTS**

**Table I** Distribution of patients

Total- 620		
Males	Females	P value
370	250	0.1

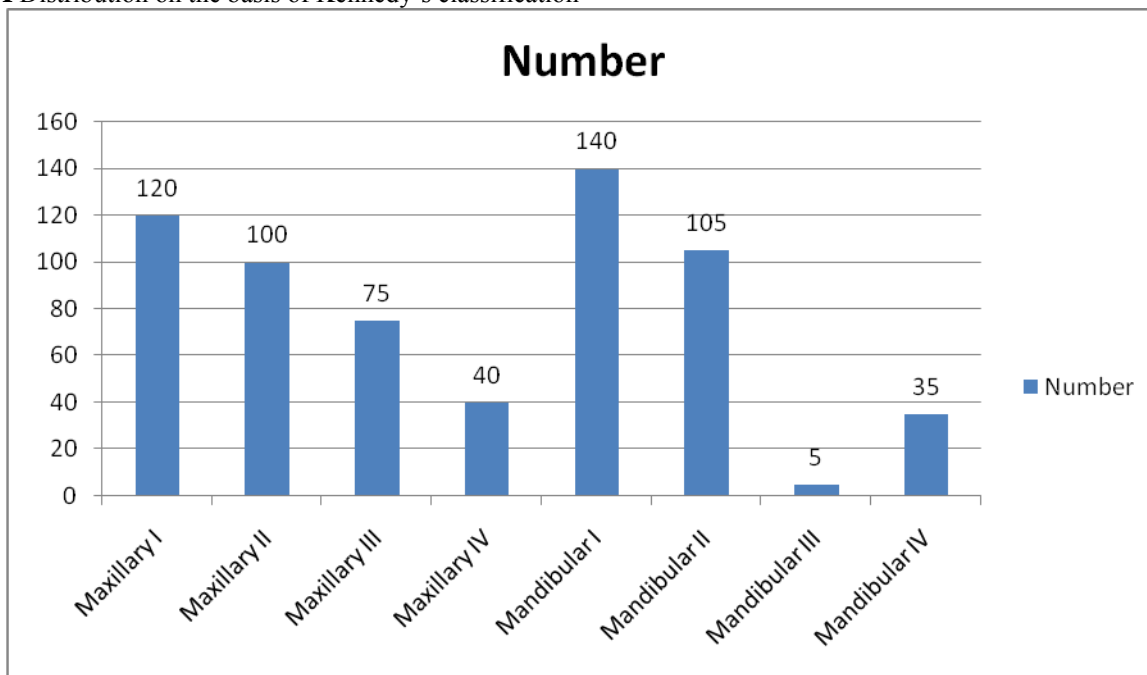
Table I shows that out of 620 patients, males were 370 and females were 250. The difference was non-significant (P- 0.1).

**Table II** Age & Gender wise distribution of patients

Age group (years)	Males	Females	P value
20-30	40	25	0.01
30-40	60	35	
40-50	75	40	
50-60	85	50	
>60	110	100	
<b>Total</b>	370	250	

Table II shows that age group 20-30 years had 40 males and 25 females, 30-40 years had 60 males and 35 females, 40-50 years had 75 males and 40 females, 50-60 years had 85 males and 50 females and >60 years had 110 males and 100 females. The difference was significant (P- 0.01).

**Graph I** Distribution on the basis of Kennedy’s classification



Graph I shows that edentulism was on the basis of Kennedy’s classification. It was seen in maxilla as class I (120), class II (100), class III (75) and class IV (40). In mandible, as class I (140), class II (105), class III (5) and class IV (35). The difference was significant (P- 0.01).

## DISCUSSION

There are studies which have analyzed the treatment needs and awareness regarding edentulousness in the screened populations. Education is an important factor associated with the awareness of dental disease and its treatment needs. Studies have stated that patients with lower educational status exhibited higher risk of becoming completely edentulous.<sup>5</sup>

In a study conducted by Abdurahiman et al<sup>6</sup> there was no significant gender difference in the partial edentulism; however, women were more aware than men to restore it. Periodontal disease and dental caries proved to be the main determinants for the high occurrence of tooth loss and for the high percentage of edentulism. The failure to visit the dentist regularly was also found to be a major reason. Several studies also concluded that age was strongly associated with edentulism. The combined effects of dental caries and periodontal diseases as well as the treatment decisions associated with dental caries and periodontal disease were found to increase with the age.

In present study, out of 620 patients, males were 370 and females were 250. We found that age group 20-30 years had 40 males and 25 females, 30-40 years had 60 males and 35 females, 40-50 years had 75 males and 40 females, 50-60 years had 85 males and 50 females and >60 years had 110 males and 100 females. This is similar to Shah et al.<sup>7</sup>

We observed that most commonly Kennedy's class I (260) was seen followed by class II (205), class III (80) and class IV (75). A study by Zaighamet al<sup>8</sup> found that among the 100 subjects evaluated, 55 subjects were male and 45 were females. 46 subjects were below 10th standard grade, 16 were between 10th and II PUC and 38 were graduation and above group. Prosthodontic treatment need awareness was highest in Class III Kennedy's Classification of partial edentulous space in both maxillary and mandibular arches. The maximum awareness about the implant placement for the treatment of partial edentulousness was among the graduation group. The awareness regarding the effect of missing teeth was high among the graduation and above group.<sup>9</sup>

A study by Hunt et al<sup>10</sup> found six hundred subjects aged between 15 and 85 years (300 males and 300 females) were edentulous. There was no statistically significant relationship between age and gender of the patient with edentulousness. However, with an increase in age, there was greater trend toward partial edentulousness followed by complete edentulousness of the patients in the groups of above 45 years of age.

## CONCLUSION

Males had higher number of edentulousness than females. Age group >60 years had higher number of patients. Kennedy's class I was the predominant type.

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