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# **RESEARCH ARTICLE**

## FREQUENCY OF PARTIAL EDENTULISM AND AWARENESS TO RESTORE THE SAME: A CROSS-SECTIONAL STUDY IN THE AGE GROUP OF 18-25 YEARS AMONG JAMMU & KASHMIR STUDENT POPULATION

### \*Dr. Youginder Singla, Dr. Manpreet kaur and Dr. Rajni Sharma

Department of Prosthodontics, Maharaja Ganga Singh Dental College and Reasarch Centre Sriganganagar, Rajasthan, India

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### ABSTRACT

Treating partial edentulism forms a major share of Prosthodontic clinical practice. The purpose of this study was to find out the frequency of partial edentulism, its arch distribution status, awareness to restore, and the ratio of removable to fixed prosthesis among a student sample aged 18-25 years. The methodology selected was a questionnaire survey followed by clinical examination of the student community from Jammu. The results showed that the frequency of partial edentulism among the surveyed group was significant with predominance in maxillary posterior edentulism in women. Though there was not any significant gender difference in the partial edentulism, women were more aware than men to restore it. All restored cases were with fixed bridges and no anterior edentulism was found. The study also revealed a lack of awareness and need to educate the population.

Key words: Partial edentulism, Descriptive study, Cluster sampling, Arch distribution, Awareness.

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### **INTRODUCTION**

Replacement of missing teeth is a common patient need and with increase in life expectancy of individuals, the need for restoration of partially edentulous condition is increasing. Various epidemiologic studies have confirmed the prevalence of partial edentulism, its prosthetic rehabilitation status, removable versus fixed restoration rate, lack of awareness on the part of public etc (Eklund and Burt, 1994; Brown, 1994; Retnakumari, 1996; Bengtsson, 1996). Long-term partial edentulism leads to various undesirable sequalae like occlusal discrepancies, aesthetic impairment, migration and spacing of surrounding teeth, supra eruption, loss of space, TMD disorders, etc.

#### Aims and Objectives

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

#### \*Corresponding author: Dr. Youginder Singla,

### **MATERIALS AND METHODS**

In this study, a survey and a patient examination method was proposed (Bokhout *et al.*, 1997; Dolan *et al.*, 2001). The population for the study comprised of the student community aged (18-25) years from Jammu. As the study was planned to be a descriptive one, it was proposed to take 10% of the total student population through cluster sampling method. Each cluster consisted of group of students from various courses such as Arts, Science, Technical, Electrical, Travel and Tourism, etc. 500 students were surveyed out of which 250 were men and 250 were women (Table 1). All the sampling units selected were screened using questionnaire and clinical examination. The data collected were analysed using appropriate techniques.

### RESULTS

Table 2 shows the sex distribution, and the frequency of partial edentulism. A total of 117 affected cases were found, out of which 62 were men and 55 were women. 23% of the surveyed groups were affected. Table 3 shows the total number of treated and untreated cases from the affected population. It also shows the gender differences in treated cases. 83% in the total affected population had not under gone treatment.

Department of Prosthodontics, Maharaja Ganga Singh Dental College and Reasarch Centre Sriganganagar, Rajasthan, India.

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0.4	Me	en	Won	nen	Total Population Surveyed		
Category	No	%	No	%	No	%	
Surveyed	250	50	250	50	500	10	

Table 2. Frequency of Partial edentulism and Sex Distribution

Sav	Affe	cted	Unaffe	ected	Total	
SCA	No	%	No	%	No	
Men	62	25	188	75	250	
Women	55	22	195	78	250	
Total	117	23	383	77	500	

The table also shows that 27% of women had under gone treatment which was considerably greater than men (8%).

 Table 3. Distribution of Treated verses Untreated and

 Gender Difference

C	Trea	ated	Untreated		
Sex	No	%	No	%	
Men	5	8	57	92	
Women	15	27	40	73	
Total	20	17	97	83	

Table 4 refers to the arch and gender wise distribution of partial edentulism. When compared between men and women, men showed predominance towards missing maxillary posteriors (70%) while women showed predominance towards missing mandibular posteriors (73%). None of the subject had any anterior edentulous space.

Table 4. Arch and Gender Wise distribution of Partial Edentulism

Arc	М	en	Wo	men	То	tal	
No	%	No	%	No	%	No	%
Max	Ant	-	-	-	-	-	-
Mand	Ant	-	-	-	-	-	-
Max	Post	56	70	24	30	80	46
Mand	Post	25	27	69	73	94	54
Tot	81	47	93	53	174	100	

Table 5 depicts the ratio of removable partial denture to fixed partial denture among the restored cases. All the subjects were treated by fixed partial dentures.

Table 5. Ratio of removable to fixed among the restored cases

Category	Men	Women	Total
RPD	0	0	0
FPD	9	20	29
Total	9	20	29

Table 6 shows the various reasons for not restoring the edentulous condition. "Felt no deficiencies" (57%) ranked the highest, (19%) were due to lack of knowledge, (16%) had fear for dental treatment procedures and (8%) due to financial problem.

Table 6. Reasons for not restoring Edentulism

Reasons for not	Men		Wo	men	Total		
Restoring	No	%	No	%	No	%	
Lack of knowledge	8	44	10	56	18	19	
Felt no deficiency	33	60	22	40	55	57	
Financial	7	87	1	13	8	8	
Fear	9	56	7	44	15	15	

#### DISCUSSION

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 literature on tooth loss has been limited primarily to cross sectional studies of groups that estimate the prevalence of complete edentulism and the mean number of teeth lost. Brown (Eklund and Burt, 1994) reported detailed patterns of tooth loss among U.S. employed adults and seniors in 1985-86. Dolan et al. 1996 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. He concluded that people who had poor general health were significantly associated with edentulism and the blacks were less likely to receive prosthetic crowns. AL-Dwairi (Kumari and Kuriakose, 2002) 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. Ostenberg et al. 2007 conducted a survey on edentulism associated with obesity among Swedish people aged 55-84 years over 22 year period. The study indicated an association between edentulism and obesity. 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. Our survey analysed the incidence of partial edentulism among student population aged (18-25) years at Jammu.

The awareness of this student population to undergo restorative treatment was also assessed. In the surveyed group, the incidence of partial edentulism was 23% (Table 2) which indicate that around 1/4<sup>th</sup> of the surveyed group was affected. The restored cases were only 17% (Table 3) out of the affected cases, which showed that there was a lack of awareness to treat the same. The reasons for not restoring the edentulousness might be highlighted using Table 6. It also shows the various reasons and percentages for not restoring the condition, out of which the option "Felt no deficiencies", showed the highest percentage (57%). This means that the people were aware of the treatment but still did not turn up for it. It can be summarized from the above finding that, the youngsters might be more concerned about their aesthetics than other functions of the masticatory system. This can also be supported with the fact that there was no anterior edentulousness in the surveyed group (Table 4). Lack of knowledge (19%), fear (16%) and (8%0 were the other reasons for not treating the cases. These clearly highlights that there is a strong need to educate the young generation. Though there was no much gender difference in the incidence of partial edentulism, women were more aware than men to restore the same. This can be explained using Table 3 where 275 of women out of affected cases had turned for treatment when compared to men (8%). All the restored subjects (both men and women) preferred fixed dentures than removable ones (Table 5). Another important finding of this study was the predominance of maxillary posterior edentulism in women (Table4). The reason at present is unknown and would require further studies.

#### Conclusion

- 1. The incidence of partial edentulism among the surveyed group was 23% with no significant gender based difference in the frequency of its occurrence.
- 2. A predominance of partial edentulism in maxillary posterior region in men and mandibular posterior region of women.
- 3. Lack of awareness to go for rehabilitation was seen in both groups. However, women subjects showed more awareness than men did.
- 4. All the subjects preferred to undergo fixed partial denture treatment rather than removable options.
- 5. 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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