

# Prevalence of Different Types of Removable Dentures in Patients Visiting District Hospital, Kathua, Jammu and Kashmir

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## Abstract

**Aims and Objectives:** The aim of this study was to evaluate the prevalence of different types of removable dentures in elderly population of Jammu.

**Materials and Methods:** The study was carried out in District Hospital, Kathua, J&K from July 2016 to December 2016. The age range of the subjects was 41 to 70 years. A single examiner clinically examined all the selected subjects.

**Results:** Majority of the subjects were wearing posterior RPD (57.5%) followed by anterior RPD (12.83%) and conventional over dentures (11%). In the present study a statistically significant association was found for both male and female subjects opting for posterior RPD in all the age ranges. Majority of the males (69%) opting for posterior RPD was found in 60-70 years of age group, whereas majority of the females (57%) wearing posterior RPD were in the age range of 50-60 years.

**Conclusion:** The prevalence of removable dentures was more among the lower socio economic status group of the society and a trend towards the replacement of posterior teeth was common among the sample size with equal consideration by males and females.

**Key words:** Edentulism, Overdentures, RPD

## INTRODUCTION

Denture is an artificial frame used to replace or rehabilitate the missing teeth and adjacent soft tissues in the oral cavity. It is divided into fixed partial and removable dentures, partial or complete.<sup>[1-8]</sup> Many studies were conducted on the subjects with Partial edentulism with or without RPD to find their satisfaction with RPDs.<sup>[9,10]</sup>

Numerous investigations in different developed countries showed the gradually decreasing percentage of adults

wearing removable dentures. Epidemiological data vary in different countries.<sup>[1-8]</sup>

In developed countries, the need for removable partial dentures declined whereas in developing countries their need is still increasing.<sup>[11]</sup> Also in India, patients with lower socio economic status tend to opt for removable dentures rather than fixed partial denture and implants. Edentulousness varies with the availability and accessibility of dental care.

A significant increase in prevalence of edentulousness is correlated with increasing age.<sup>[1-8,11-13]</sup> Edentulousness is also dependent on gender.

Lack of motivation and limited finances force the lower class of the country to get compromised dental care by quacks and non-qualified posers. Which often leads to various infections and lesions in the oral cavity including

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the periodontal disease and systemic complications also because of compromised sterilization.

The aim of the study was to evaluate the prevalence of different types of removable dentures in elderly population of Jammu.

## MATERIALS AND METHODS

The study was conducted in District Hospital, Kathua, J&K from October 2016 to Sept 2017.

The final sample consisted of 927 subjects. Out of 927 subjects, 600 were selected based on the age range and inclusion criteria and were equally divided into 300 males and 300 females. The age range of the subjects was 41 to 70 years. The presence of different types of removable dentures i.e. anterior RPD, posterior RPD and conventional over dentures (COD) were evaluated from the normal oral examination. The evaluation was performed by a single examiner specialized in prosthetic dentistry. The socio economic status was assessed using modified Kuppaswamy scale. [14]

The association factors like age and gender with the type of removable denture were evaluated using a chi-square test.

## RESULTS

The results of the present study showed that majority of the subjects were wearing posterior RPD (57.5%) followed

by anterior RPD (12.83%) and conventional over dentures (11%). In the present study a statistically significant association was found for both male and female subjects opting for posterior RPD in all the age ranges. Majority of the males (69%) opting for posterior RPD was found in 61-70 years of age group, whereas majority of the females (57%) wearing posterior RPD were in the age range of 51-60 years.

In the present study the male and female subjects opting for conventional over denture were very few with a maximum of 13 % males in the age range of 41-50 years and 15% females in the age range of 51 -60 years. Similarly in the anterior RPD 19 % male and 21% female subjects were in the age group of 41-50 years. Table 2 showed that majority of the patients in upper lower class and lower class chose removable dentures in comparison to patients of upper and middle class and there is a statistically significant relationship between the socio economic status and selection of removable dentures ( $p=0.0001$ ) (Tables 1 and 2).

## DISCUSSION

The present study was conducted in District Hospital, Kathua, J&K from October 2016 to Sept 2017. The results of the present study showed that the majority of the patients who were wearing removable dentures were of lower socio economic status and more patients were wearing posterior RPD in comparison to the anterior RPD and conventional over dentures. The results were similar in findings reported by Kar S *et al.* They also found that the

**Table 1: Age and gender distribution for different types of removable dentures**

Age group	Gender	Dentate subjects	Type of removable denture		
			Anterior RPD	Posterior RPD	Conventional overdenture
41-50 years	Male (n=100)	17	19	51	13
	Female (n=100)	18	21	52	9
51-60 years	Male (n=100)	17	9	63	11
	Female (n=100)	21	7	57	15
61-70 years	Male (n=100)	12	12	69	7
	Female (n=100)	27	9	53	11
Total (n=600)		112 (18.66%)	77 (12.83%)	345 (57.5%)	66 (11%)

$\chi^2=27.950$ ,  $df=15$ ,  $\chi^2/df=1.86$ ,  $P(\chi^2>27.950) = 0.0219$

**Table 2: Selection of removable dentures based on socio economic status**

Socio economic status	Number of subjects	Dentate subjects	Type of removable denture		
			Anterior RPD	Posterior RPD	Conventional over denture
Upper class	1	1	0	0	0
Upper middle class	3	3	0	0	0
Lower middle class	46	2	13	21	10
Upper lower class	258	41	61	137	19
Lower class	292	37	76	156	23

$\chi^2=39.442$ ,  $P=0.0001$

prevalence of over dentures was very low among higher socio economic groups of the society.<sup>[15]</sup> The findings of our study showed that there was no correlation between the age ranges of the subjects and the prevalence of removable denture types which are in accordance with the studies done by Kar S *et al.* however some studies found that there is increased risk of complications related to complete dentures with increase in age of the patients and removable partial dentures were more durable as a dental replacement for elderly patients.<sup>[16,17]</sup> The findings of study showed that majority of the males and females were wearing posterior RPD's in comparison to anterior RPD's and over dentures, similarly few of the studies showed that the male gender showed a higher prevalence for anterior and posterior RPD stating the reason that the low education and cultural restrictions of females to undergo dental treatment.

Despite the various advances in dental treatment, the selection for the rehabilitative options depends on the patient's attitudes and socioeconomic status.<sup>[18,19]</sup>

The limitation of the present study is the limited distribution of area, urban and rural population should have been segregated and considered leading to better results of the study. Further evaluations of different socio economic strata over a wide area of distribution are required.

## CONCLUSION

The prevalence of removable dentures was more among the lower socio economic status group of the society and a trend towards the replacement of posterior teeth was common among the sample size with equal consideration by males and females. Affordable fixed prosthodontics treatment should be advocated to enhance the oral health of the particular strata of the society. The unethical and

substandard treatment provided by the non-qualified so called posers should be strongly dealt with.

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