Survey of partially edentelous patients in relation to age, gender and use of removable prosthesis

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ABSTRACT

Background: The need for removable partial denture dental prosthesis varies considerably between age, and gender. The aim of this study was survey such relations.

Materials and method: A thousand partially edentulous patients, visiting the Department of prosthodontics, Dental school, University of Baghdad, through period of three were examined to determine the type of prosthodontic services done for these patients and to correlate between age, gender and use of removable appliance.

Results: Even distribution was found between male and female attending prosthodontic department for prosthodontic need and depending on die case sheets of die patients and for the years 1989- 1991. The use of single partial denture (Rpd) showed a decrease with age. The use of double partial denture (Rpd/Rpd) showed increase till age of thirty then showed decrease after this age. The use of both, complete denture against and single complete denture showed an increase with age. For age less than 20, 30, and 40 years, (bilateral free end saddle (class l) was the most common partial denture.

Conclusion: No statistical difference was found between male and female for all Kennedy classification and with all age groups.

Key words: Edentelous, removable prosthesis **(J Bagh Coll Dentistry 2006; 18(1) 38-41)**

INTRODUCTION

The need for removable partial denture dental prosthesis varies considerably between countries. This may be attributed to the fact that the need for rehabilitation of edentulous mouth is derived from a combination of many factors such as mastication, appearance, oral comfort and social acceptance, moreover, the access to dental care varies between different societies and it is probably of a great importance regarding the type of dental treatment.

Most of epidemiological surveys and clinical studies concerning the evaluation of removable prosthodontic need were carried out in countries with highly developed dental care and with particular emphasis in oral hygiene measures. Some of these studies showed decline in extraction of teeth, fewer removable partial denture wearers and less edentulism. Due to lack of any base data regarding the current needs and future needs of removable prosthodontics for Iraqis both epidemological and clinical studies are required to provide use with this information and to compare it with other countries.[2,3,5,6]

This article presents clinical survey done at the university of Baghdad. College of Dentistry, to provide information regarding removable prosthodontics services and to correlate it with age and gender.

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MATERIALS AND METHODS

A thousand partially edentulous patients (497 male and 503 female) visiting the Department of prosthodontic, College of Dentistry, University of Baghdad, through out the period of 3 years from 1989-1991 were examined.

Both genders and all different ages attending the Department were examined. The sample was divided into six age groups:

1. Less than 20 years
2. 20-29 years
3. 30-39 years-
4. 40-49 years
5. 50-59 years
6. 60 and over years

The recorded data include gender, age, missing teeth, classification of partial denture according to Kennedy classification and type of removable prosthesis. The type of removable prosthesis include, single removable partial denture (maxillary or mandibular), double partial denture (maxillary and mandibular), complete denture against removable partial denture and single complete denture against natural teeth.[1,2,4,5,8]

RESULT

The gender and age distribution of the whole sample is shown in table l. There is even distribution between male and female. The highest number of patients attending the clinic were from age groups 20, 40 and 50 years, then comes age groups 30 and 60 years. The least

number of patients attending the clinic were from age group less than 20 years. The number and the percentage of removable appliances made for the patients are shown in table II, and figure l. For age group less than 20 years, 92% of the prostheses made were single removable partial dentures, 7% were treated with double partial denture (Rpd/Rpd) and only 1% was treated with single complete denture. For age group (20-29 years), 74% of prostheses done for this age group was single removable partial denture, 26% were treated with double removable partial denture. No case of complete denture against partial denture or single complete denture was reported for this age group.

For age group 30-39 years, single partial denture and double partial denture have almost the same percentage (46%,49%) respectively (statistically significant from other types of prosthesis). For the age groups 40 and 50 years, double partial denture (50%, 42% respectively) showed higher percentage than single partial dentures (33%, 19%).

For age group 60 and over years, single complete denture showed higher percentage (30%) then comes double partial dentures (28%) then comes complete denture against partial dentures (25%) and last single complete denture (18%). Figure 1 shows that the use of single partial denture decrease with age while the use of double removable partial dentures seem to increase till age thirty then it starts to decrease after this age. The use of complete denture against partial denture or the use of single complete denture against natural teeth showed increase with age.

The number and percentage of removable partial dentures of different Kennedy classification with different age group is shown in tables 3, 4, and figure 2. The number of removable partial dentures was 1275 (587 male and 688 female).

For age group less than 20 years almost 90% of the partials were bounded saddle (class III) and 1095 were class IV. There was no statistical difference between male and female using these two types of partial dentures for this age group (table 4). For age group 20 years, bounded saddle also form the highest percentage (80%), which is statistically significant. There was no statistical difference between class I, II, and IV Kennedy classification. There was no difference between male and female for this age group.

For age, group 30 years, bounded saddle partial denture showed higher percentage (58%) (statistically significant) from other types of Kennedy classification. Class I (bilateral free end saddle) form 20% of this age group. Also no difference was found between male and female for this age group.

For age group 40 years, bounded saddle partial denture also form higher percentage (46%). Class I and class II showed almost even distribution (23%, 22%) respectively.

The recorded data include gender, age, missing teeth, classification of partial denture according to Kennedy classification and type of removable prosthesis. The type of removable prosthesis include, single removable partial denture (maxillary or mandibular), double partial denture (maxillary and mandibular), complete denture against removable partial denture and single complete denture against natural teeth.[1,2,4,5,8]

DISCUSSION

The results of this study showed clearly that there is no difference between male and female need for removable partial denture regardless of the age group and type of prosthesis or type of Kennedy classification. This finding is disagreement with Ronalds finding that more men than women need removable partial dentures, and in disagreement with Faraj's finding in regard to complete dentures [1]. This study showed also that the use of single partial denture (Maxillary or Mandibular) decrease with age, while more complicated prostheses (removable partial denture against removable partial denture, single complete denture against removable partial denture , and single complete denture against natural teeth) to increase with age. This finding agree with Ronalds finding [10] who stated that denture wearers tend to be in the older age group and agrees with Douglass finding [8], in regard to removable partial denture and complete dentures.

With regard to Kennedy classifications for age groups (20 30 and 40 years), bounded saddle (class III) showed the highest percentage. This could be due to:

1- Most of the patients attending the clinic are of low

2- Income: They can't afford the cost of fixed partial dentures.

3- While with age groups (50 and 60 years old), bilateral free end saddle showed higher

percentage.[7-10]

We can conclude from this study that:

1. There is even distribution between male and female attending prosthodontic Department for prosthodontic need.
2. The use of single partial denture seems to decrease with age (figure 1).
3. The use of double partial denture (Rpd/Rpd) increase with age till thirty years of age then showed decline after this age.
4. The use of complete denture against partial denture or use of single complete denture against natural teeth showed increase with age.
5. Age groups less than 20, 30 and 40 years, bounded saddle partial denture (class III) showed highest percentage of partial dentures (90%, 80%, 58% and 46% respectively), table III (statistically significant).
6. At the age groups 50 and 60 and over years, bilateral free end saddle (class I), showed higher percentage (43% 51% respectively, table III).
7. Class IV Kennedy classification showed least percentage for all age groups and no statistical differences was found between all age groups for this classification.
8. There is no statistical difference between male and female for all Kennedy classification for all age groups.

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Table 1: age and gender distribution of the samples.

Age groups (years)	Male	Female	Total
<20	45	27	72
20-269	114	87	201
30-39	70	109	179
40-49	79	126	202
50-59	90	111	201
≤ 60	102	45	147
Total	497	503	1000

Age years	No. of removal partial denture		Class I		Class II		Class III		Class IV	
	No.	%	No.	%	No.	%	No.	%	No.	%
<20	76	6					60	90	6	10
20-29	253	20	15	6	25	10	201	80	12	5
30-39	265	21	54	20	47	18	154	50	10	4
40-49	291	23	87	30	65	22	134	46	5	2
50-59	246	19	105	43	62	25	67	27	12	5
≤ 60	144	11	74	51	33	23	34	24	7	5
Total	1275		335	26	232	18	658	51	54	4

***Bilateral free end saddle partial denture**
**** Unilateral free end saddle partial denture**
***** Bounded saddle partial denture**
****** Single bounded saddle across the medline**

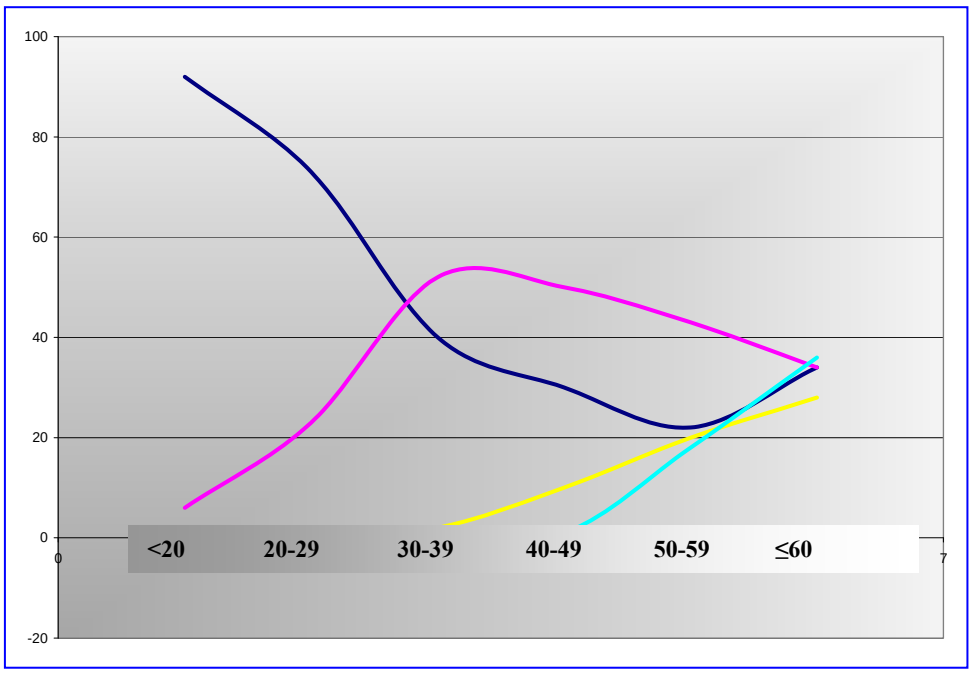

Figure 1: Percentage of persons with prosthodontic needs by age and type of services.

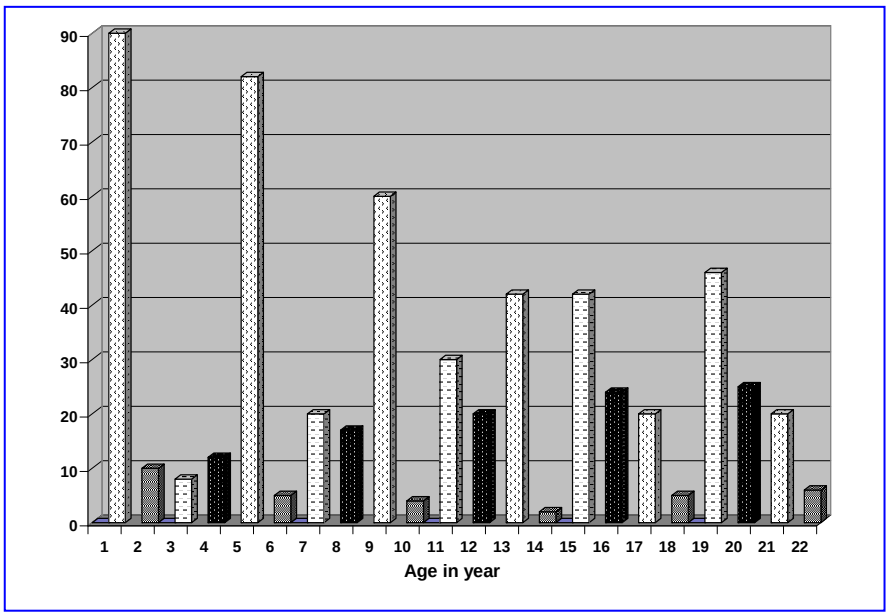

Figure 2: Percentage of removable partial dentures by age and Kennedy's classification.