ORIGINAL RESEARCH PAPER
Volume-9 | Issue-2 | February-2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

ASSESSMENT OF PROSTHODONTIC STATUS, AWARENESS AND NEEDS OF POPULATION OF WEST UP – AN EPIDEMIOLOGICAL CROSS SECTIONAL STUDY

Prosthodontics

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ABSTRACT

Objectives: To assess the Prosthodontic status and needs with respect to age, gender, educational level and economic status in western UP.
Method and Results: A total of 482 subjects aged 30-70 years were selected from the OPD of Subharti Dental College and Hospital and the neighbouring villages of Meerut City. A questionnaire was developed according to WHO oral assessment form (1997). Data obtained was subjected to statistical analysis SPSS version 17.0. Data comparison was done by ANOVA to find out the statistical significance of comparisons.
Results: Out of 482 patients 49.3% had no prosthesis. Maximum patients wore RPD for missing teeth. Out of all the subjects surveyed 227 females and 173 males were in need of prosthesis due to missing teeth. Maximum patients were aware of FPD as a treatment option (230 males, 140females), followed by RPD (180 males, 110 females) and CD (140 males, 120 females).
Conclusion: Lack of awareness, financial constraints and lack of oral health care are primary reasons for not getting the missing teeth replaced.

KEYWORDS

prosthesis, oral health status

INTRODUCTION

Oral health gives an insight to the general health of the individual. Good dental care is important to maintain healthy teeth, oral mucosa and tongue. Loss of teeth impacts the overall health of an individual. It leads to drifting of teeth, supraeruption, loss of bone, poor oral hygiene thereby affecting mastication, phonetics, esthetics, dietary intake and overall nutritional status of the being.[1]

Assessment of oral health status is vital for planning oral healthcare programs aimed at rehabilitating the patients[2].Knowing the prosthetic needs of the patients helps to gather the information in a systemic manner and brings a change beneficial to oral health of the population.[3] Awareness and knowledge of different dental procedures and different dental prosthesis by the individual helps to improve the oral health and self confidence.[4]

Yusuf and Fakiha in their survey concluded that 53.1% of the population did not get their teeth replaced. Thus they emphasized the need of motivation and education among patients[5]. Shigli k in their study regarding the attitude towards replacement of teeth among patients found that majority of study subjects were only aware of the mastication function of teeth[6]. Hence, as a dentist it is our moral duty to make the patients aware and motivated for dental checkups and get the missing teeth replaced by a prosthesis. Therefore, a cross sectional study was conducted to survey the prosthetic status, needs and knowledge of patients towards prosthodontic rehabilitation residing in western UP, since most of the rural population believe that loss of teeth is a natural process and are not aware of various treatment modalities.

MATERIAL AND METHOD

A total of 484 subjects in the age range of 30-70 years were selected from the OPD of Subharti Dental College and Hospital and the neighbouring villages of Meerut City for this cross sectional study. The sample size selected was based on the formula $n= z^2 \alpha pq/L^2$. A questionnaire was developed according to WHO oral assessment form (1997)[7] and patients consent was taken. Diagnostic tools (mouth mirror, explorer, straight probe), mouth mask and disposable gloves were used for examination.

A pretested proforma was used for the collection of data. It consisted of two parts Part A recorded the data on socio demographic factors (age and gender) and the socioeconomic status of patient based on Kuppuswamy's classification which included education level, monthly income and occupation [8]. Part B contained a section of the World Health Organization (WHO) oral assessment form (1997)[7] to record the prosthetic status and prosthetic need of the elderly population.

A single trained investigator recorded the answers followed by clinical examination.

Data obtained was subjected to statistical analysis SPSS version 17.0. Data comparison was done by ANOVA to find out the statistical significance of comparisons. Significance level was fixed at $p<0.05$.

RESULTS

A total of 482 patients within age range of 41-80 years were surveyed out of which 213(44%) were females and 269(55.5%) were males. Among these 225(55.1% males ,44.8% females) were illiterate ,83 were educated till primary level(61.4% males ,38.5% females) , 63 till middle school(58.7% males ,41.2% females), 38 till high school (73.6% males, 26.3% females), 28 till intermediate (53.5% males, 46.4% females), 32 were graduate (53.1% males, 46.8% females) and only 15 were professional (46.6% males, 53.3% females).

Majority of subjects 106 males and 133 females had no prosthesis. Subjects with partial denture were 101 males 33 females. Full removable denture was observed in 28 males and 23 females. Single bridge was found in 16 males and 4 females. There was no significant difference between the prosthetic status and gender ($P>0.01$) (Table A). Out of all the subjects surveyed 227 females and 173 males were in need of prosthesis due to missing teeth. The need for 1 unit prosthesis was the highest (100 males and 90 females) followed by need for multiunit prosthesis (70 males and 50 females). Full prosthesis was required by 57 males and 33 females. No significant difference between prosthetic needs and gender was found ($p>0.01$) (Table B). This shows that females were not aware of their prosthetic needs.

With regards to prosthodontic treatment awareness amongst the subjects, maximum patients were aware of FPD as a treatment option (230 males, 140 females), followed by RPD (180 males, 110 females) and CD (140 males, 120 females). 40 males and 22 females were aware of implants as a treatment option. Subjects (8 males, 5 females) were not aware of maxillofacial as a treatment option. 110 males and 80 females were not aware of any of the treatment modalities in the field of prosthodontics. No significant difference was found between the prosthodontic treatment awareness and gender ($p>0.01$) (Table C).

Table-1 Distribution According To Age Group Of Different Treament Modality

Treament Modality	Prostodontic Treatment Awareness					
	Male			Female		
	41-60	21-40	61-80	41-60	21-40	61-80
CD	100	20	20	60	50	10

RPD	70	60	50	40	50	20
FPD	100	90	40	80	30	30
IMPLANTS	15	20	5	12	5	5
MAXILLOFACIAL	5	3	0	5	0	0
NONE	70	30	10	40	30	10

Table-2 Distribution According To Income Level's Of Different Prosthetic Status In Males

Prosthetic Status	Male						
	RS 2000 >	RS 1000-1999	RS 750-999	RS 500-749	RS 300-499	RS 101-299	RS < 100
No Prosthesis	50	0	0	0	6	50	0
Bridge	0	0	0	18	10	0	0
More Than 1 Bridge	0	0	0	6	10	0	0
Partial Denture	20	50	10	15	6	0	0
Full Removable Denture	0	10	8	10	0	0	0

Table-3 Distribution According To Income Level's Of Different Prosthetic Status In Females

Prosthetic Status	FEMALE						
	RS 2000 >	RS 1000-1999	RS 750-999	RS 500-749	RS 300-499	RS 101-299	RS < 100
No Prosthesis	50	30	20	33	0	0	0
Bridge	7	5	0	0	0	0	0
More Than 1 Bridge	4	0	0	0	0	0	0
Partial Denture	25	8	0	0	0	0	0
Full Removable Denture	15	0	0	0	0	0	0

DISCUSSION

Healthy soft and hard tissue constitute good oral health. Loss of teeth leads to physical, psychological and physiological trauma as mastication, esthetics and phonetics are affected [15]. A direct proportional relationship was observed between age and tooth loss in National Oral Health Survey of India[10]. In the present survey majority of people belonged to 41-60 years (53.5%) age group while only 25% people were above 60 years. This finding was similar to that in a survey done by Shigli K. The reason is the lack of information, mobility and misconception about the value of dental care among geriatric population[6].

The present study showed that 46.8% people were illiterate and 17% were primary educated. The findings were similar to a study done by Marcus et al and Gupta S et al, that lack of education is directly related to lack of awareness and results in ignorance of utilizing the available medical services[11,12]. The results of the survey show that 49.3% subjects had no prosthesis. The probable cause could be financial constraints as monthly income of 91% subjects was below Rs 2000 and also because 46.8% subjects were illiterate. It has been found that such people are not conscious of their appearance and feel that loss of teeth is a natural phenomenon. They give more importance to extraction of teeth rather than restoration.

The estimation of prosthetic needs of a population is important in planning the oral health care of the society. The prosthetic needs of female (49.9%) was much higher than male (35.7%) in the present survey. The results are in contradiction to a study done by Palmqvist [13] and Shah[14] where the prosthetic need for males was higher than females. Females in rural area are usually involved in homecare and have little time left to visit a dentist. Moreover lack of awareness and the available oral health care are the reasons for lack of prosthetic rehabilitation.

Maximum patients were aware of FPD as a treatment option which could be due to advancement and use of technology and media. Implants and maxillofacial as treatment option was not known to many subjects due to inadequate knowledge and suggests that motivation and education will help the patients realize their importance and need. The above finding is similar to results of a survey by Dr. R Naveen Reddy et al[15] .Removable treatment options was also known to considerable number of subjects.

Thus, lack of awareness, financial constraints and lack of oral health care are primary reasons for not getting the missing teeth replaced .Measures such as mobile dental clinics ,dental camps ,public awareness lectures must be encouraged by the dentists to spread awareness and treatment to the people. The dentist should devote more time to the patient and motivate him to realize the need of prosthetic treatment. Further studies are encouraged to obtain a clear relationship between prosthodontic treatment related behavior and the population with large number of subjects.

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