



Comprehensive evaluation of patient's awareness, attitude and knowledge about removable partial denture therapies: A questionnaire based original research study

Farha NAZ^{1*}, Kulbir Singh², Bavneet Kaur³

¹⁻³ Post Graduate Student, Department of Prosthodontics, Shree Bankey Bihari Dental College and Research Centre, Ghaziabad, Uttar Pradesh, India

Abstract

Aim: This study aimed to assess the relative awareness and knowledge levels about RPD in studied patients.

Materials & Methods: Authors estimated 50 patients of both the genders. For checking the awareness levels, authors had employed a pre-formed questionnaire containing 7 questions associated to RPD knowledge, attitude and awareness. Responses were recorded in tables and data was processed statistically to estimate real awareness and satisfaction levels.

Results: Statistical analysis was done using statistical software Statistical Package for the Social Sciences. The resultant data was employed to suitable statistical tests to obtain p values, mean, standard deviation, standard error and 95% CI. $P \leq 0.05$ was considered as statistically significant. Age groups 35-44 years had 12 males and 5 females ($P < 0.05$). Measured p value was significant here. In second group of 45-54 years had 9 males and 6 females, 55-64 years had 5 males and 7 females ($P > 0.05$) and >65 years had 4 males and 2 females ($P > 0.05$). P value less than 0.05 was considered as significant. Roughly 89% patients believe that RPD is an excellent option for economically weaker patients. Roughly 37% patients think that RPD is the best non-invasive option to restore missing teeth. Approximately 53% patients believe that 'RPD is a kind of slow extraction forceps. Approximately 65% patients consider that RPD patients typically feel pain while using it.

Conclusion: Within the limitation of study authors concluded that level of knowledge and awareness about RPD was fair to excellent in the evaluated patients. Evaluation of attitude also revealed somewhat positive inclination. Nonetheless, the results could be different in other population groups mainly in non-rural regions.

Keywords: knowledge, attitude, awareness, missing teeth, removable prostheses

Introduction

Rehabilitation of patients with partially edentulous maxillary and mandibular arches entails a very comprehensive diagnosis and treatment planning for the operator. Long term complications and benefit to risk ratio has to be evaluated before selecting a treatment plan. The ultimate choice of prosthetic replacement is mostly determined by the patient's choice and economical status, accessibility of technological advancements and expertise, as well as the number of missing teeth^[1]. Tooth loss is the result of multifactorial causes such as caries, and periodontal diseases. Tooth loss has an undesirable impact on the psychological status of the patients, which results in a important effect on the self-esteem and social life and most likely patients might experience symptoms of depression with those who have difficulties in accepting tooth loss^[2, 3]. Determining the need, prevalence, and the pattern of partial tooth loss is necessary to identify the prosthetic needs of the patients. Significance of prevention has gained slight momentum in the past few decades leading to change in trends in Prosthodontics. People now prefer retaining of natural teeth, which may anticipate a decline in the number of complete dentures with an increase in the number of removable partial dentures (RPD)^[4, 6]. For all cases, the indications and contraindications with the treatment plan should be carefully considered. A thorough and careful assessment of the patient's condition should be taken into consideration to reach clinical success. Dental graduates need to have enough skills and experience to provide patients with all types of prosthesis. Moreover, it is essential that the prosthetics teaching provided is adequate to

produce confident and "fully qualified trainees." This will ensure the maintenance of patient safety and the delivery of superior care^[7]. The revolution in dentistry is a continues process and since the factors affecting prosthetic rehabilitation can change from one time to another and from one area to another, it was important to investigate the trend in prosthetic replacement in our area, and compare it globally and try to investigate the factors that might affect the trend. In the field of Prosthodontics a special emphasis has always been put on preservation of oral structures along with replacement of missing dental structures. One such oral structure which plays a pivotal role in the treatment planning of removable prosthesis is the residual alveolar ridge. Bone resorption under dentures can affect not only the alveolar bone but also, in some situations, the basal bone. Our study aimed to evaluate the relative awareness and knowledge levels about RPD in studied patients.

Materials & Methods

As we all know that patient acceptance and adaptation to a new dental prosthesis depends on various factors categorized under anatomical, physiological, psychological and or prosthodontic factors. Above all it depends on the attitude of the patients towards prosthetic treatment. Prosthetic treatment varies widely from replacement of missing teeth in a healthy incomplete dentition to complete rehabilitation of badly damaged teeth to functional form. Multiple prosthetic options are available for the patient to restore lost teeth that include removable partial denture, complete dentures, implant supported processes and over-dentures. Since,

emphasis is being placed on patient mediated concerns in prosthetic treatment planning, understanding patient’s knowledge, attitude towards prosthetic replacement prior to receiving treatment is the necessity. Therefore, this study was completed in the department of Prosthodontics of the institute. This study was a cross sectional questionnaire based survey. All 50 patients were selected rationally. The study was exercised for Ethical clearances of the institute. After getting this clearance, all voluntarily willing patients were separated in to four age groups from 35 to 65 years. All selected patents were explained about the study in detail and written consents were attained consequently from each patient. Because this study was a questionnaire based study; so we used a pre formed questionnaire having 7 questions about RPD awareness and knowledge. Total 20 females and 30 male patients participated in the study. Consequently we have obtained the response data of 50 patients in the form of questionnaire. Firstly the patients were selected then the questionnaires were distributed among them. The privacy and other rights of the respondents and their freedom of expression were entirely ensured. After completion of questionnaire, the patients submitted them to the operator. The data was analyzed and data was tabulated for further evaluation. The results were subjected to statistical analysis using basic statistical test. P value less than 0.05 was considered as significant.

Statistical Analysis and Results

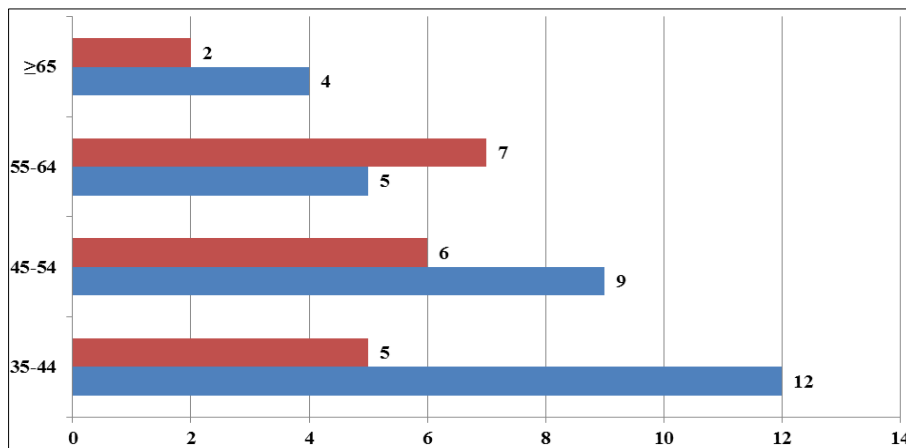
In partially edentulous conditions, implants have become a treatment of choice for the doctors for their patients over removable prosthesis but the various other factors such as anatomic, physiological, psychological, medical, and financial considerations of the patients being the reasons for deciding on the type of removable prosthesis. Removable partial dentures (RPDs) are the most cost-effective and best treatment option for partial edentulism. In our study, the gathered data were initially compiled and sent for statistical

assessment by statistical software Statistical Package for the Social Sciences version 21 (IBM Inc., Armonk, New York, USA). The attained data was subjected to suitable statistical tests to compute ‘p’ values and other variables. Frequencies of responses were also recorded along with their percentage values. Total 20 females and 30 male patients have participated in the study. All patients were divided and studied into four groups depending on their age ranges. Table 1 and Graph 1 show that age groups 35-44 years had 12 males and 5 females (P< 0.05). Measured p value was significant here. In second group of 45-54 years had 9 males and 6 females, 55-64 years had 5 males and 7 females (P> 0.05) and >65 years had 4 males and 2 females (P>0.05). P value less than 0.05 was considered as significant. Table 2 shows basic statistical description with level of significance evaluation using Pearson chi-square test. This was attempted in relation to each and every question of the questionnaire. Significant inferences were drawn for question no 1, 4 and 5 respectively (p<0.05 significant). Table 3 show the questionnaire used for the study with their related inferences. Roughly 89% patients believe that RPD is an excellent option for economically weaker patients. Roughly 37% patients think that RPD is the best non-invasive option to restore missing teeth. Approximately 53% patients believe that ‘RPD is a kind of slow extraction forceps’. Approximately 65% patients consider that RPD patients typically feel pain while using it.

Table 1: Descriptive Assessment of the Participating Patients: Age & Gender Wise

Age Group (Yrs)	Male	Female	Total	Mean	SD	P value
35-44	12	5	17 [34 %]	2.54	2.877	0.00*
45-54	9	6	15 [30 %]	5.78	2.427	0.80
55-64	5	7	12 [24 %]	2.12	2.698	0.09
≥65	4	2	6 [12 %]	2.82	3.231	0.29
Total	30	20	100 %	4.21	3.769	Significant

*p<0.05 significant



Graph 1: Allocation of the Patients among Various Age Groups

Table 2: Basic statistical description with level of significance evaluation using Pearson chi-square test

Question No.	Mean	Std. Deviation	Std. Error	95% CI	Pearson Chi-Square Value	DF	Level of Significance (p value)
1	2.76	0.523	0.211	1.96	2.321	1.0	0.010*
2	2.32	0.865	0.344	1.96	2.544	2.0	0.080
3	2.98	1.398	0.123	2.33	2.766	1.0	0.061
4	2.45	0.387	0.013	1.96	1.876	1.0	0.010*
5	2.59	0.154	0.024	1.96	2.980	2.0	0.000*
6	1.43	0.876	0.075	1.96	2.421	1.0	0.060
7	1.57	0.590	0.016	1.96	1.236	1.0	0.080

*p<0.05 significant

Table 3: Questionnaire Used for the Study

Clinical Responses		Inferences in %
Question 1	Did you know about RPD therapy?	Yes = 27/No = 73
Question 2	Have you seen RPD patients and discussed about RPD?	Yes = 29/No = 71
Question 3	Do you have any suggestion about using RPD?	Yes = 42/No = 58
Question 4	Do you think that RPD is the best non- invasive option to restore missing teeth?	Yes = 37/No = 63
Question 5	Do you consider that RPD patients typically feel pain while using it?	Yes = 65/No = 35
Question 6	Do you believe that RPD is an excellent option for economically weaker patients?	Yes = 89/No = 11
Question 7	Do you believe that ‘RPD is a kind of slow extraction forceps’?	Yes = 53/No = 47

*p<0.05 significant

Discussion

Oral health is always an inseparable part of general health, and awareness plays a vital role in determining the oral health of individual. Poor oral health and loss of teeth especially, complete loss or edentulism, is equivalent to the dental death. Thus, tooth loss causes residual ridge resorption leading to decreased masticatory function affecting the dietary intake, nutritional status, and feeling of old age thus compromises the general health [8, 10]. The attitude of the patient toward the replacement of teeth should be assessed to educate the patient accordingly and improve patient compliance with acceptance of prosthesis. The estimation of treatment need is also an important requirement in oral health-care planning. With this information, it is possible to assess future treatment needs and demands for services. The need for dental prosthesis varies from patient to patient depending on their age, sex, occupation, socioeconomic background, and literacy [11, 12]. Rehabilitative treatment is successful only when patients are motivated and made aware of various prosthodontic treatments available, its use and maintenance. Removable partial denture (RPD) is one of the various treatment options available for the replacement of teeth for partially edentulous patients. The major connector of an RDP is the component that connects the different parts of the RPD as well as can achieve numerous functions and influence the success of RPD [13]. Oral rehabilitation is the discipline within dentistry which deals with diagnosis, treatment planning and restoration of larger tooth defects, congenitally or acquired missing teeth and other oral tissues [14]. Awareness and patient's knowledge is one of the factors affecting the final treatment decision regarding the replacement of a missing tooth. Complete information on right treatment and alternative therapies must be provided to guide the patient in the choice of the most appropriate option [15, 16]. This problem is more magnified in developing nations where there is lack of education and awareness amongst people about dental treatment modalities. Replacement of missing teeth has become one of the most important needs for patients attending clinics to restore aesthetics and/or function [17, 18]. Many treatment modalities are available for replacing a single missing tooth; removable partial denture, fixed partial denture or dental implant. Our study aimed to assess the relative awareness and knowledge levels about RPD in studied patients.

Conclusion

Teeth play a vital role in the general wellness of an individual. Loss of teeth not only adversely affects the body physiology but also disturbs the psychology of the individual. This is directly related to the acceptance of the artificial prostheses by the patient. Even though the majority of the participants had the knowledge about the need for RPD, they did not undergo treatment or advised mainly due to miscellaneous

factors. Within the limitation of study authors concluded that level of knowledge and awareness about RPD was fair to excellent in the studied population. Evaluation of attitude also revealed somewhat positive inclination. Additionally, our study inferences must be only considered as evocative for assessing clinical decision making for such clinical situations. However, authors anticipate some large scale genuine researches to be performed that could possibly further establish certain authentic guidelines in these perspectives.

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