Research Article

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Estimation and Evaluation of Patient's Knowledge and Satisfaction Regarding Removable Partial Denture Therapy: A Questionnaire Based Original Study

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ABSTRACT

Background: Removable partial denture plays an imperative role in restoring functions of chewing, phonetics and aesthetics. Partial denture therapy is usually done to compensate missing teeth and other related structures following loss of teeth. This study aimed to assess the relative knowledge and satisfaction levels of RPD patients.

Materials & Methods: The present study was completed in the department of Prosthodontics. It included 200 Patients from the regular OPD of the department. A questionnaire was framed comprising of 10 questions. Various parameters regarding RPD knowledge and satisfactions were evaluated via questionnaire. Authors analyzed the data of patients who truthfully responded to this questionnaire. Response was recorded and data was processed statistically to evaluate satisfaction level.

Results: Statistical analysis was done using statistical software Statistical Package for the Social Sciences (SPSS). The obtained data was subjected to appropriate statistical tests to obtain p values, mean, standard deviation, standard error an 95% CI. $P \leq 0.05$ was considered as statistically significant. 94 patients were not satisfied with the esthetic of the removable partial dentures. 48 patients were totally satisfied with the masticatory efficiency.

Conclusion: Within the limitations of the study authors concluded that level of knowledge and satisfaction about RPD was moderate only. Most of the patients were only moderately satisfied with the comfort, retention and stability of RPD. More emphasis on newer clinical trends with improved high quality materials must be employed.

Keywords: Knowledge, Removable Partial Denture, Satisfaction, Retention, Stability.

INTRODUCTION

Removable partial denture (RPD) remains the choice of treatment for missing teeth, because it is one of the cheapest treatment alternatives for patients who are not capable to afford treatment like implants due to economic reasons. However it may be due to other reasons like anatomical etiologies.[1] According to De Van's dictum, the main purpose of partial denture therapy should always be directed towards conservation of the remaining teeth. He said that "Perpetual preservation of what remains is more important than the meticulous replacement of what has been lost." Consequently the RPDs are most widely acceptable form of dental replacement therapy that offers an increased continuum of restorative options: improving phonetics, increasing masticatory effectiveness, and

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attaining the necessary aesthetics.[2-4] RPDs are usually supported and retained with clasps however; under extreme conditions these clasps are forcing the abutment teeth out of their socket. The usage acrylic RPDs in the substitution of missing teeth differs with countries, with more frequent use in developing countries. The occurrence of usage of acrylic RPD is very high because acrylic RPD is more reasonably priced and easy to construct. However, few drawbacks of using the RPDs are increased risk of developing caries, unaesthetic appearance and periodontal disease.[5] Knowledge and satisfaction with RPD largely depends on personality of patients, outlook towards RPD, earlier RPD experience. However some of the local factors like retention, mastication, and aesthetics are also among the most important factors for RPD satisfaction.[6] Patient's dissatisfaction with removable partial denture also depends on some of reasons such as risk to local damage of the remaining teeth, for e.g. caries, periodontal disease, plaque accumulation, oral candidiasis, denture stomatitis. Therefore, a questionnaire study was outlined to assess the relative knowledge and satisfaction levels of patients wearing RPD. Here authors have indisputably attempted to explore the actual level of satisfaction among the studied group.

MATERIALS & METHODS

This questionnaire based study comprised of 200 patients those wearing the RPD. All patients were selected from the department of Prosthodontics of the institute. To avoid any kind of inconsistency in selection procedure, one in every two was selected through systemic random sampling. Ethical clearances and written consents were obtained accordingly from respective ends. The removable partial dentures were fabricated by students and faculty members. Patients were recalled for their routine checkup and they asked to complete the questionnaire regarding the overall outlook of RPD including satisfaction. Total 80 females and 120 male patients participated in the study. Accordingly we have used data of 200 respondents proficiently. A close ended questionnaire containing 10 items were delivered to the patients. The confidentiality of the respondents and their freedom of expression were completely ensured. Informed consent was obtained from the respondents those were voluntarily ready for participation. To ensure completely stress-free responses, the study was conducted over a period of 3 months in which patients are asked to fill the questionnaire. The relative significance of this study was explained in detail to all participants. The results were subjected to statistical analysis using basic statistical test. P value less than 0.05 was considered as significant.

RESULTS

All the observational notations were compiled and sent for statistical evaluation using statistical software Statistical Package for the Social Sciences version 21 (IBM Inc., Armonk, New York, USA). The obtained data was subjected to suitable statistical tests to calculate p values, mean, standard deviation, standard error an 95% CI. Frequencies of responses were also recorded along with their percentage values. Total 80 females and 120 male patients participated in the study. **Table 1 and Graph 1** shows that age groups 40-50 years had 46 males and 22 females (P< 0.05), 51-60 years had 36 males and 24 females, 61-70 years had 22 males and 26 females (P> 0.05) and >70 years had 16 males and 8 females (P>0.05). P value less than 0.05 was considered as significant. **Table 2** shows that roughly 94 patients were not satisfied with the esthetic of the removable partial dentures. 48 patients were totally satisfied with the masticatory efficacy of removable partial dentures. In relation to comfort, retention and stability the patients were not very much satisfied in their responses. Most of the respondents had responded negatively for these parameters. When concerning cost factors, the patients were very much satisfied with removable partial dentures. More than half of the participants were complaining of bad smell from prosthesis. About durability of the RPD, patients had mixed type of opinions and responses. The overall measured significant level (p value) was 0.001. It was quite significant. Other studied parameters have also been included and shown in **Table 2.**

Table 1: Age & gender wise distribution of patients.

Age Group (Yrs)	Male	Female	Total	P value
40-50	46	22	68 [34 %]	0.02*
51-60	36	24	60 [30 %]	1.00

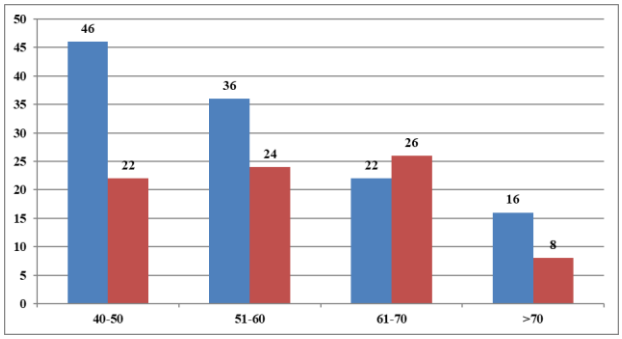
61-70	22	26	48 [24 %]	0.60
>70	16	8	24 [12 %]	0.10
Total	120	80	100	Significant

***p<0.05 significant**

Table 2: Responses compilation with observational statistical inferences.

Variables	Excellent	Good	Regular	Bad	p Value
Esthetics	24	36	46	94	0.001 *
Masticatory efficacy	48	32	70	50	
Comfort	26	34	72	68	
Retention	48	44	32	76	
Phonetics	48	52	44	56	
Stability	28	32	46	94	
Fracture Resistance	62	58	44	36	
Odors	26	34	66	74	
Economical	86	54	44	16	
Durability	46	44	34	76	

***p<0.05 significant**



Graph 1: Distribution of the patients among various age groups.

DISCUSSION

Rehabilitation of patients with removable partial dentures is a continuous process and requires attention to the specific needs of the patients. Patients those are having prior RPD experience would be expected to be more satisfied. Prior familiarity alone may not be a extremely predictive indicator of future satisfaction.[7-8] However, in prosthodontics generally we have patients who are unhappy with their removable dentures. Patients are not always satisfied with the construction pattern and materials of RPD. Still they believe that the fabrication pattern which are proposed by dentist as the best resolution. Many of the researchers and authors explored how social circumstances under which patients alive may influence their acceptance of RPD.[9-13] In their studies they had shown that factors such as patient's marital status, profession, interests, social activities, economy, housing conditions, relationships with neighbors have no significant effects in this respect. But other populace's outlook of their new dentures appeared to affect denture acceptance strongly. In their studies they also showed that the nature of the wordings that patients face after the delivery of the new dentures showed a highly significant correlation with denture acceptance.[14-16] Aesthetics, mastication, phonation, the number of missing teeth were found to be related with satisfaction in RPD patients. Some authors found association between RPD acceptance and retention, chewing, comfort, aesthetics, and hygiene. This study was a questionnaire based study which was outlined to assess the relative knowledge and satisfaction levels of 200 patients wearing RPD. Total 80 females and 120 male patients participated in the study. Most of the patients were only moderately satisfied with the comfort, retention and stability of RPD. Azadeh & Mahdavian found that women and patients older than 50 years were more dissatisfied in accepting partial denture than other patients.[17] According Frank et al. patients younger than 60 years were more dissatisfied than other.[18] Wakabayashi et al. found that the age has influence on satisfaction, because younger patients were more dissatisfied with aesthetics of denture.[19] There is a significant correlation between patient attitudes towards ageing and patient acceptance of new denture. Akeel found no significant associations between patient satisfaction and age, or denture experience, which is in agreement with our results.[20] Weinstei et al think that the age was not a significant predictor of denture success.[21]

CONCLUSION

Within the limitations of the study we concluded that most of the patients were only moderately satisfied with the comfort, retention and stability of RPD. The overall knowledge and satisfaction was nearly at moderate level. The esthetic satisfaction was also nearly at moderate level. More importance on newer clinical trends must be employed. However regarding fracture resistance and cost, the respondents were quite satisfied. Bad odor of prosthesis was also an essential component of patient's dissatisfaction. Moreover, our study outcomes could be treated as suggestive for predicting clinical satisfaction for such situations. However we expect other large scale genuine studies to be conducted that could further establish certain concrete guidelines in this field.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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