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A survey of the prosthetic status and post-treatment satisfaction of patients among Kashmiri population visiting Government Dental College and Hospital Srinagar

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ABSTRACT

The objective of this survey was to assess the prosthetic status of patients visiting the Department of Prosthodontics of Government Dental College and Hospital Srinagar Kashmir, which was followed by the assessment of patient satisfaction 4 months after treatment. Furthermore, the influence of the patient's gender, their mental attitude, and the type of prosthesis given on patient satisfaction were evaluated. A short interview was carried out with the selected patients to collect preliminary data. The socioeconomic status was recorded, following which an intra-oral examination was carried out to assess the prosthetic status and the type of prosthesis required by the patient. Patients were then given a questionnaire before the commencement of treatment to assess their mental attitude. The treatment decided on was completed for each patient. Patients' satisfaction with the treatment was assessed after four months using a questionnaire. Subsequent to the collection of data from the questionnaires, statistical analysis using the Chi-square test at a significance level of $P < 0.05$ was done to evaluate the relationship between age, personality, mental attitude, and prosthetic treatment needs. Patient satisfaction was also assessed. Statistically significant results were obtained on correlating the age and the treatment required, patients' mental attitude and the various treatment options. The relationship between the patients' gender, socioeconomic status, and mental attitude with their satisfaction was found to be noteworthy. The highest prosthetic treatment need was for complete dentures in both genders. Higher satisfaction levels were noted in individuals belonging to higher socioeconomic status and in males.

Keywords— Gender and satisfaction, Mental attitude, Prosthetic status, Socioeconomic status

1. INTRODUCTION

The World Health Organization (WHO) defines health as “a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity” (WHO, 1980). This modern approach to health lends itself to oral health as well. The modern view of dentistry is one that recognizes the emotions, or psychological essence of the patient in relationship to Dental Health Care.^[1] Oral healthcare researchers and policymakers have recognized that assessment of oral health outcomes is vital to Planning Oral Healthcare Programs.² A person's oral health status can determine significantly the physical and psychological well-being. Esthetics, speech, mastication, and self-esteem are dependent on a person's oral health.³ Assessment of prosthetic treatment needs is essential to determine unmet oral health care needs in a systematic manner and to gather the information required to bring about change beneficial to the oral health of the population.³ Levin *et al.* have stressed the importance of assessing patient's psychological aspects through the use of a simple questionnaire.⁴ Very few studies have been conducted in India, regarding the oral health status, treatment needs and satisfaction with treatment for the elderly population.

Keeping these views in mind, an attempt was made to assess the prosthetic status, prosthetic treatment needs and satisfaction among adults visiting the outpatient department of prosthodontics Govt Dental College and Hospital Srinagar, Jammu and Kashmir.

2. METHODS

100 (above the age of 20 years) visiting the outpatient Department of prosthodontics govt dental college and hospital Srinagar Kashmir were selected for the study. Informed consent was obtained from them before the study. Patients suffering from any acute illness were excluded from the study.

2.1 Assessment of prosthetic treatment needs and socioeconomic status

Selected patients were made to sit comfortably on a dental chair, and preliminary data were collected. A routine intraoral examination was carried out to assess the prosthetic status of the patient. The patient's socioeconomic status was determined based on the popularly used Kuppaswamy's index (that included education, occupation, and family income).⁵

2.2 Assessment of patient's mental attitude

Patients' mental attitude was assessed by a questionnaire that was based on the M. M. House classification of mental attitudes of dental patients.

2.3 Assessment of patient's satisfaction after treatment

A second questionnaire was given to the same group of patients (after a period of 4 months following completion of treatment) to determine their satisfaction with the treatment done.

Questions to assess the satisfaction were compiled with an emphasis on the fulfilment of the patient's need, the ability to function with the prosthesis, overall clinical handling by the doctors, and the department involved. Patient's satisfaction was scored based on the Likert's scale.^{6,7,8} The scores were divided into three grades: Low, average, and high. A single interviewer conducted all the interviews to minimize the variability. Subsequent to the collection of data from the questionnaires, statistical analysis using the Chi-square test at a significance level of $P < 0.05$ was done to evaluate the relationship between age, gender, mental attitude, prosthetic treatment needs, and patient satisfaction.

3. RESULTS

Data from the questionnaire were used to assess the socioeconomic status, mental attitude, treatment needs and satisfaction of patients. The software that was used for statistical analysis was the Statistical Package for Social Sciences (SPSS version 18.0).

The age of the patients ranged from 22 to 89 years. The study included an equal number of males and females (50 each).

The analysis of the education levels (based on Kuppaswamy's Index) showed that maximum patients fell into the category of professional degree holders (Table 1).

Table 1: Education distribution

Educational level	Number of patients	Percentage of patients
Illiterate	6	6.0
Primary	2	2.0
Middle	5	5.0
High school	16	16.0
Intermediate/Diploma	19	19.0
Graduate	21	21.0
Professional/PG and above	31	31.0
Total	100	100.0

Assessment of occupation gave the following results: Thirty-eight percent of the study group was unemployed while professionals included 36% (Figure 1).

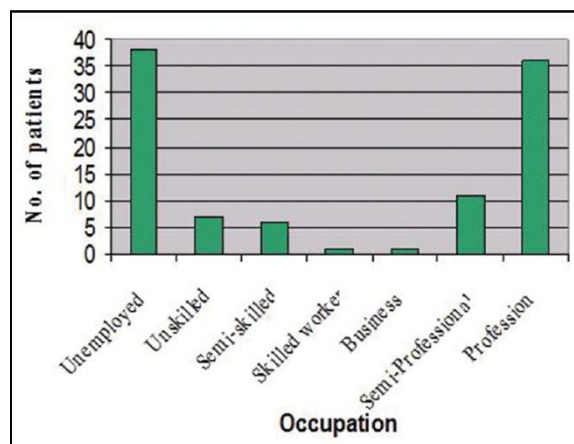


Fig.1: Occupation of patients

On analysis of family income per month, it was found that the majority of subjects (68%) belonged to the >Rs. 19,575 group (Figure 2).

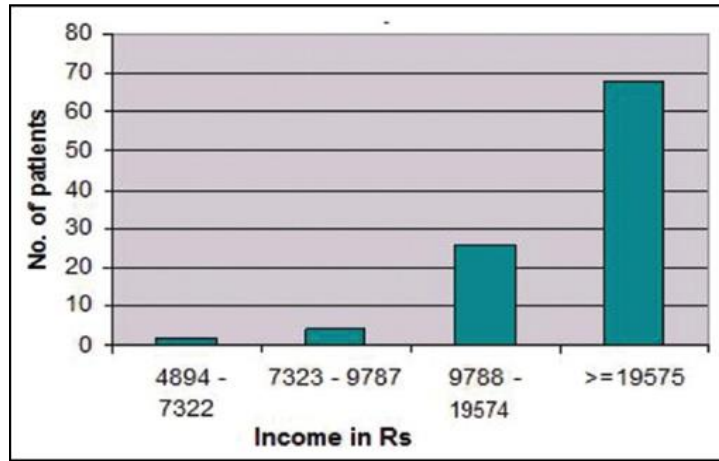


Fig. 2: Family income in Rs. per month of patients

Following the grading of the socioeconomic status, it was found that the greatest number of subjects belonged to the upper middle class (51%) (Figure 3).

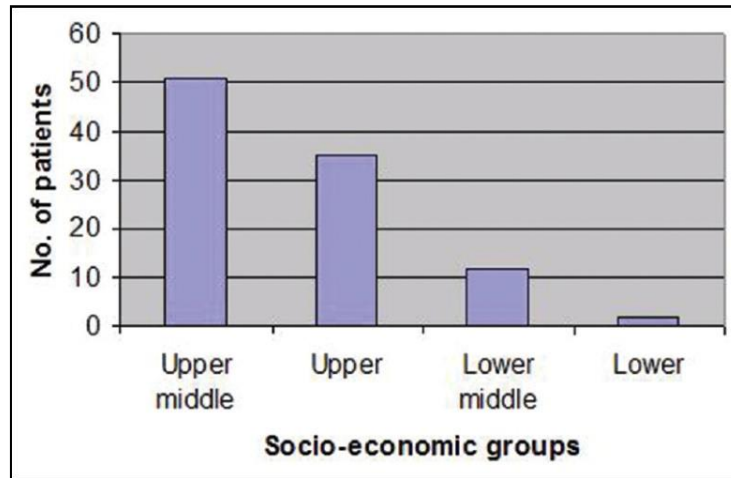


Fig. 3: Socioeconomic status of patients

On the assessment of the mental attitude, it was found that nearly half the patients belonged to the philosophic type. On the assessment of the prosthetic treatment needs of the study group, it was found that maximum patients required complete dentures (49%) (Figure 4).

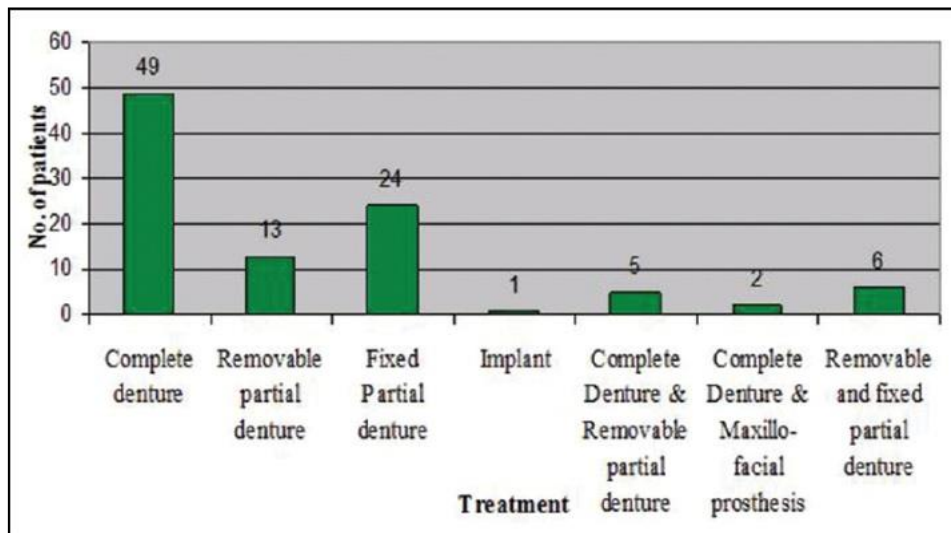


Fig. 4: Prosthetic treatment needs of patients

The Chi-square test was used to analyze the association/inter-relationship between the below-mentioned variables. The relationship between age and prosthetic status was found to be significant. The results showed that the majority of patients in the age groups “50–59,” “60–69,” “70–79” and above 80 years required complete denture treatment. Majority of patients belonging to the age groups of “up to 39 years” and “40–49” years required fixed partial dentures (Figure 5).

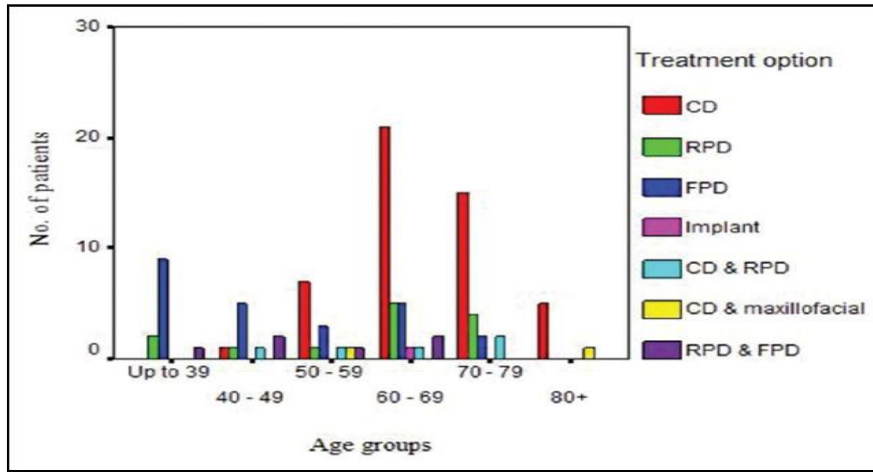


Fig. 5: Correlation of age and treatment options/needs of patients

Following an assessment of patients' satisfaction, it was determined that 44% of the subjects were highly satisfied, 35% moderately satisfied, and 21% had low satisfaction levels (Table 2).

Table 2: Satisfaction grades

Satisfaction grades	n	Percentage
Low	21	21.0
Average	35	35.0
High	44	44.0
Total	100	100.0

The results showed that satisfaction grades and gender had a positive correlation (Figure 6). It was found that a number of males were highly satisfied as compared to females.

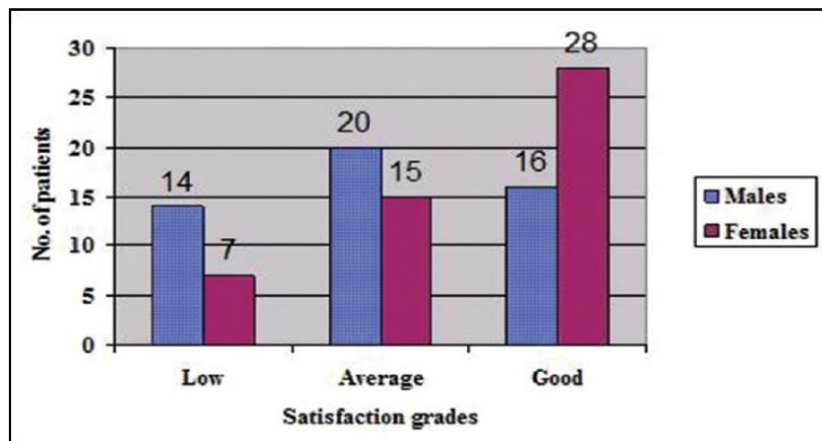


Fig. 6: Correlation of satisfaction grades and gender of patients

On comparing the satisfaction grades and education levels, it was found that higher the educational qualification, higher was the satisfaction with treatment (Figure 7).

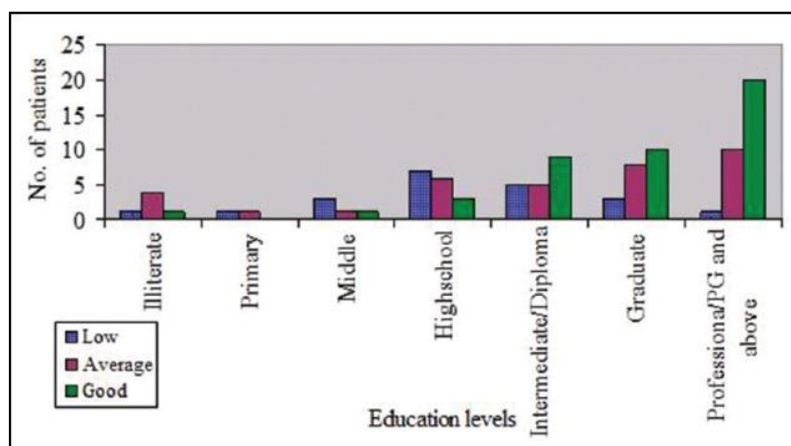


Fig. 7: Correlation of satisfaction grades and educational levels

Analysis of the relationship between the satisfaction grades and socioeconomic status elicited statistically significant results. More than half of the individuals belonging to the upper class had high satisfaction grades (Figure 8).

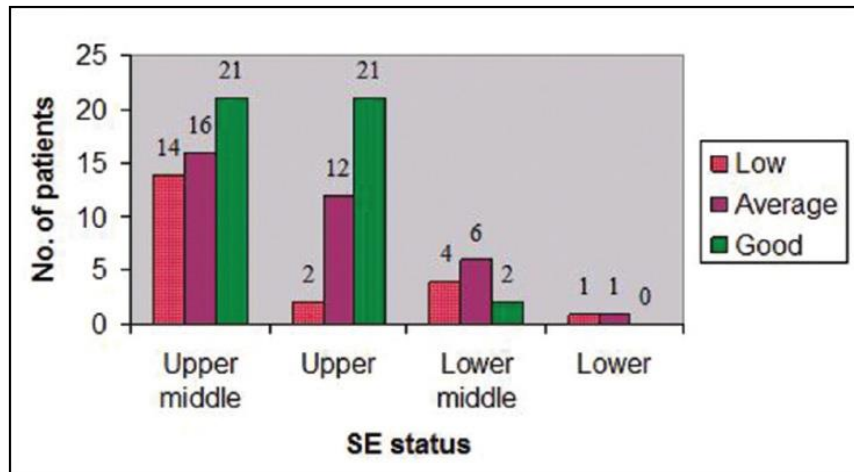


Fig. 8: Correlation of satisfaction grades and socioeconomic status

On the evaluation of the relationship between satisfaction scores and mental attitude, it was determined that philosophic patients had a statistically significant higher score. The association between the treatment options and the satisfaction scores was assessed using the Kruskal–Wallis nonparametric analysis of variance. The results were not significant; indicating that no particular treatment had higher or lower satisfaction scores.

4. DISCUSSION

Research has indicated that patient needs can profoundly influence treatment outcomes in medicine and dentistry alike.⁶ Keeping this in mind, this survey was conducted. This study has assessed patients' treatment needs and correlated their satisfaction with various parameters such as age, gender, mental attitude, and socioeconomic status.

Majority of the patients belonged to the age group of 60–79 years, which is in contrast to the results of previous studies in which the number of subjects in the above-mentioned age group was lesser.^{5,9,10} Esthetics not being a priority may have been a reason for the diminished use of dental facilities by this age group. However, the results of this study clearly contradict this view. This can probably be linked to increased awareness among the elderly patients visiting govt dental college & hospital Srinagar Kashmir. Almost half of the patients (both males and females) required complete dentures as a treatment option. Considering the age of the majority of the subjects in this study, it can be stated that an increase in age also brings about an increase in edentulousness. This may be related to the fact that older patients are more likely to suffer from medical conditions that may have at some point prevented elaborate restorative procedures. Earlier studies have reported that patients belonging to the above-mentioned group did not have much faith in preventive or restorative procedures.¹¹ Patients belonging to the unemployed group included a reasonable number. These individuals may not have been able to afford treatment in private clinics. The satisfaction of patients is a strong determinant of success with respect to prosthodontic treatment. This fact has been reinforced in a study which says the ability of the patient to use the dentures for mastication or speech, esthetic considerations, psychological factors, all influence his/her ability to adjust to, accept, and manipulate the dentures. Weinstein *et al.* have stated that such patients probably had their neuromuscular control already adapted to acclimatize them to a denture more quickly than a patient who has had no previous experience, yielding higher satisfaction scores.¹² The satisfaction with the treatment procedure was not related to the age of the patient similar to the findings of the study done by Tin-Oo *et al.*¹

The finding that females were less satisfied than males with the treatment provided is in conjunction with the results of previous studies by Tin-Oo *et al.* and Pan *et al.* as well.^{13,14} However, the results of a study done by Baran *et al.* contrasted these results, in which satisfy action between males and females were almost the same.¹⁵ Physical and psychological factors such as stress levels, anxiety, hormonal changes, blood pressure, etc., in female patients, may have a role to play. In general, with respect to medical or oral rehabilitation, it has been found that females have a lower prognostic factor.¹³

The level of education and satisfaction with treatment was found to have a positive correlation. Higher the educational qualification higher was the satisfaction grades. As the patients' educational qualification increased, there might have been a corresponding rise in their understanding of the various treatment options. This differed from the results of a previous study in which patients with advanced levels of education had higher standards for the aesthetic appearance of partial dentures. This was reflected in the lower grades for esthetic evaluation of partial dentures in these patients.¹⁶ A positive statistical correlation was found between satisfaction grades and socioeconomic status, with better socioeconomic status resulting in higher satisfaction grades. Reasons could be that patients with higher socioeconomic status have greater financial security and are usually well read. However, a previous study indicated no significant difference in patients' assessments of the quality of the partial dentures between different socioeconomic groups.¹⁵ Statistical analysis revealed that patients belonging to the philosophical category of mental attitude had higher satisfaction scores. Individuals with the philosophical type of mental attitude have been described as the most successful in terms of denture acceptance.¹⁷ In the present study, it was found that no particular treatment option had a higher or lower satisfaction grade. This differed from the results seen in another study which compared the patient's satisfaction

between complete and partial removable denture wearers and concluded that complete denture wearers were more satisfied with speech, chewing and retention of the maxillary denture. Removable partial denture wearers were more satisfied with the retention and the comfort of the mandibular denture. This can be explained by a simple fact that different individuals have to make significant, but different adjustments to wear their dentures successfully.¹⁸The present study had a few limitations. The technical quality of the prosthesis was not assessed in any way. However in a study by Smith, the technical quality of the dentures was evaluated, and there was no significant relationship between the technical quality and patient satisfaction.¹⁹ Furthermore, the number of posttreatment visits was also not taken into consideration while assessing the satisfaction. Al-Hussyeen, in his article, discussed factors affecting patient satisfaction and concluded that reasonable fees for dental services and close location of dental clinics to their homes, along with the quality of dental care play an important role in satisfaction.²⁰

5. CONCLUSION

The present study has indicated that patients with a higher educational level are more satisfied with the treatment. This provides a sign that dental awareness can be increased through such surveys, thus contributing to increased satisfaction among patients.

Hence keeping the results of this survey in mind, better treatment can be made accessible to patients while taking their demands into consideration. Simple oral health surveys such as this can be conducted to achieve greater posttreatment patient satisfaction.

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