

## ORIGINAL ARTICLE

# Knowledge, Attitude, and Practice of Edentulous Patients about Hygiene of Their Denture

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## ABSTRACT

**Aim:** The role of a dentist does not end with the placement of the prosthesis, for the care of the denture is equally important. This study aimed to assess knowledge, attitude, and practice regarding care of complete dentures. **Methods:** The sample comprised 100 complete denture patients visiting the department of prosthodontics. A questionnaire assessed their sociodemographic status (Kuppuswamy's socioeconomic classification), denture use, denture cleaning, and knowledge of denture care. Data were subjected to descriptive statistical analysis. **Results:** About 70% of patients had only one set of complete dentures, all reported cleaning their prostheses daily, 97% of patients employed a toothbrush, 2% used denture brush, and 1% used denture cleansers. **Conclusion:** Instruction on how to care for complete dentures should be given special attention by the dentists during insertion. Follow-up and reinforcement of denture home care should be done periodically to ensure durable performance of dentures as well as maintenance of good oral health.

**Key words:** Attitude, Complete denture, Denture maintenance, Knowledge.

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**Conflict of interest:** None

## INTRODUCTION

India will soon become home to the second largest number of older people in the world.[1,2] The number of people in the 60-plus age group in India is expected to increase to 100 million in 2013 and to 198 million by 2030.[3] This increase in life expectancy can be attributed to improved medical facilities and the dental needs of this section of the population require special

attention.[4] A dental prosthesis should restore esthetics and function. The quality of the prosthesis needs to be regularly monitored as it functions within a changing oral environment comprising the saliva, the oral musculature, and the supporting tissues. Microbial plaque on dentures has the potential to be harmful to both the oral mucosa and general health.[5,6] The role of dentists does not end with the placement of the prosthesis. Measures must be taken to ensure that any dental prosthesis is properly taken care of by the patient, thereby contributing to the health of the foundation area, the supporting tissues, and to the success of the treatment.[7] A neglected dental prosthesis not only represents a lack of patient knowledge but also highlights a potential lack of motivation on the part of the dentist. However, many complete denture patients tend to think that being in the state of edentulism does not require any specific oral hygiene measures and do not return to the dentist for regular denture maintenance.[8] Therefore, to assess the extent of this problem, the present study was carried out to assess the knowledge and attitude of denture-wearing patients as well as practices related to the care of dental prostheses.

## MATERIALS AND METHODS

Participants were selected from among the completely edentulous patients attending the Department of Prosthodontics, Awadh Dental College, Jamshedpur, Jharkhand, India, from March to October 2017. Ethical clearance was obtained from the institute before starting the study. The patients who fulfilled the following inclusion criteria were considered for the study: Completely edentulous patients with at least 2 months of denture wearing who had given informed consent for their inclusion in the study. All the patients were independent; hence, no other person was involved in the maintenance of denture hygiene. Patients were excluded if they had limited mental or physical abilities and if they were wearing a single complete denture. A questionnaire was designed to assess the sociodemographic status, denture use, denture cleaning, and denture home care knowledge of the patient. Sociodemographic status included personal details, habit history, and Kuppuswamy's socioeconomic classification[9] (which takes into account the level of education, monthly

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income, and occupation) was used to determine the socioeconomic status of the patients. The following data were collected: The age of the patient, the number of previous sets of dentures, the frequency of replacing dentures, nocturnal denture wear, denture removal during day, how the dentures were stored, denture-related ulceration, use of adhesives, presence of other denture wearers in the family, and the history of any denture repairs. With regard to denture cleaning, the following data were recorded: The schedule of cleaning the dental prostheses, if it was performed within or outside the mouth, the use of tooth/denture brush or other cleaning aids, perception after wearing the cleaned denture, and whether denture polishing was ever carried out. The patients' knowledge on the life expectancy of complete dentures and their knowledge of food items that may cause denture staining were recorded. Questionnaire by de Castellucci Barbosa *et al.*[10] was modified according to Indian scenario and used for the study. A pilot study on 10 patients was carried out to check the feasibility of the study, and the questions were modified accordingly. A single trained investigator (K. S.) recorded the answers to the questionnaire. The data were compiled and subjected to descriptive statistical analysis.

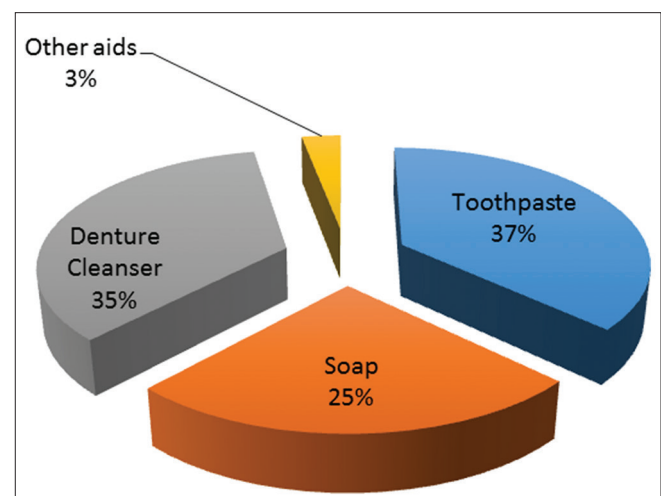
## RESULTS

A total of 100 patients participated in the study and included 79% males and 21% females. The age range was 35–90 years. 60% of the patients were categorized as having upper lower socioeconomic status, 20% as the upper middle, and lower middle while 10% were placed in the lower socioeconomic status. 77% of the patients in the study did not have smoking or tobacco chewing habits. 40% of patients had been using dentures for more than 1 year but <5 years and 60% for more than 5 years. 69% of patients reported using only one set of complete dentures and 21% had a history of having five sets of complete dentures. Of the 58 patients who reported using more than one set, 64% of patients reported changing their dentures within 5 years. 70% removed their dentures at night, and of these, 92% kept their prostheses in water, 4% in an empty box, and 2% either tied the dentures in a cloth or placed them in a pocket or on a table. Of the surveyed population, 25% removed their prostheses during the day while 75% did not. Among the 49 patients who removed the prostheses during the day 71.4% kept the teeth in water. 76.6% of patients did not report ulceration with dentures. Most of the patients (94.3%) did not use denture adhesive. The majority of the patients did not have a family member who was also a denture wearer. The dentures of 58 patients had been repaired, and of these, 41.4% reported

fracture of the mandibular denture. All patients reported cleaning their prostheses daily, and 85% of the sample cleaned the prostheses outside the mouth. 97% of patients employed a toothbrush to clean the prostheses, whereas a denture brush was used by 3%. The most popular cleaning aids are shown in Graph 1. There was a statistically significant relationship between gender and frequency of denture cleaning ( $P = 0.007$ ).

## DISCUSSION

Complete denture wearers should be educated regarding prostheses care and maintenance to ensure health and function of the supporting structures. This study assessed edentulous patients' knowledge, attitude, and practice regarding care of their complete denture prostheses. Most of the patients in this study had never required to have their dentures repaired. The smaller surface area of the mandibular denture and patient negligence during insertion, removal, and cleaning are the contributory factors most responsible.[11] Education of the denture-wearing patients is important.[12] Unclean dentures may cause halitosis, inflammatory changes of the oral mucosa such as denture-induced stomatitis and also poor esthetics.[13] Therefore, it is important for dentists to educate their patients about denture cleanliness and to stress the need for frequent recall visits.[14] The majority of the patients did not know how long a complete denture should be used. Complete dentures should be reviewed annually, with consideration for replacement after 5 years.[15] The majority of the patients attributed the knowledge of denture maintenance to themselves. While the patient may have forgotten instructions imparted orally, or not followed them, the dentist may have been negligent in not ensuring compliance.[16] Printed information for reference and frequent reinforcement is desirable.[17-19] The patients exhibited limited knowledge regarding care of



**Graph 1:** The most popular complete denture cleaning aids

the dentures. The majority of the patients employed a toothbrush to clean the denture and did not use denture cleansers. Most of the patients were not aware of the life span of a complete denture and attributed the knowledge of denture maintenance to themselves. Very few patients had knowledge of items to be avoided to prevent staining of dentures.

## CONCLUSION

Dentists need to be more cognizant of the need to offer denture patients greater support. Instruction on how to care for complete dentures should be given special attention by the dentists during insertion. Follow-up and reinforcement of denture home care should be done periodically to ensure durable performance of dentures as well as maintenance of good oral health. More attention must be given to training dental students in the education and motivation of patients regarding denture care and maintenance.

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