



# Evaluation of Different Modes of Maintaining Denture Hygiene Practices among Elderly Patients in South Indian Population

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## Abstract:

**Aim:** To determine the denture hygiene habits in removable denture wearers.

**Objective:**

Assessment of denture hygiene practices in partially and completely edentulous patients in Saveetha dental college and hospital.

**Materials And Method:**

In this study, a self-administered structured questionnaire was developed to know the attitude of the patients from the south indian population regarding denture hygiene. The study sample consist of totally 110 patients from age groups 35 to 80 yrs and taking a questionnaire survey on them based on their cleaning and hygiene habits of their denture.

**Reason:** To create an awareness among the patient that improper denture hygiene leads to lesions in the oral environment associated with the wearing of denture.

**Keywords:** *Cleansing habits, denture, denture hygiene, elder patients.*

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## INTRODUCTION:

Complete dentures are used for replacing the entire set of lost tooth in the dental arch so as to replace the esthetic and functional conditions to the patients. The quality of the denture fitting surface, occlusal relations, denture age, and hygiene are important factors contributing to the prevalence of oral mucosal lesions associated with denture use.

In elderly patients, care of the mucosal tissues and the dentures of the edentulous mouth are very important for overall health.(1-3)

The main aim of cleaning the denture is to remove the plaque adhering to the denture which in turn will eliminate the cause of denture stomatitis and reduce the presence of micro-organisms on the denture which have been known to plaque after which they can thrive and undergo further proliferation.(4-6)

The surface of the denture base becomes coated with a thick precipitate of salivary glycoprotein and immunoglobulin commonly termed as a pellicle. This pellicle in turn provides a substrate to which debris such as mucin, food particles, desquamated epithelial cells and microorganisms like bacteria and fungi adhere. Certain adherent microorganisms convert materials like sucrose and glucose in the oral cavity into a protective plaque after which they can thrive and undergo further proliferation.(7-10). The purpose of the study is to make the people aware of the denture hygiene and the role played by microorganisms and disease caused by them. So the denture hygiene is considered as one important protocol need to be followed by the denture wearers.

## MATERIALS AND METHOD:

In this study, a questionnaire containing 20 questions was developed which mainly focuses on evaluating the South Indian population regarding the complete denture hygiene and their knowledge and ability to clean the denture at appropriate intervals. The sample included around 110 subjects wearing complete denture. The purpose of this survey was explained to the subjects and their informed consent was obtained. The questionnaire contained demographic information like name, age, gender, period of wearing, and other questions like frequency of cleaning, materials used for cleaning, to check for any difficulty while wearing the denture.

**Inclusion criteria:**

- \*Age(35-80)
- \*controlled medical condition of the patients.
- \*Patients wearing heat cure dentures or metal based dentures with RPD or CD.
- \*Duration of wearing

**Exclusion criteria:**

- \*Medically compromised patients
- \*Indifferent patient (psychologically affected patient)
- \*Patients with bleeding disorders.
- \*Patients with neuromuscular disorders.

## RESULT:

About 62% of the subjects which is nearly more than half of the sample size cleaned their denture twice a day. Majority of the subjects used only water and toothbrush to clean their dentures. People who had been

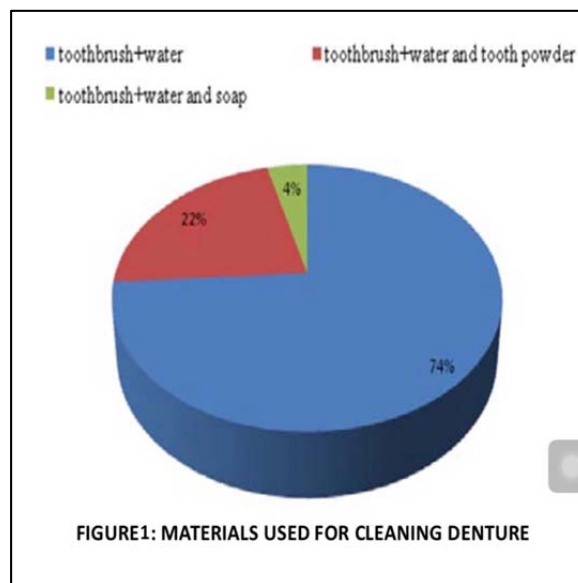
wearing the denture for the past 10-30 years have good knowledge about the denture cleanliness and maintain it well than those who had been wearing it for a short period of time. Nearly 94% of the subjects do not have any reflex sensation while wearing the denture. Hardly any subjects find difficulty while cleaning their dentures. Most of the patients wearing complete denture do not use mouthwash and they do not seem to have

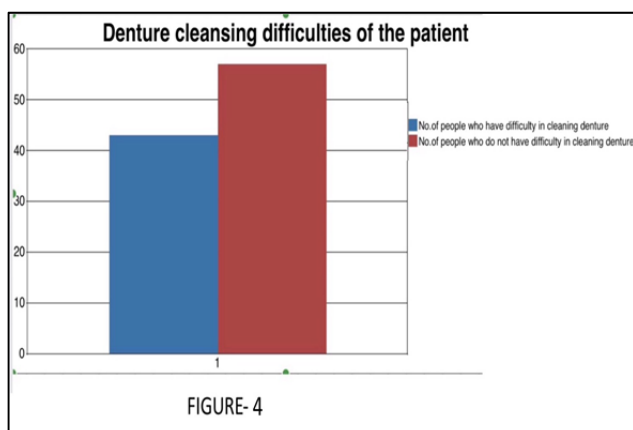
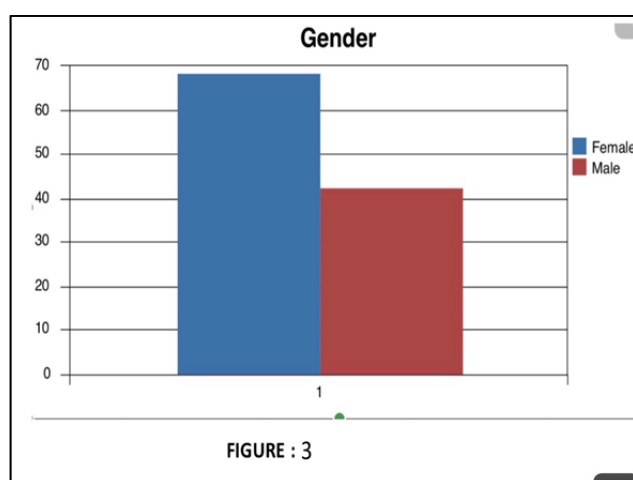
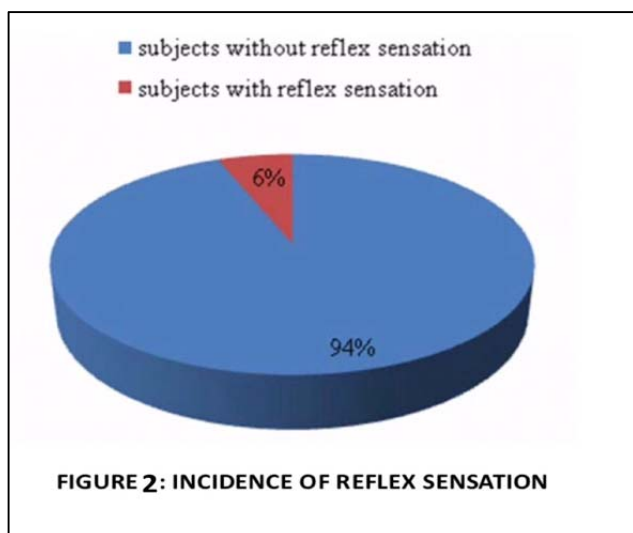
any irritation while wearing the denture. Cheek bite or tongue bite did not occur in patients wearing the denture routinely. Since the complete denture provides extensive support to the patient, and withstands the masticatory force very effectively, a vast number of subjects do not take out their denture while eating.

**PROTOCOL OF RESEARCH-QUESTIONNAIRE**

- 1)NAME: .....
- 2)GENDER:.....
- 3)PROFESSION:..... AGE.....SEX.....
- 4)HISTORY: .....
- 5)How long have you had your teeth |  
extracted?.....
- 6)How long have you been using dentures- upper.....lower.....
- 7)How long have you been using the current dentures?upper.....lower.....
- 8)Oral Hygiene .....
- 9)Have you received any instruction from your dentist on how to clean your denture(s)? Yes /no
- 10)How do you clean your denture ?  
Water + tooth brush  
Water and dentifrice + tooth brush  
Water and soap + tooth brush
- 11)How often a day do you clean your denture?
- 12)Do you have any difficulty cleaning the dentures? yes/no
- 13)Do you soak your denture in any substance? Yes /no
- 14)Do you brush your:the roof of the mouth  
1.palate  
2.tongue  
3.gum
- 15)Do you use oral rinse ?yes /no
- 16)Do you sleep with the denture? Yes/ no.
- 17)How often you go to dental clinic for oral hygiene cares.....
- 18)Did you observe any white patches or lesions in denture wearing areas.....
- 19) Do you wear denture for whole day.....
- 20)Do you use any disinfected solution to clean your solution ..yes/ no.

**Table-1**





### DISCUSSION

The wearing of new complete denture is usually associated with a lot of complaints. The complaints are looseness of the denture, pain, discomfort, masticatory problems, bad odor, altered speech and accumulation of food particles. In order to avoid any other infections or diseases, the denture must be maintained in a proper condition by cleaning it often (11-13). In the present study, most of the subjects used only water and toothbrush to clean their dentures (74%). This value

was much higher than that reported by Apratim et al., 2013(14) and lower than that reported by Patel et al., 2012 in Ahmedabad.(15) However, the others studies conducted by Coelhe et al., 2014(16) in Brazilian school of dentistry and Dikbas et al., 2006 (17) reported much higher values in comparison to the present study. Only 4% of the individuals maintained their denture hygiene with water along with toothbrush and soap and these findings are very much less when compared to Patel et al., 2012. This indicates that most of the elderly subjects are not very much aware of the denture hygiene and its various complications. The individuals do not use appropriate cleansing solutions to clean their denture properly. Most of them do not place the denture in water during sleep at night which in turn can cause many problems in the oral environment. The denture should be cleaned after placing in water overnight so as to remove any slimy layer which is most commonly present in it. The above mentioned results can be because of lack of awareness among the subjects and improper instructions given to them by the dentist after the insertion of the denture.

### CONCLUSION:

Under the limitations of this study, it was concluded that the patients interviewed had limited knowledge about prosthetic hygiene and oral care and that the subjects were totally unaware of the measures of cleaning the maxillary and mandibular dentures. A large number of patients used only water as a cleansing substance to clean their dentures along with the toothbrush. Scanty number of individuals used chemical method to clean their dentures, i.e. immersion in cleansing solution. Financial and socioeconomic factors can be the other etiological reason for neglecting the use of denture cleaning aids. Several educational and motivational camps should be conducted in order to increase the awareness about denture cleanliness among the older subjects.

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