

# **A clinical survey to determine the awareness and preference of needs of a complete denture among complete edentulous patients**

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## **Abstract**

The need for complete denture treatment varies from patient to patient depending on their age, sex, occupation, socioeconomic background. It is essential to evaluate awareness and preference of need before starting treatment as treatment expectations may influence treatment planning. 'Unrealistic expectations' should be managed by proper education before starting treatment to avoid failures. A epidemiological study was carried out among 1048 complete edentulous patients using questionnaire to assist patient to express the preference of need for complete dentures. Results of this study showed majority of subjects both from urban and rural areas preferred dentures for mastication and younger patients preferred for esthetics and phonetics reasons. In respect to different age groups most of patients preferred combination of mastication, esthetics and phonetics as preferred functions from complete denture treatment.

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## **Introduction:**

Edentulous predicament represents a compromise in functional and aesthetic sequel disturbing integrity of the total masticatory system. Perception of the edentulous state may range from feeling of inconvenience to the feeling of severe handicap, because many individuals regard tooth loss equivalent to loss of a body part. The successful complete denture treatment should address a range of biomechanical problems, tolerances and perceptions.

Loss of teeth results in significant disabilities which profoundly disturbs functions of stomatognathic system such as mastication, phonetics and esthetics. Loose teeth, edentulism or ill-fitting dentures may preclude eating favourite foods as well as limit intake of favourite foods. Poor oral health and loss of teeth not only affects dietary intake and nutrition status but also compromise general health of the patients.(1,2)

Most people desire to be accepted in the society and to associate with others in ease and comfort. This is not always possible as missing teeth cause poor speech and appearance. Desire for an aesthetic appearance is a major motivating factor for persons seeking new dentures, as society places considerable emphasis on physical appearance.(2,3)

An edentulous person comes for a denture treatment with the chief complaint of either difficulty in mastication or poor appearance or problems in phonetics or discomfort, or a combination of these problems, which indicates why an individual needs the denture. Although most of the edentulous persons require a denture for mastication, there may be some like teachers, singers who prefer a denture for phonetics and others like celebrities who mainly prefer a denture for esthetics, which indicates that preference for need of a denture varies among individuals. Knowing the preference of the need of a denture is very important for a dentist since there may be certain limitations in achieving these goals.

Many authors have suggested use of questionnaire to assist diagnostic and prognostic skills. Levin B, Landesman HM (4) also suggested

that some individuals have difficulty in verbalizing their problems and recommended use of questionnaire which assists patients to reveal their problems. Questionnaire prior to beginning of treatment not only assists the edentulous subject to reveal their problems but also to derive treatment planning addressing awareness of need and expectation of complete denture patients.

However awareness among edentulous individuals about impairment of oral functions followed by tooth loss and preference of need for complete denture has not been investigated. Therefore a study was planned using questionnaire to evaluate awareness and preference of need of complete denture patient who reported for the first time to dental colleges.

## **Aims and objectives:**

The aim and objective of the study were to conduct clinical survey using questionnaire to assist awareness regarding needs of denture among complete edentulous population reporting to the dental colleges and to know the preference of need for complete denture among complete edentulous population reporting to dental colleges.

## **Material and method:**

An epidemiological study to determine patient's awareness and preference of need of complete denture was conducted. Initially a pilot study was carried out with twenty patients recruited in the same manner as in the main study to check the feasibility of the study and the questions were modified accordingly. Following the successful pilot study in which the questionnaire was validated, potential subjects were approached to carry out the main study. 1048 complete edentulous patients comprising of 772 males and 276 females, who reported for the first time for a complete denture treatment, to the Department of Prosthodontics, Darshan Dental College and Hospital and Pacific Dental College and Hospital, Udaipur were randomly selected over

a period of one year. The patients were informed of the nature of the study and gave their consent.

Instruments:

A questionnaire which sought patient's awareness and preference of need of complete denture was developed. The starting point for the questionnaire was inquiries related to sociodemographic factors which included name, age, sex, occupation. Further the questionnaire concentrated on questions sought to help determine awareness of patients regarding need of complete denture. This part was further sub divided in to four categories namely: Mastication, Esthetics, Phonetics and Comfort. Each of these categories had a set of questions which helped to determine patient's awareness regarding loss of function. The last part of the questionnaire consisted of two items – the first was to know patient's preference of need for complete denture and the need to know whether a patient would like to have more information regarding treatment details related to complete denture treatment.

#### *Procedure for Collection of Data*

The questionnaire was completed personally for each of the patient who agreed to participate in the study, in form of an interview which appeared like normal conversation to allow for introduction and exploration of ideas and probe more deeply. Following the completion of the interview, the patients signed at the end of the questionnaire to mark their consent.

Statistical Analysis:

The collected data was analyzed statistically using chi-square test at the significance level of  $p \leq 0.05$ . All the data analysis was performed using statistical software (SPSS for windows, version 10; SPSS Inc. Chicago, IL).

#### **Discussion:**

Teeth are required for mastication, phonetics, esthetics, structural balance and for the comfort of an individual. With the loss of teeth, the above functions are impaired resulting in physical and physiological, *psychological* trauma to the individual. Further edentulism leads to a deep

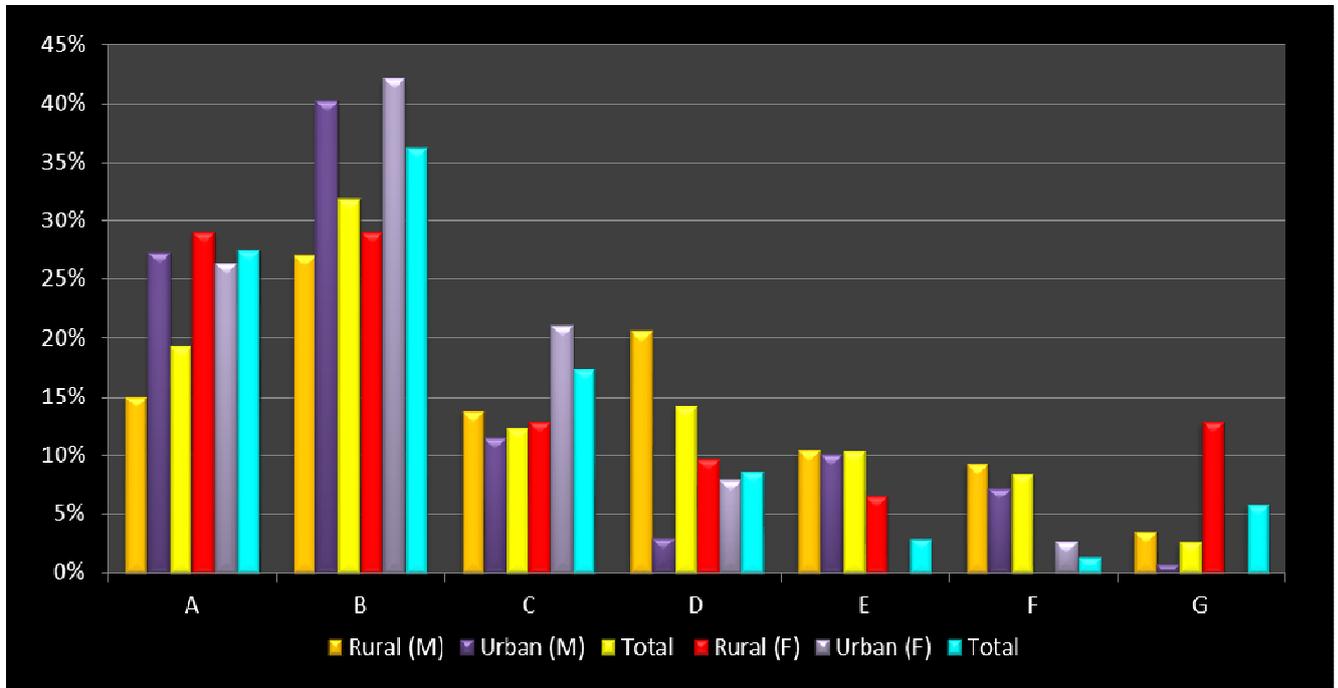
impact on the quality of life and on physiological, emotional and general health status of an individual.

It is routinely observed when an edentulous person comes to the clinic and when asked the purpose of his visit, the usual answer is- "I want a denture". This is even observed in the case sheet recording wherein the individual complains of loss of teeth and advised complete denture. This shows that the subject just needs a denture and the dentists are not giving importance to analyze the need of a denture which is actually dictating factor in the treatment of an edentulous subject. Many edentulous individuals may need a denture only for mastication or for esthetics or phonetics or comfort or may be for one or more of the combinations of these four.

There is a definite need to assess individual awareness and needs at initial appointments that improves our diagnostic skills and is essential in achieving goals of complete denture treatment. A structured questionnaire exploring awareness and needs, establishes communication between doctor and patient, builds trust and confidence, reveals our concerns and helps the patient to verbalize their problems.

From the present study, it can be observed that the subjects were not aware of the needs of dentures. When asked what difficulties or problems they felt after loss of teeth most of the subjects were thinking of only mastication (78.2% males and 58.0% females) this was especially true of the persons from the rural region, as comparatively more subjects from urban region choose phonetics and esthetics along with mastication. Also mostly females from the urban region felt loss of esthetics along with mastication. When discussing the age of the subject in respect to awareness it is observed that although in all three age groups the majority of subjects choose only mastication, however comparatively more subjects in the younger age group, especially those in 30 to 50 years of age, were aware of need of esthetics and phonetics,(Graph-1)-

Graph I: Distribution of subjects according to preference of need.



**M- Males      F- Females**

A: Mastication, B: Mastication + Phonetics, C: Mastication + Phonetics + esthetics, D: Mastication + Esthetics, E: Mastication + Phonetics + Esthetic + Comfort, F: Esthetic + Phonetics, G: Phonetics

It can be also noted that more of the females opted for esthetics as compared to males. But only a small percentage of urban subjects in the younger age group choose all the four, that is, mastication, esthetics, phonetics and comfort. Thus the present study corroborates that subject, especially females, from the urban region in younger age groups are more aware of the needs of complete dentures.

However when discussing preference in respect to age group, most of the subjects preferred a combination of mastication, esthetics, phonetics and comfort irrespective of the age group they are in. It can also be noted that more of urban population prefers comfort as compared to rural subjects. This implies that edentulous persons whether in younger or older age group needs motivation and education to help them realise the needs of a complete denture.

This shows that the subjects (specifically those from rural region) are only aware of mastication as the function of the denture. This is evident also in the study done by Szentpetery A. G. *et al.*, where the authors noted that problems with eating and chewing dominated when subjects first sought prosthodontic treatment. Shigli K. *et al.*, (2007) reported that most people in India are aware of only the masticatory function served by the teeth. They are less aware of the esthetics and phonetics function of the teeth and that the geriatric population gives less priority to esthetics and more importance to mastication. (5,6)

Patient's pre-treatment expectation may influence treatment outcomes and treatment failure may result from mismatched perceptions and expectations of the subject and the dentist. Dentures are artificial substitutes and have their

limitations, as documented in various textbooks and research work it is known that there are conditions where mastication or phonetics or esthetics may be compromised in dentures, so it is important to make the subject understand the limitation of a denture so that the subject can mentally prepare to accept the denture therapy. In the present study between male and female and rural and urban, the rural subjects did not avoid going out or feel embarrassed in meeting with their family friends and relatives or any difference while smiling. However, majority of the urban population especially females did not smile much since loss of teeth, felt embarrassed in meeting to their family friends and relatives and thus avoided going out. This could be because loss of esthetics due to edentulism also affects psychology of a subject. Thus these results also confirm that the urban subjects especially females are more concerned with esthetics than the rural subjects. This is in accordance with the results of a study done by Davis D M *et al.*, (2000) where they found a significant association between accepting tooth loss and self-confidence, also most of the edentulous people did not enjoy their food, avoided eating, laughing and going out in public, and avoided forming close relationship as a consequence of losing their teeth.(7)

### **Summary and conclusion:**

The present study was conducted to determine the awareness and preference of need of a denture among complete edentulous subjects. The survey constituted of 1048 complete edentulous subjects reporting for the first time for a complete denture treatment to the Department of Prosthodontics, Darshan Dental College and Hospital and Pacific Dental College and Hospital, Udaipur. Out of these 1048 subjects, 772 were males (494 rural and 278 urban) and 276 were females (124 rural and 152 urban). A questionnaire consisting of inquiries related to sociodemographic factors and questions regarding mastication, esthetics, phonetics, comfort and preference of need for complete denture were completed

personally for each of the subjects who gave their consent for the study. Following conclusion can be drawn from the present study:

1. Most of edentulous person say they need denture for mastication purpose and are unaware of the other needs for a denture.
2. The dentist must spend more time on the chair side during examination and motivate the patient regarding the need of a denture so as to get a proper response in relation to need of a denture.
3. The edentulous persons should be made aware that the denture not only provides mastication but also is helpful in providing esthetics, phonetics and comfort.
4. Most of the edentulous male persons prefer a denture for mastication, phonetics, esthetics and comfort in this order as preference whereas for females the preference order is mastication, esthetics, phonetics and comfort.

Hence, a distinct need exist for dental surgeon to be able to understand a patient's motivation in seeking prosthodontic care and to identify problems before starting treatment. More emphasis should be placed on patient- mediated concerns in prosthetic treatment planning. There is also a scarcity of data regarding patient's needs and preferences in field of fixed prosthodontics. Therefore further research is necessary to evaluate patient's needs and preferences in other areas of prosthodontics.

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