Original Article

Indian Journal of Dental Education
Volume 12 Number 4, October - December 2019
DOI: https://dx.doi.org/10.21088/ijde.0974.6099.12419.2

Assessment of Prosthodontic Awareness and Edentulism in Populations of Lucknow: A Clinical Survey

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Received on 20.11.2019; **Accepted on** 06.12.2019

How to cite this article:
Isha Rastogi. Assessment of Prosthodontic Awareness and Edentulism in Populations of Lucknow: A Clinical Survey. Indian J Dent Educ. 2019;12(4):121-129.

Abstract

Introduction: Knowledge of dental treatment and awareness is a big issue. *Aim and objectives:* to assess awareness and edentulism in population. *Material and methods:* 500 subjects above 20 years were target. *Results:* few people are knowing of problems due to tooth loss while majority remains neglected. *Discussion:* people are aware by different sources about dental treatment and options. *Conclusion:* oral health education needs to be imparted to society.

Keywords: Assessment; Prosthodontics; Dentures.

Introduction

It has been rightly said, "health is wealth".

A healthy mouth and replacing missing teeth are necessary for the overall health of an individual. Awareness is important in determining[1] and maintaining overall oral health of a person.

The loss of teeth affects various vital functions as mastication, phonetics, esthetics, dietary intake and nutrition status. It compromises and affects general health.[2] We have heard and seen that epidemiological surveys have been conducted in India and abroad on dental caries and periodontal problems but Prosthodontic field has never shown any interest to scholars.[3] Thus lack of awareness prevents people from availing of treatment[4] in prosthodontic field.

The target population is unfortunately less literate, less aware and financially weak compared to their urban counterparts.[5] Also many myths prevail widely amongst them[6] which are false. This survey was done to determine level of awareness, edentulism and reasons for unfulfillment. Poor oral health and loss of teeth not only affects dietary intake and nutrition status but also compromise general health of the patients.

M Porta (2006) defined[7] epidemiology as "the study of the distribution and determinants of health-related status or events in specified populations and the application of the study to control health problems."

Weintraub and Buet (1985) used[8] the term "edentulism" to describe the complete absence of natural teeth, regardless of whether they had been replaced or not.

Many authors have suggested use of questionnaire to assist[9] suggested that some individuals have difficulty in verbalizing their

problems and recommended use of questionnaire which assist 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.

Aim

To conduct clinical survey using questionnaire and basic diagnostic tools to assess awareness and edentulism in this population.

Objectives

To compare the level of awareness and edentulism in rural and urban populations. To evaluate the reasons for unfulfillment of prosthodontic needs so that adequate measures can be taken to address the problem.

Clinical Relevance

Most rural population are not aware of treatment options for missing teeth and seem to believe that loss of teeth is a part of the natural aging process, which is not true.

Materials and Methods

Selection of samples–The cluster of villages around Hospital make it logistically ideal to study the awareness and edentulous state of population.500 subjects above 20 years (250 from neighboring villages— Kakouli, Purva and Daut Nagar, Lucknow were the rural population and 250 who reported to Dental Outdoor patient department were the urban population) in 2 months were the target of this cross-sectional study. A questionnaire was developed and patient's consent was taken. Diagnostic tools (mouth mirror, straight probe, diagnostic and prognostic skills. Levin B, Landesman HM also explorer) were used. Mouth mask and disposable gloves were used for examination.

The starting point for the questionnaire was inquiries related to particulars as name, age, sex, address, education levels, socioeconomic status and occupation. Further the questionnaire concentrated on questions sought to help determine edentulism and awareness of patients regarding need of complete denture. 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. Following the completion of the interview, the patients signed at the end of the questionnaire to mark their consent.

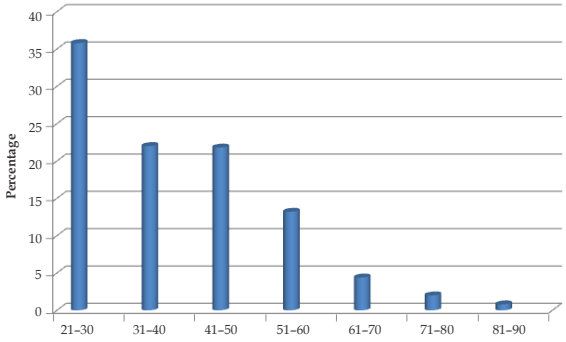
Results

In order to plan for future healthcare provisions for the society, collecting epidemiologic data on health and its related issues are very important. Data on oral health that too particularly related to Prosthodontics is scant. Therefore the study was planned (Table 1 and Graphs 1–10).

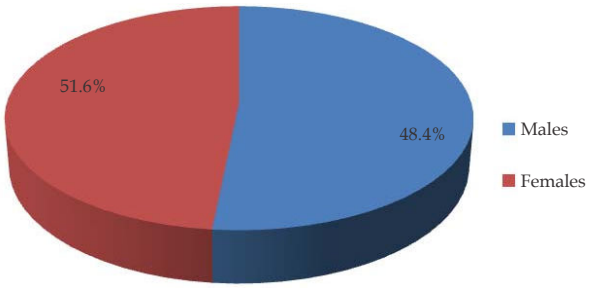
Table 1: Epidemiologic data on health and its related issues

Age in years	
21–30	179
31–40	110
41–50	109
51–60	66
61–70	22
71–80	10
81–90	4
Gender	
Males	258
Females	242
Education	
Illiterate	204
Till Primary	113
Till High School	90
Higher Education	93
Edentulism	
No Missing	187

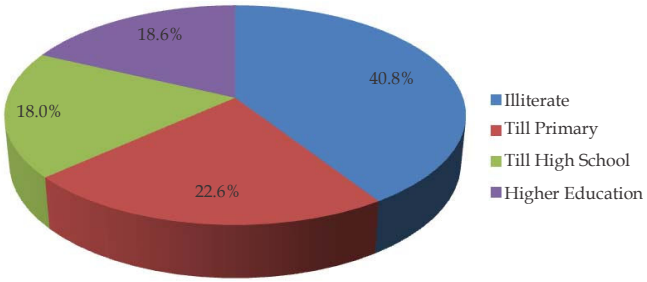
<5 Missing	189
5–15 Missing	63
>15/Completely Ed.	61
Arch	
Maxilla	47
Mandible	34
Both	232
Cause	
Dental Caries	140
Periodontal	61
Trauma	35
D.Caries & Perio	77
Problem	
Mastication	216
Esthetic	17
Comfort	2
Esth & Mast.	25
Mast. & Phonetics	20
Esth & Mast & Phon.	33
Reason	
Unaware	235
Cost	6
Sick	13
No Conveyance	4
No Facilities	5
No Time	24
No Need	84
Fear	3
Myth	6
Aware by	
Someone was	
Treated	54
Dentist	35
Self	157
Internet	4
Others	15
Know about	
CD	118
CD & RPD/CPD	55
CD & RPD/CPD & FPD	50
CD & RPD/CPD & FPD & Implant	31



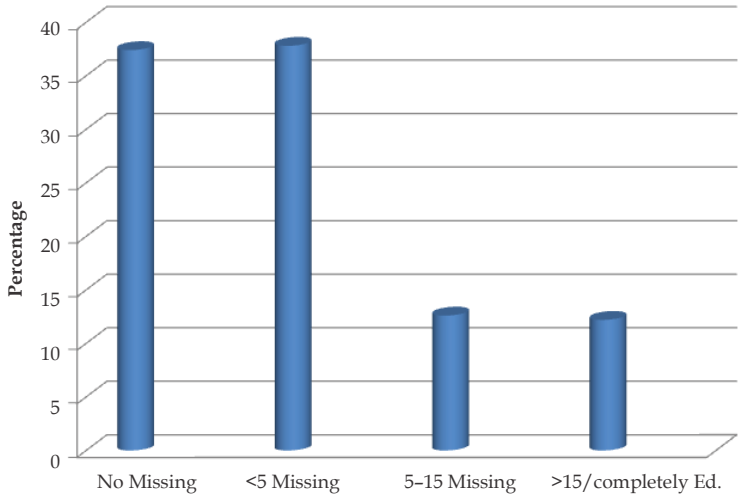
Graph 1: Agewise distribution of subjects enrolled in the study.



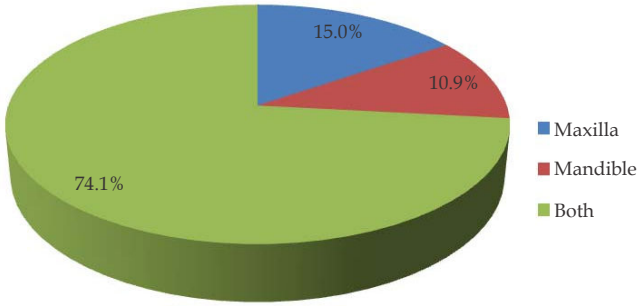
Graph 2: Genderwise distribution of subjects enrolled in the study.



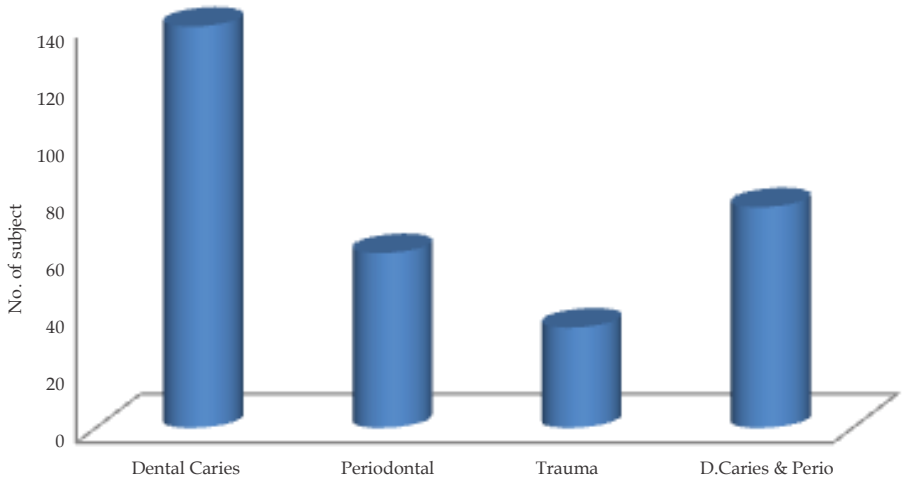
Graph 3: Distribution of subjects according to education.



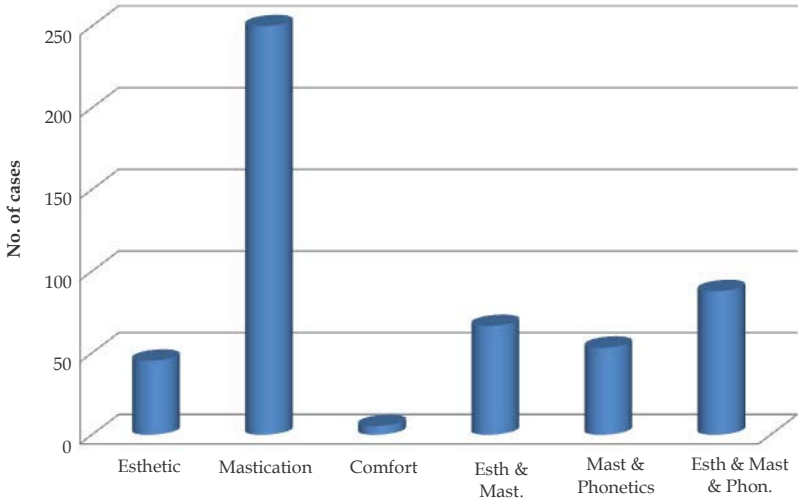
Graph 4: Distribution of subjects according to dentition status.



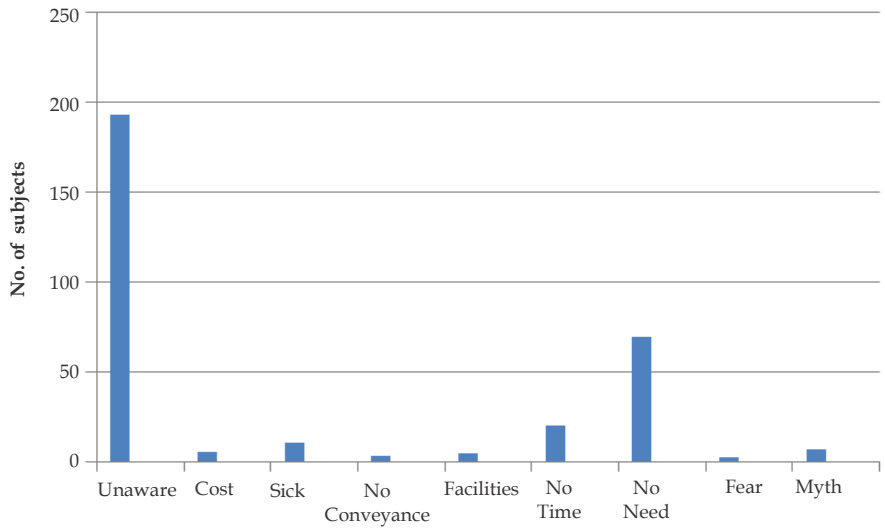
Graph 5: Distribution of subjects according to involved arch.



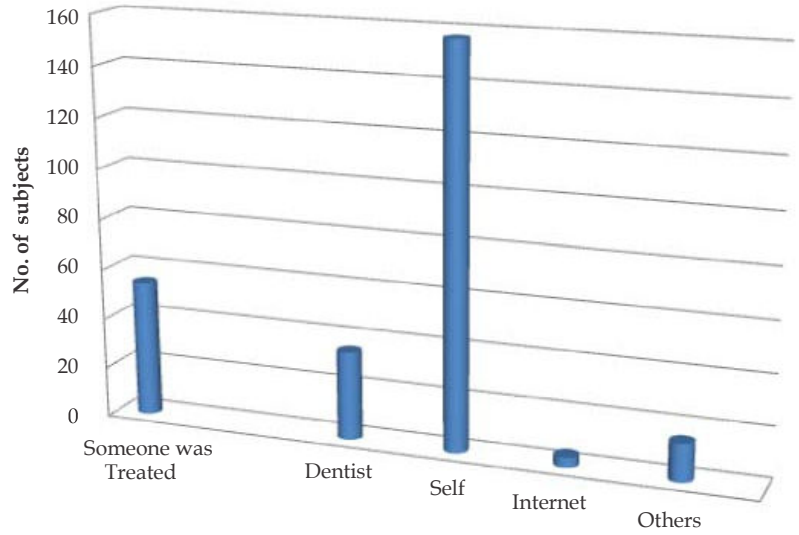
Graph 6: Distribution of subjects according to cause of missing teeth.



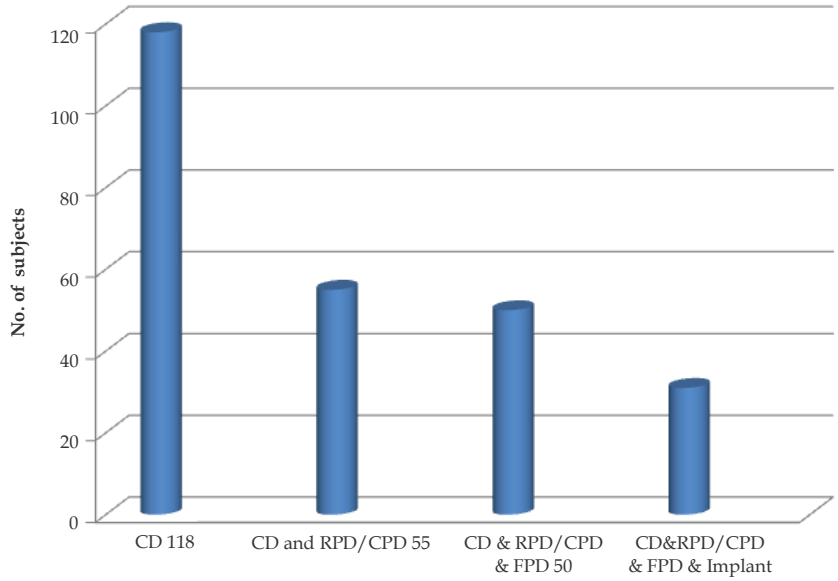
Graph 7: Prosthodontic problems.



Graph 8: Reasons for not replacing teeth.



Graph 9: Source of awareness.



Graph 10: Knowledge about different prosthodontic treatment options.

Discussion

Teeth are needed for mastication, phonetics, esthetics and comfort of an individual. With loss of teeth, physical, physiological and psychological trauma to patient occurs. It affects psychosocial well being of patients.[10] There is a definite need to assess individual awareness and level of edentulism so that one can improve diagnostic skills and also achieve goals of complete denture treatment with apt planning. A structural 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.

In this study age group 21–30 years had 179 people, age group 31–40 years had 110 subjects, age group 41–50 years had 109 people, age group 51–60 years had 66 subjects, age group 61–70 years had 22 people, age group 71–80 had 10 people and

age group 81–90 had 4 people. The number of male subjects was 258 and that of females 242.

Among these 204 were illiterate, 113 were educated till primary level, 90 studied till high school and 93 people were highly educated.

The dentulous subjects were 187, those with less than 5 teeth missing were 189, 63 subjects had 5–15 teeth missing, and 61 subjects had more than 15 teeth missing or were completely edentulism. Older people make extensive use of medical facilities but they seem to underuse dental facilities. 47 subjects reported missing teeth in maxillary arch while 34 subjects had edentulism in mandibular arch. 232 subjects had missing teeth in both arches.

For teeth loss 140 subjects gave the cause as dental caries, 61 people told that it was periodontal disease and 35 people cited the cause was trauma. Dental caries and periodontal disease together accounted for teeth loss in 77 people.

The problems suffered due to absence of teeth were that 216 subjects reported it was mastication,17 subjects gave esthetics as the problem, 2 subjects had discomfort, 25 subjects had combined problems in esthetics and mastication, 20 subjects had problems in mastication and phonetics and 33 subjects gave problems in all 3: esthetics, mastication and phonetics.

Shigli et al.[11] reported that most people in India are aware of only mastication function served by the teeth. They are less aware of the esthetics and phonetics function of teeth. This is in agreement with findings by Annette Thomas-Weintraub who stated that masticatory difficulty was the most frequently voiced complaint and dentists too are responsible for this state as for the same population ratio, there are 10 times more dentists in cities than in villages in India. Szentpetery et al.[12] noted that problems with eating and chewing dominated when subjects first sought Prosthodontic treatment.

It was found that the rural people did not avoid going out or felt embarrassed in meeting with their family, friends and relatives or any difference while smiling even though they were without teeth. On the contrary, majority of the urban population especially females did not smile much since loss of teeth, felt conscious while socializing and so avoided going out. This could be because 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 DM et al.[13] 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.

The reason given for not replacing teeth was lack of awareness in 235 people, cost in 6 subjects, sickness in 13 subjects, no conveyance in 4 subjects and no facilities in 5 subjects. 24 people had no time and 84 subjects felt no need of it. 3 people lived in fear while 6 subjects believed in myths. This showed that lack of awareness was the primary cause of edentulous state.

Mobility problems, lack of information, misconceptions about the value of dental visits have been mentioned as contributing to this apparent disinterest in dental care among geriatric patients. Perceptions associated with increasing age as feelings that they are too old to adapt to dentures and lack of interest in esthetics may also be contributory factors for low perceived needs in the higher age group. Lack of education about the importance of oral health, the need for preventive services and the consequences of neglect appear to constitute a significant barrier to dental healthcare.

Tuominen[14] also found financial constraints to be a main cause. Tennstedt et al.[15] reported disinterest as the most common cause for non utilization of Prosthodontic treatment in New England. The most common myth in rural population was tooth loss is an extension of old age and eating tobacco helps to relieve dental pain. Also that only medicines can cure dental diseases. They had a fear that tooth extraction leads to loss of vision and oral prophylaxis causes loosening of teeth.

Of the people who knew about dental treatment, 54 subjects were informed by those who had been treated, 35 were told by a dentist while 4 people came to know through internet. 15 subjects were informed of Prosthodontic treatment by other sources. Of the majority, 157 subjects came to know of Prosthodontic treatment by themselves.

Those who knew of Prosthodontics among them 118 knew about complete dentures, 55 subjects had knowledge of complete dentures and removable/cast partial dentures, 50 people knew about complete dentures, removable/cast partial dentures and fixed partial dentures while 31 people had information about complete dentures, removable/cast partial dentures, fixed partial dentures and implants.

Conclusion

The study has brought to light that there is a high unmet need of Prosthodontic treatment among populations surveyed. The elderly population of India is over 77 million.[16] Tooth loss especially complete loss or edentulism is equivalent to dental death.[17] The findings indicate that through increased awareness of patient, his expectations can be sought and apt treatment can be planned and executed. To improve oral health, it is important to provide oral health education and inform people of importance of Prosthodontic treatment. Main cause of tooth loss is dental caries in which diet plays an important role.[18] Preventive dental care is almost non existent in rural India. Shah et al.[19] observed that for same population ration, there are 10 times more dentists in cities than the population in villages. Primary health care centers in rural areas have no provisions for dental care. Edentulous people are aware only about masticatory function of dentures but are deprived of esthetic and phonetic values. Awareness of responsibility of oral health professional is necessary, as well as obligation to inform patients.[20] However it is unfortunate to conceive that there is still a huge need to bridge the gap.[21] We also need to make sure that long term and palliative care is accessible for those who need it at end stages of life.[22]

A distinct need exists for Prosthodontists to be able to understand a patient's motive in seeking Prosthodontic care and to identify these before starting the treatment. More emphasis has to be given to patient mediated concerns. There is lack of awareness among people so education and motivation is the call of the hour. Also need of Prosthodontic care is expected to increase due to increase in average lifespan of adults. Misconceptions need to be eradicated that tooth loss is unavoidable and inevitable part of aging process. There is dire need of providing correct information to rural population and targeted programmes have to be conducted. These should inform them of scientific dental practices that are necessary for them. Thus conducting surveys, promoting dental education and motivation are important for rural population so that they can identify availability of Prosthodontic services and treatment modalities.

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