# Chapter 3
# Dental Implant Selection:
## A Study in Odisha–Based Elderly Patients

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## ABSTRACT

*Elderly dental patients suffer from toothache and lose their teeth without proper care, particularly diabetics and other chronically ill people who used to suffer from more dental problems and fear of surgery or implantation techniques. These patients also avoid visiting doctors or dentists for treatment and suffer from not eating or chewing. Hence, a study was conducted to study the barriers to geriatric dentistry among patients above the age of 60/65 in Odisha. Further selection of dental implant materials for elderly people was done by E_DAS (evaluation based on distance from average solution) multi-criterion decision-making method, such that the best implant material could be prioritized. Then the statistical study on site selection for implants is conducted with variations in temperature during the tooth implantation process. This chapter will help in the proper selection of dental materials by considering older patients. It will also help guide the proper and better treatment procedures for senior people, which can reduce the fear factor in dental treatment.*

## INTRODUCTION

Geriatric dentistry means dental care for senior citizens or old people after age 60. As per NIH (National Institute of Health), after age old people lose bone densities. But with proper dental care, many people are able to keep their dental health for a long time. People suffering from health problems like diabetics, cancer, etc. used to suffer from dental problems in their late age. Jaw bone density is properly checked before implantation or any kind of surgical operation. Dental Enamel wear also creates sensitivity problems and causes tooth decay. Many seniors suffer from gum diseases and lose their teeth. Tooth extraction is conducted for infected teeth of old or aged people. Dental implants are preferred to avoid loss of teeth. Denture replacement and periodontal treatment is done to relieve people from gum diseases.

Poor oral health has been known as a risk actor for overall health issues in the aged population. A rise in chronic illnesses and physical/mental limitations makes older people more prone to oral problems or diseases. Therefore, in terms of receiving care, the elderly are a unique category in dental treatment. Rahardjo et al. (2022) have done an analysis on the awareness and attitude of dental students during oral treatment towards the old Indonesian people. Rodrigues et al.(2019) & Chan et al.(2021) have explained that diabetic patients are suspect able to fungal infection.

Jongen (2017) found that there are many barriers to dentistry for senior citizens, like the distance of the clinic and time for each patient, lack of proper equipment, lack of financial support, limited number of workers. In order to prevent and cure oral illnesses in this population, dentists must acquire the requisite expertise. Holm-Pedersen (2015) have discovered that providing proper <u>dental care</u> to older adults by <u>diagnosis</u>ing improve oral health of patients. Ara et al. (2022) have explained that geriatric dentistry problems elderly people were connected with psychological and pathological age related diseases. It reiterated that oral health is an essential component of total health by the expression "the mouth is a mirror of overall health". Dentists must have enough knowledge about treatments for old people and can do proper surgery to use implants to help old people. In developing countries like India, the older population is 60% of the total population and the maximum of these population are suffering of chronic diseases like diabetic, cardiovascular diseases, hypertension and cancer. There is a strong connection between these diseases with oral health. So these large populations are also sufferers of oral/dentistry diseases.

To take care of the gray population from oral problems, there are many obstacles found in Indians, so more research is essential for selection of dental implant materials. The Restoratrive materials are essential, which have antibacterial property, durability and the dental implant must have the property to bond with muscles. Hence, in this chapter the survey is conducted to study elderly dentistry patients' status in Odisha (India), then the evaluation based on distance from average solution (E Das) multi

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