

Geriatric Oral Health Research: Research Designs and Areas of Research

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Good quality medical and well-being care, improved lifestyles, enhanced hygiene measures, appropriate food, and a decrease in child mortality are responsible for adding years to people's lives.¹ Presently we are seeing a rising trend of a new active cohort of young old adults (65–74 years), old-old adults (75–84 years), and oldest-old adults (85 years and above).² This phenomenon is noticeable in the changing age pyramid (the base becoming smaller and the middle portion till the top becoming wider). Dentists are observing new dental problems amongst this cohort and are facing challenges to tackle them.³ Also, the oral health of the geriatric population is neglected. It is estimated that by 2100, there will be 2.37 billion people aged over 65 years of age. Proportionately, the dental disease burden is bound to increase, and hence, to address this situation through evidence-based practice, we need to build a robust and comprehensive research database.

Research plays a vital role in healthcare decision-making. Broadly, research can be classified as biomedical, epidemiological, and health services research.⁴ Research can be undertaken through a primary and secondary approach. The most familiar form of health research for a clinician is patient-based (primary approach). However, now, an increasingly large portion of research is information-based (secondary approach). Also, secondary research can be performed on data, specimens, samples, etc, that were initially collected for another research.⁴

According to the Dental Council of India, Geriatric Dentistry is not considered a separate specialty. The primary research in Geriatric Dentistry is majorly academic-based and undertaken by any of the nine dental specialties, followed by Government-funded, industry-sponsored, and meagre contributions from voluntary or independent players. **Figure 1** depicts a compilation of different types of research, types of research designs, and areas of research for Geriatric Dentistry research.

Literature findings are vital to clinicians to make evidence-based healthcare decisions for patients. A senior dentist practicing Geriatric Dentistry must attempt to compile their clinical knowledge and publish it as an expert opinion. Since life expectancy has improved, we are encountering new dental problems that are probably not reported in the literature. Hence, it becomes mandatory that even one case registered and treated must be reported as case reports. This will be a significant contribution to the literature. Cross-sectional studies or prevalence studies help report the health or disease condition at a point in time. Any new finding or prevalence trend can be easily identified. This is a straightforward type of study design and can be conducted quickly. In addition to the cross-sectional studies, one can also conduct a long-term or longitudinal study, which is undertaken to study the time trends,

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progression, or the natural course of the disease. These kinds of studies are descriptive and help build the hypothesis.

The most popular are the clinical trials or the interventional studies, which should be conducted ethically with patient consent. The general and oral health are interlinked and should not be treated in siloes. There is an urgent need for a comprehensive and holistic treatment approach to tackle the overall health of geriatric adults. Thus, interdisciplinary or multidisciplinary studies must be conducted in collaboration with allied and medical health professionals. Most often, in research, the focus is on statistical significance, and the least importance is given to clinical relevance. Health economics is an important part of clinical significance and therefore, research studies based on cost-effectiveness/cost benefit analysis should also be undertaken.

Desk research (secondary research, information-based research) in the form of systematic review and meta-analysis is the highest ranked in the hierarchy of evidence. Such manuscripts help the stakeholders generate policy documents and implementation guidelines. Clinicians can also utilize it for decision-making for patient treatment.

We are in the initial phase of exploring the new age cohort and the associated geriatric oral concerns. The clinicians should contribute to the research base by opting for any kind of research design.

Figure 1 depicts the different areas of Geriatric Dentistry research viz: dentate elderly and their oral concerns, edentulousness, and associated effects, the effect of dentition and nutrition, the effect of biological changes on the oral mucosa, systemic diseases and its impact on oral health, influence of depression and Falls on the oral health and comprehensive geriatric health care. Gershen JA has suggested the following research agenda for the elderly: epidemiologic studies of relevant oral diseases and related risk factors; investigations of patient and provider attitudes and behavior related to oral health; studies of the relationship between general health and oral health; development and testing

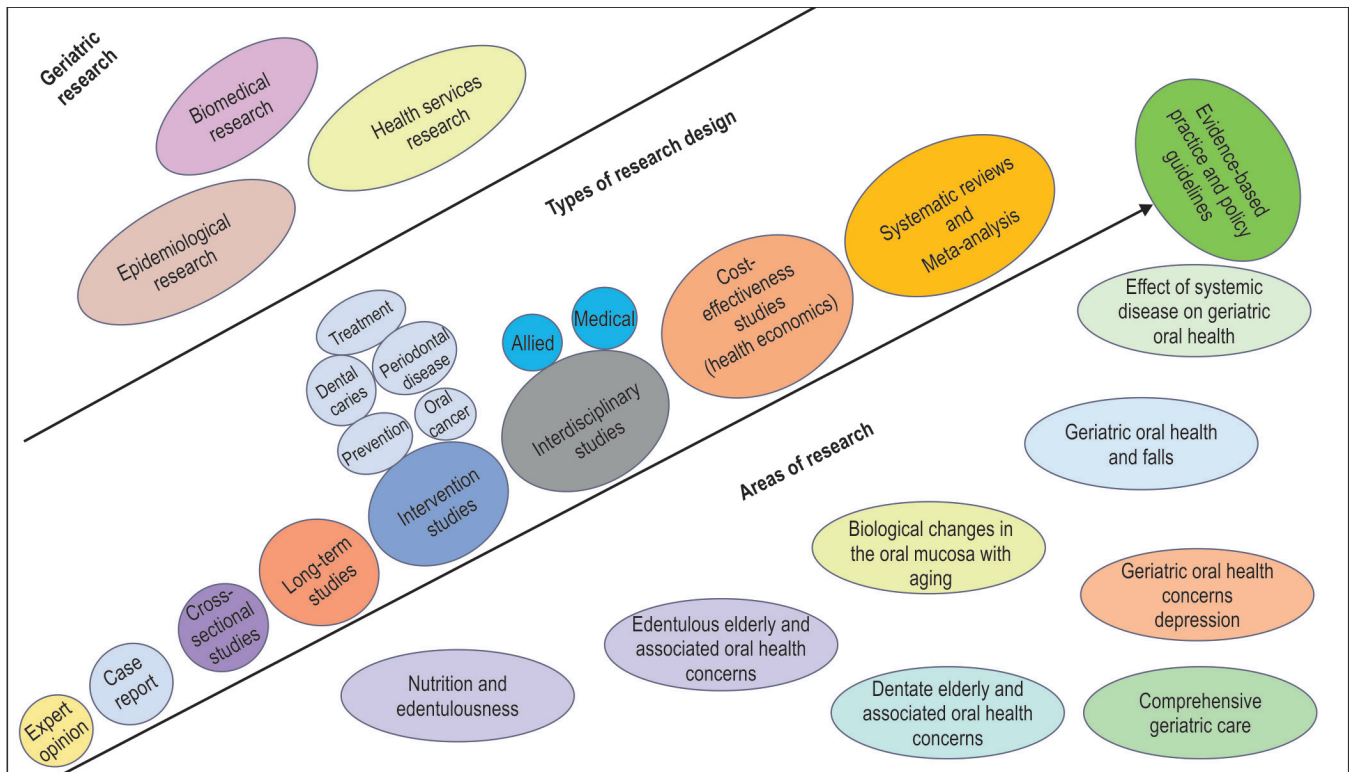


Fig. 1: Geriatric oral health research: Types of research design and areas of research

of preventive and treatment strategies for conditions such as xerostomia, root caries, secondary caries, and gingival recession; and studies for the evaluation of the impact of the aging population on the dental delivery system.⁵

To conclude, firstly, the research should focus on building a solid evidence base on which the clinicians can depend to plan holistic treatment for the geriatric population. Secondly, creating awareness of the presence of this new age cohort, their oral health concerns, and a need to have complete preventive, promotive, and curative care through research and evidence-based.

REFERENCES

1. Kakodkar PV, Kaur A, Manivasakan S, Rayannavar S, Deshmukh R, Athavale S. Oral health concerns of the 'sunset age'. *Journal of Medical Evidence* 2023;4(2):141–145. DOI: 10.4103/JME.JME_7_23.
2. Vasthare R, Ankola AV, Yan Ran AL, Mansingh P. Geriatric oral health concerns, a dental public health narrative. *Int J Community Med Public Health* 2019;6(2):883–888. DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20185509>.
3. Pardhan MS, Sonarkar SS, Sheno PR, Uttarwar V, Mokhad V. Geriatric dentistry- An overview. *Int J Oral Health Dent* 2016;2(1):26–28. DOI: 10.5958/2395-499X.2016.00004.6.
4. Institute of Medicine (US) Committee on Health Research and The Privacy of Health Information: The HIPAA Privacy Rule, Nass SJ, Levit LA, Gostin LO, (Eds). *Beyond the HIPAA privacy rule: Enhancing privacy, improving health through research*. Washington (DC): National Academies Press (US); 2009. p. 3. The Value, Importance, and Oversight of Health Research. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK9571/>.
5. Gershen JA. Geriatric dentistry and prevention: Research and public policy. *Adv Dent Res* 1991;5(1):69–73. DOI: 10.1177/08959374910050011101.