

# Perception of health care providers toward geriatric oral health in Belgaum district: A cross-sectional study

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## Abstract

**Objectives:** To access knowledge and practices related to the oral health of geriatrics among the health care providers practicing in urban and rural areas. **Background:** Older adults have identified a number of barriers that contribute to lack of dental service use. However, barriers that clinicians encounter in providing dental treatment to older adults are not as clear-cut. **Materials and Methods:** 236 health professionals (of allopathy, ayurveda, and homeopathy) from urban and rural areas were assessed by means of structured questionnaire related to oral health practices and beliefs. **Results:** Doctors practicing in urban areas assessed dental care needs more frequently ( $P = 0.038$ ) and performed greater practices related to oral health of geriatrics ( $P = 0.043$ ) than the doctors practicing in primary health care (PHC) centers (rural) ( $P = 0.038$ ). **Conclusion:** Owing to the relative lack of knowledge among rural practitioners, there is a need to integrate primary health care with oral care in rural areas.

**Key words:** *Allopathy, ayurveda, geriatrics, health care providers, homeopathy, oral health, PHC centers*

## INTRODUCTION

Demographic transition has been observed worldwide, with a strong trend toward global population aging. Global population aging is expected to continue in the 21<sup>st</sup> century, and maintaining maximum individual and population health throughout the lifespan is thus a significant challenge.

India has acquired the label of an aging nation with the elderly population currently being over 77 million. The rapid graying of the population comes with a number of difficulties in terms of general and oral health. They are

considered being frail, impaired, and may have at least one chronic medical disability.<sup>[1,2]</sup>

Due to the high prevalence of complex chronic diseases and psychological disorders during aging, older persons usually require coordinated health care offered by different health care professionals.<sup>[2]</sup> Furthermore, poor oral health may also impact on general health, with reports indicating that older persons with fewer natural teeth that were not replaced by dental prostheses are more likely to be obese. Such findings support the notion that the relationship between poor oral health and systemic conditions may have important clinical implications.<sup>[3]</sup> This close interrelation between oral and systemic diseases needs to be considered by dentists and other health professionals caring for older persons, meaning that the oral cavity must not be viewed separately from the rest of the body.<sup>[4-6]</sup> Specifically, it is known that chronic diseases, their consequences, and cognitive impairments can lead to oral events.<sup>[5,6]</sup>

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In India, the main mode of patient treatment is allopathy, followed by ayurveda, homeopathy, and unani, and when it comes to utilization of these services, primary health care (PHC) centers serve as first-hand referral centers for rural population including the older population which represents the main users of medical care. Surprisingly, they are less frequent users of dental care services, with studies indicating that the development of oral health education programs oriented toward oral hygiene self-care and oral health self-diagnosis needs to take into account the fact that older persons tend to perceive their oral health as good, even when oral diseases are present.<sup>[7]</sup>

In order to advance directions to integrated care, dentistry must claim its place when it comes to the provision of health care to older people.<sup>[8]</sup> Older adults have identified a number of patient- or clinician-related barriers as contributing to a lack of dental service use. The former include socioeconomic status and ethnic characteristics, dental attitudes and awareness, accessibility, general health, and the degree of social support and care available.<sup>[7]</sup> However, the barriers that clinicians encounter in providing dental treatment to older adults are not as clear-cut, as there is a general lack of research in this area.

As per our knowledge, there is scarcity of literature in this field. So, the present study was undertaken to access knowledge and practices related to the oral health of geriatrics among medical professionals practicing in urban and rural areas and also to make comparisons between different types of health care providers.

## **MATERIALS AND METHODS**

### **Study design, study setting, and study population**

The present study was a cross-sectional questionnaire study conducted in the month of May 2013 for a period of 28 days. There are two allopathy, one ayurveda, and one homeopathy colleges present in Belgaum district, and all of them are located in the urban areas. For the present study, all the practitioners working at these colleges and at the city Civil Hospital constituted the sample from urban areas, whereas all allopathic, ayurvedic, and homeopathic medical care providers practicing at eight randomly selected PHC centers represented the sample from the rural areas. The questionnaires were distributed to the all the 244 doctors who were present on the day of study during the break time, and they were given sufficient time to complete the questionnaires.

### **Ethical clearance and informed consent**

The study protocol was reviewed by the institutional ethical and review committee of KLE Dental College. The questionnaires were administered to the doctors who gave written informed consent and volunteered to participate in the study. Before administering the questionnaire, the doctors were briefed about the objectives of the study. The surveys reports were kept anonymous.

### **Inclusion criteria**

- Subjects who were present on the day of study
- Subjects practicing allopathy, ayurveda, or homeopathy
- Subjects working in PHC centers for minimum of 6 months
- Subjects who gave informed consent.

### **Exclusion criteria**

- Interns or undergraduate students
- Health technicians and other paramedical staff.

### **Pre-testing of the proforma**

A pre-validated structured questionnaire was used to collect data based on a previous study done among PHC professionals and residents to evaluate their knowledge and practices related to oral health care of older persons.<sup>[8]</sup> The questionnaire was reviewed by experts (who were active in the field of geriatric health) and content validity was checked. A pilot study was conducted to determine the test-retest reliability of the survey questions in the present scenario; 15 doctors who completed the survey during the initial administration completed the survey 2 weeks later. The respondents were also asked for feedback on clarity of the questions and whether there was difficulty in answering the question or ambiguity as to what sort of answer was required. The subjects who participated in the pilot study were not included in the final sample. No modifications were made in the questionnaire based on the results obtained from the pilot study, as all the questions were easy to understand and relevant to the present situation. Moreover, it covered the topic in the desired manner.

### **Proforma details**

The proforma consisted of two parts:

- Sociodemographic details – including age, length of time since qualification, profession (allopathy, ayurveda, or homeopathy), area of work, i.e. PHC or urban, and duration

- Knowledge and practices related questions to oral health of geriatrics – It consisted of 12 closed-ended 3-point Likert scale questions pertaining to oral health practices and beliefs related to older persons.

### Statistical analysis

Completed questionnaires were entered in a database using MS Excel (Microsoft Corporation, Redmond, WA, USA). To test the reliability of the survey items, Cronbach's alpha coefficient was used. Descriptive statistics were generated for all questions. Frequency distributions and percentages were examined for each answer. Fisher's exact test was used to find the association between the study groups for various responses. The statistical significance level was set at  $P < 0.05$ . The statistical analysis was conducted using SPSS v. 17.0 (Chicago, IL, USA).

### RESULTS

Out of total 244 respondents, 236 responses were included in the final analysis because 8 subjects did not return their proformas back. Cronbach's alpha coefficient value for reliability was found to be 0.81, indicating good internal consistency. There were 110 (46.6%) male and 126 (53.4%) female participants; of them, 116 (49.2%) were post-graduate staffs, 69 (29.2%) were post-graduate students, and 51 (21.6%) were graduate staffs. Distribution of the study subjects according to degree, age, and years in practice is given in Table 1.

Information on knowledge and practices related to the oral health of older persons as reported and also the comparison between the different study groups using Fisher's exact test are shown in Table 2. Doctors practicing allopathy, ayurveda, and homeopathy in urban areas were found to have better knowledge and performed greater practices than those working in PHC centers as far as oral health of geriatrics was concerned,

although the difference was statistically significant only at a few places. Doctors practicing in urban areas assessed the dental care needs more frequently (81.9%, 83.6%, and 81.8% of allopathy, ayurveda, and homeopathy, respectively) than the doctors working in PHC centers (57.1%), and this difference was found to be statistically significant ( $P = 0.038$ ). Furthermore, doctors working in PHC centers reported dubiety related to contraindications of dental procedures more frequently than the other group participants (47.6 vs. 31.9%, 31.3%, and 32.7% for allopathy, ayurveda, and homeopathy doctors, respectively;  $P = 0.039$ ). Only a very small proportion of PHC centers' team participants reported that there were no contraindications to dental procedures (16.7%), but they also reported that root canal treatment (19.3%), dental extractions (08.3%), and local anesthesia administration (08.1%) were not indicated for older patients. When it comes to the practices related to oral health of older persons, most of the participants from all the study groups do ask questions related to their oral health problems, but this proportion was significantly lower among the doctors working in PHC centers (64.3%) than the other group professionals (81.9%, 82.1%, and 80.0% for allopathy, ayurveda, and homeopathy doctors, respectively;  $P = 0.043$ ).

### DISCUSSION

As we all know, oral health is an integral part of general health, and despite great achievements made in the oral health of populations globally, problems still remain in many target groups all over the world, especially among the underprivileged groups, particularly geriatrics, where it is most neglected. So, the present study was carried out to research the knowledge and practices related to oral health of older persons among all the three major modes of treatment providers in India, viz. allopathy, ayurveda, and homeopathy. Also, it attempts to make comparison between the doctors working in PHC centers and the urban areas regarding the oral health of geriatrics. Physicians providing all these modes of treatments can provide screening services also for the early detection of dental diseases and guide reference to seek dental care. Also, the PHC centers have the potential to rechannelize large number of patients who require medical care to the dental referral units, thereby reducing the overall burden of dental diseases among older persons. In the study, it was observed that all the types of medical professionals had adequate knowledge and concern regarding the oral health of older persons, which was in contrast to the other similar studies.<sup>[9-12]</sup> This may be ascribed to the fact that care providers had high clinical

**Table 1: Distribution of the study subjects according to place of practice, profession, age, and years of practice**

	Frequency and percentage	Mean±SD	
		Age	Years in practice
Urban (Allopathy)	72 (30.5)	32.82±9.47	5.72±1.88
Urban (Ayurveda)	67 (28.4)	30.88±8.87	6.39±2.59
Urban (Homeopathy)	55 (23.3)	34.40±9.62	7.76±2.52
PHC (allopathy+ ayurveda+homeopathy)	42 (17.8)	36.17±10.69	8.10±1.99

SD=Standard deviation

**Table 2: Comparison of knowledge and practices related to the oral health of geriatrics**

	Medical (urban) (%)	Ayurveda (urban) (%)	Homeopathy (urban) (%)	PHC (medical, ayurveda and homeopathy) (%)	Total (%)	Fisher's exact P
Recommend patients to visit dentist						
Yes	81.9	83.6	81.8	57.1	78.1	0.038*
No	12.5	13.4	10.9	31.0	15.7	
Sometimes	05.6	03.0	07.3	11.9	06.4	
Contraindication						
Yes	22.2	22.4	21.8	35.7	24.6	0.039*
No	45.8	46.3	45.5	16.7	40.7	
I don't know	31.9	31.3	32.7	47.6	34.7	
Age-related changes in oral health						
Yes	95.8	95.5	92.7	90.5	94.1	0.760
No	02.8	01.5	05.5	04.8	03.4	
I don't know	01.4	03.0	01.8	04.8	02.5	
Oral health and systemic changes						
Yes	83.3	83.6	87.3	81.0	83.9	0.704
No	05.6	03.0	07.3	04.8	05.1	
I don't know	11.1	13.4	05.5	14.3	11.0	
Oral manifestations						
Yes	80.6	77.6	77.6	85.7	80.9	0.903
No	08.3	13.4	13.4	07.1	09.7	
I don't know	11.1	09.0	09.0	07.1	09.7	
Questions about oral health problems						
Yes	81.9	82.1	80.0	64.3	78.4	0.043*
No	18.1	17.9	18.2	26.2	19.5	
Sometimes	00.0	00.0	01.8	09.5	02.1	
Oral health and eating habits						
Yes	93.1	91.0	92.7	88.1	91.5	0.817
No	05.6	04.5	03.6	09.5	05.5	
I don't know	01.4	04.5	03.6	02.4	03.0	
Diet control/sugar						
Yes	76.4	76.1	76.4	71.4	75.4	0.922
No	23.6	23.9	23.6	28.6	24.6	
Oral health care						
Yes	79.2	68.7	81.8	61.9	73.7	0.079
No	20.8	31.3	18.2	38.1	26.3	
Oral health and self-esteem						
Yes	79.2	76.1	76.4	69.0	75.8	0.852
No	09.7	10.4	12.7	19.0	12.3	
I don't know	11.1	13.4	10.9	11.9	11.9	
Social relationships						
Yes	77.8	67.2	80.0	59.5	72.0	0.318
No	12.5	17.9	10.9	23.8	15.7	
I don't know	09.7	14.9	09.1	16.7	12.3	
Self-examination						
Yes	94.4	92.5	94.5	90.5	93.2	0.793
No	05.6	07.5	05.5	09.5	06.8	

\*P&lt;0.05, PHC=Primary health care

experience (6.81 ± 2.46 years) and compulsory dental postings during their curriculum. However, significant

differences were observed at some places between urban and rural treatment providers. When it was enquired

if they ask older persons about eventual oral health problems and seek their proper referral to dental care center, the responses collected differed significantly for PHC and urban medical care providers. PHC team members were found to be exhibiting less concern for eventual oral health problems, assessment of the dental care needs, and adequate referral of older persons to the dental care center than the doctors practicing in the urban areas. A number of factors exist to explain this unmet need among the older population, viz. lack of facilities for early and regular oral health check-up and prompt treatment, and lack of knowledge regarding oral health as there is no dentist attached to these centers. Similarly, when comparisons were made regarding the contraindicated dental procedures for older persons among PHC professionals and doctors working in urban areas, the latter were found to have more knowledge regarding the same. The possible reason, we believe, regarding this holding is more number of conferences and dental education programs which the doctors working in the urban areas can be part of, so that they can update their knowledge regarding various other fields including dentistry. Also, there are more of multispecialty hospitals and institutes in the urban areas which are often attached with the dental institutes, which increases the knowledge and attitude of medical professionals regarding dental considerations. This study recommends building up of integrated, interdisciplinary team work practices and comprehensive evaluation of the present oral health care delivery system to address the treatment needs of geriatrics. PHC centers act as the backbone of a developing country like India. So, measures should be initiated to further increase interdisciplinary competencies among the rural care providers. Surveys including different age cohorts and areas would also provide relevant information. Further researches are required to evaluate the dental management skills of general physicians in cases of emergencies. This study will help to determine the improvements required in medical education, besides the requirements for continuing education programs to address this topic.

## CONCLUSION

The subjects in the present study from all the three medical professions, viz. allopathy, ayurveda, and homeopathy, practicing in both urban and rural centers. The overall knowledge and practices among health professionals (allopathy, ayurveda, and homeopathy) were found to be appropriate. The doctors working in rural areas were found to have little lack of knowledge and performance of practices related to oral health of geriatrics, when compared with their counterparts in the urban areas. It is suggested that there should be regular

exchange of postings between the rural and urban areas, so that the doctors who have got more exposure regarding the oral health of geriatrics can also serve the rural population. Also, if possible, one permanent dental staff should be posted in PHC centers in order to meet the demands of the rural population, thereby increasing their awareness regarding oral health and consequently the oral health-related quality of life. We also believe that continuing education on oral health-related topics during different life cycles should be provided, if improvements in care provision and training are considered essential.

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