

Assessment of Oral Health Awareness among Undergraduate Medical Students in Raichur District: A Survey

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ABSTRACT

Background: Early detection of oral diseases makes them more amenable to treatment and allows the greatest chance of cure. Delay in presentation and/or referral has a significant effect on the associated morbidity and mortality. Lack of general medical practitioner's knowledge of oral disease has been shown to contribute to delays in referral and treatment.

Aim: The present study was undertaken to assess knowledge, attitude and practice of dental awareness among undergraduate medical students in Raichur District, Karnataka, India. The present study is cross-sectional survey conducted among the medical students in Raichur District, Karnataka, India. 140 undergraduate medical students from 4 different years were selected for the present study. The data pertaining to their knowledge, attitude and practice about oral health was gathered using a self-administered questionnaire. The data was analyzed using descriptive statistics.

Results: Majority of the undergraduate medical students were aware about the inter-relation between oral health and general health.

Clinical relevance statement: The present study aims at evaluating the awareness among undergraduate medical students about the oral health. It also focuses on the need of incorporation of basic knowledge about dentistry in medical syllabi.

Keywords: Attitude, Knowledge, Oral health.

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INTRODUCTION

Oral health is essential to general health and well-being at every stage of life. A healthy mouth enables nutrition of the physical body and enhances social interaction, and promotes self-esteem and feelings of well-being. Research has also suggested that oral and systemic health are closely associated with each other, and oral diseases if left untreated may exaggerate certain systemic diseases. This makes maintenance of optimum oral health important in one's life.¹

Oral health is compromised by unhealthy habits like the use of tobacco and lack of dental specialist care.² The World Health Organization set the goals for the year 2020 as recommended oral self-care (ROSC), which includes tooth brushing more than once a day, lesser consumption of sugar-containing snacks once daily or rarely, and regular use of fluoride-containing toothpaste.³

India is a country of diverse ethnic groups, geographic characters, culture, and religion, with a population of 1.22 billion. About 68.84% of the population resides in rural areas where only 10% of manpower resources are available and vice versa in urban areas.^{4,5}

The dentist population ratio is 1:10,000 in urban areas and 1:250,000 in rural areas. For such a major part of the population residing in rural areas, health care is delivered through primary health centers mainly, where the majority of health providers are medical practitioners.⁶

The demand for faculty and facilitation is tremendous, and the supply most often cannot meet the needs.⁷

Medical practitioners should play an active role in oral health promotion.⁸ Proper knowledge of oral diseases is crucial in medical practice due to the following reasons: (a) periodontal diseases are associated with multiple systemic conditions of medical interest; (b) a large number of systemic diseases have oral manifestations; (c) many drugs are associated with oral adverse drug reactions,⁹ and (d) the majority of the population approaches medical practitioners

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for their oral health problems. Hence, early screening and proper referral by these professionals may benefit from improving access to oral health problems and reduce the associated morbidity and mortality. The need of the hour is for general practitioners to have adequate knowledge about oral health as they are the ones whom the majority of the population approach.

MATERIALS AND METHODS

Study Design

The study is an observational, descriptive, and cross-sectional survey. A self-structured, pretested questionnaire was used for the survey. All the questions were multiple choice and close-ended.

Sample Size and Sampling Method

The undergraduate students studying in the first, second, third, fourth years and interns of Navodaya Medical College and Raichur Institute of Medical Sciences were included in the study.

Ethical Consideration and Consent

The study protocol was approved by the institutional review board. The required permission was obtained from the concerned authorities of both the medical institutions. Written informed consent was obtained from the students participating in the study after explaining the objectives, and also the pros and cons of the study.

Collection of Data

Data were collected using a self-structured, pretested questionnaire. The questionnaire included the demographic details and the information related to oral health maintenance, the relationship of oral diseases with systemic diseases, and oral health problems and their management. The questionnaire was administered by an investigator during students' free hours—in the library, college campus, and hostel. Students were instructed not to discuss any of the answers with their friends. Students were also instructed to approach the investigator if they had any doubts pertaining to the questionnaire. Students answered all the questions in the questionnaire in 30 minutes. There were no missing data. The study was completed within a period of 4 months.

Statistical Analysis

The Chi-squared test was used to test the significant difference in oral health awareness among undergraduate medical students.

RESULTS

Based on the interquartile range, all the students were grouped according to their oral health awareness as follows: ≤ 11 = poor oral health awareness; 12–16 = fair oral health awareness; and ≥ 17 = good oral health awareness.

Out of 140 students, only 88 (63%) were found to have good oral health awareness, 45 (32%) students were found to have fair oral health awareness, and 7 students (5%) were found to have poor oral health awareness.

Interns were found to have better oral health awareness (33.6%) when compared to final-year (10.7%), second-year (8.6%) and third-year (5%), and first-year (5%) undergraduate medical students at $p > 0.05$.

Interns were found to have 13.6% fair knowledge when compared to 5.7% of the fourth-year and 4.3% of the third-year, 4.3% of the second-year, and 4.3% of the first-year undergraduate students. The fourth-year undergraduate students were found to have 2.1% poor knowledge when compared to 1.4% of the first year and 0.7% of interns and 0.7% of the second year and 0.0% of the third-year undergraduate students. All their results were found to be significant at $p > 0.05$.

LIMITATIONS

Geographical areas of samples covered is limited; hence larger sample size with different geographic location needs to be analyzed.

DISCUSSION

In the present study, the awareness about oral health was found to be good among undergraduate medical students in Raichur district. Intern medical students were found to have better oral health awareness compared to another year undergraduate medical students. The probable reasons could be more clinical exposure, more experience, and knowledge. The majority of the first-year undergraduate medical students were found to have average oral health awareness when compared to the

other undergraduate medical students, in which most of them had poor oral health awareness. The probable reason could be medical students are exposed to dental subjects in their second academic year. It is recommended that oral health awareness of the undergraduate medical students can be improved by incorporating basic information about oral health in their academic curriculum, conducting various interdisciplinary workshops, continuing dental education programs and conferences, and increasing the clinical exposure of the students to oral findings as most of the systemic diseases manifest in the oral cavity. Special study modules or electives in oral health and disease should be created by involving the dental faculty emphasizing the importance of oral health. As prospective doctors, they should have sufficient awareness about oral health as oral health problems are cumulative by nature, more amenable to prevention, and difficult to treat. Early identification of the oral diseases and referral to a specialist not only prevents a patient from pain, agony, and functional and esthetic problems but also from death in some conditions. The present survey shows good oral health awareness among undergraduate medical students, and interns were found to have better knowledge compared to the remaining undergraduate students. Further studies have to be conducted to explore the reasons (Figs 1 and 2).

Oral health awareness	No. of cases	Percentage (%)
Fair	45	32
Good	88	63
Poor	7	5
Total	140	100

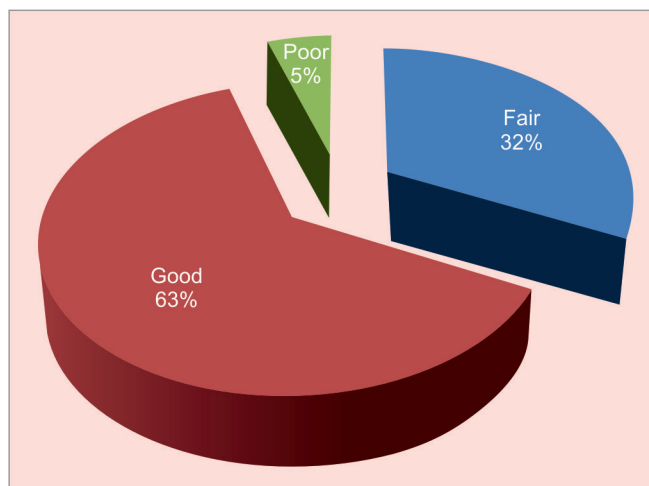


Fig. 1: Oral health awareness among undergraduate medical students

Class	Poor		Fair		Good		Total	
	No.	%	No.	%	No.	%	No.	%
First year	2	1.4	6	4.3	7	5.0	15	10.7
Second year	1	0.7	6	4.3	12	8.6	19	13.6
Third year	0	0.0	6	4.3	7	5.0	13	9.3
Fourth year	3	2.1	8	5.7	15	10.7	26	18.6
Internship	1	0.7	19	13.6	47	33.6	67	47.9
Total	7	5.0	45	32.1	88	62.9	140	100.0

$\chi^2=9.476, p = 0.304 > 0.05$; not significant

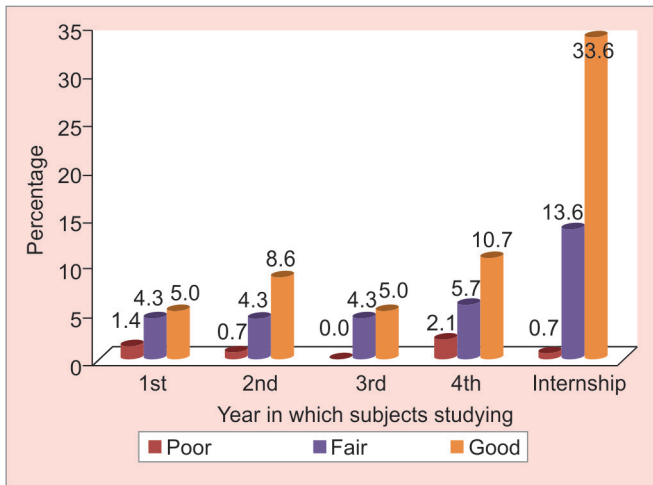


Fig. 2: Graphical representation of oral health awareness among undergraduate students

REFERENCES

1. Rhodus NL. Oral health and systemic health. *Minn Med* 2005;88(8): 46–48. PMID: 16225336.
2. Gundala R, Chava VK. Effect of lifestyle, education, and socioeconomic status on periodontal health. *Contemp Clin Dent* 2010;1(1):23–26. DOI: 10.4103/0976-237X.62516.

3. Gopinath V. Oral hygiene practices and habits among dental professionals in Chennai. *Indian J Dent Res* 2010;21(2):195–200. DOI: 10.4103/0970-9290.66636.
4. Available from: <http://www.indiaonlinepages.com/population/india-current-population.html>. [Last accessed on January 14, 2012].
5. Available from: <http://www.censusindia.gov.in/2011-Documents/Houselisting%20English.pdf>. [Last accessed on January 14, 2012].
6. Kishor KM. Public health implications of oral health–inequity in India. *J Adv Dent Res* 2010;1:1–10.
7. Available from: <http://www.dentistryindia.net/article.php?id=1010>. [Last accessed on January 14, 2012].
8. Patel A. Awareness of oral health among medical practitioners in Sangamner city: A cross-sectional survey. *Int J Clin Dent Sci* 2010;1:26–29.
9. Ramirez JH, Arce R, Contreras A. Why must physicians know about oral diseases? *Teach Learn Med* 2010;22:148–155.

QUESTIONNAIRE

ASSESSMENT OF ORAL HEALTH AWARENESS AMONG UNDERGRADUATE MEDICAL STUDENTS IN RAICHUR DISTRICT: A SURVEY

NAME:

AGE:

GENDER:

ADDRESS:

COLLEGE NAME:

YEAR: (1st/2nd/3rd/4th/Internship)

PHONE NUMBER:

EMAIL ADDRESS:

QUESTIONNAIRE

1. Oral health is an integral part of general health.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
2. Certain systemic diseases can manifest in the oral cavity.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
3. Proper maintenance of deciduous dentition is as important as permanent dentition.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
4. Saliva can be used in the diagnosis of oral as well as certain systemic diseases.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
5. Dental caries and periodontal disease are plaque-mediated diseases.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
6. Dental caries is a complex disease but can be prevented by adopting proper oral health behavior.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
7. Proper brushing of teeth and flossing will enable the prevention of both dental caries and gingival diseases.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
8. Alignment of teeth is done both for functional and esthetic purpose.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
9. Dental care should be started even before the birth of a child/prenatal care.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
10. Microorganisms that cause dental caries are transmitted mainly from the mother to the child.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
11. Frequent consumption of sugar-containing food is more detrimental than the quantity of sugar consumed.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
12. Tobacco is one of the risk factors for causing oral cancer.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
13. All precancerous lesions of the oral cavity invariably lead to oral cancer even if the predisposing factors are removed.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree
14. Parafunctional habits like thumb-sucking, lip-biting, lip-sucking, and nail-biting are very common among children. These habits need to be curbed as they affect orofacial structures.
 - a. Agree
 - b. Disagree
 - c. Neither agree nor disagree

QUESTIONNAIRE

15. Fluorides have a protective role against dental caries.
a. Agree
b. Disagree
c. Neither agree nor disagree
16. Mouthguards are useful in preventing sport-related injuries/trauma.
a. Agree
b. Disagree
c. Neither agree nor disagree
17. A tooth avulsed due to trauma can be reimplanted into the tooth socket within a stipulated time period.
a. Agree
b. Disagree
c. Neither agree nor disagree
18. Bruxism (grinding of teeth) and worn-out teeth can cause temporomandibular joint problems and pain in the orofacial region.
a. Agree
b. Disagree
c. Neither agree nor disagree
19. Loss of teeth during old age is a natural phenomenon. Neither the dentist nor the patient can prevent tooth loss.
a. Agree
b. Disagree
c. Neither agree nor disagree
20. Artificial teeth can perfectly replace the function of natural teeth. Hence, too much care for natural teeth is unwarranted.
a. Agree
b. Disagree
c. Neither agree nor disagree
21. Soft drinks can cause erosion of dental enamel, which is the hardest tissue in the human body.
a. Agree
b. Disagree
c. Neither agree nor disagree
22. Cleft palate and cleft lip are developmental defects. Proper surgical and prosthetic treatments are available that will enable patients with cleft lip/cleft palate to lead a normal life.
a. Agree
b. Disagree
c. Neither agree nor disagree
23. Health education has an important role to play in creating awareness about oral health among the public.
a. Agree
b. Disagree
c. Neither agree nor disagree
24. Oral diseases have an implication on certain systemic diseases/conditions like cardiovascular diseases, pregnancy, low-birth-weight babies, etc.
a. Agree
b. Disagree
c. Neither agree nor disagree
25. Oral health has an influence on the overall quality of life
a. Agree
b. Disagree
c. Neither agree nor disagree
26. Which are the following specialties in the field of dentistry you are aware of? Tick them.
a. Oral medicine and radiology
b. Oral and maxillofacial surgery
c. Conservative dentistry and endodontics
d. Orthodontics
e. Periodontics
f. Prosthodontics
g. Pedodontics
h. Community and Preventive Dentistry
i. Implantology
j. Oral Pathology
k. Forensic Odontology