

Oral health awareness and tooth brushing behaviour among high school students in a rural and an urban area: a comparative study

L. Joseph, Uzma Iqbal Belgaumi*, N. Vibhute, V. Kadashetti, Sushma Bommanavar and W. Kamate

Department of Oral Pathology and Microbiology, School of Dental Sciences, Krishna Institute of Medical Sciences Deemed to be University, Karad-415110 Maharashtra, India

Received: 24th August 2020; *Accepted:* 15th March 2021; *Published:* 01st April 2021

Abstract: *Background:* Oral health is vital to the overall health and well being of an individual. It is imperative to train children from a young age in order to inculcate good oral hygiene practices among them that would become the basis for a healthy society. It is generally observed that children from urban areas are more sensitized towards personal hygiene than those from rural area. *Objective:* Our objective was to evaluate the oral health knowledge, attitudes, and practices among secondary school students in urban and rural areas of Karad, Maharashtra. *Methods:* A cross sectional study sample of 200 students (100 student from rural and 100 from urban) from 2 schools were included in the study. Participants for this study were selected by stratified random sampling and included both males and females, aged between 12-14 years. All the participants were requested to complete a closed-ended questionnaire of 18 questions for assessment of knowledge, attitude and local oral health practices. *Results:* The overall results showed that urban children showed a better knowledge, attitude and practice of oral hygiene in comparison to those from rural areas inspite of the fact that both the areas were not very different culturally, economically or in terms of development. *Conclusions:* Rural areas need more oral health awareness programmes and outreach activities for promoting better community oral health and hygiene.

Keywords: Brushing, Knowledge, Oral health Practices, Questionnaire.

Introduction

Improvement in oral health-related knowledge, awareness and practice may be an essential prerequisite for improving oral health in a community. Oral health promotion through schools must be initiated, as recommended by the World Health Organization (WHO), to bring about an improvement in the knowledge, attitude, and behavior related to oral health and for prevention and control of dental diseases among young school children [1].

Various recent studies have noted that Indian children have low level of oral health awareness and practice as compared to their western counterparts. Not much is known about oral health awareness and behavior of children from developing countries as compared to the developed countries [2]. Very few studies have been conducted to evaluate the level of oral health-related knowledge and the attitudes and practices of children in developing countries,

especially those residing in rural areas, as compared to that of children in developed countries [1]. The study was done in order to compare the knowledge, attitude and practice among high school students, residing in rural and urban areas of Karad.

Material and Methods

Ethics committee approval was obtained prior to commencement of the study. From 25 schools in Karad, 2 schools were selected for the study, based on their geographic locations of being in a rural and an urban area of Karad. The participants for this study were selected by stratified random sampling, from a private school in Karad city and a government school in Goleshwar, a village in Karad. A total of 200 students were invited to participate in this study. The study sample included both males and females. Subjects' age ranged from 12 to 14 years old.

Approval of the Principal of the respective schools was obtained; the purpose of the study and the procedures that would be followed during its conduct were explained. Parent’s approval of the students who volunteered to participate in the study was obtained and a day was set for each school to collect the data. Because the children had a different language of communicating, it was necessary to design the questionnaire to be readable and understandable for the young children. For this reason, the questionnaire was translated in the local language, i.e. Marathi.

A closed ended questionnaire was prepared. The questionnaire included questions designed to evaluate the knowledge, awareness and practice of high school children regarding oral health and oral health practices. Validation of questionnaire was done by the subject expert, as well as the language expert. The subjects were asked to

respond to each question according to the response format provided at the end of each question. One of the investigators was always available during the completion of the questionnaire, and the participants were encouraged to approach her whenever they needed clarification at any point. Descriptive statistics were obtained and means, standard deviation, and frequency distribution were calculated. The data were analyzed using the Statistical Package for Social Science 11.0.

Results

The overall results showed that the knowledge, attitude and practice of oral hygiene among secondary school children was better among the children from urban areas than the rural areas. The results are shown in Table 1, Chart 1, 2 and 3.

Table-1: Oral Health Knowledge, Attitude and Practice among rural and urban children						
Assessment	Knowledge		Attitude		Practice	
	Rural	Urban	Rural	Urban	Rural	Urban
Mean	3.09	4.2	2.97	3.65	2.68	3.9
Standard Deviation	0.652	0.752	0.809	0.882	0.776	0.643
t value	11.146		5.719		12.093	
p value	0.0001		0.0001		0.0001	

Chart-1: Oral hygiene knowledge among children studying in urban V/s rural schools

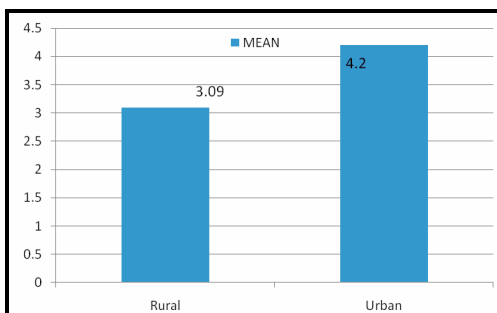


Chart-3: Oral hygiene Practice among children studying in urban V/s rural schools

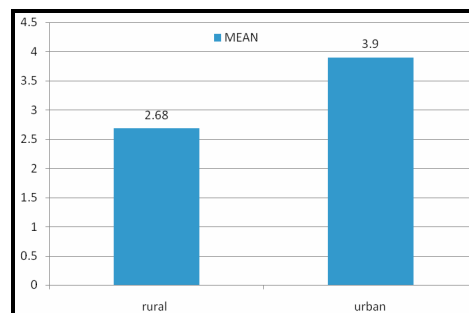
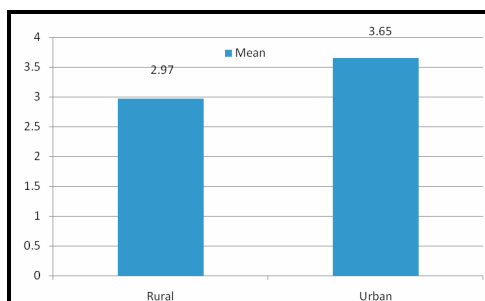


Chart-2: Oral hygiene attitude among children studying in urban V/s rural schools



Discussion

Oral diseases are an important public health problem globally. Being educated about oral health is an important element of health-related practices. Increased knowledge of oral care has been associated with better oral health. A good knowledge of oral health is more likely to manifest in better self-care practices [2-4].

Oral health promotion among adolescents through education in school has been prioritized by World Health Organization [5]. The lack of knowledge among secondary school students is reflected in the lack of health education programmes in the school curriculum [6]. To reduce disparities in oral health between different socio-economic groups within countries and inequalities in oral health across countries was one of the goals of FDI, WHO and IADR for the year 2020 [7].

A study conducted on 1587 government school children of Udaipur district in the age group of 5-14 years for recording the prevalence of dental caries and treatment needs. Dental caries was found in 46.75% children, and 76.87% children required some kind of dental treatment. This emphasizes the need for targeted policy decisions especially among rural school going children [8]. The results from our study show the knowledge, attitude and practice of oral hygiene was better in urban group as compared to the rural group.

Conclusion

Oral health awareness among children is a stepping stone for a future society that is equipped with better oral health. The knowledge, attitude and practices need to be strengthened to promote the goal of global oral health. The rural areas are deprived of the facilities available to children from urban areas. With majority of the Indian population residing in rural areas the focus of our oral health policies should be on rural communities.

In our study we noticed a marked difference in the knowledge, attitude and practices among urban vs rural school children in spite of the fact that there were very few geographic, cultural or economic differences. Hence all institutes, associations, private and government and non government organizations wanting to promote oral health among children should focus on rural areas in comparison to urban areas.

Financial Support and sponsorship: Nil

Conflicts of interest: There are no conflicts of interest.

References

1. Mehta A, Kaur G. Oral health-related knowledge, attitude, and practices among 12-year-old school children studying in rural areas of Panchkula, India. *Indian J Dent Res*, 2012; 23:293.
2. Harikiran AG, Pallavi SK, Hariprakash S, Ashutosh, Nagesh KS. Oral health-related KAP among 11- to 12-year-old school children in a government-aided missionary school of Bangalore city. *Indian J Dent Res*, 2008; 19:236-242.
3. Khamaiseh A, ALBashtawy M. Oral health knowledge, attitudes, and practices among secondary school students. *British Journal of School Nursing*, 2013; 8(4):194-199.
4. Ashley FP. Role of dental health education in preventive dentistry. *The prevention of dental disease*, 1989; 406-414.
5. World Health Organization. Oral health promotion: an essential element of a health-promoting school. *World Health Organization*; 2003.
6. ALBashtawy M. Oral health patterns among schoolchildren in Mafraq Governorate, Jordan. *The Journal of School Nursing*, 2012; 28(2):124-129.
7. Hobdell M, Clarkson J, Petersen PE, Johnson N. Global goals for oral health 2020. *International Dental Journal*. 2003; 53(5):285-288.
8. Dhar V, Jain A, Van Dyke T E, Kohli A. Prevalence of dental caries and treatment needs in the school-going children of rural areas in Udaipur district. *J Indian Soc Pedod Prev Dent*, 2007; 25:119-121.

Cite this article as: Joseph L, Belgaumi UI, Vibhute N, Kadashetti V, Bommanavar S and Kamate W. Oral health awareness and tooth brushing behaviour among high school students in a rural and an urban area: a comparative study. *Al Ameen J Med Sci* 2021; 14(2):169-171.

This is an open access article distributed under the terms of the Creative Commons Attribution-Non Commercial (CC BY-NC 4.0) License, which allows others to remix, adapt and build upon this work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

*All correspondences to: Dr. Uzma Iqbal Belgaumi, Reader, Department of Oral Pathology and Microbiology, School of Dental Sciences, Krishna Institute of Medical Sciences Deemed University, Karad-415110 Maharashtra, India. E-mail: uibelgaumi@gmail.com