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## RESEARCH ARTICLE

### ASSESSMENT OF ORAL HYGIENE AWARENESS AND PRACTICE AMONG PATIENTS ATTENDING OPD AT DR. HEDGEWAR SMRUTI RUGNA SEVA MANDAL'S (HSRSM'S) DENTAL COLLEGE AND HOSPITAL HINGOLI, MAHARASHTRA, INDIA: A CROSS-SECTIONAL STUDY

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#### ABSTRACT

**Background:** Oral health is an important factor in maintaining sound psychological and physical health. According to World Oral Health report 2003, the prevalence of periodontitis is 86% in India. Dental care can sometimes be a forgotten part of a healthy life style. Oral health has been neglected for long in India. **Objective:** The aim of the study is to assess the oral hygiene awareness and practice among the patients attending OPD at HSRSM's dental college in Hingoli and encourage them about the benefits of a healthy oral cavity. **Methodology:** A total of 300 patients (150male and 150females) participated in the study through a questionnaire that consisted of closed ended questions. The data was analyzed using statistical package for social sciences (SPSS) version 15 and results were accumulated by percentage distribution. **Results:** Awareness among patients about oral hygiene was good. 95% patients in our study were brushing the teeth at least daily but with different oral hygiene measures. It was observed that 86.67% patients didn't know the relationship between oral and general health. Patients only visited the dental clinic during the problem. **Conclusion:** The need for continuing dental education through promotion programs is emphasized with justification.

#### INTRODUCTION

Health is a valuable asset not only for any individual but also for any country. Any nation can progress rapidly when its people are healthy and lead a productive life (AshrafulHayet, 2015). According to the WORLD HEALTH ORGANIZATION (1946), Health is the state of complete physical, mental and social wellbeing of a person and not merely the absence of disease and infirmity (Vinod, 2016) Oral health is an important aspect of general health and wellbeing (Ananth Kamath, 2014). India, sixth biggest country by area is the second most populous country (Raima Bashir, 2016). Dental disease is very common in our country. Caries, gingivitis and periodontitis are the common dental disease. Lack of awareness about the dental disease and proper treatment facilities are the main cause of poor dental condition (Mohammed Sultan, 2016). For good oral health, oral selfcare has been proved to be an effective preventive method. The oral care comprises measures such as professional care, diagnosis, and personal care and prevention (Elavarasu, 2017).

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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 majority of health providers are medical practitioners (Dilip, 2005). To redirect the focus of oral-health professionals toward effective preventive interventions and to enable them to motivate their patients to adopt healthy behaviors, special educational programs need to be integrated into undergraduate training and made available to established clinicians (Sujatha, 2014). Evidence has showed that an increase in knowledge about risk factors for oral disease and strong knowledge of oral health demonstrates better oralcare practices that aim to promote healthy habits (Daya, 2017). The aim of the study is to assess the oral hygiene awareness and practice among the patients attending OPD at HSRSM's dental college in Hingoli and encourage them about the benefits of a healthy oral cavity.

#### MATERIALS AND METHODS

**Study Design:** A cross-sectional study was conducted to assess the oral health knowledge, attitude and practice amongst

the patients attending opd (out-patient department) at HSRSM dental college.

**Place and Duration of Study:** The study was conducted at Dr. HSRSM dental college Hingoli district, Maharashtra in March 2017. This study was a questionnaire based study.

**Study Sample:** A total of 300 patients (150male and 150females) participated in the study through a questionnaire that consisted of closed ended questions. The data was analyzed using statistical package for social sciences (SPSS) version 15 and results were accumulated by percentage distribution. Participants that were selected through the sampling procedure were officially informed and assured about the confidentiality of the research findings and of the report. Written consent was taken both from patients after explaining the objectives of the study.

**Data Collection:** All participants were requested to complete a 14- questions closed ended questionnaire encompassing to demographic details and evaluation of oral hygiene practice, knowledge, attitude, habits and parental awareness. The questionnaire was distributed amongst the patients either in English or local language. A minimum time of 15 minutes was allotted to each patient to fill in the questionnaire with the assistance of dental professionals.

**Data Analysis:** The data was analyzed using statistical package for social sciences (SPSS) version 15 and results were accumulated percentage distribution.

## RESULTS

In this study, a questionnaire was filled for the participants by a team of dental professionals. A total of 300 participants were included in the study randomly, Out of which questions regarding oral hygiene practice were asked which showed that almost 95% of the participants brushed their teeth and 5% did not brush their teeth in daily practice. 30% of the participants used tooth brush and tooth paste as a mode of cleaning their teeth, whereas 36% used finger with tooth powder, 20% used neem stick, and 13% used charcoal. Amongst those who brushed, majority i.e. 86% brushed once daily, 10% brushed twice, 3% brushed more than twice. 43% of the participants reported using hard tooth brushes, 3% used soft brush. As far as oral hygiene knowledge is concerned, 16% of the participants changed their tooth brush once a year amongst which 3% changed their brush once in 6 months, none of the patients changed their tooth brushes once in 3 months and about 53% discarded their tooth brushes when they were useless. 91% did not use mouth wash and only 8% did. 46% of the participants rinsed their mouth after eating and 43% did not.

**Table 1. Distribution of the study participants based on the responses to various questions (N=300)**

Variables	Sub-groups	(N=300)	
		n	%
Socioeconomic status	Upper class	0	0.0
	Middle class	70	23.33
	Lower class	230	76.67
Do you Brush your teeth daily?	Yes	285	95.0
	No	15	5.0
If yes, how do you clean your teeth?	Neem stick	60	20.0
	Charcoal	40	13.33
	Toothbrush & toothpaste	90	30.0
	Finger & toothpowder	110	36.67
How many times a day do you brush your teeth?	Once daily	260	86.67
	Twice daily	30	10.0
	More than twice	10	3.33
What type of tooth brush do you use?	Hard	130	43.33
	Soft	10	3.33
	Never noticed	160	53.33
How often should you change your tooth brush?	When useless	240	80.0
	Once in 3 months	0	0.0
	Every six months	10	3.33
	Once a year	50	16.67
Do you clean your tongue?	Yes	100	33.33
	No	200	66.67
Do you rinse your mouth after eating?	Yes	140	46.67
	No	160	53.33
Do you use mouthwash?	Yes	25	8.33
	No	275	91.67
How often do you use mouthwash?	Once daily	25	8.33
	Twice daily	0	0.0
	Never	275	91.67
Have you ever noticed bleeding in your gums?	Yes	120	40.0
	No	180	60.0
Have you ever noticed smell from your mouth?	Yes	220	73.33
	No	80	26.67
Do you think bad oral hygiene affects your general health?	Yes	40	13.33
	No	260	86.67
How often do you visit a Dentist?	Never	40	13.33
	Only in problem	260	86.67
	Once in 3 months	0	0.0
	Once in 6 months	0	0.0
Do you want to get your teeth clean?	Yes	110	36.67
	No	190	63.33

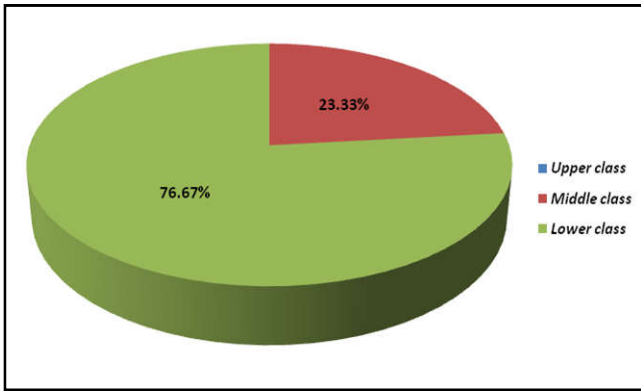
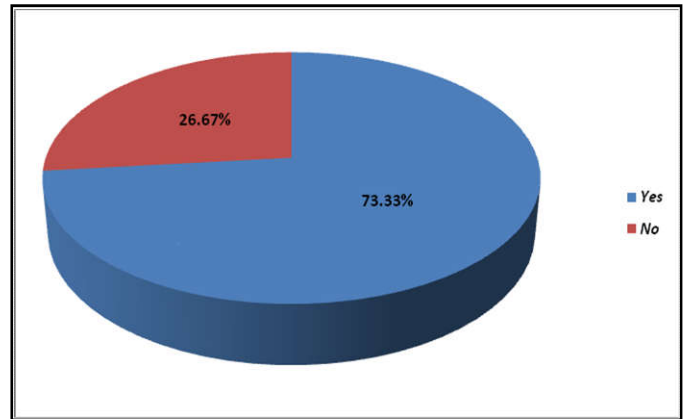
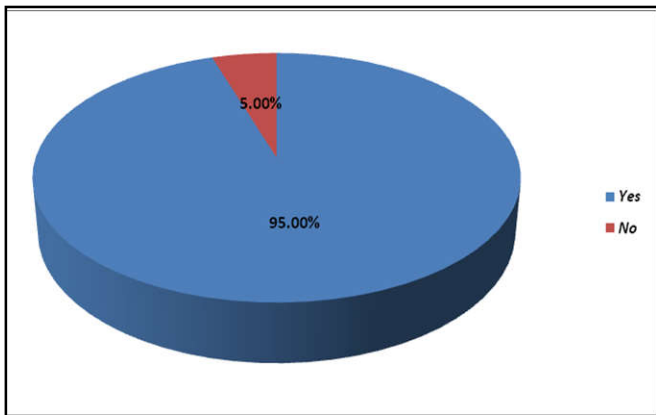


Figure 1. Distribution of the study participants based on the responses to various questions (N=300)

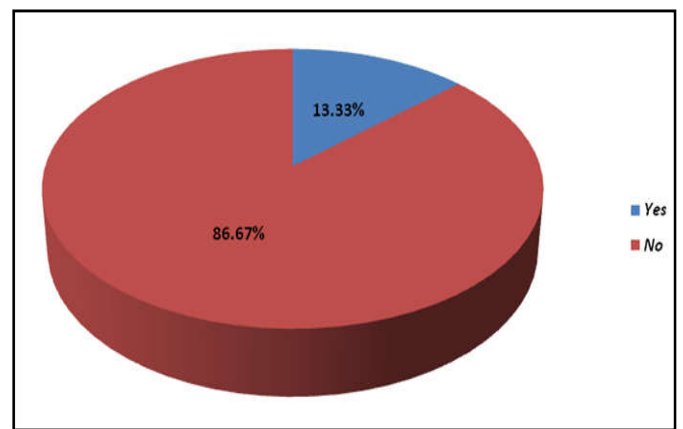
Have you ever noticed smell from your mouth?



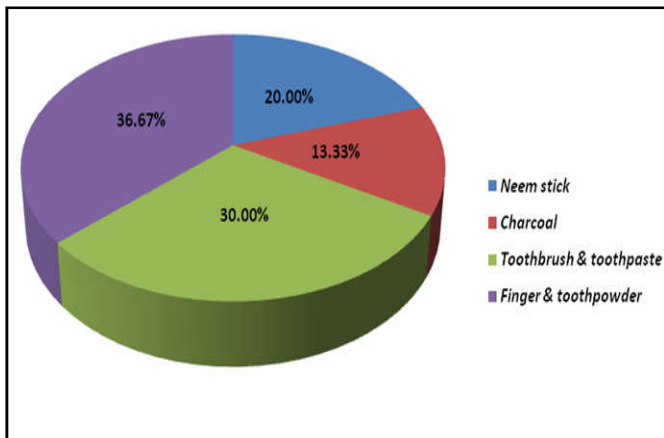
Do you Brush your teeth daily?



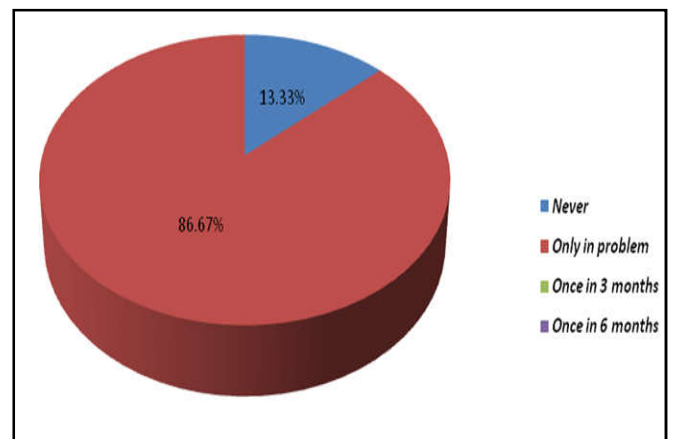
Do you think bad oral hygiene affects your general health?



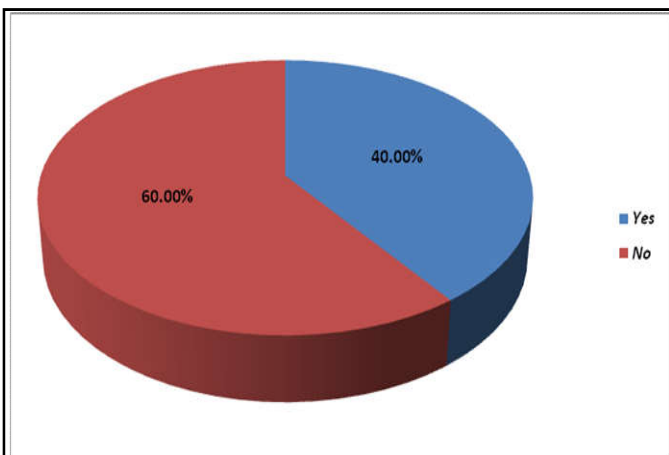
If yes, how do you clean your teeth?



How often do you visit a Dentist?



Have you ever noticed bleeding in your gums?



Bleeding from gums was reported by 40% participants and 60% did not report bleeding from gums. 73% experienced smell from their mouth whereas 26% did not. Only 34% (n=102) of the participants had visited the dentist and amongst these 28% (n=84) visited when they had some dental problem, 6% (n=18) visit in a year. Among those 92.6% (n=277) of the participants wanted to have clean teeth.

**DISCUSSION**

Oral health is an essential component of health throughout life. Poor oral health and untreated oral diseases and conditions can have a significant impact on quality of life. They can affect the most basic human needs, including the ability to eat and drink,

swallow, maintain proper nutrition, smile, and communicate. However, oral problems are affecting human race since time immemorial, and they are considered as one of the "public health problems (Dilip, 2005)." Oral hygiene maintenance may be a totally ignored practice in people of low socio-economic class of developing countries and the load is higher significantly in poor and deprived population (Vinod, 2016). Though oral and dental diseases are rarely life threatening, they do have an impact on the quality-of-life. The health-care in India is still under various stages of development with vast differences between regions and states. For the oral health of the general population at the global level, marked changes in oral disease pattern has been observed over past decades (Mohammed Sultan Al-Darwish, 2016). As a major part of their role in the oral-health-care provision, dentists are considered experts in the field of oral-health education and promotion<sup>8</sup>. Since treatment measures alone are insufficient to tackle the underlying cause of oral diseases, oral health inequalities can only be reduced through educating the public about preventive measures such as oral hygiene procedures. Therefore, it is imperative to determine the level of awareness among people belonging to different socioeconomic status and gender to implement effective and appropriate oral health promotion (Elavarasu, 2017).

Hou R *et al.* in 2014 examined Tibetan students for caries, periodontitis, dental fluorosis, and oral hygiene status. The students' questionnaire addressed oral health practices, present access to oral medical services, and the anticipated needs of oral health services. The related reasons for the oral health status were also analyzed. They found that Tibetan students had higher prevalence of dental diseases and lower oral health awareness. The related main reasons were geographical environment, dietary habit, students' attitude to oral health, and lack of oral health promotion (Daya, 2017). Kamath A *et al.* in 2014 carried out the survey was to assess awareness regarding oral hygiene practice amongst children toward oral health in rural population of Mangalore city. They observed that basic oral hygiene knowledge and practice of the study participants was good but advanced knowledge needed to be improved (Shrivastav, 2018). Al-Darwish MS in 2014 examined the oral health knowledge behaviour and practices among school children in Qatar and he found that the oral health knowledge in Qatar is below the satisfactory level. Parents were the most popular source of oral health knowledge for the children followed by dentists, school teachers, and media (Jain, 2012). Jain N *et al.* in 2012 assessed the awareness levels among the patients visiting VDCH, Jodhpur, from Jodhpur's urban and rural localities. They concluded that there was an acute lack of oral hygiene awareness and limited knowledge of oral hygiene practices. Shrivastav A *et al.* in 2018 did a study to assess the oral hygiene and periodontal status in the primitive tribe group of Bharias in Patalkot, Madhya Pradesh, India. They observed that higher prevalence of periodontal diseases and poor oral hygiene status in Bharia people can be attributed mainly to their difficult terrain, isolation, very low literacy level, socioeconomic status, and cultural practices. So the present study was done to assess the oral hygiene awareness and practice among the patients attending OPD at HSRSM's dental college in Hingoli and encourage them about the benefits of a healthy oral cavity. Amongst the participants included in the study 95% participants brush their teeth daily. The majority of the patients in the present study used finger and toothpowder (36.67%) for cleaning their teeth whereas toothpaste and toothbrush were

used by 30% of the patients. Frequency of the oral hygiene practices is also an important factor deciding the periodontal health of an individual. Brushing twice daily was reported by 10% of the participants whereas brushing teeth once daily was reported by majority (86.67%) of the patients in the present study. However, there was no significant difference between genders with regard to frequency of tooth brushing. The use of toothbrush with hard bristles was significantly more common i.e. 43.33% With regard to mouth rinse, 46.67% participants performs mouth rinsing. Bleeding gums were noticed by 40% of patients whereas bad smell from mouth was experienced by 73.33% patients. Only 40% patients knew relation of bad oral hygiene and the general health. No regular visit to a dentist was reported by participants in the present study. Majority of the participants were under the perception that there was no need to seek dental care unless a problem occurs. This is due to the lack of awareness among patients about the preventive measures.

## Conclusion

The results extracted from the findings of this study are that the oral hygiene practice among the patients is good which is discernible by 95% patients demonstrating regular tooth brushing practice. Although this is appreciable yet their knowledge relating to awareness about other recommended methods of oral health care is poor and confined plus the conjunction of harmful eating habits and lack of regular dental checkups can pose a risk of dental diseases. Hence there is a need to continue improving and promoting oral hygiene knowledge and awareness through education and oral health promotion campaigns. This will require collaboration of National & International authorities, dental colleges and public health departments to organize outreach programs.

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