

*Original Research***Knowledge, Attitude and Practices Regarding Oral Health among Out Patients at Rama Dental College, Kanpur.**

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**ABSTRACT**

**Objectives:** To assess the knowledge, attitude and practices regarding oral health among out-patients of Rama Dental College Hospital and Research Centre (RDCHRC), Kanpur. **Material and Methods:** A cross-sectional, descriptive hospital based survey was conducted among 200 out-patients who were selected through non-probability convenient sampling technique. Data on the oral health knowledge, attitude and practices was collected by means of a self administered close ended questionnaire. Descriptive statistics were used for data analysis. **Results:** Majority, 117 (58.4%) of the subjects brushed their teeth for less than 3 minutes and about 60 (30%) were aware about the fluoridated toothpaste. Only, 10 (5%) subjects used interdental devices to clean teeth. A total of 146 (73%) subjects cleaned their teeth regularly and 33 (16.5%) stopped brushing when they noticed bleeding from gums. Tobacco consumption in the form of smoking and smokeless tobacco was observed among 81 (65%) and 42 (34.1%) subjects, respectively. Half of the subjects were unaware about the role of tobacco in oral cancer as well as its impact on general health. **Conclusion:** The knowledge and attitude regarding oral health in selected population is low. Systematic community-based oral health promotion should be strengthened and preventive-oriented oral health care system is the need of the hour including further self-care practices and the use of fluoridated toothpaste.

**Key words:** Caries; Diet; Oral Health; Tobacco Hazards; Premature; Disease.

**Introduction**

Prevalence and severity of dental disease vary from individual to individual and is affected by age, gender, education and socioeconomic status. Most oral diseases, like most chronic pathologies in general, are directly related to lifestyle. Oral disease can be considered a public health problem due to its high prevalence and significant social impact. Chronic oral disease typically leads to tooth loss, and in some cases has physical, emotional and economic impacts; physical appearance and diet are often worsened, and the patterns of daily life and social relation are often negatively affected. These impacts in turn lead to reduced welfare and quality of life.<sup>1</sup> Poor oral and dental health has also been linked to heart and lung disease, diabetes, stroke, low-birth weight, and premature births. Often, diseases give their first warning signs in the form of oral problems.<sup>2</sup>

A majority of the Indians are unaware of the fact that good oral health not only ensures freedom from pain and suffering associated

with oral health problems, but is also essential for the overall health improvement and elevation of self-esteem, quality of life, and performance at work.<sup>3</sup> Majority of the population in South East Asia region do not have specific trends to visit qualified health facilities. This may be due to socioeconomic and educational factors, but lack of knowledge and false perception is also very important. The evaluation of available information and facilities, attitude and practices is very important for provision of proper health care facilities as they form the baseline of the strategic planning and decision making.<sup>4</sup>

Numbers of features namely; diet, smoking, alcohol, hygiene, stress and exercise are linked to a wide range of important diseases forming fundamental basis of common risk factor approach to prevent range of conditions including oral diseases. Among these, hygiene is most significant when it comes to prevention of oral diseases. Little is known about oral health attitude and behaviors and practices among people from developing countries<sup>5</sup> and especially in this part of our

country. Hence the present study was conducted to assess oral health knowledge, attitude and practices among patients visiting the out-patient department of Rama Dental College, Hospital and Research Centre (RDCHRC), Kanpur, India.

### **Material and Methods**

The present study is a questionnaire based cross-sectional survey to assess knowledge, attitude and practices regarding oral health among patients attending out-patients in Rama Dental College Hospital and Research Centre, Kanpur. A total of 200 (127 males and 73 females) subjects aged from 20 to 68 years with a mean age of  $35.6 \pm 4.8$  years participated and responded to the study. Patients suffering from debilitating disease or maxillofacial trauma, those who were unable to respond to the questionnaire and who refused to take part in the study were excluded from the study. The study protocol was reviewed and approved by the Ethical board of RDCHRC, Kanpur. Consent was obtained from all the individuals who participated in the study.

The original version of the questionnaire was written in English and had been translated into Hindi. The translation was performed by two independent and expert translators. Finally, another independent translator returned back translations, which were further compared with the originals, and inconsistencies were analyzed and corrected.

The questionnaire was designed to be comprehensible for the patients and was pre-tested among a group of patients (Twenty) who were requested to complete the questionnaire on two different occasions separated by seven days. The pre-test focused on the patient's ability to understand the vocabulary used in the questionnaire, and that the questions were clear and unambiguous. The questionnaire was found suitable for application among the patients as there was high concurrence with the answers to the items on both occasions (Kappa test coefficient for all questions = 0.90). Minor changes were

made to certain terminology in the questionnaire prior to its administration in the actual survey.

Final version of the questionnaire included twenty four items and was designed to evaluate knowledge, attitude and practices of patients regarding their oral health and dental treatment. The socio demographic information was also recorded. Assessment of patient's oral health knowledge included items on the reasons for cleaning and not cleaning their teeth, sources of information about oral health, plan of action on seeing gums bleed and signs of decay, adverse effects of tobacco and also excess sweets.

All patients visiting the OPD were assessed based on the eligibility criteria for inclusion in the study. Those selected were handed over a questionnaire and received instructions on how to score their responses. They were made aware to choose only one answer for the same item. Furthermore, the researcher was always available during the completion of the questionnaire, and the subjects were encouraged to approach him whenever they needed clarification of any point. Care was taken that individuals did not duplicate each other's answers by asking each one to answer separately maintaining some space between them. Also, care was taken to see that all the items in the questionnaire were answered. Completed questionnaires were collected back and verified for the same. Confidentiality and anonymity of the respondents were assured.

**Statistical analysis:** The data was analyzed using the Statistical Package for Social Sciences version 15.0 software (SPSS Inc, Chicago, IL, USA). Descriptive statistics was used to summarize the sample and responses of the questionnaire.

### **Results**

Two hundred questionnaires were filled by the out-patients attending RDCHRC, Kanpur. Out of 200 respondents, 73 were female and 127 were male respondents. Demographic profile

of the study participants including educational level and age of respondents are given in Table 1. Males (63.5%) were more compared with females (36.5%) and 31% were in the third decade. It was creditable to see that around 72% were literates. Habitually, 38% subjects cleaned their teeth for brightening purpose followed with prevention of foul breath (32%) and bleeding gums (15%). Surprisingly, 15% of the subjects reported that cleaning teeth helps in prevention of oral cancer. The main reasons for not brushing

teeth were no time (18%) and very tiring (17.5%). Few subjects (16.5%) did not clean as they noticed their gums bleeding while brushing. The main source of oral health information was media (30%) and friends (28.5%). Only 25% subjects were found to visit a dentist when bleeding occurred from gums. When sign of tooth decay was observed, 35% didn't care and 25% went to dentist only after experiencing pain. A higher proportion (75%) responded correctly that tobacco causes oral cancer (Table 2).

**Table 1: Demographic profile of the study population**

Characteristics	Male n (%)	Female n (%)	Total n (%)
<b>Age (years)</b>			
20-30	34 (26.8)	23 (31.5)	57 (28.5)
30-40	42 (33.1)	20 (27.4)	62 (31.0)
40-50	35 (27.6)	23 (31.5)	58 (29.0)
50-60	13 (10.2)	6 (8.2)	19 (9.5)
>60	3 (2.4)	1 (1.4)	4 (2.0)
<b>Education</b>			
Illiterate	35 (27.6)	21 (28.8)	56 (28)
Graduate	71 (55.9)	40 (54.8)	111 (55.5)
Postgraduate	21 (16.5)	12 (16.4)	33 (16.5)
<b>Total</b>	<b>127 (63.5)</b>	<b>73 (36.5)</b>	<b>200</b>

**Table 2: Distribution of the study population based on Knowledge regarding oral health.**

Questions/Items	Frequency	Percentage
<b>Reason for cleaning teeth</b>		
1) To brighten teeth	76	38
2) Prevention of bleeding gums	30	15
3) Prevention of oral cancer	30	15
4) To get rid of foul breath	64	32
<b>Reason for not cleaning teeth</b>		
1) Laziness	30	15
2) Very tiring	35	17.5
3) No time for brushing	36	18
4) Useless, good teeth are heredity based	15	7.5
5) Teeth are not dirty	25	12.5
6) Gums bleed while brushing	33	16.5
7) Dental aids are expensive	10	5
8) Not a habit since childhood	11	5.5
9) Don't know of any benefit from brushing	5	2.5
<b>Sources of information about oral health</b>		
1) Radio and television	60	30
2) Friends	57	28.5
3) Newspaper	41	20.5
4) Community	42	21

<b>What will you do if gums bleed?</b>		
1) Stop brushing	31	15.5
2) Pay more attention when brushing	43	21.5
3) Brush more frequently	43	21.5
4) Go to see a dentist.	50	25
5) Never had this problem	22	11
6) Don't know what to do	11	5.5
<b>What will you do on seeing signs of decay?</b>		
1) Just try to cope with this problem	55	27.5
2) Don't care if no pain	70	35
3) Go and see a dentist only when in pain	50	25
4) Go and see a dentist immediately	25	12.5
<b>Do you know tobacco can cause oral cancer?</b>		
1) Yes	150	75
2) No	50	25
<b>Do you know sweet foods affect teeth adversely?</b>		
1) Yes	135	67
2) No	54	27
3) Don't know	11	5.5

In the study population, 65% subjects thought that oral health is as important as general health and 64.5% subjects were of the view that oral health has a relationship with systemic illness. The chief complaint for visit to dentist was pain (36.5%), whereas, 51% of them didn't go to a dentist as they were afraid of the needle (Table 3).

A total of 73% subjects clean their teeth regularly. Commonly used aid is toothbrush and toothpaste (67%). Only, 18.5% brush their teeth twice daily and 5% use interdental device on a regular basis. Majority, 61% change their toothbrush within 2 months; 58.5% brush their teeth for less than 3 minutes; 30% use fluoridated tooth paste and more than half of the respondents cleaned their tongue every day (Table 4).

**Table 3: Distribution of the study population based on Attitude regarding Oral health**

QUESTIONS	FREQUENCY	PERCENTAGE
<b>Do you think it is necessary to create awareness about problems among family member/peer group</b>		
1. Yes.	141	70.5
2. No	42	21
3. Don't know	17	8.5
<b>Do you think oral health is as important as general health?</b>		
1. Yes	130	65
2. No	52	26
3. Don't know	18	9
<b>Do you think oral health has relationship with systemic illness?</b>		
1. Yes	129	64.5
2. No.	57	28.5
3. Don't know	14	7

<b>Reason for last dental visit.</b>		
1. Dirty teeth.	16	8
2. Pain.	73	36.5
3. Routine dental check up	104	52
4. Repair	7	3.5
<b>Frequency of dental visit.</b>		
1. Regularly every 6-12 months	105	52.5
2. Occasionally.	67	33.5
3. Whenever I have a problem.	19	9.5
4. Never	9	4.5
<b>Feeling during first dental visit.</b>		
1. Scared and reluctant.	101	50
2. Slightly afraid	64	32
3. Moderately afraid	33	16.5
4. Never afraid	2	1

**Table 4: Distribution of the study population based on Practices regarding Oral health**

QUESTIONS	FREQUENCY	PERCENTAGE
<b>Do you clean your teeth?</b>		
1.Regularly.	146	73
2.Sometimes	46	23
3.Never	8	4
<b>Type of aid used.</b>		
1. Toothbrush.	134	67
2. Finger.	41	20.5
3. Tree stick.	21	10.5
4. Any other.	4	2
<b>Material used.</b>		
1. Toothpaste.	134	67
2. Toothpowder.	37	18.5
3. Charcoal.	12	6
4. Tobacco.	9	4.5
5. Any other	8	4
<b>Frequency of cleaning.</b>		
1. Once a day	150	75
2. Twice daily.	37	18.5
3. More than twice daily.	13	6.5
<b>Use of interdental devices.</b>		
1. No	135	67
2. Sometimes.	56	28
3. Regularly.	10	5
<b>How often do you change your toothbrush.</b>		
1. <2months	122	61
2. 2-6month.	60	30
3. >6month.	18	9
<b>Time spent for cleaning teeth.</b>		
1. Less than 3 min.	117	58.5
2. 3min or more	83	41.5
<b>Types of toothpaste used.</b>		
1. Nonfluoridated.	95	47.5
2. Fluoridated.	60	30
3. Don't know.	45	22.5

Do you clean your tongue?		
1. Every day.	106	53
2. Sometimes.	76	38
3. Never	18	9

## Discussion

The knowledge pertaining to oral health among the participants was good as about 65% of the subjects were aware of the harmful effects of excess sweet, cold drink, alcohol consumption, and smoking / pan chewing / guthka and other tobacco products on oral hygiene. However, these findings were in contrast to a study by Chandrasekhar et al (25%).<sup>7</sup> Regarding the source of information on oral health, television was the most common mode with 30% of the participants acquiring information through it; this was consistent with the finding of the other studies.<sup>5,6</sup>

In the current study, 25% respondents visited dentist when they experienced bleeding from gums which was higher and 25.5% subjects paid no attention on sign of decay which was less as compared with the study done by Zhu et al.<sup>8</sup> As regards the oral health attitude, it was found that 52.5% of the study population reported visiting a dentist during last 6 months, which was higher when compared with the study done by Parveen et al where it was 42.5%.<sup>4</sup> Dental pain was cited as the most common cause for dental visit during past 6 months, in 36.5% participants, as compared to 56.8% participants in the study by done by Humagain.<sup>9</sup>

Oral health practices of the study population were relatively good, with 73% brushing their teeth regularly, and about 67% subjects used tooth brush and tooth paste for cleaning teeth. The subjects brushing their teeth twice daily was 18.5% which was very less as compared with other studies; 67% in patients attending Vyas Dental College, India conducted by Jain et al<sup>10</sup>, 67% among Chinese urban adolescents in a study by Jiang et al<sup>11</sup>, and 62% of the Kuwaiti adults in a study by Al- Shammari et al.<sup>12</sup>

A very small proportion of participants, 5% used interdental device to clean teeth which is almost similar to the result found in the study by Bhatt et al<sup>13</sup> which was 7.6%. In another study conducted by Jamjoom<sup>14</sup> in Saudi Arabia no subjects used floss. The low percentages who use floss in this study emphasize the urgent need for educating and motivating the public to use this efficient method for oral health care.

**Conclusion:** The knowledge and attitude among subjects in regard to dental health in the present study is satisfactory. For further augmentation, there is a need to educate and motivate people about oral health and related problems beyond the clinics through various outreach programs in the areas, which are less accessible to oral health facilities.

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