

Oral Health: Knowledge and Practices in Rural Community

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ABSTRACT

Background: Good oral health is a key for ensuring overall well-being. Dental caries and periodontitis may also be linked to different systemic diseases. Good oral health practices are the clue for preventing the diseases of the oral cavity. **Objectives:** To assess the oral health knowledge and oral health practice of the people in a rural community. **Materials and Methods:** Study was conducted in Dehradun district of Uttarakhand state. Sample population has been selected based on systematic random sampling. Study has included 798 participants above 3 years of age. **Statistical Analysis Used:** Percentage. **Results:** Study results have shown poorest oral health status amongst population below 19 years of age. Constant pain in teeth/ gums was also reported maximum in this age group. Habit of having sticky food was reported maximum in 3-10 years age group with poorest practice of brushing teeth (daily brushing was reported by only 67% population and twice a day was reported by only 2.4%). **Discussion:** Study results have shown that perception of having good oral health is high in this population but oral health practices are not satisfactory. **Conclusion:** Study finding recommends that oral health awareness needs to be increased in the area especially focusing young children. Awareness programs should be supplemented with primary care services for better oral health and hygiene.

Key words: Oral health knowledge, practices, habits, brushing

Introduction:

Oral health is not only important for appearance and sense of well-being but also for overall health. Cavities and gum diseases may contribute to many serious conditions, such as diabetes and respiratory diseases. Untreated cavities can also be painful and lead to serious infections. Maintaining good oral health status includes keeping teeth free from cavities and preventing gum disease. Poor oral health can affect your quality of life (1), appearance and self-esteem, and has been linked to sleeping problems, as well as behavioral and developmental problems in children. Poor oral health can also affect chewing and digestion of food. Food habits are important for strong teeth and gums. Oral health is important at all stages of life to keep teeth longer than ever before. However, older adults may have less access to oral care services and dental professionals because of lower income. Tooth brushing and flossing are suggested to be a prerequisite for reducing the amount of bacterial plaque (2). Many oral diseases can be prevented if proper education or awareness is provided. Knowledge of oral health is considered to be a prerequisite for health related behavior. It has been shown that Indian community has low level of oral health awareness and practice as compared to west (3). Little is known about oral health awareness from developing countries (4). This study attempts to assess the oral health perception and practices in a rural community of Uttarakhand.

Material and Methods:

Cross-sectional study was conducted in the Block Doiwala of Dehradun district, which is the field practice area of the Department of Community Medicine, Himalayan Institute of Medical Sciences. A minimum sample size of 385 was calculated, considering the 50% prevalence with 5% margin of error and 95% confidence limit. List of all the villages in the block was prepared and one village was randomly selected considering the resource limitation. All the households in the village were visited for selecting the sample population. In each of the selected household all the people who were above 3 years of age were included in the study after informed consent. In case of minors parents were asked to provide the consent and to answer the questionnaire. Dentists collected the data using pre-designed & pre-tested questionnaire by interview method and oral examination. Data was collected from January 2010 to April 2010. The oral health perception is measured by self-assessment. The subject is having good appearance of teeth and gums, good chewing ability, absence of missing and/or destructed teeth, toothache and/or gum symptoms: **always** – excellent perceived oral health status; **most of the time** – good perceived oral health status; **often** – average perceived oral health status; **rarely** – poor perceived oral health status; **almost never** - very poor perceived oral health status. Although only 385 sample was required however on the request of villagers whole village population was surveyed. Total 798 people participated in the study. For research purpose following working definitions were used

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to classify dentures: **Partial denture** – a denture that is replacing a part of the patient’s teeth; **Full upper denture** - a denture that is replacing all patient’s teeth in the upper jaw; **Full lower denture** - a denture that is replacing all patient’s teeth in the lower jaw; **Complete denture** - a denture that is replacing all patient’s teeth in the both jaws. Sticky foods are defined as those foods that tend to adhere to the teeth surface thus increasing the time of contact between the carbohydrates and the enamel surface and easing the destructive action of oral bacteria. Examples of sticky food: bread, biscuits, chocolate, candies, etc.

Results:

Total 798 participants of more than 3 years of the age were included in the study. 10.4% participants were in 3-10 year age group, 18.6% in 10-19 year age group and 70.9% participants were more than 19 years of age.

Table No: 1 Perceived oral health status

Health of teeth and gums				
Status	3-10 year	10-19 year	? 19 years	Total
Excellent	11(13.3)	26(17.4)	28(4.9)	65(8.1)
Good	35(42.2)	85(57)	204(36)	324(40.6)
Average	25(30.1)	32(21.5)	191(33.7)	248(31.1)
Poor	10(12)	6(4)	102(18)	118(14.8)
Very Poor	2(2.4)	0	38(6.7)	40(5)
Don't know / No Answer	0	0	3(5)	3(4)
Total	83	149	566	798(100)
Pain in teeth/gum past 12 months				
Never	50(60.2)	117(78.5)	283(50.1)	450(56.4)
Occasionally	29(34.9)	29(19.5)	235(41.5)	293(36.7)
Almost constantly	4(4.8)	3(2)	44(7.7)	51(6.4)
Don't know / No Answer	0	0	4(7)	4(5)
Total	83	149	566	798(100)
Removable prosthetics				
None	82(98.8)	148(99.3)	512(90.5)	742(93)
Partial	0	1(7)	30(5.3)	31(3.9)
Full upper	0	0	7(1.2)	7(9)
Full lower	0	0	5(9)	5(6)
Complete Dentures	0	0	8(1.4)	8(1)
Don't know / No Answer	1(1.2)	0	4(7)	5(6)
Total	83	149	566	798(100)
Visit dentist in past 12 months				
0 time	73(88)	142(95.3)	467(82.5)	682(85.5)
1-3 time	7(8.4)	5(3.4)	82(14.5)	94(11.8)
More than 3	0	2(1.3)	10(1.8)	12(1.5)
Don't know / No Answer	2(2.4)	0	7(1.2)	10(1.2)
Total	83	149	566	798(100)

Approximately 50% participants reported their oral health status as excellent or good, however 20% reported it to be poor or very poor. 7.7% participants of more than 19 years of age have reported almost constant pain in teeth/gums for last 12 months while only 2% in the age group of 10-19 complained of such pain. Almost 6.4% of the population

was using denture out of which 1% was using complete denture, 3.9% partial, 0.6% full upper, and 0.6% full lower denture. 14% of the participants have reported visit to dentist in past 12 months out of which 11.8% visited 1-3 times whereas 1.5% visited more than 3 times the dentist.

Table 2: Oral health practices & Dietary Habits

Frequency of Brushing	3-10 year	10-19 year	? 19 years	Total
Less than once a week	5(6)	3(2)	22(3.9)	30(3.8)
Once a week	10(12)	2(7)	15(2.6)	27(3.3)
2-3 times a week	10(12)	11(7.4)	48(8.5)	69(8.6)
Every day	56(67.5)	128(86.5)	443(78.1)	627(78.6)
Twice or more a day	2(2.4)	5(3.4)	26(4.6)	33(4.1)
Don't know / No Answer	0	0	12(7)	12(1.5)
Total	83	149	566	798(100)
Type of brush				
Plastic tooth brush	77(92.8)	142(96.6)	471(82.9)	690(86.8)
Charcoal	0	0	5(9)	5(6)
Chew sticks or Meswak	0	2(1.4)	3(0.5)	5(0.6)
Wooden or plastic toothpicks	2(2.4)	0	8(1.4)	10(1.3)
Finger	2(2.4)	2(1.4)	59(10.4)	63(7.8)
Brush & finger	1(1.2)	3(2.0)	7(1.2)	11(1.3)
Don't know / No Answer	1(1.2)	0	13(2.3)	14(1.7)
Total	83	149	566	798(100)
Habit of taking sticky foods				
Never	3(3.6)	21(14.2)	250(44.1)	274(34.3)
Occasionally	43(51.8)	94(63.5)	271(47.8)	408(51.1)
Once a week	20(24.1)	15(10.06)	17(3)	52(6.5)
Every day	17(20.5)	19(12.8)	24(4.2)	60(7.5)
Don't know / No Answer	0	0	4(7)	4(0.5)
Total	83	149	566	798(100)

Study findings revealed that once a day brushing was minimum in 3-10 years of age group (67.5%), followed by more than 19 year age group(78.1%) & 10-19yr (86.5%). Only 4.1% participants were brushing their teeth twice a day. In maximum cases plastic brush was used (86.8%). However use of charcoal, chew sticks have been reported in 1.2% of the cases.

34% of study participants reported that they never ate sticky foods like bread; biscuits etc and 51% reported their occasional use only. Daily intake of sticky food was higher amongst 3-10 year age children (20.4%) which was more than in the >19 year age group (4.2%).

Discussion:

The objective of this study was to achieve a broader understanding of the status of oral health perception and oral health practices in a rural community. In this study, 798 people from a rural community (above 3 yrs of age) were assessed for finding out perception of oral health and oral health practices in this area.

Perceived oral health status

In the present study, only 5% of study participants answered that health of their teeth was poor which was very less when compared to a previous study by BenoitVarenne *et al* (5) where it was 63%. It was also found that 65% of study participants considered their oral health as excellent and 40% as good. Therefore, perception of oral health in this area is very high. Correlating with this finding only 11.8% participants had visited dentist in last 12 months which is very less as compared to the same data in a study by Al-Ansari J. *et.al* (6) in which 60% of the participants had visited a dentist in the last 12 months. It was also found that 85.6% of the study participants did not visit any dentist in the past 12 months which is very high. 56.5% of participants did not have pain in their teeth /gums in past 12 months (7).

Oral health practices

This survey has reported very low percentage of people brushing their teeth twice a day (4.1%) as compared to a study by Harikiran AG *et al* (8) in which it was 38.5%. This is because of poor oral health awareness resulting in faulty practices (9).

The use of other recommended oral hygiene methods such as dental floss was not found; this also, could be attributed to the lack of oral health education and/or the cost of such aids. This number is even less than what was found by Al-Omiri *et al* (10), where the use of dental floss was 2%. In contrast, Hamilton and Coulby (11) in a study conducted in North Eastern Ontario found a high percentage (42%) used dental floss. This could be due to significant resource allocation to health education programs in this region (12). It was also found that 34.4% of study participants never consumed any kind of sticky foods in their life while 51.3% ate only occasionally. This can explain the good oral health status of people, inspite of inadequate oral hygienic practices (13, 14).

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