



DENTAL / ORAL HEALTH RELATED KNOWLEDGE, ATTITUDE AND PRACTICES AND THEIR IMPACT ON DENTAL/ORAL HEALTH – A COMMUNITY STUDY IN EASTERN/CENTRAL UTTAR PRADESH POPULATION.

Dental Science

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ABSTRACT

Background/Aim: Study of dental/oral health related knowledge, attitude and practices and their association with dental/oral health issues at population level has not been studied extensively. The present study attempted to study the dental/oral health related knowledge, attitude and practices and their association with dental/oral health issues in eastern/central Uttar Pradesh population.

Material and Method: A total of 2118 persons aged >12 years of age at 23 locations in 7 different districts of Eastern/Central Uttar Pradesh attending various dental check up camps organized by Society of Medical Dental & Public Health, were enrolled in the study. Knowledge, attitude and practices of the study population were using a 14-item questionnaire developed for the purpose having 6 questions related with knowledge and 4 each for attitude and practice domain respectively. A total of six oral/dental health issues were also studied. Data was analyzed using SPSS 21.0 software.

Results: Majority of respondents provided correct responses for half or more than half of questions on knowledge (91.7%), attitude (88%) and practice (94%) domains. Almost half (49.7%) the respondents had oral/dental health issues. A total of 559 (26.4%) had two or more issues. Statistically, a significant association was observed between low knowledge, attitude and practice scores with oral/dental health issues.

Conclusion: Despite majority of respondents reporting general knowledge, attitude and practices, the prevalence of oral/dental health issues in study population was quite high thus indicating that there is need to create awareness and appropriate dental care facilities.

KEYWORDS

Knowledge, attitude, practices, dental/oral health, community study

INTRODUCTION

Dental and oral health is one of the most important and essential part of overall health of an individual. Oral and dental health not only have aesthetic significance but also play an important role in the dietary intake. Despite their aesthetic and functional significance, it is one of the most ignored aspect of the general health. A number of previous studies have shown that knowledge regarding dental/oral health in general public as well as in professionals is of poor order and the scenario with respect to development of good attitude and practices towards dental/oral health care is pathetic¹⁻⁴. Incidentally, most of these studies have assessed knowledge, attitude and practices of select group of respondents, viz. college students, dental/medical/paramedical students and have limited the scope of their study upto assessment of knowledge, attitude and practices only. In present study, we make an attempt to study this problem at a larger level in community and also intend to study the impact of knowledge, attitude and practices of individuals on oral/dental health of participants.

MATERIAL AND METHOD

The present study was carried out at 23 different urban/rural sites in 7 different districts of eastern/central Uttar Pradesh which were covered under public outreach programme of the Society of Medical Dental & Public Health (an NGO working for promotion of dental/oral healthcare) that included a total of 2118 participants. Evaluation of knowledge, attitude and practices was done using a 24-item questionnaire developed using a Delphi technique by a panel of six dental practitioners from different specialties which after pilot study in a population of 100 volunteers was truncated to 14-items after exclusion of 10-items showing inconsistency and repetition. Rephrasing of five items was also done in order to make them more comprehensible. The questionnaire was framed in Hindi which is the widely spoken/mother tongue of the region. The final 14-item questionnaire included 6 items related with knowledge and 4 items each related with attitude and practices.

For each item, one mark was awarded for correct response. In case of wrong response, no mark was awarded. No negative marking was done. Total scores for knowledge, attitude and practices were summed up. Overall score for KAP was calculated by summing these three components.

The oral/dental health problems of the individuals were studied for six issues, viz., bad odour from mouth, abscess/pus secretion, difficulty in mouth opening, difficulty in speaking certain words owing to gaps/missing teeth, use of dentures and missing teeth/about to fall teeth.

Procedure: Dental Check-up camps were held at 23 different locations in 7 different districts of eastern/central Uttar Pradesh at suitable sites including village community centers, school premises, office canteens or other common areas. Although, the dental check-up camps were organized for all the population however KAP study was done only among those aged >12 years after obtaining approval from Society's ethics committee. At enrolment, the participants were briefly apprised about the purpose of study. Those willing to participate in the study were subject to knowledge, attitude and practice assessment. Finally, a total of 2118 participants were included in the assessment.

All the participants thereafter underwent oral/dental check-up by a competent dental practitioner. Primary therapeutic interventions were provided at the camp itself. Patients requiring intensive intervention were referred to appropriate facility.

Data Analysis: Data so obtained was subjected to analysis using Statistical Package for Social Sciences, Version 21.0. Data has been represented as numbers and percentages and mean \pm standard deviation. Independent samples 't' test was used to seek out statistical relationships. A 'p' value less than 0.05 indicated a statistically significant association.

RESULTS

For six items related with knowledge, correct response rate ranged from 51.4% (Snacking between meals affects oral health adversely) to 94.2% (Balance diet since birth makes teeth healthy and beautiful). Out of six items, for two items (Balance diet since birth makes teeth healthy and beautiful and Excessive intake of sweets can cause cavities), the proportion of those providing correct responses was >90%. For items problems of deciduous teeth affect permanent teeth too, Snacking between meals affects oral health adversely, hard/drink food items make teeth strong and occasional carbonated drinks adversely affect the teeth the proportion of correct responses was 53.5%, 51.4%, 67.1% and 68.9% respectively (Table 1).

For four items related with attitude, correct response rate ranged from 51.2% (Children should not be given milk bottle/juice at the time of sleeping) to 94.5% (Cleaning teeth at night can avoid dental problems) for the remaining two items, proportion of those providing correct response was 62.3% (Deciduous teeth do not require much care as they are temporary) and 74.9% (Children's teeth require as good care as Adults) (Table 1).

For four items related with practice, correct response rate ranged from 42.3% (Ever visited a dentist) to 97.3% (Cleaning teeth at least once a day). For the remaining two items, proportion of those with correct

responses was 75.5% (Do not use tobacco/ pan masala/ khaini/ areca nut) and 90.1% (Using toothpowder/toothpaste) respectively (Table 1).

For different oral/dental health related issues, most common was missing teeth/about to fall teeth (30.5%) followed by bad odour from mouth (20.4%), abscess/pus secretion (16%), difficulty in mouth opening (15.6%), difficulty in speaking certain words owing to gaps/missing teeth (11.8%) and using dentures (3.4%) respectively (Table 1).

For knowledge, out of a maximum possible score of 6, maximum number of participants (48.5%) had score >4 followed by score 3-4 (43.2%). There were only 176 (8.3%) respondents with knowledge scores ≤ 2 (Table 2).

For attitude, out of a maximum possible score of 4, majority of participants (57.5%) had score 2-3 followed by score 4 (30.5%). There were only 255 (12%) respondents with scores ≤ 1 (Table 3).

For practices, out of a maximum possible score of 4, majority of participants (65.1%) had score 2-3 followed by score 4 (28%). There were only 127 (6%) respondents with scores ≤ 1 (Table 4).

With respect to oral/dental health related issues, majority (50.3%) had no issue. There were 1053 (49.7%) respondents with at least one issue while 559 (26.4%) respondents had two or more issues (Table 5).

Mean knowledge, attitude and practice scores of those without any oral health issue were significantly higher as compared to that of respondents with oral issues ($p < 0.05$). Mean Total KAP scores of those without any oral health issue were also significantly higher as compared to that of respondents with oral issues (10.43 ± 2.03 vs 9.92 ± 2.16 ; $p < 0.001$) (Table 6).

DISCUSSION AND CONCLUSION

The present study was a large scale assessment of general awareness, behavior and practices related with oral/dental health in general population of eastern/central Uttar Pradesh. Assessment of oral/dental health related knowledge, attitude and practices of school children, college, dental/medical/ paramedical students have been done in various studies¹⁶, however, no such assessment has been done at community level in general masses. Furthermore, no assessment to correlate the knowledge, attitude and practices with oral health status has been done previously. The present study was a primitive step in that direction. Owing to the fact that the present study was being carried out in general public and included patients from varying age and demographic profiles, the assessment questionnaire was required to be easy to comprehend for all the age and demographic groups while at the same time being capable of including primary information related with oral/dental health care. Hence, a 14-item inventory with generalized questions related with knowledge, attitude and practices related with oral/dental health care was developed. One of the problems in carrying out KAP studies for oral/dental health care is absence of a universally applicable inventory owing to the fact that oral/dental health is interpreted varying in different cultures. However, the primary focus of knowledge, attitude and practices is generally towards studying the dental/oral cleanliness measures, diets affecting the oral/dental health, preventive measures, general perceptions and beliefs, etc.¹⁶. In present study, we also focused on all these issues and framed a 14-item questionnaire for general masses.

In present study, knowledge, attitude and practice scores of respondents were relatively higher with most of the respondents answering more than half the questions for all the three segments correctly. Such kind of high knowledge, attitude and practice scores on generalized questions have been reported to be prevalent in pre-University students of Mysore too and among dental and medical students in Eastern India¹⁷. However, poor knowledge, attitudes and practices have been shown in 12-year-old schoolchildren studying in rural areas⁵. Another study in Nigerian medical and paramedical students revealed inadequacy of KAP on oral health issues⁴. The differences in various studies might be owing to the difference in environment and nature of population being studied. Moreover, the method of estimation of knowledge, attitude and practices could also influence the proportion of correct responses. In present study, the purpose was to study the general awareness, behavior and practices of general public representing a wide demography. We had relatively easier generalized aspects and did not include questions on specific

issues like "dental plaque leads to..." as framed by Priya *et al.*⁶ while studying the KAP of school children in Chennai and "Relationship between chronic trauma and oral cancer...." as framed by Harish *et al.*¹ for dental and medical students. Instead we asked simple questions such as "Do you think that problems of deciduous teeth affect permanent teeth too?", "Do you think that balanced diet makes teeth healthy and beautiful?", "Do you think that snacking between meals affect the oral health?", etc. In fact, the focus of our study was to understand whether the basic knowledge, attitude and practices regarding the dental/oral health among general public. The present study highlights that the proposed studies on this issue should take into cognizance the fact that technical issues should be dealt in common language and should be targeted to understand the factors through which general oral/dental health could be assured.

The present study was a step forward from the previous studies in view of the fact that it targeted to study the oral/dental health issues too and to associate them with the knowledge, attitude and practice status of the population. A number of previous studies have attempted to study the oral health status with different perspectives in different populations¹⁹ and have in general showed a high prevalence of oral health issues irrespective of the type of population. The present study included a wide diversity of respondents in different age and demographic groups and also showed oral/dental health issues in nearly half the population (49.7%). The present study also showed that oral/dental health issues are often multiple in number as 26.4% of entire population had more than one dental/oral health issue. These findings thus endorse the findings of present study that dental/oral health issues are quite frequent irrespective of the population being studied and brought forward the fact that irrespective of the type of population and/or knowledge, attitude and practice status of the population regular preventive dental care is quite essential. In present study nearly 57.7% of respondents had never visited a dentist previously, which shows a wide gap in preventive dental care and as a result a high frequency of dental/oral health issues. The findings are paradoxical in nature, keeping in view the fact that while at the one hand a number of dental practitioners are today facing the problem of unemployment / diminished career opportunities, on the other hand, there is a huge segment of society which is unattended by dental care. These huge gaps indicate the need to formulate appropriate strategies to balance these gaps by creating essential dental care facilities in different areas.

In present study, we also made an attempt to study the relationship between dental/oral health care related knowledge, attitude and practices and dental/oral health status of targeted population and found that higher knowledge, attitude and practice scores have a protective effect against dental/ oral health issues. These findings thus indicate the need not only to create the dental healthcare facilities but also indicate the need to launch appropriate campaigns to create awareness regarding dental/oral health. Although, similar needs have also been highlighted in previous studies too¹⁹ among various types of study populations separately, but the present study which was a community study highlighted that these needs are generalized in nature and are not limited to a particular age/demographic group and hence use of mass media could be an appropriate step to fill these gaps.

Dental / Oral Health Related Knowledge, Attitude And Practices And Their Impact On Dental/Oral Health Of Individuals

Type	Total No. of questions	Question Nos.
Knowledge	6	1, 4, 6, 7, 8, 9
Attitude	4	2, 3, 5, 11
Practices	4	10, 12, 16, 20
Oral Health	6	13, 14, 15, 17, 18, 19

Table 1: Itemwise Correct Responses (n=2118)

SN	Item	No. of correct responses	%
Knowledge			
1.	Problems of deciduous teeth affect permanent teeth too	1134	53.5
2.	Balance diet since birth makes teeth healthy and beautiful	1995	94.2
3.	Snacking between meals affects oral health adversely	1088	51.4
4.	Hard/strong food items make teeth strong	1422	67.1

5.	Occasional carbonated drinks adversely affect the teeth	1459	68.9
6.	Excessive intake of sweets can cause cavities	1980	93.5
Attitude			
1.	Deciduous teeth do not require much care as they are temporary	1139	62.3
2.	Children's teeth require as good care as Adults'	1587	74.9
3.	Children should not be given milk bottle/juice at the time of sleeping	1085	51.2
4.	Cleaning teeth at night can avoid dental problems	2002	94.5
Practices			
1.	Cleaning teeth at least once a day	2060	97.3
2.	Using toothpowder/toothpaste	1926	90.1
3.	Do not use tobacco/pan masala/khaini/ areca nut	1599	75.5
4.	Ever visited a dentist	895	42.3
Oral/Dental Health			
1.	Bad odour from mouth	433	20.4
2.	Abscess/pus secretion	339	16.0
3.	Difficulty in opening mouth	331	15.6
4.	Difficulty in speaking certain words owing to gaps/missing teeth	250	11.8
5.	Using dentures	73	3.4
6.	Missing teeth or about to fall teeth	645	30.5

Table 2: Distribution of respondents according to knowledge scores

SN	Score	No. of respondents	%
1.	<2	176	8.3
2.	3-4	915	43.2
3.	>4	1027	48.5

Table 3: Distribution of respondents according to attitude scores

SN	Score	No. of respondents	%
1.	<1	255	12.0
2.	2-3	1218	57.5
3.	4	645	30.5

Table 4: Distribution of respondents according to practice scores

SN	Score	No. of respondents	%
1.	<1	127	6.0
2.	2-3	1378	65.1
3.	4	613	28.0

Table 5: Distribution of respondents according to prevalence of dental/oral health issues

SN	No. of problems	No. of respondents	%
1.	No issue	1065	50.3
2.	At least one issue	1053	49.7
3.	Two or more issues	559	26.4

Table 6: Association between Dental/Oral Health issues and KAP scores

SN	Variable	With no oral/dental health issue (n=1065)		With oral/dental health issues (n=1053)		Statistical significance	
		Mean	SD	Mean	SD	't'	P
1.	Knowledge	4.37	1.09	4.20	1.25	3.388	0.001
2.	Attitude	2.95	1.06	2.71	0.92	5.416	<0.001
3.	Practices	3.11	0.69	3.01	0.92	2.869	0.004
4.	Total KAP scores	10.43	2.03	9.92	2.16	5.563	<0.001

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