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Original Research Article

A KAP study of oral health status among adults in a rural area of Jammu District

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ABSTRACT

Background: Oral health is an integral part of general health and well being. It is important to know about the factors which having a bearing on oral health so that preventive measures can be taken. A research activity was planned to assess the oral health status and oral health practices of people in a rural community of Jammu region as very little is known about the knowledge and oral health practices of adults residing in this area.
Methods: A cross sectional study for a period of four months was conducted in a village Tanda of R.S.Pura block of Jammu district. 324 adults above the age of 20 years (145 males and 179 females) were interviewed face to face with the help of a questionnaire consisting of questions from WHO technique of self assessment of oral health along with some more questions exploring the knowledge, attitude and local oral health practices.
Results: The overall results showed adequate knowledge but poor attitude regarding oral health. Out of 324 subjects studied, 41.7% paid dental visits on having pain in teeth, gums or mouth and only 3.0% visited dentist routinely. 85.6 % of participants reported using brush and toothpaste but only 24.0% of all respondents brushed twice a day and only 16.7% of the respondents changed their tooth brush within three months.
Conclusions: Oral health awareness, by promoting community based programs should be undertaken at periodic intervals for better oral health and hygiene.

Keywords: Oral health practices, Knowledge, Brushing, WHO questionnaire

INTRODUCTION

Demographic, nutritional and epidemiological transitions with improved standard of living in India have resulted in increased burden of both infectious and lifestyle diseases. Of all the non communicable diseases, oral diseases are the most common and can result in discomfort, disfigurement and even death.[1] Moreover oral health is a key indicator of overall health and general wellbeing of an individual.

According to the Global Burden of Disease Study 2016, 3.58 billion people worldwide are affected by oral diseases with caries of the permanent teeth being the most prevalent of all conditions assessed. Globally, it is estimated that 2.4 billion people suffer from caries of permanent teeth and 486 million children suffer from caries of primary teeth.[2]

Oral diseases are still a burden in developing countries like India and their prevalence is determined by number of factors like geographical region, availability and accessibility of oral health services. Dental caries and periodontal diseases are the two most common oral diseases in India.[3] India has also earned the name of "oral cancer capital" of the world due to high intake of both

smoked and smokeless tobacco products, which are strongly associated with oral cancers.[4] These diseases are concentrated more in rural areas and in socially and economically backward population groups.

The main etiological risk factors leading to oral diseases are genetic predisposition, developmental problems, poor oral hygiene and traumatic incidences.[5] Socio cultural determinants like poor living conditions, low education, traditions beliefs and practices in support of oral health also play a major role in aetiology of oral diseases. Unhealthy diet, use of tobacco in any form and alcohol are the major risk factors for both oral diseases and leading chronic diseases– cardiovascular diseases, cancer, chronic respiratory diseases and diabetes.

For assessing the current oral health status of population, the World health organization has developed manual health surveys for different age groups for all countries to conduct standardized oral health surveys.[6] According to World Health organization (WHO), promotion of oral health is a cost-effective strategy to reduce the burden of oral health diseases and maintain oral health and quality of life.[7] Lack of knowledge and following wrong practices related to oral health are very important factors resulting in poor oral hygiene, therefore it is important to assess the knowledge, attitude and practices of community so that we can focus on health related behaviours and improve knowledge and awareness which would be instrumental in the effective prevention of dental diseases.

There are number of studies related to oral health which are done on school children but very few are done in adults and there is dearth of literature of such studies in our set up. With this background, this community based study was planned and conducted to assess the oral health knowledge, attitude and practices of adults residing in village Tanda of R.S Pura block in Jammu district.

METHODS

A cross sectional study on oral health of adults was conducted in R.S. Pura for a period of four months from (1st April 2018 to 31st July 2018). R.S. Pura is also a rural health training centre of Community Medicine Department GMC Jammu and the block is divided into 8 health zones. For study purposes, village Tanda was chosen randomly from Miran Sahib Zone. Complete enumeration of all the residents of the village was done by house to house visits. All adults both females and males above the age group of 20 years, residing permanently in the study area and who gave their consent for participation were included in the study. Those who were not present for two consecutive visits at their respective homes and those who did not gave consent for the study were excluded from the study. The final sample size was 324. After explaining the purpose of the study the information was collected by using face to face interview method. The data was mainly collected using the WHO technique of 'Self-assessment of oral health through use of questionnaires' for adults. Along with WHO adult questionnaire, some closed ended questions adapted from previous similar studies, exploring the knowledge, attitude and practices regarding oral health were also included.

The WHO oral health questionnaire is a simplified structured questionnaire for collection of self-assessed data on oral health and risk factors for adults. The WHO questionnaire has a set of sixteen questions with multiple choice answers. The questions range from knowledge about importance of cleaning of teeth, frequency of cleaning, use of toothpaste, use of aids for oral hygiene, use of toothpaste containing fluoride, dental visits, reasons for dental visit, use of tobacco, type and frequency, consumption of alcohol and level of education etc. Additional questions assessing the attitude and practices included inquiry about the health facility they used in case of dental problems, importance of oral health to general health and whether they were afraid of visiting dentist or not, cleaning of tongue, rinsing of mouth after meals, timing of changing toothbrush. The questions were translated into local language and simplified for the understanding of the subjects. During the study, dental problems requiring immediate attention were referred to the dentist for appropriate management.

The overall knowledge, attitude and practices concerning oral hygiene were assessed based on the responses to the questionnaire. Knowledge variables were scored and respondents answering ≥70% of the knowledge questions correctly were considered as having good level of knowledge and others were considered to have unsatisfactory knowledge. The attitude variables comprised of 6 questions and ≥70% correct responses for a statement were considered as having positive attitude towards that aspect. While the practice variables comprised of 8 questions and if a question had a ≥70% or more of correct responses, the participants were said to have good practices regarding that aspect, otherwise considered to have unsatisfactory practices regarding the same. All recorded data were coded and entered into Microsoft Excel 2007. Descriptive statistics was used to summarize the responses of the questionnaire.

RESULTS

Two third of the study participants were in the age group of 35 to 64 years followed by 20 to 34 year old age group. 55% of the study population was constituted by females, while half of the participants had completed secondary or higher secondary school of education and 12.5% had no education at all. 21.6% of the participants were currently smoking (Table 1).

As shown in Table 2, knowledge regarding role of brushing teeth daily in prevention of dental caries, harmful effects of consuming sweets and tobacco (smoking or chewing paan or guthka) on oral health was

found to be good whereas the knowledge regarding the use of dental floss and the role of fluoride in tooth decay was poor. Only half of the participants were aware of the fact that one should visit dentist for maintenance of oral health.

Table 3 shows the attitude of participants toward dental care. Half of the study population never visited dental clinics and 31.5% have visited between two to five years. 41.7% of the sample went to the dentist solely for treatment of pain with teeth, gums or mouth. Only 3% have visited for routine check ups. Approximately 64.5% of the study participants were satisfied with their oral health (both teeth and gums) and graded them from excellent to good. 62.1% of the study population relied upon hospital for managing dental problems and almost same percentage of participants believe that oral health is as important as general health.

A total of 73.1% subjects cleaned their teeth regularly. Almost all the participants used toothbrush and toothpaste (93.5%). 61% of the subjects change their toothbrush within 3 months and 9.3% use fluoridated tooth paste. Approximately two third of the respondents cleaned their tongue every day and three fourths rinsed their mouth after meals (Table 4).

Table 1: Socio demographic characteristics of study participants.

Characteristics	Number	Percentage (%)
Age (in years)		
20-34	71	21.9
35-49	105	32.4
50-64	108	33.3
>65	40	12.4
Gender		
Male	145	44.8
Female	179	55.2
Education		
Illiterate	40	12.5
Primary	91	28.0
Secondary and higher secondary	167	51.5
Graduate and above	26	8.0
Smokers		
Yes	70	21.6
No	254	78.4
***Alcohol intake**		
Yes	39	26.8
No	106	73.2

*Only males were included.

Table 2: Oral health knowledge among study participants.

Questions based on knowledge about oral health	Frequency	Percentage (%)
1. Teeth are an important part of your body		
Yes	229	70.6
No	95	29.4
2. Daily cleaning of teeth can prevent dental caries		
Yes	243	75
No	81	25
3. Regular visit to dentist helps to keep your teeth in a healthy state		
Yes	144	44.4
No	180	55.5
4. Consuming sweetened food products or drinks cause dental caries		
Yes	278	85.8
No	46	14.2
5. Use of fluoridated toothpaste prevents tooth decay		
Yes	24	7.2
No	31	9.5
Don’t know	270	83.3

Continued.

Questions based on knowledge about oral health	Frequency	Percentage (%)
6. Smoking/chewing paan/guthka is harmful for oral health		
Yes	286	88.3
No	38	11.7
7. Do you know about the use of dental floss		
Yes	05	1.5
No	319	98.5
8. How many natural teeth you have		
None	06	1.9
1-9 teeth	21	6.5
10-19 teeth	29	8.9
20 teeth or more	268	82.7

Table 3: Attitude of study participants towards dental care.

Questions	Frequency	Percentage (%)
1. How long is it since you last saw a dentist		
<6 month	37	11.4
6-12 month	25	7.7
>1-5 year	102	31.5
Never visited	160	49.4
2. Reason of your last visit to the dentist		
For pain with teeth, gums or mouth	135	41.7
For treatment/follow up treatment	24	7.4
Routine check-up/treatment	10	3.0
Don't remember	155	47.9
3. How would you describe the state of your teeth and gums		
Excellent	34	10.5
Very Good	72	22.2
Good	103	31.8
Average	60	18.5
Poor	35	10.8
Very poor	19	5.9
Don't know	01	0.3
4. From where did you receive dental treatment		
Private clinic	78	24.0
Hospital	201	62.1
Quacks	45	13.9
5. Do you think oral health is important to general health		
Yes	208	64.2
No	87	26.9
Don't know	29	8.9
6. Are you afraid of going to dentist		
Yes	236	72.9
No	88	27.1

Table 4: Distribution of study populations based on practices regarding oral health.

Practices	Number	Percentage (%)
1.Do you clean your teeth		
Regularly	237	73.1
Sometimes	53	16.3
Never	34	10.6
***2.Aid used for cleaning teeth**		
Toothbrush	264	81.5
Wooden and plastic toothpicks	40	12.4
Finger	12	3.7
Dental floss	08	2.4

Continued.

Practices	Number	Percentage (%)
3. Material used for cleaning teeth		
Tooth paste	291	89.8
Charcoal	2	0.6
Miswak/chewstick	31	9.6
4.Which type of toothpaste do you use		
Non fluoridated	24	7.4
Fluoridated	30	9.3
Don't know	270	83.3
5. Do you clean your tongue		
Everyday	205	63.3
Sometimes	30	9.3
Never	89	27.4
6. How often do you change your toothbrush		
<3 months	54	16.7
3-6 Months	70	21.6
>6 months	200	61.7
7. Do you rinse mouth after meals		
Yes	249	76.9
No	75	23.1
8. How often do you clean your teeth		
Once a day	198	61.1
Twice a daily	78	24.1
More than twice a daily	48	14.8

DISCUSSION

Each one of us loves to smile and look beautiful but very few of us take our oral health problems seriously. People are either not aware of the consequences of improper oral health care or they underestimate it. In our study 145 males and 179 females were interviewed. The results of our study showed that the community had adequate knowledge but unsatisfactory attitude towards oral health. The oral health practices of the community were relatively good with regard to some variables and below average with regard to others.

Overall knowledge was found to be average as participants answered 57% of the questions correctly with approximately 70% to 80% of the participants giving correct responses to questions pertaining to brushing, affects of tobacco and sweets on oral health. 98.2% of the participants had no idea of dental floss and 83.3% had never heard of fluorides.

Only 19.1% participants had visited a dentist in the last 12 months which is quite low as compared to the study conducted by Shammari et al in which 60% of the participants had visited a dentist in the last 12 months.[8] 49.4% of the subjects in the present study had never visited a dentist for oral health problems. This is in concordance with the study conducted by Singh et al in patients attending the North Indian School.[9]

In our study 41.7% of the respondents reported pain in tooth, gums or mouth as the most commonly cited reason for visiting a dentist which is in concordance with the findings of Al-Beiruti who found that 69.5% of the participants visited a dentist when they had pain.[10] Approximately half 47.9% of the participants did not remember the reason for their visit thereby showing their casual attitude towards dental care.

In the present study, 10.8% of study participants perceived health status of their teeth and gums as poor and 5.9% as very poor which was almost half in comparison to the study conducted by Diwan et al and meagre when compared to a study conducted by Varenne et al.[11,12]

For receiving dental treatment 62.1% of study participants visited nearby Government hospital whereas 24.0% visited private clinics. Due to lack of awareness, 13.9% sought advice and treatment from unqualified dental care providers or traditional healers. In addition, on asking about the relationship between oral health and general health, only 64.2% agreed to know this association and 26.9% were of the opinion that there is no association this is in agreement with the findings of Singh et al.[9] Majority of the respondents 72.9% stated that they are afraid of visiting the dentist.

Regarding the oral hygiene practices, 73.1% of the study participants cleaned their teeth regularly, 81.5% used brush and 89.8% used toothpaste for cleaning their teeth, which was similar to the study conducted by Al-Johan where 95.4% patients used brush and paste for cleaning their teeth and Ali et al in which 88.0% patient's preferred using brush and paste.[13,14]

In our study, we found 61.1% people brushed only once a day, which is in agreement with the study conducted by Singh et al and Gupta where 69.0%, 68.5% people brushed only once a day.[9,15] However for maintaining good oral hygiene the Indian Dental Association recommends brushing the teeth twice a day which was reported only by 24.0% of the subjects and it was quite less than the study conducted by Al-Johani 38.5%.[13,16]

Regarding the practice of changing the brush, 3 month duration of time has been advocated as ideal. [16] This time frame was practiced by only 16.7% of our population which is similar to the study conducted by Jain et al while it was found to be double among the subjects studied by Gupta 35.8%.[15,17] Education and awareness at dentist level is hereby required to lay stress on the change of brush at 3 months interval. The use of other methods for cleaning teeth like dental floss, fingers, wooden and plastic tooth pick was reported as 2.4%, 3.7% and 12.4% respectively. The use of less dental floss is similar to a study conducted by Jamjoom in Saudi Arabia whereas in a study done by Padma et al 7.6% of the subjects use dental floss.[18,19] This emphasizes the urgent need for educating and motivating the public to use this efficient method for oral health care. The less use can be attributed to the lack of oral health education and awareness in rural set ups.

Practice of cleaning tongue is an essential component of oral health hygiene and it was found to be adequate 63.3% whereas in another study conducted by Jain et al only 20% of sample has the habit of cleaning tongue.[17] In our study, practice of rinsing mouth after meals was found to good with response rate of 76.9%. Tooth paste containing fluorides was used by only 10% of the participants and it was quite surprising that 83.3% of respondents did not know about such toothpastes whereas in a study conducted on dentists revealed use of fluoridated toothpaste in more than half of study respondents.[20] This could be due to the fact that study was conducted among dental professionals who are fully aware of benefits of fluorides. We cannot generalise our findings due to small sample size.

CONCLUSION

To conclude, our study provided the base line information of oral health status among rural adult population. The findings of our study showed that there is a need to sensitize the adults in rural area by organizing community based outreach sessions so that they can prioritize oral health and inculcate better oral health practices in their daily regimens and that of their children's at early age.

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