Original Article
International Journal of Medical and Dental Sciences, *Vol 9(2), DOI: 10.18311/ijmds/2020/25396, July 2020*
ISSN (Print) : 2454-8952
ISSN (Online) : 2320-1118

Oral Health Knowledge and Practices among Dental Patients at SHKM Government Medical College, Nuh, Haryana

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Abstract

Aim: The study was conducted to assess oral health knowledge and practices among the patients attending the Department of Dentistry at Shaheed Hasan Khan Mewati (SHKM) Government Medical College, Nuh, Haryana India. **Material and Methods:** A cross-sectional descriptive study was conducted on 3000 patients using a pretested and structured questionnaire. The questions were to explore patient's oral health behaviour and knowledge along with their routine oral practices. The data was collected and subjected to analysis through SPSS 18. Proportions and percentages were used for compilations of results. **Results**: The results showed that there is lack of knowledge with inappropriate measures to keep good oral hygiene. Only a small number of patients (12%) were found using tooth brush and paste whereas majority of population (73%) used Miswak sticks for cleaning their teeth. Females were found as most negligent regarding their oral health. **Conclusion**: The oral health practices among the population of Nuh were nonsatisfactory. There is need to develop and implement community oriented oral health promotion programs targeting oral health practices to control preventable oral diseases among the people of Nuh.

Keywords: Behaviour, Knowledge, Oral Health, Practices

1. Introduction

Oral diseases affect nearly 3.9 billion people globally[1]. Oral health is multifaceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow and convey a range of emotions through facial expressions with confidence and without pain, discomfort and disease of the craniofacial complex[2]. To overcome the burden of oral diseases, community oriented preventive and oral health promotional programs have been emphasized by World Health Organization (WHO) for general curative approach. This strategy promotes oral health with a shift of responsibility from healthcare professionals to individuals[3]. To achieve this conducive environment; there should be an accurate knowledge and good understanding of scientifically supported information and facts. Hence, there is a need to educate and spread knowledge for keeping good oral care and prevention of dental diseases through outreach programs and relevant public health awareness measures to make a healthy individual and a healthy society.

The healthcare sector has shown vast improvements in developed areas of country with numerous innovative strategies but the scenario is glum among underprivileged communities due to lack of implementation of these promotional programs. Nuh (earlier known as Mewat) is also one among such marginalized areas colonized by 1.09 million population[4]. NITI Aayog i.e., National Institution For Transforming India is a policy think tank of the government of India, established with the aim to

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achieve sustainable development goals and to enhance cooperative federalism by fostering the involvement of state government of India in the economic policy making process using a bottom up approach[5]. As per the list declared by NITI Aayog in March 2018, Nuh district in Haryana has been declared as the most backward region of the country[6].

As per the official census 2011, 88.61% population of Mewat district lives in rural areas of villages. As per the Mewat district religion census 2011, total population of Mewat is 1,089,263 and majority being Muslims which constitutes 79.20% of it. The population here is bounded with many religious beliefs which show its impact on health, culture and lifestyle. It is burdened with many social issues including lowest female literacy (36.60%), poverty and unemployment amongst Haryana state[7].

Preventive dental care is almost absent in the rural areas and very limited in the urban areas of India[8]. There is scarcity of education regarding the knowledge and behavior about oral health especially for rural people[9]. No study has been reported till date among the people of Nuh regarding their oral health status. So, this study was taken up to access the knowledge, attitude and practices amongst the patients visiting the department of dentistry at Shaheed Hasan Khan Mewati Government Medical College, Nuh which is the first and the only medical institute in Mewat region.

2. Materials and Methods

A descriptive cross-sectional study was conducted on 3000 patients at Shaheed Hasan Khan Mewati Government Medical College. All the patients who were 18 years and above and who attended the dental Out Patient Department (OPD) during the randomly selected period of 12 months were enrolled in the study. A self-assessment questionnaire was prepared for this study and the internal reliability of questionnaire was confirmed by pilot study on 40 patients in the department of Dentistry. The value of Cronbach was found to be α=0.79 which is good. Ethical clearance was obtained from the Research and Ethics Committee of the college. The preliminary section was designed to gather demographic data and the anonymity of the respondents was assured. The second section was concerned with perception of self-oral hygiene which consisted of 4 questions and third section was about the practices regarding oral hygiene which consisted of 15 questions.

The patients were interviewed face to face and questionnaire was filled after asking the questions in local dialect. The collected data was entered into Microsoft Excel spreadsheet for analysis (SPSS version 18, IBM statistics, New York, USA). Analysis and interpretation has been done on the basis of scores of individual items. The scoring for the items was done in the following manner. Each answer to a question was designated with scores ranging 0, 1, 2, 3 and more based upon the variables in response. The individual scores were summed up to yield a total mean score, standard deviation and frequency distribution.

3. Statistical Analysis

The data was entered in to Microsoft Excel and analyzed using SPSS 18 (Statistical Package for Social Sciences) for relevant statistical comparison. Proportions and percentages were used to describe the findings among the study subjects for their responses based on dental knowledge, attitude and awareness related to oral health.

4. Results

A total of 3000 subjects among which 11% of patients were from urban areas and 89 % were belonging to rural areas. The majority of patients (68.4%) were illiterate whereas 27.6% of the patients were below 12th standard and only few (0.9 %) of patients were post graduated (Table1).

The socio-economic status of the patients was recorded using the B.G Prasad's Modified classification. This classification was suited for this population as it is applicable to both rural as well as urban areas along with consideration of big family size. Most of the population (84.1%) falls under class V category where earning is below rupees 869 per month.

Table 1. Socio Demographic profile of study subjects

Variable	Frequency (n)	Percentage
Gender		
Male	1458	48.60
Female	1542	51.40
Total	3000	100
Education		
Illiterate	2052	68.4
Below 12th	828	27.6
Graduate	93	3.1
Post graduate	27	0.9
Total	3000	100
Socio economic status		
Class I (Rs>5797)	24	0.8
Class II (Rs>2898-5797)	54	1.8
Class III (Rs>1932-2577)	96	3.2
Class IV (Rs>869-1546)	303	10.1
Class V (Rs below 869)	2523	84.1
Total	3000	100
Location		
Rural	2670	89
Urban	330	11
Total	3000	100

Table 2. Perception of self oral hygiene among study subjects

Questions asked	Options in response	N = 3000	N = 3000 (Percentage %)
How many natural teeth you have?	No natural teeth	0	0
	1-9	30	1
	19-20	60	2
	20 or more	2910	97
How would you describe the health of your teeth and gums ?	Very good	6	0.2
	Good	117	3.9
	Average	1137	37.9
	Poor	1602	53.4
	Very poor	120	4
	Don't know	18	0.6
Have you ever noticed bad smell from mouth ?	Yes	2490	83
	No	510	17
Have you ever noticed bleeding gums?	Yes	2610	87
	No	390	13

Table 3. Distribution of study subjects based on practices regarding oral hygiene

Question asked	Options in response	N = 3000	Percentage %
Do you clean your teeth?	Yes	2880	96
	No	120	4
If yes, how do you clean your teeth ?	Neem stick	51	1.7
	Miswak stick	2190	73
	Charcoal	0	0
	Finger and tooth powder	33	1.1
	Finger and brick powder	210	7
	Finger and tooth paste	120	4
	Tooth brush and paste	360	12
	Tooth brush and tooth powder	36	1.2
	Any other	0	0

How often do you clean your teeth ?	Never	0	0
	Once in a month	0	0
	2-3 times a month	60	2
	Once in a week	210	7
	2-6 times in a week	0	0
	Once a day	2640	88
	Twice or more a day	90	3
If you brush, then when do you brush your teeth ?	Morning before breakfast	2820	94
	Morning after breakfast	60	2
	Noon after lunch	54	1.8
	Before going to bed	36.9	1.23
	Other time	0	0
For how long do you brush ?	Less than one minute	60	2
	One minute	240	8
	Two minute	600	20
	More than two minutes	2100	70
What type of brush you use ?	Hard	525	17.5
	Soft	165	5.5
	Medium	2010	67
	Never noticed	300	10
What technique do you use for brushing ?	Horizontal	2340	78
	Vertical	180	6
	Circular	360	12
	Combined	120	4
Do you change your brush ?	Yes	2580	86
	No	420	14
If yes, how often do you change your brush ?	When useless	2430	81
	Once in 3 months	255	8.5
	Every 6 months	189	6.3
	Never	126	4.2
Do you use any interdental cleansing aids (like floss, tooth pick) ?	Yes	90	3
	No	2910	97
Do you rinse your mouth with mouthwash ?	Yes	180	6
	No	2820	94
Do you clean your tongue ?	Yes	150	5
	No	2850	95
Do you rinse your mouth after eating ?	Yes	1950	65
	No	1050	35

How long since you have last seen your dentist ?	Less than 6 months	1830	61
	6-12 months	120	4
	More than 1 year	150	5
	2 years but less than 5 years	0	0
	5 years and more	0	0
	Never	900	30
Do you have any tobacco related habits ?	Beedi	1230	41
	Cigarette	60	2
	Paan masala	270	9
	Gutka	450	15
	Pan with tobacco	90	3
	No	900	30

5. Discussion

The present study shows the general opinion that oral hygiene has still remained an ignored and unrealized major social problem. Rural people of India in general, and tribal populations in particular, have their own beliefs and practices regarding health. Some tribal groups still believe that a disease is always caused by hostile spirits or by the breach of some taboo. They therefore seek remedies through magicoreligious practices[9].

Perception and practices regarding self oral hygiene amongst the participnts is depicted above in (Table 2 and 3). It was found that Most of the participants were aware about the number of teeth present in their mouth and most of subjects (97%) were having more than 20 teeth. The results are in agreement with Asif *et al.,* who also found that 89.9% of their study population knew that there were 32 teeth in the adult cavity[10]. The individuals with tertiary education were more likely to have good oral hygiene, and this could be explained by the fact that exposure to higher level of education influences oral health knowledge and behavior like daily tooth cleaning habit[11].

In our study maximum of the participants (96%) followed the practice of cleaning their teeth, however only 12% of them were found using toothbrush and toothpaste. Whereas in a study done by Sen *et al.,* about 41% of rural population brushed their teeth using a toothbrush and tooth paste[12]. In the present study 73% used miswak stick as tooth cleaning agent, the results are in contrast with the reports among rural dwellers in Nigeria where 31.6% of population used chewing stick as tooth cleaning agent[11]. The reason could be, oral hygiene practices in our country are deeply based in tradition and culture with use of various materials. Majority being the muslim population in Nuh region, people offer Namaz five times a day, so as a part of ritual before every offering, they use traditional "miswak stick" to clean the mouth.

In the present study only 3% brushed their teeth twice a day which is in agreement with the results of Jain *et al.,* where 67% and Al shammari *et al.,* where 62% of the population brushed their teeth twice daily[13,14]. Majority of the patients (94%) said they clean their teeth before breakfast in the morning and only 12% brushed before going to bed. The results are in contrast with the studies of Doshi *et al.,* and Al-Omiri *et al.,* where almost 52% of the respondents used to brush their teeth before going to bed at night[15,16].

Considering the time period of brushing, in our study, 70% of patients brushed their teeth for more than two minutes at a given time. Majority of the patients (67%) used medium textured toothbrush. In the study done by Sen *et al.,* and Jain *et al.,* about 67.4% and 75% of the respondents brushed their teeths horizontally which puts the teeth at risk of[12,13]. Almost similar results were obtained in our study where 78% used horizontal motion while brushing.

Regarding the frequency of changing tooth brush, the data showed more than half of patients (81%) change their brush only when useless. The results are in agreement with those of Zhu *et al.,* where the subjects used the same toothbrush for several months i.e., one quarter of young adults and four out of ten elderly used the same toothbrush for more than six months[17].

In response to bad breath and bleeding gums, 83% of the patients had noticed bad smell from mouth whereas, 87% had noticed bleeding gums. The results are high and in contrast with those of Benazir *et al.,* where 61% of samples noticed bleeding gums and Sen N *et al.,* where 64.5% of rural population noticed bad smell from mouth[18,12]. Majority of patients had never used any interdental cleaning aid. In the study done by Madan *et al.,* it has been reported that only 15.8% of the population in India used dental floss[19]. Whereas in our study only 3% participants were found using interdental aids which could be attributed to lack of awareness among people and prescription practices of the dentists.

In response to tongue cleaning habit, 95% of patients said they never cleaned their tongue whereas, only 4% of them were found using tooth brush to clean their tongue. The results are poor in comparision to both the studies by Jain *et al.,* and Sen *et al.,* where 20% and 52% of population cleaned their tongue[13,12]. Also about 65% of population responded positive to the habit of doing oral rinses after every meal which is in accordance with those of Ling Zhu *et al.,* where 62% claimed that mouth rinsing is an effective method of tooth cleaning[17].

In a study conducted on dental patients in Maharashtra 5.75% were beedi smokers whereas in the present study 41% of the patients had the habit of smoking beedi[20]. Also, majority of studied population felt that there is no need to visit a dentist. A total of 30% patients were visiting the dentist for the first time. However, our result does not coincide with the results of Chakraborty *et al.,* where 83.6% patients were visiting dentist only if they had pain[21].

6. Conclusion and Recommendations

The oral hygiene and practices among the studied population were non satisfactory. This epidemiological survey has provided baseline information to support the implementation of oral health programmes targeting oral health practices to control preventable oral diseases among the people of Nuh. As awareness alone is not enough to achieve good oral health unless the target population practices it as desired. Scaling up the efforts in implementation of the relevant oral health education programs and oral health promotion interventions are the need of the hour.

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How to cite this article: Sharma A, Dhote S , Malik M, Kumar A. Oral Health Knowledge and Practices among Dental Patients at SHKM Government Medical College, Nuh, Haryana. Int. J. Med. Dent. Sci. 2020; 9(2): 1888-1894.